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**Effect of grammaticality judgements on the relationship
between metalinguistic awareness and second language proficiency**

By

 Janet M. Renou

Dissertation presented to the School of Graduate
Studies and Research as partial fulfillment
of the Ph.D. degree in Education

Faculty of Education, University of Ottawa
Ottawa, Ontario, Canada, 1998



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Abstract

This study investigated the relationship between metalinguistic awareness (MLA) and L2 proficiency of second language learners from an experiential (communicative) and an analytic (grammar) approach to learning French. The model tested (Bialystok & Ryan, 1985) posits that linguistic and metalinguistic proficiency are composed of two components - 'analysed knowledge' and 'control' over that knowledge. All tasks (e.g., conversation, literacy, metalinguistic) require some degree of both components. Since the development of the components is the result of different learning experiences, learners may master aspects of proficiency related to an increase in analysed knowledge but not master ones which stem from an increase in control, or vice versa. This is problematic in that it is conceivable that learners may have a very different mastery of the language when task demands change.

Advanced university level French L2 learners (n=64) completed a French Test of Proficiency and a written and oral grammaticality judgement test. The grammaticality judgement task required subjects to judge sentences for grammaticality, to identify errors, to correct errors and to provide the rule which had been violated. The first level of analysis looked at the performance of the entire sample on the grammaticality judgement tests and on the test of L2 proficiency. Then further analyses were carried out in light of the demands tasks made upon the two components and with subjects grouped according to learning methods; that is whether they had been exposed to a communicative or grammar approach to L2 learning.

Results show that there is a positive relationship between MLA and L2 proficiency when analyses are run for the entire sample, but that once learners are grouped according to learning methods, that positive relationship no longer exists for communicative-approach learners. Tasks

which made similar demands did not always correlate. Significant differences were found in learners' performance depending upon whether the tasks required high levels of analysed knowledge, control, or both and depending upon the type of learning method.

Implications for the model and for L2 learning conclude the study.

Chapter I

1. Introduction

Since the arrival of the communicative-approach to teaching and learning a second language (L2) in the late 1970s, a greater number of learners have been exposed to communicative activities believed to promote fluency and, where the emphasis is on meaning as opposed to form (grammar) (Alderson & Steel, 1994; Germain & Seguin, 1995; Hammerly, 1991; Masny, 1987; Mitchell & Hooper, 1991). One of the prevalent theories lending support to de-emphasizing grammar claims that providing comprehensible input, which is language that is within the learner's grasp of comprehension, is the only prerequisite for acquisition of a second or foreign language (Krashen, 1981).

The communicative-approach to language learning and teaching (Hymes, 1970) gained prominence because of a general dissatisfaction with L2 teaching methods such as "grammar-translation" or "audiolingual" approaches. The emphasis of these methods was on the development of language structure with little consideration being given to oral fluency. Research has, however, since shown that when second language learners' attention is focused mainly on meaning, as in the communicative-approach, linguistic accuracy suffers (Alderson & Steel, 1994; Harley & Swain, 1984; Lyster, 1987). Most recently, interest in issues of accuracy and grammar knowledge has developed from the perspective of "metalinguistic awareness" (MLA) which is broadly defined as conscious knowledge of the formal aspects of the target language (e.g., grammar). The important issues from this perspective are what the learner is consciously aware of, how he or she becomes aware and to what extent that awareness is related to L2 learning and

L2 proficiency. What is needed for MLA to be considered important, is more empirical evidence linking it to greater proficiency in the target language. Consequently, the first research question which the present study addresses is as follows - What is the relationship between metalinguistic awareness and L2 proficiency? The debate over what types of L2 learning approaches lead to greater proficiency in a target language has led to the second research question - Do learners from different learning methods differ in their levels of metalinguistic awareness, and if so, is this difference reflected in measures of L2 proficiency?

First, this chapter will present the debate over the importance of MLA to L2 learning and provide definitions of relevant terminology. The section which then follows is entitled “Changing Trends in the Importance Accorded to Grammar Knowledge”. It explains why knowledge about grammar has gone from being considered irrelevant, which was the trend of thought in the 80's, to being reinstated in the 90's as important. Prior to explaining the theoretical framework of the present study, the role of the grammaticality judgement task (GJT) in assessing MLA is presented. The GJT defines the operationalization of MLA for the purpose of the present study. At the basis of the explanation of metalinguistic awareness to be presented here are two underlying processing components responsible for (1) the analysis of linguistic knowledge “process of analysis” and (2) the retrieval of that knowledge “control of linguistic processing” (Bialystok & Ryan, 1985a). This theoretical framework of MLA fine-tunes the notion of L2 proficiency in that it posits that all L2 abilities and tasks can be described in terms of the demands made upon the two underlying components. In order to better understand the role of the process of analysis, a brief account of what the term representation means in the psychological literature is provided. In the sections which follow in Chapter I, metalinguistic tasks are

explained in terms of the process of analysis and control of linguistic processing.

1.1 Statement of the problem

1.1.1 Concern over L2 learners' Lack of Knowledge about the Language

Current setting of the issue

Interest in metalinguistic awareness stems from an increasing consensus among educators and researchers that a great number of L2 learners are communicating without linguistic accuracy (Alderson & Steel, 1994; Germain & Seguin, 1995; Hammerly, 1991; Larsen-Freeman, 1995). Because of a growing concern, particularly among university L2 language teachers, that many students entering university lack knowledge about the language, Alderson and Steel (1994) ran a battery of language tests on first year university students in the UK. The goal of their study was to evaluate learners' metalinguistic knowledge about the target language, French, and about English. Alderson and Steel (1994) claim that learners' linguistic inaccuracy in the second language points to a lack of metalinguistic knowledge (or awareness). They further contend that learners' grammatical awareness, as reported in their study, may well be a reflection of their L2 learning experience (Alderson & Steel, 1994). A lack of MLA leads to (1) an inability to understand the structure of a language (e.g., sentences follow subject, verb, object order), and (2) learners' difficulty in following discussions where linguistic terminology is used to render explicit, the grammar of the target language (Bloor, 1986). These two problems may affect students' desire to continue their L2 studies as well as their development in learning a L2, and their level of achievement in language courses.

1.1.2 **Definition of Terms**

Metalinguistic awareness: Conscious knowledge about the language which will be operationalized through the score on a grammaticality judgement test.

L2 proficiency: Learners' mastery of specific aspects of the language which in this case are written comprehension or reading, oral comprehension or listening and grammar knowledge. The score on the French Proficiency Test (global and sub-tests) of the Second Language Institute (SLI) of the University of Ottawa is used to operationalize L2 proficiency in the present study. Sub-tests include tests related to reading, listening and grammar knowledge.

Advanced-level learners: A functional description of advanced-level learners can be summarized as follows: They are able to understand main ideas and most details of connected discourse on a variety of topics beyond the immediacy of the situation. Comprehension may be uneven due to a variety of linguistic and extralinguistic factors, among which topic familiarity is very prominent. They get the main ideas and facts but may miss some details. They can write social and more formal correspondence, discourse of several paragraphs, and cohesive summaries with some detail. They can take notes and can explain a point of view simply. They have sufficient vocabulary for self-expression with good control of basic morphology and frequently used syntactic structures. They may still have quite a few errors in basic constructions which are not generally patterned. Their writing style is obviously foreign, yet they are able to join sentences in relatively cohesive paragraphs. They can narrate and describe in major time frames. These speakers generally speak in paragraphs rather than in short phrases or sentences. They can talk about a wide range of concrete topics, describe places and things, report on events

and provide narration about past, present and future activities (Omaggio Hadley, 1993)¹.

Communicative Group: A group formed of learners who have come from an approach to learning French where the emphasis has been on meaning as opposed to grammar. This emphasis has been confirmed through learners' responses to a questionnaire completed for the purpose of group formation (see Section 3.2).

Grammar Group: A group formed of learners who have come from an approach to learning French where the emphasis has been on grammar as opposed to meaning. This emphasis has been confirmed through learners' responses to a questionnaire completed for the purpose of group formation (see Section 3.2).

1.2 Changing Trends in the Importance Accorded to Grammar Knowledge

1.2.1 Resituating the Importance of Knowledge about the Language

Since the view is that originally the intention of the communicative-approach was not to dismiss linguistic accuracy, some researchers are restating what it means to be communicatively competent (Hammerly, 1991; Nemni, 1985). Garrett (1991) claims that "communicative competence, in its original sense, is part of, or an extension of, knowledge of language"(p.79). Higgs (1991) reinforces this point of view when he states that, "the more accurately a message is transmitted, the greater the possibility is for successful communication"(p.46). In Canale and Swain's (1980) model of communicative competence, knowledge of grammar is also considered

¹ This functional definition, which is adapted from Omaggio Hadley (1993), has been confirmed by five professors at the Second Language Institute as representative of the general capabilities of the participants in this study.

to be one of the components of second language proficiency.

Research in second language acquisition (SLA) provides further support for this view. It suggests that generally it is the young, pre-adolescent learners, who, without formal grammar instruction, are capable of achieving native-like proficiency in a second language (Celce-Murcia, 1992; Larsen-Freeman & Long, 1990; Larsen-Freeman, 1995). It is otherwise believed that without some focus on form, which is but one means of enhancing MLA, many adult L2 learners will develop an interlanguage that reflects a lack of grammatical awareness (Gass & Selinker, 1994; Hammerly, 1991; Rebuffot, 1993). In order for learners to evolve toward native-like proficiency, their interlanguage must be amenable to change. As learners advance, erroneous utterances (e.g., ungrammatical forms) are gradually replaced by appropriate forms (e.g., grammatical forms). It seems reasonable to claim that when learners consistently employ inappropriate forms, they may not be aware of the correct grammatical form; thus they lack grammatical awareness.

1.2.2 Reasons for Reevaluating the Importance of Metalinguistic Awareness

The recent influx of research which focuses on the role of formal instruction (Garrett, 1986; Gass, 1983; Green & Hecht, 1992; Harley, 1989; Long, 1991; Terrell, 1991; White, 1991) provides support for the growing concern of second language educators and researchers about linguistic accuracy. Hammerly (1991) claims that, “although the communicative-approach has resulted in increasing fluency or oral proficiency, many students are emerging from language programs with deeply engrained and very faulty interlanguage” (p. 8). He goes on to state that “when students are simply encouraged to communicate freely without regard to language

structure, they may enjoy the immediate gratification and may even feel exhilarated about it. But when students [...] realize that their output is quite ungrammatical [...] what they feel is not self-esteem, positive attitudes and motivation but terminal discouragement that leads them to avoid using the language” (Hammerly 1991, p. 8).

Germain and Seguin (1995) claim that an awareness of grammar is important for the following reasons: (1) In order for students to succeed in various language tests based on explicit knowledge about the language (e.g., placement exams for second language schools), knowledge of grammar is essential; (2) Grammatical awareness enhances learners’ comprehension because it provides information required for deciphering input; (3) For some learners, knowledge about the language enhances learner motivation and reduces stress related to L2 learning; and (4) Some cultures (e.g., French, Japanese, Chinese and Russian) place great importance on linguistic accuracy and learners will subsequently be judged according to their accuracy in speaking the target language. From a social point of view, this will affect the perception others have of the speaker. Rather than being stereotyped, treated differently, or both, because of a lack of grammatical accuracy, learners are perceived in a more positive manner (Noyau & Porquier, 1984; Thomas, 1983). MLA is also important because it enhances learners’ communicative abilities. Transmitting a grammatically correct message means there is a better chance of communicating more accurately (Nemni, 1985).

Research in MLA offers not only an opportunity to investigate what learners know about the language, but metalinguistic tasks can lead to the learner’s own experience of becoming aware of what he or she knows. Performing a metalinguistic task means that the learner has to think about, access and articulate knowledge. The importance of this is that it appears to result in

transforming implicit (unconscious) knowledge into explicit or analysed knowledge (Bialystok, 1994). If, as Alderson and Steel (1994) suggest, “higher degrees of explicit knowledge (an awareness of the formal properties of a target language) should be associated with greater accuracy in language use”, then learners need to be metalinguistically aware (p. 101). Krashen’s (1981) view that explicit knowledge is of no importance to the acquisition of a L2 is now being questioned by an increasing number of researchers who claim that conscious knowledge is important to L2 learning. Bialystok (1990a, 1991, 1994), for example, states that tasks which require MLA force the learner to reflect, notice and consequently to become aware. Since noticing and awareness are often linked to learning (Bley-Vroman, 1986; Carroll & Swain, 1993; Ellis, 1995; Garrett, 1986; Harley, 1994; Rutherford, 1987; Sharwood-Smith, 1994; White, 1989;), this is how MLA can have an influence on second language acquisition (Bialystok, 1991, 1994; Schmidt, 1993). The goal of many forms of instruction is to have learners notice and become aware. Consequently, metalinguistic tasks may result in learning similar to that achieved by formal grammar instruction, so often frowned upon by many who promote the communicative-approach to learning.

1.2.3 The Role of the Grammaticality Judgement Task in Assessing Metalinguistic Awareness

Much of the research in MLA of adult second language learners has sought to assess learners’ intuitions about the well-formedness of utterances through metalinguistic activities which have been largely comprised of grammaticality judgements (Bialystok, 1979; Chaudron, 1983; Sorace, 1985). Because research has provided inconclusive evidence with respect to the

relationship between MLA and proficiency in the target language, more empirical evidence providing support for the stand that MLA is important to L2 learning is needed (Alderson & Steel, 1994). Bialystok (1982) contends that research will continue to provide conflicting results until descriptions of L2 proficiency are made in light of what L2 learners are being asked to do.

The goal of the present study is to investigate through grammaticality judgement tasks (GJT) what university level L2 learners of French know about certain aspects of the target language. Grammaticality judgements are viewed as important because (1) they reflect information about learners' knowledge of the grammar; (2) they provide information about the development of learning a L2 and (3) they provide information about the ways in which knowledge is organized (Gass, 1983). The ability to make grammaticality judgements of linguistic material is considered to be a test of formal competence - what the learner knows as opposed to what the learner does - that relates to the learner's metalinguistic awareness (Arthur, 1980; Cazden, 1974; de Villiers & de Villiers, 1972).

Generally, adult L2 learners are asked to judge the grammaticality of sentences which they themselves or their peers may have produced (Gass, 1983; Schachter, Tyson, & Diffley, 1976; White, 1977) or which the researcher may have composed in order to gather specific information about a specific structure (Bialystok, 1982; Ellis, 1991; White, 1985). Tasks can vary from simply identifying a grammatical versus ungrammatical sentence (Bialystok & Frohlich, 1978; Bley-Vroman, Felix, & Ioup, 1988; Mazurkewich, 1985; Tanaka, 1987), to pointing out (e.g., underlining) what part of the sentence violates grammaticality (Alderson & Steel, 1994; Bialystok & Frohlich, 1978), to having to correct the ungrammatical sequence (Alderson & Steel, 1994; Hulstijn, 1984), and to providing the rule which is required for the

correction (Alderson & Steel, 1994).

For the present study, use of an oral and written mode of presentation of the GJT provides a means of relating learner knowledge about the target language and access to that knowledge to the context or demands of the task presented. This is important, since the goal of language proficiency tests is to provide a global (general) assessment of learners' proficiency. For this reason, such tests are limited in their ability to reflect to what extent L2 learners have knowledge about the language and in what contexts learners are able to retrieve that knowledge. Tarone (1987) and Ellis (1987) support this view of the importance of a more detailed description of proficiency, and claim that discussions of learner proficiency must be placed in the context of a description of the demands being placed on learners. For example, a learner whose proficiency in a L2 is judged on his or her performance in a communicative context (e.g., role playing) may not have the same level of performance if called upon to give a resume of a written text. The hypothesis which stems from this view is that a learner may appear to have a very different mastery of the language when task demands change. Or to put it another way, it is possible for learners to master certain aspects of proficiency but not others. The model (Bialystok & Ryan 1985a) adopted here offers a possible explanation for such a hypothesis. It posits that successfully meeting task demands, (e.g., conversation, literacy or metalinguistic tasks) depends on the development of two underlying processing components - process of analysis and control of linguistic processing - and that the development of these components may be influenced by different types of L2 learning experiences.

1.3 Conceptual Framework

Research in MLA has gone from focusing on specific metalinguistic abilities, particularly in the case of child learners (Chaney, 1992; Barton, 1985; Bowey & Tunmer, 1984; Tunmer, Herriman & Nesdale, 1988) to addressing the issue of whether there is a general metalinguistic ability. The latter has been studied by intercorrelating childrens' performance on different tasks (Ricciardelli, Rump, & Proske, 1989). Results from the Ricciardelli et al. (1989) study provide some support for the notion that MLA can be conceived as a unitary construct. However, a more detailed framework for studying MLA, which involves two information-processing components, is receiving the recognition of a number of researchers (Alderson & Steel, 1994; Ellis, 1987; Gombert, 1992; Tarone, 1987; Ricciardelli, 1993); that is, the model of Bialystok and Ryan (1985a, 1985b).

1.3.1 The Relevance of the Bialystok and Ryan (1985) Model

Descriptions of learner performance and their implications for the language learning process must take a number of factors into account. The choice of this model to explain linguistic and metalinguistic proficiency can be linked to the criteria which Bialystok (1990a) claims the model meets. The first criterion concerns a theoretical description of not only language use but also the nature of the system of knowledge. In Bialystok's (1978) early theoretical framework, knowledge was either implicit (unconscious) or explicit (conscious), which corresponds to Krashen's (1981) terminology of "acquired" and "learned" knowledge, respectively.

Bialystok has since undergone a reconceptualization of L2 knowledge (Bialystok &

Ryan, 1985a). Where Bialystok (1978) and Krashen (1981) differed, and continue to differ, is that for Krashen there can be no interaction between the two. Although Bialystok no longer claims that explicit knowledge can become implicit knowledge, the model refutes the notion of a dichotomy and has opted for two intersecting continua reflecting the extent to which language is more or less controlled and analysed (Bialystok & Ryan, 1985a, 1985b). Because the process of analysis and control of linguistic processing are responsible for changes in mental representations which are the basis of learning, it seems reasonable to claim that the functioning of these processes leads to learning (Bialystok, 1994). What makes the processes function are the task demands (e.g., conversation, literacy or metalinguistic tasks).

Second, the model seeks to establish that the cognitive operations involved in processing language are not fundamentally different from cognitive operations involved in other types of learning. The two skills - process of analysis and control of linguistic processing - which are derived from general constructs of cognitive theory, can in fact be found throughout definitions of what researchers view as metalinguistic awareness. A number of researchers refer to MLA as conscious knowledge about the language (Chomsky, 1979; Downing, 1979; Gombert, 1992; Gleitman & Gleitman, 1979). Others relate it more to the ability to access that knowledge (Cazden, 1974; Hakes, 1980), and some see MLA as an interaction between the two (Bialystok, 1988, 1990, 1994; Ehri, 1975; Gass, 1983; Ricciardelli, 1993; Vygotsky, 1962). Further support for the model has come from Swan (1987) and Ellis (1987), who both see in the components a means for explaining learner variability. The consistency with which these skills appear in descriptions of metalinguistic awareness suggests their appropriateness as candidates for the two underlying components required to solve metalinguistic tasks, and thus the reason why this

model is particularly suitable to these research interests.

Third, the model accounts for one of the greatest concerns in assessing language proficiency - variability in language performance. This framework is a description of the mental processes that may be responsible for synchronic variability as opposed to diachronic variability. Synchronic variability refers here to variability in performance where there is no lapse in time which could account for the change in learners' knowledge as they evolve in the direction of more native-like proficiency (e.g., diachronic variability).

Finally, one of the great attributes of this model is that it attempts to explain how knowledge and use of that knowledge evolve over time, irrespective of the conditions under which language is being learned. That is to say, the framework places emphasis on increases in the underlying cognitive skills which are responsible for the development of analysed knowledge and the development of control of linguistic processing which is needed to use knowledge. At the same time, the model draws attention to the different experiences which can affect those increases, hence, affect learning.

1.3.2 The Bialystok and Ryan (1985a) Model

Analysed knowledge, which stems from the process of analysis, and control over that knowledge (control of linguistic processing) are each considered to develop along continuous and orthogonal dimensions to one another. Each axis in Figure 1, adopted from Bialystok and Ryan (1985a), marks increments in demands placed upon each processing component. As shown in Figure 1, the model posits that conversation tasks, reading and writing tasks, and metalinguistic tasks, make increasing demands on one or both components.

The theoretical notion of orthogonal dimensions serves to separate L2 learners' analysed knowledge of aspects of the language from their control over knowledge. The two components are independent in that each is responsible for a different aspect of processing. Analysed knowledge is at the basis of accuracy, and control of linguistic processing is at the basis of fluency (Bialystok, 1990a, Bialystok, 1994). However, they are also interdependent because neither one alone is sufficient for language processing (Bialystok, 1990a). It is possible that one could advance along one of the dimensions but not necessarily as much along the other or not at the same rate. Therefore, the development of one versus the other component is to a certain extent governed by different factors, and could result in learners having more analysed knowledge than control over that knowledge or vice versa; thus an individual could speak fluently but inaccurately or vice versa. Although such a separation lends itself to categories of language proficiency, it offers the means for more detailed descriptions of second language proficiency and its development.

While Menyuk (1985) claims that classifying metalinguistic skills along the dimensions of analysed knowledge and control over that knowledge is appropriate, she claims there is confusion in Bialystok and Ryan's (1985b) explanation of the relationship between the components. Menyuk (1985) states that the two components cannot be independent of each other because analysed knowledge would have to exist before the subject could have control over it. In a similar vein, Gombert (1992), who supports the model because he views it as a sort of declarative (knowing that) and procedural (knowing how) approach to explaining MLA, contends that the model does not specify the relationship between the components. These concerns have been addressed in several articles (Bialystok, 1994, 1991, 1990b; Bialystok and

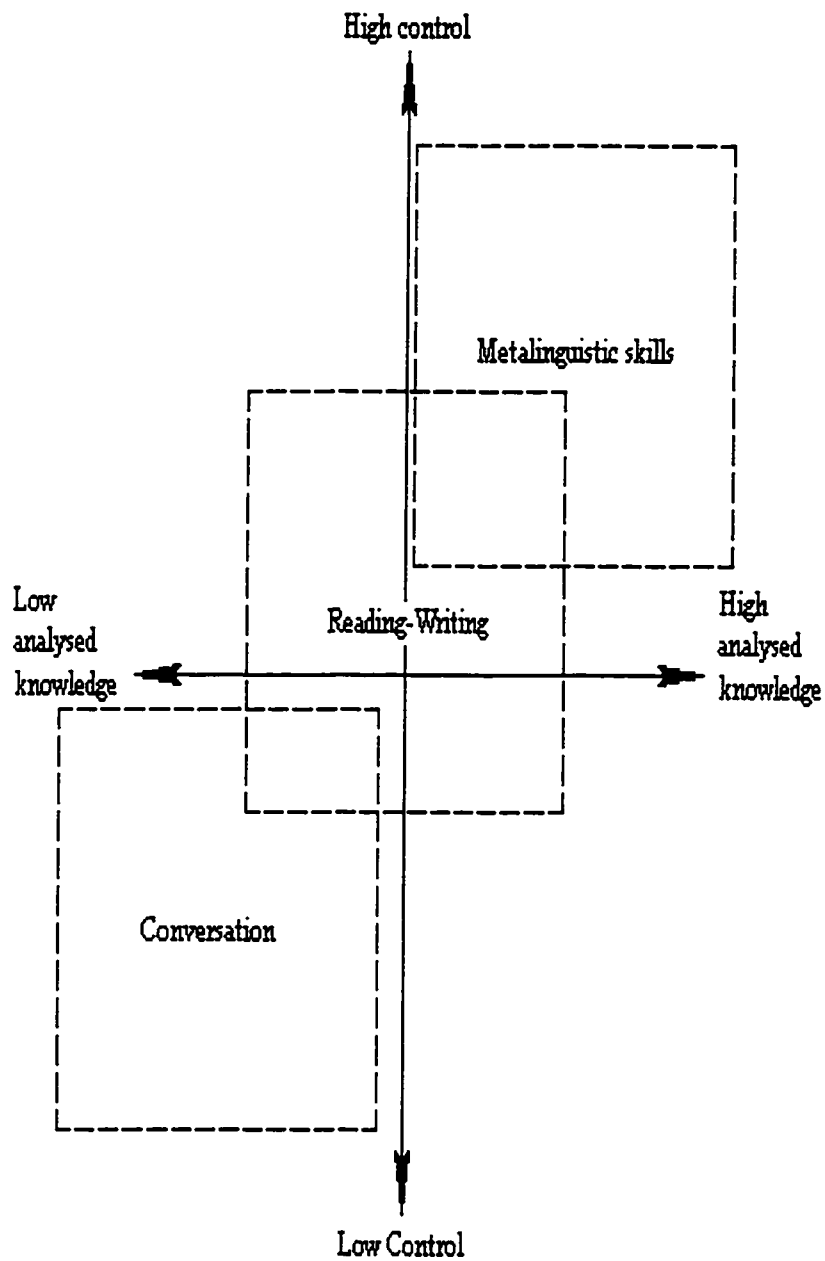


Figure 1. A Metacognitive Model of Language Skills

Note. From "Towards a Definition of Metalinguistic Skill," by E. Bialystok and E. Bouchard-Ryan, 1985, *Merrill Palmer Quarterly* 31, 3, p. 232. Copyright 1985 by Wayne State University Press. Reprinted with permission.

Ryan 1985c).

In response to Menyuk (1985), Bialystok and Ryan (1985c) state that task demands usually require that analysis and control be applied in an ordered fashion - analysis of knowledge preceding control. In this sense, the extent of analysed knowledge does impose, as Menyuk (1985) points out, a basic limitation on the range of control that is possible. The independence of the two components is most apparent in that the skills can be differentially promoted by different kinds of experiences. Therefore, as Bialystok (1994) claims, “although related to each other in important ways, they (the components) are importantly distinct from each other”(p.159). The intention of the framework is to provide a description of language acquisition and language use in various contexts. In light of the fact that these activities can be viewed as language processing, then an adequate description of them requires specification of at least two components of that process (Bialystok, 1990b).

To understand the role and the responsibility of the process of analysis, a brief account of what the term representation means in the psychological literature is required.

1.3.3 Defining Representation

Mandler (1983) claims that the term representation is generally associated with two meanings in the psychological literature. The first meaning refers to knowledge and the way it is organized. Language can therefore be viewed as a set of semantic relations that organize one's knowledge of the world. Linguistic representations described in this way are considered unanalysed and are sufficient for many if not most uses of language (Bialystok, 1991). The second way in which the term is used concerns the use of symbols. In this sense it refers to

words, artifacts or other symbolic productions which people use to represent (to stand for, to refer to) some aspect of the world, or some aspect of their knowledge of the world.

What the Bialystok and Ryan (1985a) model seeks to explain are those aspects of processing which are general and applicable to a number of symbolic systems such as the relationship between a road map and the terrain, or between a portrait and the object of the portrait. The representation involves a relation between a symbol and its referent. Language learners continually reorganize their knowledge of the linguistic system and mental representations evolve by becoming more structured, more explicit, more interconnected, resulting in higher levels of analysed knowledge. It is the difference between these two meanings which provides a means of distinguishing metalinguistic proficiency from language proficiency in its broader sense (Bialystok, 1991). Representations of language in the broad sense are organized around meanings and uses. Metalinguistic uses of language are based on representations of the second kind. In order to solve metalinguistic problems, the underlying mental representations must be organized around forms and structures and be capable of indicating the nature of the symbolic relation.

1.3.4 The Process of Analysis

It is the process of analysis which is responsible for the development and evolution of mental representations of knowledge (Bialystok 1994). Analysed knowledge can be defined as what the learner knows s/he knows about the structure (e.g., sentences in a language follow subject, verb, object order) or the formal aspects of a language. Bialystok (1982) emphasizes the importance of analysed knowledge when she states, “because the structure is apparent, the

learner is able to operate on this knowledge by transforming it, comparing it to other events and using it as a means of problem solving”(p. 183). Analysis is therefore the means by which mental representations, based more on nonanalysed or implicit knowledge and knowledge of the world, become rearranged into explicit or analysed knowledge of which an individual is aware.

With respect to the model (see Figure 1), at any point along the analysed knowledge dimension, the information itself may be the same, but as the information becomes more analysed it is possible to speak in terms of the degree of analysis (Bialystok, 1994). This is so because the learner becomes increasingly aware as well, of the structure or the form of that information. When learning a L2, the various contexts and situations in which learners find themselves or place themselves can have an effect on whether their attention is drawn to form. It is attention being drawn to form that helps learners to reflect upon the language as an object of thought, therefore, it is that which leads to analysed knowledge.

The relevance of more analysed knowledge can be seen if one differentiates between meanings and functions, on the one hand, and the symbolic relations described above, on the other. In the context of L2 learners conversing with native-speakers, learners tend to be more concerned with fluency as opposed to accuracy. Such is often the case because of the likelihood that attempts to access analysed knowledge would cause delays which could result in a breakdown in communication (Bialystok, 1979). Consequently, Bialystok and Ryan (1985a) claim that conversations generally require relatively unanalysed knowledge. This is so because in communicative situations the emphasis is on the meaning of language, whereas literacy skills depend on more analysed knowledge based on such symbolic relations as the link between letters and sounds in written language. There has been criticism (Menyuk, 1985) over the claim that

conversational contexts require relatively unanalysed knowledge. In response to Menyuk (1985), Bialystok (1991, 1994) has since acknowledged that there can exist oral domains where the demands for analysed knowledge are as great as the domains of literacy or metalinguistic tasks (e.g., lecturing). Bialystok (1991) does emphasize that any operationalization of the domains whether it be for developing theories or for research purposes, should specify the nature of the tasks used.

1.3.5 Control of Linguistic Processing

Control of linguistic processing is the component responsible for directing attention to the selection and integration of information (Bialystok, 1991). The control component is responsible for three functions - (1) the selection of items of knowledge or information; (2) the co-ordination of these items; and (3) the extent to which selection and co-ordination can be carried out automatically. According to Bialystok and Ryan (1985a), when the required information is not obvious or readily accessed (e.g., retrieving the response to a question), selection (e.g., choosing the correct response) becomes difficult. If a number of sources must be consulted in order to access the required information, then coordination will suffer (reformulations e.g., j'ai allé devient je suis allé). If there is difficulty with one or more of these aspects of the control function then speed or fluency becomes difficult (Bialystok & Ryan, 1985a).

Bialystok (1990a) states that the model makes no distinction between automatic and controlled processes, often associated with the cognitive theory of learning (Schneider & Shiffrin, 1977). In her view (Bialystok, 1990a), control of linguistic processing refers to selective processing of relevant information regardless of automaticity. An example would be one's ability

to listen to directions being given in the target language and to be able to get the most important and pertinent information about getting from point A to point B. However, control over the accessibility of linguistic information is considered in terms of whether it is automatic or not automatic, in the sense that effective control processes give the perception of fluency or automaticity upon performance (Bialystok, 1981, 1990a). The interdependence of the components can be understood when one considers that the more analysed the knowledge the more accessible it will be, and as a result the need for less attention on the part of skilled performers. The effect of a decrease in the need for attention is that processing becomes more automatic (Bialystok, 1992). In this sense, the components can be viewed as being jointly responsible for linguistic performance (Bialystok, 1990a).

Bialystok's (1990b) view of the interdependence of the components has been criticized as being endowed with a dual nature similar to that associated with knowledge and skill (Hulstijn, 1990). Bialystok (1990b) contends that the distinction between analysis and control is not a distinction between knowledge and skill. She further states that to try to incorporate such a distinction would mean that each component would have to reflect both aspects of skill and knowledge. In her own words - "the process of analysis depends heavily on knowledge-based representation, but demands as well the analytic skill to restructure those representations at a higher level, while the process of control depends heavily on the skill of directing attention, but such attention would be vacuous without an adequate knowledge base" (Bialystok, 1990b, p. 48).

1.3.6 Metalinguistic Tasks and the Process of Analysis

Because different uses of language for different purposes require different levels of

control or analysis, tasks can be classified along each continuum (see Figure 1). The representation of tasks along the continuum refers to whether they require analysed versus nonanalysed knowledge and automatic or nonautomatic retrieval (one facet of control of linguistic processing). Metalinguistic tasks which make greater demands on the analysis component, therefore requiring higher levels of analysis, are those in which learners must perform the three steps of detecting, correcting and explaining the detected errors (Bialystok & Ryan, 1985a, 1985b; Bialystok, 1982, Bialystok 1994). In L1 or L2, simply judging a sentence as grammatical or not reflects implicit or unconscious knowledge (Bialystok, 1991; Reber, 1976). It can therefore be done without MLA, that is without being aware of the basis of judgement (Bialystok, 1991; Reber, 1976). More difficult tasks which demand justification of correction require the learner to access and elaborate upon their linguistic knowledge, which is a reflection of metalinguistic awareness (Bialystok, 1982; Bialystok & Ryan, 1985a, 1985b; Gass, 1983; Sorace, 1985). Both the written and oral grammaticality judgement tests to be used in the present study make such demands on learners' analysed knowledge.

1.3.7 Metalinguistic Tasks and Control of Linguistic Processing

Problems or tasks which require paying attention to some aspect of input which may not be salient, usual or expected make very high demands on selection attention, a function of control of linguistic processing (Bialystok, 1992). For example, in situations where language is presented outside the context to which it refers, either orally or written, demands are made on control of linguistic processing. As meaning is usually the salient aspect of an orally presented linguistic message, focusing on the form of the message requires greater control. Tasks which

draw on the subject's ability to manipulate linguistic knowledge and deal with competing information are considered to reflect the control of linguistic processing component. A cognitive control dimension can also be added to a task which would normally be considered to represent analysed knowledge. For example, in child MLA studies, a grammaticality task can be confounded with a control problem if the meaning is also in need of correction or clarification, as in word-renaming tasks similar to Piaget's (1929) "sun-moon" task. Here children were told that the sun was now going to be called the moon or that the moon was going to be called the sun. The task was for children to answer questions such as 'What would you call the thing in the sky when you go to bed?'.

Judging the grammaticality of orally presented sentences, which requires the learner to make a relatively immediate judgement, is also considered to make high demands on the control of linguistic processing component. L2 learners' retrieval procedures will vary according to the demands of the situation, the information required and the fluency or automaticity of the individual's control over the information (Bialystok, 1982).

Chapter II

Literature Review

2. Introduction

Inspired by what Yaden & Templeton (1986) consider to be an etymological account of how the term metalinguistic has evolved, the review begins with the section “Towards a definition of MLA” which is a historical review of how the term came about. This is followed by an explanation of the controversy regarding the definition of metalinguistic awareness. The review consists of two main parts - (1) Metalinguistic Awareness in L1; and (2) Metalinguistic Awareness in L2. Each part contains an introduction which is followed by sub-sections related to research in both child and adult MLA.

2.1 Towards a Definition of MLA

The term metalinguistic awareness (MLA) has been adopted by a number of disciplines (e.g. linguistics, psycholinguistics, and education) to describe a spectrum of abilities and behaviour of children and adults within cognitive and language development. Although the interest in the present study is ultimately in MLA and the adult second language learner, much of the work done in this field has stemmed from at times intersecting developmental domains. These developmental domains link MLA to first language acquisition, cognitive development and the development of literacy skills (Birdsong, 1989). The plethora of definitions for metalinguistic awareness leaves some researchers to claim that consensus as to exactly what constitutes metalinguistic awareness has yet to be achieved (Bialystok, 1991; MacLaren, 1993;

Yaden and Templeton, 1986). This lack of definitional consensus is a reflection of the various domains considered to affect and be affected by MLA.

The term can be traced to philosophy in the 1920s and in particular to the Polish mathematician, logician, Alfred Tarski. Tarski (1983) distinguished between the language being studied and the language used to talk about that language - “metalanguage”. For some fifty years philosophers respected Tarski’s definition of metalanguage and consequently considered the term metalinguistic to be its adjective form (Burchfield, 1976). The 1940s brought about a sociolinguistic use of the term as it referred to the linguistic science which studied the “relationship of language to the rest of the culture” (Pei & Gaynor, 1954, p.155). In a similar vein, Smith and Trager (1952) used the term to define aspects of linguistic science dealing with “the relations of linguistic behaviour (language) to other human behaviour”(p. 163). They claimed not only that metalinguistics was the study of what people spoke or wrote about, but why they chose to do so.

In the 1950s, linguists generally employed the term metalinguistic to refer to metalanguage, which was composed of linguistic terminology such as syntax, phoneme, lexeme, and so forth (Gombert, 1993). It is Roman Jakobson (1980) who is said to have been the first to use the related adjective “metalingual” to refer to developing language behaviour in individuals. For Jakobson, any recourse to the code itself, that is language used to refer to itself, could be defined as metalinguistic. As Gombert (1992) points out, in its linguistic sense, metalinguistics, which has developed from Jakobson’s definition, is linguistic activity which focuses on language. Viewed this way, metalinguistics is limited by its dependence on the ability of language to refer to itself (Gombert, 1992).

Since the 1920s, the definition of the term has taken on a psycholinguistic as well as a psychological-educational slant, although within the fields there remain various interpretations of the term. Yaden and Templeton (1986) claim that the term metalinguistic, viewed today from the psycho-educational perspective, has as a referent varying states of psychological awareness.

In Gombert's (1992) analysis of what constitutes a psycholinguistic conception of MLA, he states that it is consensus regarding the importance of the notion "attention" which unifies the discipline. However, he further states that depending on the researcher, the emphasis shifts from a declarative aspect of MLA to a procedural aspect, or a balance between them (Gombert, 1992). Knowing that one knows, and one's ability to reflect on language in and for itself, is what Gombert classifies as the declarative aspect of MLA. The procedural aspect is linked to the processing of language whether this be during language production or comprehension. From this point of view, metalinguistic activity is characterized by an intentional monitoring which the learner uses when attention and selection are required during language processing. That is to say, it is the learner's ability to treat language as an object of thought (Cazden, 1974; Gombert, 1992; Hakes, 1980; VanKleeck, 1982).

Whereas linguists are interested in studying verbal productions to discover linguistic features which indicate the use of language to refer to itself, psychologists analyse subjects' verbal behaviour so as to infer processes of conscious manipulation of language as an object. As a result, what is viewed as metalinguistic in one discipline is not necessarily in the other. Verbal productions made by young children about their own language are considered by linguists to demonstrate metalinguistic awareness. The same verbal productions can only be viewed as such by psycholinguistics if the conscious, reflective nature of the cognitive activity has been

established (Gombert, 1992).

2.1.1 Defining MLA for the Purpose of the Present Study

According to Bialystok (1991), the term metalinguistic is used to describe tasks, skills and levels of awareness. Bialystok's (1991) description of how the term is used best suits the needs of the present study, and offers both an empirical and theoretical basis for an interpretation of the results.

When applied to tasks, language used in making repairs or judgements about grammaticality is classified as metalinguistic. This perspective is the basis of the operational definition of metalinguistic awareness. For the purpose of the present study, learners' MLA, defined as conscious knowledge about the formal aspects of the target language, is operationalized through the results of the grammaticality judgement test. Each learner is assigned an index of MLA on the basis of his or her score on the judgement test.

When the term is associated with a skill, the emphasis is on the learner's ability to focus on language forms. In this instance, the term metalinguistic is describing the learner's mental state or mental representation. This refers to how the evolution of mental representations towards more analysed knowledge allows the learner to have access to knowledge of structure (e.g., form), as well as to meaning. This will be further elaborated upon in a later section.

When defined as a level of consciousness Bialystok (1991) claims that any performance can be viewed as metalinguistic if it has been done with the deliberate control and awareness of the language learner. In this case however, performance must indicate that the learner is aware of the forms and functions of the language being manipulated. Metalinguistic tasks oblige learners to access and elaborate on analysed linguistic knowledge, therefore, demonstrating learners'

control and awareness of language as an object of thought. Particularly relevant is the fact that metalinguistic tasks can be constructed so as to make increasing demands on the two components believed to underlie metalinguistic proficiency.

2.2 Metalinguistic Awareness in L1

2.2.1 Introduction

Over the past fifteen years there has been increasing theoretical and empirical interest in children's metalinguistic awareness. Most of the debate concerns the possible relationship between metalinguistic skill (e.g., understanding the relationship between forms and meanings) and literacy (Ehri, 1979; Van Kleeck, 1982). Consequently, empirical research in children's metalinguistic awareness has focused primarily on metalinguistic abilities which are related to the child's ability to learn to read - phonological awareness, word awareness, syntactic or grammatical awareness and pragmatic awareness. Pragmatic awareness is concerned with learners' awareness about the appropriateness of utterances from a sociopragmatic point of view and not from a grammatical point of view. For this reason, it will not be included in the present review since the focus here is on those domains which can be linked to knowledge about the formal aspects of the language - phonological, word and syntactic awareness. The review of the literature on metalinguistic awareness in L1 is divided into two parts- (1) Child Metalinguistic Awareness, and (2) Adult Metalinguistic Awareness. Each part is first divided into sections where studies related to the types of metalinguistic abilities are presented. This is followed by a section entitled "Discussion", which in turn is followed by a summary of conclusions which can

be drawn from the studies.

2.3 Child Metalinguistic Awareness

2.3.1 Phonological Awareness

Nesdale, Herriman & Tunmer (1984) claim that the most appropriate place to begin an investigation of children's awareness of language is at the phonological level, in that it consists of the most elementary units of language. Phonological or metaphonological awareness (terms used interchangeably) has been defined as the ability of the subject to identify the phonological components in linguistic units and intentionally manipulate them (Gombert, 1992). In other words, it is the ability to understand that words can be segmented into individual sounds and phonemes (James, 1988). Generally, tasks which demonstrate this ability require children to identify and segment syllables and phonemes.

Many metaphonological experiments seeking to verify whether children can identify syllables examine the child's early ability to identify rhymes (Content, Kolinsky, Morais & Bertelson, 1986; Lenel & Cantor, 1981; Nesdale et al., 1984; Smith & Tager-Flushberg, 1982). Lenel & Cantor (1981) examined the ability of children 4-7 years of age to identify rhymes and found the level of success for 4-5 year olds was 77%, for 5-6 year olds, 83% and for 6-7 year olds, 87%. Smith & Tager-Flushberg (1982) provide similar percentages for the same age groups, while Liberman, Shankweiler, Liberman, Fowler & Fischer (1977) found a similar percentage (90%) only for 7 year olds. These results point to syllable identification tasks as being difficult for most children younger than 6 or 7 years of age. Generally, research which has been

carried out on syllable segmentation has focused on studies where children have been asked to repeat a word, once normally, and then to elide a syllable (Fox & Routh, 1975; Rosner & Simon, 1972). These studies have shown that (1) with training, children as young as 3 years of age can obtain a 60% success rate in syllable manipulation tasks; (2) that deletion of the medial syllable (re(pro)duce - reduce) is more difficult than first and last syllable deletion; and (3) that the task as well as the child's understanding of the task influence results as to the age at which this metalinguistic ability appears to emerge.

The identification of phonemes, which involves the deconstruction of the syllable has been shown to be more difficult for the child than is identification of the syllable (Ehri, 1991; Gibbs, 1996; Liberman et al.,1977; Yopp, 1988). Studies carried out by Liberman (1973) and Tunmer and Nesdale (1982) on 5, 6, and 7 year olds and by Calfee, Lindamood and Lindamood (1973) on 6-17 year olds provide evidence that the counting of phonemes emerges relatively late, at 7-8 years of age. Similar experimental designs exist for phonemic segmentation as for syllabic segmentation, and results show that phoneme deletion tasks are again more difficult for children than syllable related tasks. Bruce (1964) presented words like (h)ill and lo(s)t and interpreted the difficulty encountered by young children (n = 67) as support for his claim that children below the mental age of 7 cannot perform phonemic analysis of words. Bruce (1964) further suggests that up until the age of 9 years children may not yet be able to perform phonemic segmentation with high success. Rosner and Simon (1971), who carried out a similar experiment to that in Bruce (1964), found that success depended on the difficulty of the analysis required, and consequently claim that the age can vary between seven and twelve years of age.

Although Yopp (1988) and Adams (1990) claim that phoneme manipulation is the last

aspect of phonological awareness to develop, Content et al. (1982, 1986) have shown that with a little training, children as young as 5 years old can perform phonemic tasks well. In a similar vein, Chaney (1989) found that limiting the complexity of word segmentation tasks gave an 80-90% success rate with children 4 and 5 years old.

2.3.2 Word Awareness

Word awareness generally refers to recognizing that utterances are made up of and can be broken down into individual words (James, 1988). According to Bowey and Tunmer (1984), there are three requirements for full word awareness, and these emerge in the following order - (1) awareness of the word as a unit of language; (2) awareness of the word as an arbitrary phonological label (the word/referent distinction); and (3) comprehension of the metalinguistic term word.

Papandropoulou and Sinclair (1974) have studied children's definitions of word, and of words in general, as a means of establishing their conceptions of language units. They claim that such definitions are a measure of a developing ability to reflect on language as an object (Papandropoulou & Sinclair, 1974). Based on the results of their study of 163 children aged 4-12 years, Papandropoulou and Sinclair (1974) claim that (1) children aged 4-5 years define what a word is by providing information about the object (e.g. "fraise, c'est un mot parce que ça pousse dans le jardin"; or the word train being proposed in response to a request for a long word); (2) it is not until age 6-7 years that words are perceived as independent of such descriptions and responses such as the following example are found "un mot, c'est des lettres"; (3) from the age of 7 years onwards words are considered by children to be larger and meaningful units (e.g., a word

is a bit of a story) and are defined metalinguistically by the use of words such as an adjective, noun or verb (p. 59).

Other research (Drecher & Zenge, 1990; Ehri, 1975; Fox & Routh, 1975; Grieve et al. 1980; Hakes, 1980) also points to 7 years as being the age when children know that certain types of words are to be treated as units. Snow (1990), who carried out a study on childrens' skill to define words, claims that childrens' word awareness abilities fluctuate and are influenced by the opportunity to practice giving definitions. Karmiloff-Smith, Grant, Sims, Jones and Cuckle (1996) carried out three experiments where children (n = 86) aged 4-5 years listened to a story and were then asked to repeat the last word or the last thing the narrator had uttered before stopping. Results show that children as young as four and a half years could differentiate word and thing.

Riccardelli, Rump, and Proske (1989) and Riccardelli (1993) used, among a variety of metalinguistic tasks, word awareness tasks, as a means of investigating child MLA. These studies differ from those presented thus far, in that the goal was not an investigation of the link between MLA and literacy, or the age of the onset of metalinguistic awareness. The Ricciardelli et al. (1989) study provided support for the view that metalinguistic awareness can be considered as a unitary concept. Ricciardelli's (1993) later study no longer sought to establish that MLA was a unitary concept, but rather examined tasks in terms of demands made on two information-processing components. Results provide support for the Bialystok and Ryan (1985a) model, which claims that tasks can be qualified as primarily making greater demands on analysed knowledge or control of linguistic processing.

2.3.3 **Syntactic Awareness**

Syntactic awareness is the child's emerging ability to reflect upon the internal grammatical structure of sentences (Tunmer & Grieve, 1984). This conscious knowledge of syntax can be perceived in the subject's metalinguistic speech, which focuses on the grammaticality of utterances. Manifestations of syntactic or metasyntactic awareness (terms used interchangeably) are assessed through tasks which require judgements of acceptability and grammaticality. The tasks which are part of such studies can range from identifying grammatical versus ungrammatical sentences to identifying anomalous ones which, for example, violate constraints on the distribution of animate/human features, such as the story believed the teacher (Bialystok, 1986; deVilliers & deVilliers, 1972; Howe & Hillman, 1973; Ricciardelli, 1993).

Early studies created some controversy over whether a distinction should be made between grammaticality and acceptability judgements. In one of the earliest studies on judgements of acceptability by young children, three 2 year-olds were asked to judge sentences (e.g., eat the cake or cake the eat) as good or silly (Gleitman & Gleitman, 1970). The Gleitman team interpreted the results from this study as providing evidence that children as young as 2 years of age have some ability to distinguish well-formed sentences from deviant ones. Others (de Villiers & de Villiers, 1972; Gombert 1992) question this interpretation since syntactically incorrect sentences were accepted by the youngsters in more than half the cases. De Villiers and de Villiers (1972, who carried out a modified version of the Gleitman and Gleitman (1970) study, suggest that young children's acceptability judgements are based more on semantic factors than on syntactic factors. However, more recently, Chaney (1992) carried out a study which also provides evidence that preschoolers are able to make judgements and productions. This Chaney

(1992) interprets as indicating they are learning to think about the forms of language as well as meaning.

Tunmer and Grieve (1984) claim that children pass through three stages before carrying out acceptability judgements based solely on linguistic grounds. Children from 2-3 years of age tend to judge sentences according to whether or not they have been understood. At approximately 4-5 years of age, children tend to base their judgements on content. Here sentences which are understood but not believed by the child are rejected as are those which the child does not like. It is not until the child reaches age 6-7 that s/he realizes that the form of the sentence can be separated from its meaning and therefore is able to judge the sentence on purely linguistic grounds. With an increase in age there is an increase in correct rejections and there seems to be general consensus that performance at all ages is better on determining the grammatical than the ungrammatical utterances (Hakes, 1980; Sutter & Johnson, 1990).

2.3.4 Discussion

For the most part, the studies presented indirectly point to two issues of debate in research in phonological awareness - the age of the onset of metalinguistic ability and the kinds of tasks considered to demonstrate such awareness. The age at which children can perform metalinguistic tasks with a high rate of success is viewed as an indication of the age of the onset of MLA. The broad range in the age at which metalinguistic awareness appears to emerge in children reflects two schools of thought on the nature of MLA. Those who view MLA as a distinct type of linguistic behaviour whose development is independent of basic linguistic acquisition link metalinguistic abilities to the emergence of literacy (Birdsong, 1989; Ehri, 1975;

Lieberman, Shankweiler, Fischer & Carter, 1974; Markman, 1977; Tunmer et al., 1988). The advocates of this approach, known as the autonomy hypothesis, claim that comprehension and production skills in language learning develop first without the need for MLA during the preschool years.

Researchers attempt to correlate individual variation found on metalinguistic tasks to individual differences in the rate of acquisition of and attainment of proficiency in reading and writing. Since a number of the studies show successful completion of various metalinguistic tasks at the age of 6-7, the age when children are learning to read, they support the literature which claims metalinguistic skills are correlated with the onset of literacy. The ongoing debate is over whether MLA enhances the child's ability to read (Mattingly, 1972; Tunmer & Bowey, 1984; Van Kleeck & Schuele, 1987) or whether reading promotes MLA (Vygotsky, 1962). Another point of view is to see an interaction between the two (Ehri, 1973). Ehri (1973) claims that a certain amount of MLA is necessary before the child learns to read and that learning to read will in turn increase the child's awareness of language.

Other studies presented here support the hypothesis that metalinguistic skills emerge at a much younger age, that basic comprehension and production processes develop at the same time as MLA, and that the two interact and facilitate each other (Chaney, 1992; Karmiloff-Smith et al., 1996; Van Kleeck & Schuele, 1987; Webster & Plante, 1995). Evidence from studies (Chaney, 1992; Karmiloff-Smith et al. 1996) using spontaneous data, which show preschoolers as young as 2 years of age demonstrating some metalinguistic ability, support this "interactionist" point of view. In general, the studies presented here force researchers to examine the context and question the goals of the research before drawing conclusions about the age of

the onset and the nature of metalinguistic awareness. Chaney (1992) underlines this by stating that the two “hypotheses” are concerned about very different issues.

On one hand, those who support the “autonomous hypothesis” define metalinguistic ability as complete mastery of a skill based on at times complex tasks, while “interactionists” are interested in the early emergence and stages of development of metalinguistic awareness. Metalinguistic tasks which are said to reflect the mastery of skills usually have a passing criterion, such as a percentage correct, on the basis of which research hypotheses are confirmed or rejected. It seems reasonable to claim that the same results would not be obtained in experiments seeking to show mastery of skills as in those using spontaneous data which is often solicited in a communicational setting (e.g., two people participating in a conversation). This points to an important variable which could affect the age at which metalinguistic abilities appear to emerge: the nature and the type of the metalinguistic task.

Several conclusions can be drawn from the results of studies in child metalinguistic awareness reviewed in this section. They are summarized as follows:

2.3.5 To Summarize

(1) The age at which children are able to perform phonological awareness tasks ranges between 2-12 years of age, depending on what is taken as proof of phonological awareness (e.g., spontaneous versus elicited speech), the circumstances (e.g., whether or not the learner has received some training), and the difficulty of the task (e.g., phonemic versus syllabic tasks).

(2) Syllable identification tasks are difficult for most children younger than 6-7 years of

age.

(3) Phoneme manipulation (e.g., adding, deleting, or moving phonemes) appears to be the last aspect of phonological awareness to develop.

(4) Children under 7 years of age have difficulty separating words from the things to which they refer.

(5.) Semantic factors play a more important role than syntactic factors in children's acceptability and grammaticality judgements up until the age of approximately 6-7 years.

(6) Because findings vary from study to study, learners' performance appears to be sensitive to the nature of the tasks they are asked to perform, and the context in which they are performed.

(7) There is evidence that tasks can be classified according to the demands made on two processing components - process of analysis and control of linguistic processing.

2.4 Adult Metalinguistic Awareness

2.4.1 Introduction

Much of the research in adult MLA in L1 has focused on speakers' judgements of the grammaticality or the acceptability of sentences. This stems from the fact that, for more than thirty years, linguists have examined adult native speakers' judgements of grammaticality in an attempt to formulate theories of grammar. One of the goals of linguists has been to characterize a set of linguistic distinctions that is representative of all speakers of a language, as well as to determine what its organization might be, and how such a set might be systematically

represented (Spencer, 1973). Since linguists are members of the speech community, they have often used their own intuitions to differentiate linguistic levels (Spencer, 1973). However, in an attempt to analyse the common natural language of a community, attention has shifted towards the study of native speakers considered linguistically naive (e.g., nonlinguists).

This part of the Literature Review will first present phonological and word awareness studies in adult L1 linked to research in literacy, followed by studies in syntactic awareness. Although intuitions about the well-formedness of sentences in L1 form the criterion for the inclusion of utterances in grammatical rule construction, the goal here is not to expound on the consequences of such judgements for linguistic theory. Rather the intention is to present grammatical judgement tasks as having been an integral part of the study of what L1 speakers know about the language. For this reason, a summary of conclusions related to L1 speakers' abilities to make grammaticality judgements will immediately follow the review of the literature.

2.4.2 Phonological Awareness

At the phonological level, Read (1978) claims that judgements of vowel similarity from a phonetic point of view (e.g., bait, bet, bat; bite, bit) deteriorate in adulthood. Adults generally judge vowels in the examples above as being related because of spelling similarities. It seems that familiarity with the written form eventually results in diminished awareness of phonetic relationships (Read, 1978). Consequently beginning students of phonetics usually have to re-acquire the judgements which kindergarten age children are capable of correctly making (Read, 1978).

Morais, Carey, Alegria and Bertelson (1979), who carried out a study with nonliterate

adults on their ability to segment words, found similarities in their ability with that of young children. The task used was that of adding or deleting a sound segment from a word or nonword (e.g., adding ch to the Portuguese word uva- grape). The results provide evidence of the difficulty nonliterate adults have in manipulating sounds within a syllable. A study of low-level literate adults showed, as is the case with young children, that dividing one syllable words into smaller units is more difficult than dividing words of several syllables (Hamilton & Barton, 1983). Generally, the syllable is easier for children and adults alike to work with. Scholes and Willis (1987) found nonliterate adults to be fairly proficient at judging phonetic similarity of minimally paired words.

2.4.3 Word Awareness

The study of adult word awareness has been closely linked with studies of literacy because it is while learning to read and write that the forms of language need to become an object of thought. While learning to read presupposes some awareness, it also provides information which increases one's awareness (Barton, 1985). Hamilton and Barton (1983) carried out a study to determine the word awareness of sixty monolingual adults of varying levels of literacy. Results show that like young children, the adults in this study tended to frequently treat phrases as units. Hamilton and Barton (1983) also found that adults generally use grammatical information about the language to isolate words, whereas young children have a more difficult time applying grammatical information correctly.

Typical errors found were those where a phrase would be treated as a word (e.g., more or less). These are considered conventional errors because there is "an element of orthographic

arbitrariness into the decision as to whether or not the form should be written as one word” (Barton, 1985, p.192). Barton links this type of error to the same problem linguists face when they are called upon to analyse speech into words. It is the linguist’s job to decide if a sequence of speech constitutes a word. This is done by determining whether or not the form can occur freely in a sentence or whether it is always bound to another word or words. Such a hypothesis points to a qualitative difference between adult and children’s word awareness (Barton, 1985). Adults, literate and nonliterate, utilise information on convention as well as grammatical information about the language to isolate words. In so doing, they demonstrate a more sophisticated awareness of words (Barton, 1985). Children’s range of errors are not limited to conventional errors. This can be seen in children’s tendency to collapse words (e.g., a drink), rather than segment them (Ferreiro, 1978).

2.4.4 Syntactic Awareness

A number of studies (Gleitman & Gleitman, 1970; Mohan, 1977; Quirk & Svartvik, 1966; Spencer, 1973) have examined the grammaticality judgements in L1 of adults considered to have different levels of linguistic awareness. In the Quirk and Svartvik (1966) study of a group of English honors students and a group of geography students there was no significant between-group difference in their ability to judge sentences. The Gleitman and Gleitman (1970) study of two groups of adults (clerical workers and Ph.D candidates) showed that syntactic oddities in test materials posed greater difficulty than semantic peculiarities for both groups. Between-group differences were also much greater for the syntactic aspect of the sentences in comparison to the semantic aspect. Spencer’s (1973) study showed that nonlinguists agreed among themselves as to

the acceptability and unacceptability of 80% of the sentences, but agreed with the linguists judgements in only 50% of the sentences. Mohan (1977) compared the grammaticality judgements of 64 freshman level linguistic students with 32 freshman level anthropology students and found no differences.

Vetter, Volovecky and Howell (1979) had 152 adult male subjects judge sentences for grammaticalness and ordinariness under five different modes of stimulus presentation. Results showed that judgements of grammaticality are not made independently of meaningfulness and ordinariness. Subjects in this study also produced a wide variety of justifications for their judgements.

In studies on syntactic awareness of adults carried out by Scribner and Cole (1981) all groups including nonliteratees succeeded in identifying the ungrammatical features of paired sentences. However, it was when subjects had to explain their judgements that group differences between the literate and nonliterate became apparent. Nonliterate adults, like young preliterate children, were unable to explain the reasoning for their judgements. The same disparity was found in the subjects' ability to correct ungrammatical phrases, with the literate group outperforming the nonliterate group. Scholes and Willis (1987) report that nonliteratees appear to judge acceptability by semantic rather than syntactic criteria. Studies show that the acceptability of sentences for nonliteratees stems from plausibility or whether they are pragmatically and morally acceptable (Scholes & Willis, 1987; Scribner & Cole, 1981).

2.4.5 To Summarize

- (1) Although adults do not always agree about the acceptability or grammaticality of

sentences, the ability to make such judgements is part of adults' linguistic competence.

(2) Studies show a high between-subject variation in justifications for judgements provided by adults.

(3) Nonliterate adults share some of the difficulties that young children have in phonological and word awareness tasks.

(4) Adults use more grammatical information about the language than do children in isolating words.

2.5 Metalinguistic Awareness in L2

2.5.1 Introduction

Although research in child MLA in a second language has concentrated on much the same areas as in child L1 studies, word awareness studies have been the main focus of research. Focusing on word awareness can be linked to the fact that interest in child MLA and L2 learning is to some degree cross-related with research in acquisition of reading skills. In a manner similar to the section on MLA in L1, studies on child MLA in L2 which pertain to three types of metalinguistic abilities are first presented. This will be followed by a discussion of research findings and a summary of the conclusions which can be drawn from the review of literature.

Chapter I introduced and described in detail the conceptualization of MLA for adult L2 learners, as well as its importance to L2 learning. Consequently, the section entitled here "Adult Metalinguistic Awareness in L2" will be a review of the empirical studies carried out in adult MLA. As research in adult MLA in a L2 has mainly focused on learners' judgements of

grammaticality, and because of their importance to the present study, the section related to adult MLA in L2 concentrates solely on this particular metalinguistic activity. In this section, the summary of conclusions to be drawn from the review of empirical data is presented prior to the discussion. The intention of the section “Discussion” is two-fold. First, the types of studies reviewed and their findings are synthesized. Then, in order to lead up to the research questions, the discussion points out the nature of the evidence that past research has provided as well as pointing out what remains to be investigated. This is followed by the presentation of the research questions and hypotheses.

2.6 Child Metalinguistic Awareness in L2

2.6.1 Phonological Awareness

Although most of the studies (BenZeev, 1977; Bialystok, 1986, 1988a, 1998b, Sutter & Johnson, 1990; Yelland, Pollard & Mercuri, 1993) on childrens’ metalinguistic abilities in a second language have been carried out on word awareness, some researchers claim that the second language learning experience can also have a positive effect on phonological awareness and syntactic awareness (Davine, Tucker, & Lambert, 1971; Galambos & Hakutas, 1988; Goncz & Kodzopeljic, 1991; Rubin & Turner, 1989). Rubin and Turner’s (1989) study on Grade I French Immersion children showed they had greater ability in segmenting phonemes in phoneme deletion tasks than their equivalent monolingual peers. In a similar vein, Goncz and Kodzopeljic (1991) compared syllabic and phonemic deletion abilities in children aged 5-6 years and found those who had contact with a second language to outperform monolinguals.

2.6.2 Word Awareness

Most of the studies seeking to establish the benefits of learning a second language and MLA have focused on word awareness with particular attention given to the child's ability to recognize the arbitrary relationship between the word and referent (BenZeev, 1977; Bialystok 1986, 1988; Sutter & Johnson, 1990; Yelland et al., 1993). Researchers claim that the metalinguistic abilities which are believed to be enhanced by L2 learning can also have a positive effect on accelerating reading acquisition (Bialystok, 1988; Rubin & Turner, 1989; Tunmer & Bowey, 1984; van Kleeck & Schuele, 1987). For example, being aware that words are separate from the things to which they refer can enhance reading development because in learning to read the child must realize that word forms and word meanings are not the same thing (Chaney, 1989).

Generally research in MLA and child L2 learning points to a metalinguistic advantage in some form or degree for the second language learner, and a number of studies suggest that second language learners' MLA appears to be accelerated by their contact with a foreign language. Early evidence of a metalinguistic advantage first came from Piaget (1929). Piaget (1929) studied children's ability to differentiate between words and their referents, and found the L2 learners to outperform monolinguals. In Piaget's (1929) study, the task involved children being told that the sun was to be called the moon, and the moon called the sun. Children were then asked what was in the sky when they went to bed? Vygotsky (1962), Ben Zeev (1977), and Bialystok (1986) also concluded that bilingual children were aware earlier than their monolingual peers of the arbitrary nature of the word/referent distinction.

Bialystok (1986) had children perform tasks such as choosing the bigger of two words in

a pair such as train and caterpillar. Results showed that young French Immersion students were more advanced in this type of word judgement tasks than their equivalent age English monolinguals. Since these tasks make higher demands on learners' control of linguistic processing, Bialystok (1986) has concluded that contact with a L2 increases learners' level of control of linguistic processing. When childrens' level of bilingualism is taken into account, Bialystok (1988a) has shown that fully bilingual children perform better than partially bilingual children on tasks requiring high levels of analysis. Other research suggests that children who are fluent in two languages have greater analysed knowledge of their language than their monolingual peers (Bialystok, 1987; Diaz, 1985; Galambos & Goldin-Meadow, 1990). It is the child's ability to access this knowledge which is indicative of their MLA (Yelland et al., 1993).

2.6.3 Syntactic Awareness

At the syntactic level, Bialystok's (1986) study of judgements of grammaticality of monolingual and bilingual 5-9 year olds, showed that grammatical sentences are generally recognized earlier than ungrammatical sentences. Sentence types were of four sorts - grammatical and meaningful (GM); ungrammatical but meaningful (gM); grammatical but not meaningful (Gm); and ungrammatical and not meaningful (gm). Monolinguals and bilinguals performed similarly on GM sentences, while monolingual and older children were more accurate for gm sentences. Monolingual children found gM sentences to be easier than Gm sentences, while bilingual children found Gm sentences to be easier than gM sentences. Although the difference between the two groups was not significant for gM, there was a bilingual advantage for Gm sentences. Since judging grammatical but not meaningful sentences (Gm) requires the

learner to direct his or her attention to the structure of the sentence and to ignore the meaning, the bilingual advantage provides proof of these learners having a higher level of control of linguistic processing. Such an increase in one of the cognitive operations involved in language processing is of importance particularly in light of Bialystok's (1994) claims that (1) the same skill components are involved in other types of learning and (2) that different experiences can influence learners' level of analysed knowledge and control of linguistic processing.

Galambos and Hakuta's (1988) study of Spanish speaking children enrolled in English Immersion (roughly half of the instruction given in English) concurs with this study in that the L2 learners outperformed their monolingual peers. In the correction of syntactic errors these immersion children were a year in advance of age equivalent monolingual children. The monolinguals were still focusing on the semantic content of the sentences, whereas the immersion students could easily focus on the form. Another study, Berthoud-Papandroupoulou and Sinclair (1983) had children between 4 and 10 years of age judge the translation of sentences produced orally. Results showed that younger children (4-6 years) judged the grammaticality based on the configuration of the sounds of the sentence and not on its syntactic structure. Only those children 7 years of age and older were able to provide justifications based on syntactic structure.

2.6.4 Discussion

Research into the metalinguistic abilities of second language learners is important because the L2 learning experience provides an opportunity for researchers to investigate what may be considered a means of enhancing metalinguistic awareness which is not related in a direct

way to processes involved in reading. Thus, the L2 learning experience can be viewed as a separate variable in explaining what increases metalinguistic abilities.

Studies presented where L2 learners demonstrate a higher level of MLA than their monolingual peers point to L2 learners having more analysed knowledge. This is of relevance, since one difficulty for beginning readers is that they must tap into tacit linguistic knowledge on which spoken language depends and somehow be able to map incoming information to it. Yet, in order to map between language forms, children's knowledge must be conscious; that is, they require MLA (Bialystok, 1987; Nesdale et al., 1984; van Kleeck & Schuele, 1987; Yelland et al., 1993). It is L2 learners' apparent increased access to tacit knowledge which makes the L2 learning experience an important variable when examining childrens' progress in learning to read. An important finding from the research presented is that for child L2 learners, simply being aware of the separability of forms and meaning, or that two referents can exist for the same set of concepts, can facilitate their ability to reflect upon and manipulate that knowledge (Bialystok, 1988a).

Several conclusions can be drawn from the results of studies in child metalinguistic awareness reviewed in this section. They are summarized as follows:

2.6.5 To Summarize

- (1) Children's metalinguistic awareness appears to be accelerated when they have contact with a second or foreign language .
- (2) The increased MLA of children learning a L2 has a positive affect on accelerating reading acquisition.

- (3) Children who are fluent in two languages have greater explicit knowledge of their L1 than their monolingual peers.
- (4) Children who have contact with a L2 have higher levels of control of linguistic processing than monolingual children.

2.7 Adult metalinguistic awareness in L2

As stated in the introduction, the intent of this section is to provide an overview of the types of L2 learners and the tasks which have been an integral part of past research in adult MLA in L2. The studies which are presented here in chronological order sought - (1) to shed light on learners' knowledge of errors which stem from their L1 (Schacter, Tyson & Diffley, 1976; White, 1977); (2) to examine advanced learners' judgements in comparison to intermediate learners (Gass, 1983; Masny, 1991; White, 1977); (3) to compare native speakers' judgements to nonnative speakers (Schmidt & McCreary, 1977; Tucker & Sarofim, 1979); (4) to examine learners' judgements before and after instruction (Lightbown & Barkman, 1978); (5) to examine whether the ability to judge sentences is correlated with L2 proficiency (Alderson & Steel, 1994; Alderson, Clapman & Steel, 1996; Bialystok & Frohlich, 1978; Gass, 1983; Sorace, 1985); (6) to examine learners' performance on a judgement task which requires identifying, correcting and providing the rule for the correction (Sorace, 1985); and (7) to examine whether placing a time constraint on the completion of the task affects learners' access to analysed knowledge (Bialystok, 1979).

2.7.1 Review of Empirical Work in Judgements of Grammaticality

Schachter, Tyson and Diffley (1976) carried out a study on ESL learners' intuitions of grammaticality on sentences containing three types of relative clauses. The groups, which were native speakers of Arabic, Chinese, Japanese, Spanish, and Persian had, been shown in a previous study to produce certain kinds of errors considered to stem from their L1. The types of relative clauses which were under investigation included a set considered grammatical by native speakers (NSs) of English, a set containing errors typically made by the group being studied, and a set containing errors typically made by one of the other groups. It was found that two of the groups tended to accept their own L1-type errors as grammatical. However, all groups performed randomly on judging sentences with errors typical of other groups' L1 as ungrammatical and identified L2 correct sentences well. Schachter, Tyson and Diffley interpret this as providing evidence that errors not based on learners' L1 are in the indeterminate range of subjects' interlanguage system. Results of the study show that eliciting intuitional data helps non-native speakers (NNSs) in their understanding of the structure of their interlanguages.

White (1977) presented two groups of Spanish speaking ESL learners (intermediate and advanced levels) with written errors, they themselves and others had made, and asked them to first judge them as grammatical or not, then to point out the error and subsequently to correct the error. Despite some variability between learners' judgements and their own performance there was an approximate 50% correction of perceived errors while another 10% were identified without approximate correction. The advanced group was, however, no better at error correction than the intermediate group. In this experiment no time restriction was placed on learners for the correction of the error and White (1977) suggests that the additional time available permits better

access to explicit or implicit rules.

Schmidt and McCreary (1977) carried out a study where they attempted to determine native speakers (NSs) and nonnative speakers (NNSs) intuitions about standard English (English accepted as representative of what is generally heard) and super-standard English which is comprised of grammar rules in prescriptive textbooks. The instrument consisted of three tests: (1) a performance test where subjects who were presented 25 sentences orally were told to make any changes believed necessary to produce 'good, sensible sentences' that they themselves might utter; (2) a second test where subjects had to choose one of two or three versions most indicative of how they would say something; (3) a third test where subjects received the same sentences as in the second test and were asked to check which sentence they thought was grammatically correct. Results showed that the NSs proved to be inconsistent in comparing their super-standard judgements with their actual and reported use while the NNSs were most consistently "super-standard" in all three tests. Schmidt and McCleary attribute the NNSs superior performance to the fact that learning English as a foreign language provides them with the prescriptive rules necessary for a more explicit knowledge of the language.

Lightbown and Barkman (1978) were interested in whether subjects would improve in judgements and ability to correct errors following instruction. In a study where learners had to judge the correctness of various grammar points (e.g., plurals, possessives, 3rd person) before and after only several days of instruction, results showed that the instructed group excelled with an absolute percentage improvement four times greater than the control groups with no instruction.

Bialystok and Frohlich (1978) developed an aural grammar test to measure the ability of

L2 learners to refer to specific rule information for judging grammaticality. Results from the test were highly correlated with subjects' scores on standardized tests. This sort of test which is considered to demonstrate learners' control over the target language because of the time constraint was also devised to tap into learners' explicit knowledge. To determine the explicitness with which students identified various errors subjects were asked to check how certain they were that their response was correct. It was assumed that if the response was based on conscious knowledge of a rule then the learner would be certain of its correctness and vice versa.

In a study using an adapted version of the aural grammar test, Bialystok (1979) showed that allowing learners less time to complete tasks requiring more explicit knowledge limited their ability to retrieve the required information and that level of study and knowledge of other languages affect learners' ability to successfully complete tasks. Bialystok (1982) had ESL adults carry out, among other metalinguistic tasks, two steps of the grammaticality judgement test - identifying and correcting errors. Results showed that tasks which required higher levels of analysed knowledge were intercorrelated while tasks which made low demands on analysed knowledge were not correlated with those which required high levels of analysed knowledge. Although there were some significant relationships between tasks which differed in demands on analysed knowledge and control of linguistic processing, these relationships were weaker than those where the demands on the components were the same. Generally, results showed that advanced learners were more metalinguistically aware than intermediate learners.

Tucker and Sarofim (1979) used judgements of acceptability to compare the reactions of NSs and NNSs to the same target language errors. The subjects, divided in two groups, were

asked to judge sentences containing typical L1-L2 errors. The English test items were presented in one case by a NS and in the other case by a NNS. The NS was rated more highly for grammaticality and acceptability than the NNS, which the researchers suggest may be proof that judgements were not solely made on perception of grammaticality.

Gass (1983) carried out a study of adult ESL learners' judgements of grammaticality using written grammatical and ungrammatical sentences produced by the subjects themselves or by someone in the group. This group consisted of intermediate and advanced learners. While all subjects recognized grammatical sentences close to 70% of the time, the advanced learners were better able to judge other subjects' errors than were the intermediate learners. The greatest between-group difference was found in the greater ability of the advanced group to correct errors, which Gass attributes to higher levels of proficiency being linked to greater explicit knowledge of the target language.

Sorace (1985) carried out a cross-sectional study on two groups of English-speaking students of Italian using a grammaticality judgement test where students were requested to first judge sentences as grammatical or not, to then correct the ungrammatical sentences, and finally to state the rule broken. The ability to articulate a rule was found to be a relatively late-acquired skill and possibly the last stage of the metalinguistic awareness development sequence. Sorace (1985) concluded that students exposed to more analytical approaches to learning a L2 are not immediately able to apply the information. With time, formal mastery of the linguistic structures leads to their application in a number of contexts (Sorace, 1985). Results showed generally that growth in MLA appears to be concomitant with an increase in explicit knowledge.

Masny (1991) carried out a study of ESL adolescent learners to examine the role of

language knowledge in making grammaticality judgements as well as to determine the strength of the relationship and under what conditions the relationship may exist. Tasks were devised to measure learners' sensitivity to syntactic and lexical organization. As the subjects represented different levels of proficiency, the results provide evidence that as learners become more proficient in a L2, they draw on different abilities in making grammatical judgements. Levels of proficiency correlated with learners' ability to successfully carry out the metalinguistic task and results showed that the lowest level (intermediate group) of learners had the most difficulty with the task. The ability of the next level (intermediate-advanced) to make judgements was related to reading test scores while the most advanced group's ability to make judgements correlated with speaking ability. Masny (1991) attributes these correlations to the fact that the less orally proficient learners are more likely to rely on reading activities in and out of the classroom context and possibly on the transfer of L1 reading abilities. The more proficient subjects are better able to take advantage of their oral language abilities even in the formal context of the second language classroom which is believed to promote second language oral decontextualization. Masny (1991) claims that second language decontextualization is an aspect of communicative proficiency considered to be linked to MLA.

Alderson and Steel (1994) carried out a pilot study on adult learners of French at the university level where the aim was to determine, among other things, learners' level of metalinguistic knowledge in French and English. The mean score on a grammar test was 55% and correlations between metalinguistic knowledge and accuracy in grammar showed only a moderate relationship ($r = .44$). Metalinguistic knowledge did not correlate with subjects' scores on the French A-Level exam considered by the researchers to be their most comprehensive

measure of language proficiency in the UK. The conclusion which Alderson and Steel (1994) draw from their study is that students can be proficient in their use of French without having the aptitude which they define as grammatical sensitivity and without having high levels of metalinguistic knowledge. They suggest that the contribution of metalinguistic knowledge to accuracy is still unclear and call for further investigation through more refined test instruments.

Alderson, Clapman, and Steel (1996) refined the test instruments of the 1994 pilot study for the main study carried out on 509 subjects from seven universities in the UK. Although only minor changes were made to the metalinguistic assessment test, the original test of grammar was replaced by a national (Scottish) multiple choice test on grammar (SUCE). The metalinguistic assessment test produced results lower than those of the pilot, which in the researchers' view may be "due to the wide spread of ability in the main study sample" (Alderson et al., 1996, p.9). The results also showed a drop in performance from Bloor's (1986) study which used the same test. Generally, all three studies show that students vary greatly in their metalinguistic knowledge. With respect to the grammaticality judgement test, results show that students found it easy to identify and correct errors in both French and English. In French, their ability to state which rule had been violated was superior to their ability to use metalanguage in their descriptions. In English, their ability to state the transgressed rule varied greatly depending upon the error (facility values ranged from 9-80%). According to Alderson et al. (1996), the results suggest that students in first year university may not be prepared to cope with metalinguistic terms beyond the basics such as noun and verb.

A summary of the findings which can be drawn from the studies reviewed is as follows:

2.7.2 To Summarize

- (1) There is inconclusive evidence with respect to increases in learners' ability to judge grammaticality being concomitant with an increase in learners' L2 proficiency.
- (2) Adult NNSs can have greater explicit knowledge about L2 rules than adult NSs have of L1 rules.
- (3) Grammar instruction has been shown, at least in the short-term, to improve adult L2 learners' judgements of grammaticality.
- (4) Orally presented sentences may be judged for reasons other than grammaticality when the enunciator is not a NS.
- (5) In judging orally presented sentences, time is a factor which can affect learners' access to explicit or analysed knowledge.

2.7.3 Discussion

What the diversity in the goals of these studies points to, is an evolution in research interests. Early research which sought to link learners' errors to L1 and to compare L2 learners to native speakers has given way to greater concern about what the learner is consciously aware of in the L2 and how that conscious knowledge influences L2 proficiency. For the most part, ungrammatical sentences in these studies were made up of learners' own utterances, typical errors which stem from the transfer of L1 grammar to L2, aspects of grammar not easily or usually taught in the L2, or aspects of grammar known to be difficult in the L2. Results of the studies provide inconclusive evidence with respect to the link between learners' ability to detect ungrammaticality and L2 proficiency. On one hand, studies by Bialystok (1979), Gass (1983),

Sorace (1985) and Masny (1991) indicate a correlation between MLA and L2 proficiency, while White's (1977) study showed that advanced learners did not outperform intermediate learners in judgements of grammaticality. Generally the results of the Alderson and Steel (1994), and Alderson et al. (1996) studies do not show that MLA is correlated with their measure of L2 proficiency. However, when the components of the instruments are examined, the grammar accuracy test is moderately correlated with L2 proficiency.

Only a limited number of studies address the question of the source of variance in metalinguistic abilities or the possible factors which may affect learners' ability in judging sentences. None of the studies presented compare learners from different learning methods. Very few studies take into consideration how increasing demands on conscious knowledge of the target language, how the mode of presentation of the items and how the amount of time available for accessing information can affect learners' performance. Taking these variables into account, which is the goal of the present research, will allow for a more detailed description of MLA and L2 proficiency.

2.7.4 Research Questions and Hypotheses

Chapter I presented the controversy over whether knowledge about the formal aspects of the target language (MLA) is important to L2 learning and L2 proficiency. Dissatisfaction with the learning methods of the 1960s and early 70s led to the prominence of the communicative-approach to L2 learning. However, in the 1990s there is an increasing consensus among educators and researchers that L2 learners lack linguistic accuracy. As a result, trends are changing with respect to the importance accorded to grammar knowledge. Because the literature

review suggests that more empirical evidence is needed, in order to support or refute the view that knowledge about the language (MLA) is beneficial to L2 learning, the first research question is as follows:

Research Question 1

What is the relationship between advanced-level French L2 learners' metalinguistic awareness and L2 proficiency?

Based on the Bialystok and Ryan (1985a) model which posits that analysed knowledge and control of linguistic processing are required for MLA and L2 proficiency, the following hypotheses have been drawn up:

Hypothesis 1

There is a significant relationship between grammaticality judgement, and French Proficiency for advanced-level learners.

Hypothesis 2

The correlation between MLA and L2 proficiency is higher when the demands of the tasks² measuring these two variables are the same. The correlation between MLA and L2 proficiency is lower when the demands of the tasks differ.

Research Question 2

The claim of Bialystok and Ryan (1985a) that increases in analysed knowledge and control of linguistic processing are related to different kinds of learning approaches has led to the second question research question:

² **Demands of the tasks or task demands:** This refers to what degree along the continuum the task requires analysed knowledge or control of linguistic processing.

What is the relationship between learners' MLA and L2 proficiency when advanced French L2 learners have experienced distinct learning approaches ?

Bialystok (1994) claims that learners who have been part of a communicative approach to L2 learning should have higher levels of control of linguistic processing than those who come from a grammar approach, and that learners who have been part of a grammar approach to L2 learning should have higher levels of analysed knowledge. Based on this theory, the following hypothesis has been drawn up:

Hypothesis 3

Learners from a communicative approach to L2 learning perform better on tasks which make greater demands on control of linguistic processing. Learners from a grammar approach to L2 learning perform better on tasks which make lesser demands on control of linguistic processing.

Chapter III

Methodology

3. Introduction

This chapter first presents the population and the subjects of the main study. Then the instruments, the grammaticality judgement tests, the French Proficiency Test and a questionnaire are presented. Next, a survey and a pilot study carried out in order to establish content validity and item difficulty of the judgement tests are presented.

3.1 Main Study

Subjects

Sixty-four university-level French L2 learners (59 females/5males) from the population of adult learners participated in the study. They came from eight intact classes and ranged between 20 and 26 years of age. The French courses in question concentrated on vocabulary acquisition, grammar knowledge, improving oral expression, writing style, listening and reading comprehension. Students enrolled in these courses are considered by the Second Language Institute, University of Ottawa (SLI) to represent a high-intermediate to advanced-level of proficiency. This classification stems from the fact that these students have either successfully completed certain prerequisite courses or in the case of new students have obtained a score of 65+ on the French Proficiency Test of the SLI. Students were from various faculties (e.g., law, engineering, arts) and their reasons for enrolment in these French courses ranged from personal

interest to program requirements.

Initially, 75 students agreed to participate in the study. Some students who had taken the French Proficiency Test within 20 weeks of the start of the study were exempt from having to retake the exam and the results from their previous test were used. This decision applied to 12 students who had written the exam as a placement test (e.g., in September 1996) for a course beginning in January 1997, and who had not participated in a French course prior to the winter session 1997. Then, it was assumed that their knowledge of French would not have improved in the interim.

Once the scores on the tests used in the present study, and the students' profile according to a questionnaire (see Appendix A) were examined, 11 students were rejected for either one or a combination of the following reasons: (1) having scored too far below the score of 65 on the Proficiency Test to be considered part of a relatively advanced group, (2) failing to take both the grammaticality judgement test and the Proficiency Test, (3) not meeting the criterion of coming from a communicative or grammar-approach to learning French as a second or foreign language.

The rationale for allowing 9 participants to remain in the study who scored slightly less than 65 on the Proficiency Test can be summarized as follows: First, unlike some of those who were rejected, all 9 subjects fit the profile of a university student in the sense that they came to the University of Ottawa from a North American type of communicative or grammar-approach to learning French as a second language and/or had successfully completed the prerequisite courses in order to be registered for the relatively advanced course in question. In comparison, the 11 people whose data were not included could not be viewed as representative of the university population. There were, for example, senior citizens and middle-age immigrants whose prior

French L2 learning experiences did not fit the profile of the sample. Second, all registered students in advanced courses had been solicited regarding the study. Therefore, it appeared that the possibility of finding other students meeting the criteria set for the selection of subjects for the present study was slim.

3.2 Instruments

The Grammaticality Judgement Test (GJT)

The GJT requires subjects to make grammaticality judgements about sentences which are presented in written form (GJTWRT) and orally (GJTORL). The format adopted corresponds to an error-detection paradigm used in a previous study ($n = 147$), which yielded a reliability coefficient of $r = 0.72$, $p < .001$ (Bialystok & Frohlich, 1978).

The GJT (see Appendix B) consisted of 9 grammatically correct and 21 grammatically incorrect French sentences of approximately 15 syllables in length for each modality (written and oral). These sentences were taken from Bialystok and Frohlich (1978), who claim that they have been controlled for syntactic and semantic complexity. Incorrect sentences contained only one error which research has shown to be representative of errors frequently committed by L2 learners (Swain, 1976; Naiman et al., 1978). Seven sentences contained an error related to the adjective; seven sentences contained an error related to the direct or indirect object pronoun; and seven sentences contained an error related to the verb. In the main study, a reliability analysis on the items of the Written judgement test and the Oral judgement test produced alpha coefficients of internal consistency of .83 and .84 respectively.

Prior to carrying out the main study, content validity for the judgement tests was established. A panel of five second language instructors from the Second Language Institute, University of Ottawa, validated the demands of the tasks in a survey. In the survey, each participant read a two-page explanation of the theoretical framework. Then each person was asked to indicate whether the categories of the grammaticality judgement task made low or high demands on the components, analysed knowledge (analysis) and control of linguistic processing (control). Panel members were not required to judge sentences for grammaticality. Four of the five panel members were in complete agreement with the demands according to the model (Bialystok & Ryan, 1985a). One person differed in her opinion of tasks requiring high control. This stemmed from the panel member interpreting the notion of control as it is sometimes referred to in other theories of L2 learning. That is to say, she saw tasks requiring high levels of control as referring to an increased level of attention, as opposed to a decrease in the level of attention required to carry out certain tasks.

In the categories or steps of the judgement task which follow, the notation + is used to indicate that the task requires a higher dependency on a skill component, and the notation - is used to show a relatively lower dependency. The terms low and high which the panel had to choose from in the survey are considered a general indication of the demands that the task requires. Scoring reflected the assumption that correcting an error makes greater demands on analysed knowledge than identifying one, and that providing the rule which was violated requires more analysed knowledge than correcting the error. The following categories are those for which panel members were required to assign levels of analysis and control.

Category 1 - to state whether the sentence is grammatical or not

Written Task demands: Low analysis (-A) Low control (-C)

Oral Task demands: Low analysis (-A) High control (+C)

Category 2 - to identify and correct the incorrect form

Written Task demands: High analysis (+A) Low Control (-C)

Oral Task demands: High analysis (+A) High Control (+C)

Category 3 - to give the appropriate rule that the correction entails

Written Task demands: High analysis (+A) Low control (-C)

Oral Task demands: High analysis (+A) High control (+C)

Tabulation of Scores on the Grammaticality Judgement Tests

Responses on the written and oral grammaticality tests were assigned a score, 0, 1, 2, or 3 according to whether:

- (1) the learner was not able to identify an incorrect sentence (score = 0)
- (2) the learner was able to identify an incorrect sentence but unable to correct the error (score = 1)
- (3) the learner was able to detect and correct the error but provide no rule or incorrect rule (score = 2)
- (4) the learner was able to detect the error, correct it and provide the correct grammar rule (score = 3)

Pilot Study

The goal of the pilot study was to examine the difficulty of the grammaticality judgement

tests for the population in question, to detect any methodological difficulties, and to assess the feasibility of the study.

Nine advanced-level students of an intact class of future French L2 teachers participated in the pilot study. The students, aged 22-26 years, are considered advanced learners of French L2 based on their results on the “Test de Compétence Linguistique”, a test from the SLI, designed to test for proficiency levels which resemble native-like competence. Students who fall just short of native-like proficiency (determined by the score) are able to take a French language course whose goal is to improve their knowledge about the formal aspects of the language.

Results show that the items on both tests were well within the range of the abilities of the subjects. The maximum score on the tests is 63. Descriptive statistics on the Written judgement test of the pilot study are as follows: $\bar{M} = 52.4$, $SD = 9.2$. On the Oral judgement test, $\bar{M} = 54.3$, $SD = 5.5$. Negative skewness in the distribution of the scores confirms, as expected, that this was a particularly advanced group. A test of reliability of the scores on the judgement tests produced a Cronbach alpha of .87 for the written grammaticality judgement test and an alpha of .77 for the oral grammaticality judgement test.

The French Proficiency Test

The French Proficiency Test of the University of Ottawa has been developed for the population entering university; thus, it is comprised of texts readily understood by educated young adults. The skills tested are listening comprehension (three texts with a maximum of 18 items in total), reading comprehension (three texts with a maximum of 18 items in total), and general knowledge of vocabulary, grammar, and structure as measured by a cloze text (28 to 32

items). This latter text has had words deleted on a rational basis in order to test specific points of second language knowledge. Sources for listening comprehension texts include excerpts from lectures and radio broadcasts where the main purpose is to try to popularize new ideas for a non-specialist audience. Potential sources for reading comprehension texts include introductory textbooks, university documents, and magazine and newspaper articles where the main purpose is to popularize new ideas from science, industry, education, etc. All questions are about the literal meaning of the text and include recognition of the main idea and supporting ideas, recognition of examples that support or contradict the main idea, location of specific pieces of information, recognition of paraphrases of words/phrases in the text, and the understanding of both implied and explicit relationships between elements in the text. Questions in all three sub-tests are in multiple choice format with four alternatives.

Reliability and Validity of the French Proficiency Test

The French Proficiency Test has a KR20 of 0.95+ as a measure of internal consistency. Predictive validity has been established through teachers' reports of the appropriateness of students placed in their classes and through students' successful completion of course objectives.

Although correlations between the sub-tests of the Proficiency Test are significant, in light of the fact they explain approximately 25% of the variance (see Appendix C), the contention is that each individually measures something different from the total score on the test.

Questionnaire

The 10 item questionnaire (see Appendix A) completed by participants provided

information about their past French L2 learning experiences as well as their impressions about their level and type of knowledge about French. Questions 1 and 2 had subjects circle the grades in which they had been part of a French Immersion or Core French³ program. Then questions 5 and 6 asked learners to circle the amount of time (e.g., 25% to 50%, 51% to 75%) typically spent on focusing on grammar in junior high and high school. Questions 7 and 8 described respectively a communicative and grammar-approach classroom setting, and the participant was asked to indicate to what extent the description provided corresponded to his or her classroom environment in junior high and high school. These latter questions served to confirm that the program in question was indeed representative of what is generally considered to be a communicative or grammar-approach to learning a L2. The other four questions were of general interest and related to how much learners read and how they view their reading ability. Although the reading questions were not part of the study design, interest in how much learners read stems from early research in MLA which has provided evidence that literacy affects and is affected positively by metalinguistic awareness (Ehri, 1973; Hakes, 1980; Mattingly, 1972).

Classifying a learner as having come from a communicative-approach or from a grammar-approach to learning French stemmed from the responses to questions 1,2,5,6, 7 and 8 described above. For example, when a learner circled more years of Core French study than French Immersion (Questions 1 and 2), questions 5 and 6 were closely examined to see if the responses also reflected an approach where grammar was emphasized (e.g., 50%-75% of class

³ A Core French Program is defined generally as one where the focus is on grammar as opposed to meaning, and whose duration does not surpass 200 minutes per week or approximately five 40 minute classes a week.

time spent on grammar instruction). Questions 7 and 8 were particularly helpful in the case where there appeared to be a discrepancy in responses to earlier questions. For example, a learner may have circled more years of French Immersion than Core French study, but claimed that 50%-75% of time was spent on grammar. This amount of time spent on grammar is more in keeping with a grammar-approach to learning. Questions 7 and 8 supplemented information on the learning approach and provided a reason to clarify the responses through a telephone interview or to place the learner in one group or another.

3.3 Procedure

The grammaticality judgement tests (see Appendix B) were administered during regular scheduled French classes. For the Written judgement test, fifty minutes were allowed for completion of the items. The prescribed amount of time is consistent with an earlier study carried out using a similar task (Bialystok, 1982). The Oral judgement test consisted of listening to a tape recording of each sentence (see Appendix B). Sentences were heard three times with a 3 second pause between the first and second repetition, a 10 second pause between the second and third repetition, and a 15 second pause between the third repetition and the arrival of the next sentence. The oral presentation and completion of the tasks took 25 minutes, and immediately followed the Written judgement test.

The tests were not rotated because of the high risk of late-arriving students having to be disqualified if they missed the first items of the oral presentation. The decision to begin with the written mode ensured that all participants were present when the tape recording of the Oral judgement test began. At the same time, this usually ensured that if there were late-comers for

the written test, there was a chance for them to catch up with those who would have begun 5 to 10 minutes earlier.

The questionnaire was completed before the judgement tests were administered. There were 6 questions in the questionnaire which served to group subjects according to L2 learning approaches where the main focus was either on meaning (communicative) or on grammar.

The French Proficiency Test was administered in the SLI at the participant's convenience. With respect to the French Proficiency Test, candidates were specifically asked not to guess answers and told to mark alternative E if they felt there was no correct answer. The order of presentation was first the listening texts, then the reading texts, and finally the cloze text. The language of presentation was French although the instructions were also written in English. For listening comprehension, the questions for each text were written in the test booklet and the texts were presented on tape. Time was given to read the questions before the presentation of each text. After hearing the text once, examinees had time to answer the questions before hearing the text a second time. Additional time was then given to check their answers to the questions. Presentation of the listening texts took approximately 30 minutes. To some extent the ability to read in French is also being measured in the listening comprehension section of the test. The reading texts and questions and the cloze text with four alternative word choices were printed in the test booklet. One hour was given for completion of this part of the test. The time allowed was more than sufficient for intermediate and advanced learners to be able to complete the test.

Three scores, one for listening comprehension, one for reading comprehension, and one for the cloze test, were each weighted to form approximately one third of the possible total. Although the three scores were reported, it is the global test score which was used to determine

the students' level of L2 proficiency. The pass mark, 50%, represents an intermediate level of second language ability for the receptive skills tested. The total score is considered to be a fairer means of determining the pass level because it allows for the fact that many students do not have a uniform profile in their skill levels and can compensate in one area for slightly less proficiency in another area.

For the purpose of the present study, the global score was used as a measurement of language proficiency and the scores on the sub-tests (listening, reading, cloze) provided a profile of L2 proficiency.

Chapter IV

Analyses and Discussion of Results

4. Introduction

This chapter first presents the design of the study, the analyses carried out, and then the results of the analyses as they pertain to each hypothesis. Then a section “Discussion of the Results” provides an interpretation of the results of the study as they relate to the relationship between metalinguistic awareness and second language proficiency.

4.1 Design

The design of the study is based on the relationship between metalinguistic awareness and second language proficiency, which are believed to be influenced by increases in analysed knowledge and control of linguistic processing. The approach was to identify the demands placed on the processing components in the grammaticality judgement tests and in the sub-tests of the French Proficiency Test. Then a between-groups matrix was used to compare correlations between tasks which vary in their demands on analysed knowledge, control of linguistic processing, or both, for the two groups of learners. The Grammar Group is formed by those considered to come from an approach where grammar was emphasized, while the Communicative Group is formed by those who come from an approach where meaning is emphasized.

4.2 **Data Analysis**

The French Proficiency Test and the two grammaticality judgement tests correspond to the variables which are part of the analyses described below. The global score on the French Proficiency Test is used by the SLI to determine learners' level of proficiency, and consequently used to operationalize L2 proficiency for the purpose of the present study. All references made to French proficiency in the present study refer to learners' L2 proficiency as measured by the French Proficiency Test of the University of Ottawa.

Normality plots obtained from an SPSS statistical computer program indicate that the population attributes do not violate the normality of distributions. Histograms are presented in Appendix D. Despite some negative skewness shown in the graphs, Kolmogorov-Smirnov Goodness of Fit Tests applied to all the variables for both the Communicative Group and the Grammar Group. The Kolmogorov yield statistics ranging from .48 to 1.17, and are therefore non-significant at alpha 0.05.

4.2.1 **Hypotheses 1 and 2**

In order to test Hypothesis 1 and Hypothesis 2, Pearson Correlation Coefficients were calculated. For each hypothesis, the results will be presented first for the entire sample and then for each group. An alpha level of 0.05 was set as the required level of significance which is in accordance with alpha levels generally used for educational studies.

Hypothesis 1

There is a significant relationship between grammaticality judgement, and French Proficiency for advanced-level learners.

The Pearson Coefficients (see Table 1) show, as predicted, that for the entire sample a

Table 1

Pearson Correlation Coefficients between the Grammaticality Judgement Tests and the French Proficiency Test for the Entire Sample and for the Communicative and Grammar Groups

Pair of Variables	Group		
	Communicative	Grammar	Entire Sample
	r	r	r
Written Judgement French Proficiency	0.24	0.39*	.033**
Oral Judgement French Proficiency	0.14	0.47**	0.34**

Note

Legend: p<.01** p<.05*

positive and significant relationship exists between Written judgement and French Proficiency ($r = .33$, $p = .008$) and between Oral judgement and French Proficiency ($r = .34$, $p = .007$).

With respect to the Communicative Group, contrary to predictions, there is no significant relationship between Written judgement and French Proficiency ($r = .24$, $p = .193$), nor between Oral judgement and French Proficiency ($r = .14$, $p = .447$) (see Table 1).

For the Grammar Group, as predicted, there is a positive and significant relationship between Written judgement and French Proficiency ($r = .39$, $p = .023$), as there is between Oral judgement and French Proficiency ($r = .47$, $p = .006$).

Hypothesis 2

The correlation between MLA and L2 proficiency is higher when the demands of the tasks⁴ are the same. The correlation between MLA and L2 proficiency is lower when the demands of the tasks differ.

In Chapter I, it is stated that Bialystok and Ryan's (1985a) model offers the means of fine-tuning definitions of L2 proficiency by determining the cognitive processing components required for successfully completing metalinguistic tasks. The model posits that all tasks and abilities can be analysed to determine the demands made upon analysed knowledge and control of linguistic processing. In order to examine the relationship between tasks of similar and divergent demands, the sub-tests of the French Proficiency Test are correlated with the grammaticality judgement tests - the operationalization of MLA. Therefore, in examining Table 2, the pairs of variables which are of relevance to Hypothesis 2 are those where one variable is either Written or Oral judgement and the other is Cloze, Listening or Reading. The reader is

⁴ **Demands of the tasks or task demands:** This refers to what degree along the continuum the task requires analysed knowledge or control of linguistic processing.

advised that since there are multiple tests on the correlation coefficients (r), the significance level of alpha .01 and alpha .05 should be adjusted accordingly (e.g., using a Bonferroni statistic). In Table 2, correlations between both the Written and Oral Judgement Tests and the Cloze test have levels of 0.014 and 0.015 respectively for the Communicative Group. These statistics, even with the mentioned levels, could be considered significant at the 0.05 level including the correction suggested above.

For the entire sample (see Table 2), as predicted, because demands are similar, there is a positive and significant relationship ($r = .45$, $p = .000$) between the Written judgement test and the Cloze test. For the entire sample, again as predicted, because demands differ, there is no significant relationship between the Written judgement test and the Listening test ($r = .09$, $p = .472$), nor between the Written judgement test and the Reading test ($r = .18$, $p = .160$).

Contrary to predictions, for the entire sample, there is a significant relationship between the Oral judgement test and the Cloze test ($r = .51$, $p = .000$). Contrary to predictions, there is no significant relationship between the Oral judgement test and the Listening test ($r = .17$, $p = .169$), nor between the Oral judgement test and the Reading test ($r = .08$, $p = .532$).

In response to research question 2, Pearson Coefficients (see Table 2) were also calculated for each group between the sub-tests of the French Proficiency Test and the two grammaticality judgement tests. For the Communicative Group, as predicted, because task demands are similar, there is a significant relationship between the Written judgement test and the Cloze test ($r = .44$, $p = .014$). As predicted, because task demands differ, there is no significant relationship between the Written judgement test and the Listening test ($r = .02$, $p = .931$). As predicted, because task demands differ there is no significant relationship between the

Table 2
Pearson Correlation Coefficients between the Grammaticality Judgement Tests and the sub-tests of the French Proficiency Test

Pairs of Variables	Task Demands		Groups		
			Communicative	Grammar	Entire Sample
			r	r	r
Written Judgement Cloze	+A +A	-C -C	0.44*	0.47**	0.45***
Written Judgement Listening	+A +A	-C +C	0.02	0.17	0.09
Written Judgement Reading	+A +A	-C +C	0.11	0.22	0.18
Oral Judgement Cloze	+A +A	+C -C	0.43*	0.59***	0.51***
Oral Judgement Listening	+A +A	+C +C	0.02	0.24	0.17
Oral Judgement Reading	+A +A	+C +C	-0.07	0.20	0.08
Written Judgement Oral Judgement	+A +A	-C +C	0.78***	0.76***	0.71***
Listening Cloze	+A +A	+C -C	0.46**	0.29	0.17
Listening Reading	+A +A	+C +C	0.34	0.28	0.29*
Reading Cloze	+A +A	+C -C	-0.01	0.41*	0.27*

Note.

Legend: p<.001*** p<.01** p<.05*

Written judgement test and the Reading test ($r = .11$, $p = .555$).

Contrary to predictions, for the Communicative Group, there is a significant relationship between the Oral judgement test and the Cloze test ($r = .43$, $p = .015$). Contrary to predictions, there is no significant relationship between the Oral judgement test and the Listening test ($r = .02$, $p = .914$), nor between the Oral judgement test and the Reading test ($r = -.07$, $p = .710$). With respect to the correlations at the 0.014 and 0.015 levels, the trends are strong enough to be of interest, but they should be interpreted with caution.

For the Grammar Group (see Table 2), as predicted, because task demands are similar, a positive and significant relationship was found between the Written judgement test and the Cloze test ($r = .47$, $p = .006$). As predicted, because task demands differ, there is no significant relationship between the Written judgement test and the Listening test ($r = .17$, $p = .345$), nor between the Written judgement test and the Reading test ($r = .22$, $p = .220$).

Contrary to predictions for the Grammar Group, there is a significant relationship between the Oral judgement test and the Cloze test ($r = .59$, $p = .000$). Contrary to predictions, there is no significant relationship between the Oral judgement test and the Listening test ($r = .24$, $p = .174$), nor between the Oral judgement test and the Reading test ($r = .20$, $p = .274$).

In Table 2, in addition to examining the relationship between MLA and L2 proficiency, significant correlations were also reported between the judgement tests on the one hand and between the sub-tests of the L2 proficiency test. Accordingly, there is a significant relationship, for the entire sample, between the Oral judgement test and the Written judgement test ($r = .71$, $p = .000$). A significant relationship was found between the same variables for the Communicative Group ($r = .78$, $p = .000$) and again for the Grammar Group ($r = .76$, $p = .000$). Significant correlations between subtests of the French Proficiency test which do not make similar demands on the components were also found. For the Communicative Group, a significant relationship

was found between the Listening test and the Cloze test ($r = .46$, $p = .009$). For the Grammar Group, a significant relationship was found between the Reading test and the Cloze test ($r = .41$, $p = .017$).

4.2.2 Hypothesis 3

Hypothesis 3.

Learners from a communicative-approach to L2 learning perform better on tasks which make greater demands on control of linguistic processing. Learners from a grammar-approach to L2 learning perform better on tasks which make lesser demands on control of linguistic processing.

In Table 3, the descriptive statistics show that the mean score for the Communicative Group on the Oral judgement test (45.84) is higher than the mean score for Grammar Group on the same test (41.48), while the mean score for the Communicative Group on the Written judgement test (43.48) is lower than the mean score for Grammar Group on the Written judgement test (46.61). In other words, as expected, on the one hand, the Communicative group did better on the Oral judgement test (GJTORL) which requires a high level of control of linguistic processing. As expected, on the other hand, the Grammar Group did better on the judgement test (GJTWRT) which did not require a high level of control of linguistic processing.

In an attempt to verify if these findings related to group performance on the judgement tests were significant, and therefore to test Hypothesis 3, a multivariate analysis of variance was computed to determine group differences on the Oral and Written judgement tests. Two tests - Pillai's ($F = 7.86$, $df = 2.00$, $p < .001$) and Hotelling's ($F = 7.86$, $df = 2.00$, $p < .001$) indicate that there is a global and significant difference between the groups, the independent variables, on the

Table 3

Descriptive Statistics for the sub-tests of the French Proficiency Test, and the judgement tests for the Entire Sample, the Communicative Group and Grammar Group

Test	Group								
	Communicative Group			Grammar Group			Entire Sample		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Cloze	24.55	2.68	31	25.06	3.77	33	24.81	3.28	64
Listening	25.58	3.06	31	23.94	4.08	33	24.25	3.61	64
Reading	24.58	3.73	31	25.03	4.50	33	24.81	4.12	64
GJTWRT	43.48	10.31	31	46.61	10.61	33	45.09	10.51	64
GJTORL	45.84	10.16	31	41.48	12.23	33	43.59	11.40	64

Note.

The sub-tests of the French Proficiency Test are Cloze/Listening/Reading

Maximum Scores: Cloze = 30; Listening = 30; Reading = 34; GJTWRT = 63; GJTORL = 63

judgement tests.

The global difference which the multivariate analysis of variance confirmed was not, however, large enough to detect the corresponding local differences (e.g., post-hoc analysis). Since the judgement tests differed in the demands made on the processing components, it was of particular importance to localize the differences. Although, the theoretical framework claims that these tests differ in their level of control of linguistic processing, several favourable conditions led to the decision to use a univariate design with repeated measures on the dependent variables, the Written and Oral grammaticality judgement tests. First and foremost, the dependent variables are highly interrelated which indicates that they are measuring to some degree the same thing. All subjects took both tests and in the same order. Sentences in both tests contain the same types of errors. Second, Box's M test provided evidence of equality of variance-covariance (Box's $M = 1.83$ $p = .623$). Because the size of both groups is almost equivalent ($n = 31/n = 33$), differences in sample size which can affect the very sensitive Box' M test were not a concern. These favourable conditions allow the approximation of the multivariate design by a design with repeated measures.

Table 4 which presents the results of an analysis of variance with repeated measures contains in part information which is relevant to the exploratory phase of this study and which will be discussed in Chapter V. The results of the univariate design with repeated measures (see Table 4, **Within-Subjects**, JT x G) show an interaction between the Communicative and Grammar groups on the judgement test variable (MS error = 9.68, df 1, $F = 17.34$, $p = .000$).

A multivariate analysis of variance was also carried out on the Cloze, Listening, and Reading components of the proficiency test. Table 4 (MS error = 1.58, df 1, $F = 0.02$, $p = 0.884$)

Table 4**Analysis of Variance for Groups and Grammatical Class with Repeated Measures on Judgement Tests**

Anova (Repeated Measures) Fixed Effects					
Source	SS	df	MS	F	Sig. of F
Between Subjects					
Groups (G)	1.58	1	1.58	0.02	0.884
Within + Residual	4560.15	62	73.55		
Within Subjects					
Judgement Test (JT)	23.51	1	23.51	2.43	0.124
JT x G	167.89	1	167.89	17.34	0.000
Within + Residual	600.32	62	9.68		
Class (C)	237.41	2	118.71	9.71	0.000
C x G	52.55	2	26.27	2.15	0.121
Within + Residual	1515.9	124	12.23		
JT x C	41.5	2	20.75	3.65	0.029
JT x C x G	13.1	2	6.55	1.15	0.318
Within + Residual	704.59	124	5.68		

shows that there is no significant global difference between these dependent variables, and therefore, it is not justifiable to try and localize any further difference.

4.2.3 Regression Analyses

The decision to include regression analyses results which are not required to validate or invalidate the hypotheses, stems from the results of the correlation coefficients. The claim made in Chapter I is that the relationship between metalinguistic awareness and L2 proficiency is a controversial one. The correlation coefficients between the two variables, MLA and L2 proficiency, confirmed Hypothesis 1 for the entire sample, and for the Grammar Group, but not for the Communicative Group. Consequently, it was relevant to examine the extent to which the grammaticality judgement tests predicted success on the sub-tests of the French Proficiency Test.

Learners' achievements on the grammaticality judgement tests were related to their scores on the three sub-tests of the French Proficiency Test by multiple regression (see Table 5). A stepwise method was chosen because it allows for variables to be entered into the equation according to how much of the variance (R Square) they explain. This type of variable selection for the regression equation has come under scrutiny (Huberty, 1989). At each step, the variable that adds the most to the prediction equation is entered until no more useful information can be gleaned from further addition of variables (Tabachnick & Fidell, 1983). The first variable entered in a stepwise regression is the variable which has the highest correlation with the dependent variable. A lot of the controversy lies in the issue of the goodness of a variable subset in the regression analysis as being associated with the importance of the variable. What Huberty (1989) warns against, is that when variables are entered late in the stepping process or not at all,

Table 5
Stepwise Regression for the Prediction of Cloze from the Grammaticality Judgement Tests

Sample	Source of variation	df	MS	F	p
Entire Sample	Cloze Residual	162	194.25 8.09	21.54***	0.001
Communicative Group	Cloze Residual	129	40.81 6.03	6.77*	0.05
Grammar Group	Cloze Residual	131	160.77 9.52	16.89**	0.01

Note.

All other regression analyses yield a non-significant F value

Table 6
Regression Equation for the Prediction of Cloze from the Grammaticality Judgement Tests

Sample	Size	Regression Equation	Explained Variance	p
Entire Sample	64	Cloze =18.451+0.146 (Oral Judgement Test)	0.26	0.0000
Communicative Group	31	Cloze =19.630 + 0.113 (Written Judgement Test)	0.19	0.0145
Grammar Group	33	Cloze =17.455 + 0.183 (Oral Judgement Tests)	0.35	0.0003

Note.

All other equations of regression yield a non-significant R²

due to a criterion which was not met, researchers should not explicitly or implicitly suggest that they are not important. The reader is therefore advised that the intention here is not to make such a suggestion.

Three regression analyses were run to predict each component of L2 proficiency from the two judgement variables. For the entire sample, results of the stepwise method show (see Table 6) that of the two independent variables, the Written and Oral judgement tests, and the three dependent variables (cloze/listening/reading) only the Oral judgement test can be used to predict one of the dependent variables, the Cloze test. When the variable that added the most to the prediction equation was entered, the regression analyses produced an **R Square** of .26 for the Oral judgement test, which means that it explains 26% of the variance ($F = 21.54$, $p < .001$). The stepwise method shows that the largest variance to be predicted from the independent variables was done by Oral judgement and consequently, adding Written judgement would not provide any significant increase of explained variance. For the entire sample, this was also confirmed using the “enter” method, where when the variable Written judgement is forced into the equation the result is an **R. Square** of .28 ($F = 11.58$, $p < .001$). In the case of Reading and Listening components of the variable proficiency, they did not contribute enough to the explanation of the variance to be included in the equation. This is to say that the relationship between the variables did not meet the default criterion in the stepwise method. Such a finding was not a surprise in light of the fact that the correlations between the Reading and Listening tests and the judgement tests were not significant at the 0.05 alpha level. These regression analyses show that the Written judgement test and the Oral judgement test cannot be used to predict the reading and listening component.

The same stepwise regression analyses were run for each group. For the Communicative Group, results (see Table 6) show that of the two independent variables, the Written and Oral judgement tests, only the Written judgement test can be used to predict one of the dependent variables, the Cloze test. With an **R Square** of .19, the Written judgement test explains 19% ($F = 6.77, p < .05$) of the variance. Here, the largest variance to be predicted from the independent variables was done by the Written judgement test and consequently, adding the Oral judgement test would not provide any significant increase of explained variance. The Reading and Listening tests of the Proficiency Test again did not contribute enough to the explanation of the variance to be included in the equation.

For the Grammar Group, results (see Table 6) show that of the two independent variables, the Written and Oral judgement tests, only the Oral judgement test can be used to predict one of the dependent variables, the Cloze test. The Oral judgement test (**R Square** .35) explains 35% ($F = 16.88, p < .000$) of the variance. The majority of the variance to be predicted from the independent variables was done by the Oral judgement test and consequently, adding the Written judgement test would not provide any significant increase of explained variance. Both the Reading and Listening tests of the Proficiency Test did not contribute enough to the explanation of the variance to be included in the equation.

4.2.4 To Summarize

With respect to Hypothesis 1, as predicted, for the entire sample and for the Grammar group, there is a positive and significant relationship between the grammaticality judgement tests and the French Proficiency Test. Contrary to predictions, this relationship does not exist for the

Communicative Group.

Hypothesis 2 claims that the strength of the relationship between MLA and L2 proficiency is higher when the demands of the tasks of the two instruments measuring the variables are the same, and that the relationship between MLA and L2 proficiency is lower when the demands differ. For the entire sample, significant correlations between tasks which made similar demands were found between the Written judgement test and the Cloze test. As expected, in some cases where demands differed, no significant relationship was found, as was the case between the Written judgement test and Listening, and between the Written judgement test and Reading. However, significant correlations were found between other tasks which did differ in their demands such as between the Oral judgement test and the Cloze test and between the Oral judgement test and the Written judgement test. At times when task demands were similar, no significant relationship was found, as was the case between the Oral judgement test and Listening, and between the Oral judgement test and Reading. We will return to an attempt to account for these results in section 4.3.

With respect to Hypothesis 2, for both groups, significant correlations between tasks which made similar demands were found between the Written judgement test and the Cloze test. As expected, where demands differed, no significant relationship was found between the Written judgement test and Listening, nor between the Written judgement test and Reading. Similar to the entire sample, for both groups, significant correlations were found between tasks which differed in their demands, such as between the Oral judgement test and the Cloze test and between the Oral judgement test and the Written judgement test. At times when task demands were similar, again, as was the case for the entire sample, no significant relationship was found between the Oral judgement test and the Listening test, nor between the Oral judgement test and

the Reading test. An attempt to account for these results is presented in section 4.3.

With respect to Hypothesis 3, an analysis of variance with repeated measures showed an interaction between type of grammaticality judgement test and learning approach.

For the entire sample and for the Grammar Group, three regression analyses were run using each time one of the sub-tests on the proficiency test as the dependent variable. In the results, only the Oral judgement test can be used to predict results on the Cloze test of the French Proficiency Test. In the case of the Communicative Group, it is the Written judgement test which can be used to predict the results of the Cloze test. We will return to an attempt to account for these results in section 4.3.

4.3 Discussion of the Results

4.3.1 Introduction

Of particular relevance to the discussion of the results are Bialystok's (1994) views that (1) all tasks can be analysed for the demands they make on analysed knowledge and control of linguistic processing; (2) increases in analysed knowledge and control of linguistic processing, which are responsible respectively for accuracy and fluency, are to some extent governed by different factors, such as different learning approaches; and (3) differences in levels of analysed knowledge and control of linguistic processing will be reflected in learners' performance on tasks.

Although several studies in adult MLA (Alderson & Steel, 1994; Gass, 1983; Sorace, 1985) make reference to the Bialystok and Ryan model (1985a), none has analysed the results of

their study in light of the demands made on analysis and control of linguistic processing.

However, Bialystok and Ryan's (1985a) theoretical framework has been supported by studies in child metalinguistic awareness (Bialystok 1988a, 1988b; Ricciardelli, 1993). For this reason, part of the discussion seeks to examine the results of this study in light of past research carried out on children. First, each hypothesis is contextualized and then presented prior to discussion of the findings. Where applicable and relevant, findings will be presented first and discussed for the entire sample, then for the Communicative Group and the Grammar Group.

4.3.2 Hypothesis 1

Since learners' ability to make grammaticality judgements is viewed as demonstrating metalinguistic awareness, and because MLA is considered important to second language learning, the first hypothesis claims that there is a positive relationship between grammaticality judgement and L2 Proficiency for advanced-level learners.

The significant correlations between the Oral judgement test, the Written judgement test and the global score on the French Proficiency test, for the entire sample, provide evidence that the higher a learner's MLA, as defined by the score on the judgement tests, the higher the score is likely to be on the French Proficiency test. These results corroborate findings from previous studies (Bialystok & Frohlich, 1978; Bialystok, 1982; Gass, 1983; Masny, 1987; Thomas, 1988) which have demonstrated that an increase in the level of MLA is concomitant with an increase in L2 proficiency, and therefore, provide support for Hypothesis 1.

Subjects were then divided into groups associated with the main focus of two types of L2 learning programs (Communicative Group and Grammar Group). The importance of grouping

learners according to the type of learning approach stems from Bialystok's (1991, 1994) contention that different types of learning approaches lead to differential increases in learners' analysed knowledge and control of linguistic processing.

With respect to the Communicative Group, no significant relationship was found between the Written judgement test and the French Proficiency Test, nor between the Oral judgement test and the French Proficiency Test. The results, therefore, do not support Hypothesis 1. The results for the Grammar Group are to the contrary. A significant relationship found between the Written judgement test and the French Proficiency Test and between the Oral judgement test and the French Proficiency Test provide support for Hypothesis 1. These results can be viewed as supporting Bialystok's (1994) claim that learners who have been exposed to different learning approaches will perform differently on tasks which make relatively high demands on analysed knowledge, control of linguistic processing, or both.

Past research in adult MLA has been mainly concerned with establishing that more advanced learners perform better on judgement tasks than intermediate or beginner learners (Arthur, 1980; Bialystok, 1979; Gass, 1983; Singh, d'Anglejan & Carroll, 1982; White, 1977). What Bialystok (1994) now attempts to place emphasis upon is that it is the task demands, in terms of analysed knowledge and control of linguistic processing, which may be an important influence on learners' metalinguistic awareness. Equally important is the contention that learners can only meet the task demands if they have the required level of analysed knowledge and control of linguistic processing, and that the development of the components may vary depending on learning approaches and experiences. Although no studies in adult MLA have been found where learners' performance on metalinguistic tasks is specifically examined according to

different types of learning approaches, a few studies link their results to a type of learning approach.

Studies carried out by Alderson and Steel (1994) and Alderson et al. (1996) examined the claim of L2 educators in the UK that French L2 learners' lacked knowledge about the formal aspects of the language, and that this stemmed from the de-emphasis on grammar associated with communicative-approaches to learning. Alderson et al. (1996) did not show that there is a significant relationship between MLA and L2 proficiency. Although, they found that three-quarters of the subjects were able to correct errors, almost one out of two was incapable of using the correct metalanguage when explaining the correction. Based on the results of their study, Alderson et al. (1996) concluded, that "any instruction which assumes that students know more than noun or verb will cause problems for many students"(p. 10). This points to a lack of analysed knowledge on the part of learners considered to be exposed to a more communicative-approach to learning.

In the present study, when all subjects were grouped together, it was found that their scores on the judgement tests were significantly related to their score on the test of L2 proficiency. However, once learners were grouped according to type of learning programs, a significant relationship between the judgement tests and the French Proficiency Test was found for the Grammar Group, but not for the Communicative Group. At first glance, this lack of significant correlation between two measures of MLA and a general measure of L2 proficiency presents metalinguistic awareness and L2 proficiency, for the Communicative Group, as unrelated.

The view that learned or conscious knowledge about grammar may not be beneficial to

L2 proficiency has been supported on theoretical grounds (Krashen, 1981) and on empirical grounds (Alderson et al., 1996). Krashen's (1981) use of the term L2 proficiency generally refers to oral proficiency. Nonetheless, his claim that explicit or conscious knowledge of grammar can be of no use in communicative situations has played a role in the de-emphasis on grammar in many L2 learning programs. Most studies investigating the relationship between MLA and L2 proficiency do not operationalize L2 proficiency with an instrument which measures oral fluency (Alderson & Steel, 1994; Alderson et al., 1996, Masny & d'Anglejan, 1985; Masny, 1991). Since subjects in earlier studies (Bialystok & Frohlich, 1978; Bialystok, 1979; Gass, 1983) were highschool and university students who were grouped as intermediate or advanced learners on the basis of class placement, it is unlikely that proficiency levels were determined through the use of a test of oral proficiency. The reason for this may be that in an academic setting (e.g., highschool or university) L2 learners are generally called upon to use oral, listening, reading and writing skills to meet course requirements. Therefore, any scale of L2 proficiency would attempt to take the skills being used and required into consideration when speaking of proficiency.

It is not known why there is no significant relationship between MLA and the French Proficiency Test for the Communicative Group. One possible reason is the nature of the task demands of the sub-tests of the proficiency test. This explanation focuses attention on another claim of Bialystok (1982, 1986) which states that in order to assess L2 proficiency and the relationship between MLA and L2 proficiency, task demands of the sub-components of tests should be taken into consideration. In other words, descriptions of L2 proficiency should be made in light of what learners are being asked to do. Particularly relevant is that the theoretical framework adopted here allows to predict that tasks can be analysed for demands made on

analysed knowledge and control of linguistic processing.

The correlation results between the judgement tests and the global score on the French Proficiency Test suggest the importance of examining the components of the French Proficiency Test to determine where differences lie. In the next sections, Hypotheses 2 and 3 address, respectively, the relationship between tasks in this test in terms of the demands made upon learners' analysed knowledge and control of linguistic processing, and learners' performance on the judgement tests according to group membership.

4.3.3 Hypothesis 2

Bialystok (1982) claims that descriptions of the relationship between MLA and L2 proficiency will be fine-tuned if learners' abilities are examined in terms of the demands of the instruments which measure linguistic and metalinguistic proficiency. Therefore, Hypothesis 2 states that the correlation between MLA and L2 proficiency is higher when the demands of the tasks of the two instruments measuring these two variables are the same. The correlation between MLA and L2 proficiency is lower when the demands of the tasks differ.

With respect to Hypothesis 2, for the entire sample, when the correlations between the sub-tests of the French Proficiency Test (Cloze/Listening/Reading) and the Written/Oral judgement tests are examined, the only significant relationships found are between the judgement tests and the Cloze test. The significant relationship which exists between the Oral judgement test and the Cloze test is contrary to Hypothesis 2 since the demands on the components differ. Also contrary to Hypothesis 2 is that the significant relationship which was predicted between the Oral judgement test and the Listening and Reading tests was not found. However, as

predicted, because task demands differ, there is no significant relationship between the Written judgement test and the Listening and Reading tests.

For the Communicative Group, when the correlations between the sub-tests of the French Proficiency Test and the Written/Oral judgement tests are examined, again the only significant relationships found are between the judgement tests and the Cloze test. The significant relationship which exists between the Oral judgement test and the Cloze test is contrary to Hypothesis 2, since the demands on the components differ. In the case of the Grammar Group, again both judgement tests are significantly related to the Cloze test. Contrary to Hypothesis 2, correlations between the Oral judgement test and the Listening test, and the Oral judgement test and the Reading test for both groups are not significant. However, as predicted for both groups, because task demands differ, there is no significant relationship between the Written judgement test and the Listening and Reading tests.

Contrary to Hypothesis 2, what these results show is that in the case of the entire sample, as well as with respect to the groups, there is a significant correlation between tasks which differ in the demands on the components, such as between the Oral judgement test and the Cloze test . Just as some tasks making similar demands are significantly related, therefore, partially confirming Hypothesis 2, other tasks making similar demands are not significantly related, such as between the Oral judgement test and the Reading and Listening tests.

According to the theory in question (Bialystok & Ryan, 1985a), the Reading and Listening tests of the French Proficiency Test make high demands on both analysed knowledge and control of linguistic processing. Because subjects are both reading and listening in order to gain specific information, the level of analysis required is greater than it would be if they were

reading and listening for gist (Bialystok & Ryan, 1985a). At the same time, both tasks also place high demands on control of linguistic processing. In the Reading test, attention must be balanced between forms and meaning. In the Listening test, attention is balanced between listening to words for meaning and for precise information required in order to enter the correct response on the answer sheet. The lack of correlation between the Oral judgement test and the Reading and Listening tests indicates that the Oral judgement test does not make the same demands as the Reading and Listening tests.

MLA is said to be demonstrated through tasks which require high levels of analysed knowledge, control of linguistic processing, or both. The reason for an oral presentation of a grammaticality judgement test was to manipulate task demands so that an increase in the level of control was required in order to solve the task. This was of importance since a difference in demands made on analysed knowledge and control of linguistic processing is considered to be what differentiates learners of a communicative-approach from learners of a grammar-approach. Since identifying, correcting and providing the rule simultaneously in both judgement tests requires high analysis, the only component which had to be manipulated, so that it too made high demands, was the control component. The combination of the oral presentation and the limited time to react to the sentences in the Oral judgement test is considered to result in a task which makes high demands on both components (Bialystok, 1982).

With respect to Hypothesis 2, the correlations in the present study are inconsistent with results found in child studies. Correlation results in child studies (Bialystok, 1986a, 1988a; Ricciardelli, 1993), show significant relationships among different tasks that make the same processing demands, irrespective of content, but not among tasks which differ in their processing

demands. Some of the significant correlations, as well as some of the non-significant correlations described here point to our lack of understanding of the relationships between tasks that are believed to make similar or divergent demands. Although this points to inconclusive evidence regarding Hypothesis 2, several possible explanations concerning these results of the study merit discussion.

One important difference between the child studies cited (Bialystok, 1986a, 1988a; Ricciardelli, 1993) and the present study is the nature of the metalinguistic test. In the child studies, children were called upon to carry out different metalinguistic tasks. Such was not the case for the Written and Oral judgement tests, where learners in both tests had to identify, correct, and provide the rule for the error. Childrens' metalinguistic tasks vary greatly in that they may be required (1) to state which word in a sentence rhymes with another; (2) to choose the longer of two words such as train and caterpillar; (3) to permute words, as in Piaget's (1929) sun-moon task⁵; (4) to judge sentences for grammaticality when the sentence is grammatically correct but not meaningful (**Gm**) or when it is meaningful but not grammatically correct (**gM**) (Bialystok, 1988a, 1988b, 1986a, 1991).

Bialystok (1986a) states that **gM** sentences provide a greater challenge to analysed knowledge than to control of linguistic processing because of having to detect the error in grammaticality. However, at the same time, because such sentences (ungrammatical but meaningful) are incongruent, they do contain some level of control burden (Bialystok, 1986a). Moreover, an important contention of Bialystok (1986a) is "that adequate levels of analysis help

⁵ The sun-moon task involved young children being told that the sun was going to be called the moon and the moon was to be called the sun. Children were then asked - What is in the sky when you go to bed?

overcome the control burden”(p. 502). Therefore, one possible explanation for the high correlation between the Written and the Oral judgement tests, as well as that between some of the other tasks which differed in the level of control required for their solution, is that learners’ analysed knowledge helped overcome the control burden.

4.3.4 Interpreting the Results of the Regression Analyses

The possibility that learners’ analysed knowledge helped decrease the burden on control of linguistic processing may be relevant to an interpretation of the regression results. Such a conclusion could possibly also explain why for the entire sample, and for the Grammar Group, the Oral judgement test (+A+C) in the regression analyses proved to be the better predictor of success on the Cloze test (+A-C) of the French Proficiency Test. The Cloze test is considered to be the component of the French Proficiency Test which tests for grammar knowledge. One would have expected that of the two judgement tests, the Written judgement test, which makes high demands on analysed knowledge and low demands on control of linguistic processing, would have been the better predictor of success on the Cloze test. However, for the Grammar Group, it was the Oral judgement test which was the better predictor of success on the Cloze test, whereas for the Communicative group, the Written judgement test best predicted success on the Cloze test.

It is important to recall that the theoretical framework refers to both the demands which tasks make on the components, and to learners’ level of analysed knowledge and control of linguistic processing. The implications are that learners with more analysed knowledge will do better on tasks requiring a high degree of analysed knowledge, and that those with a higher level

of control of linguistic processing will do better on high control tasks. Nonetheless, an important prediction of the model is that tasks which make similar demands should correlate highly. Consequently, that communicative-approach learners have higher levels of control of linguistic processing than analysed knowledge is not in contradiction with the prediction that the Written judgement test should be the best predictor of results on the Cloze test. In the case of the Communicative Group, such was the case. The following interpretation may shed light on the results as they pertain to the Oral judgement test being the best predictor of the Cloze test for the Grammar Group.

It is expected that grammar-approach learners may have higher levels of analysed knowledge than control of linguistic processing since generally they are exposed to more grammar than communicative-approach learners. Since the grammaticality judgement tests, which assess knowledge about grammar, are significantly and highly intercorrelated, this indicates that they are measuring to some degree the same thing. It is plausible that because learners completed the Written judgement test just prior to the oral version, they had already accessed the analysed knowledge required for the Oral judgement test. This seems to have been particularly beneficial to the grammar-approach learners who perhaps from the start had more analysed knowledge to access. Having already seen the error types in written form may have resulted in a certain level of expectancy of the same errors on the Oral judgement test. It appears that this resulted in the Oral judgement test taking on the attributes of the Written judgement test; a task which made high demands on the analysis component and low demands on the control component. It is possibly for this reason that the Oral judgement test was the best predictor of success on the Cloze test for the Grammar Group. This is not to infer that an Oral judgement test

would not generally require a high level of control of linguistic processing, but that in these circumstances, due to methodology, such may not have been the case.

Bialystok (1994) states that the more analysed the knowledge, the less attention learners need to devote to accessing that knowledge, which results in lesser demands being made on the control component. In other words, because the learner already accessed the knowledge in a different context (the Written judgement test), it is possible that the demands on the control of linguistic processing component were not as elevated as was predicted. This conclusion may provide insight into why the correlations between the Oral judgement test and the Reading and Listening tests were not significantly related for either group. For the reasons just presented, it is conceivable that the Oral judgement test in these circumstances was not a task which made high demands on control of linguistic processing, and therefore would not be expected to be significantly correlated with the Reading and Listening tests of the French Proficiency Test.

Another consideration to be taken into account in interpreting the regression analyses is the similarity between the two indices (judgement tests and Cloze test). A cloze test has been shown to be a measure of L2 proficiency (Alderson, 1979; Cohen, 1980; Oller, 1979, 1983). Success on a cloze test depends to some extent on the subject's ability to access knowledge of the syntactic and semantic rules of the language to determine which is the appropriate word for the blank (Oller, 1973). Oller (1973) also claims that success on a cloze test can be determined by the extent to which an individual anticipates linguistic elements in a sentence. Therefore, a level of expectancy could have played a part in subjects' performance on both the Cloze and the Oral judgement test. Success on the grammaticality judgement test depends on the learner being capable of judging a sequence of words for grammaticality, and accessing analysed knowledge in

order to make the correction and provide the rule. If as stated earlier, the Cloze test is considered as a measure of L2 proficiency, the ability to successfully carry out the judgement task could be considered a reliable correlate of L2 proficiency. Masny and d'Anglejan's (1985) study shows that a Cloze test used as a measure of L2 proficiency was a significant predictor of learners' ability on a grammaticality judgement test.

4.3.5 Hypothesis 3

The claim of the Bialystok and Ryan (1985a) model is that different learning approaches or experiences may lead to differential increases in the processing components. Therefore, Hypothesis 3 claims that learners from a communicative-approach to L2 learning perform better on tasks which make greater demands on control of linguistic processing. Learners from a grammar-approach to L2 learning perform better on tasks which make lesser demands on control of linguistic processing.

With respect to Hypothesis 3, a multivariate analysis of variance first provided evidence of a global difference between the groups on the judgement tests. Then an analysis of variance with repeated measures showed a significant interaction between the groups and the mode of presentation of the judgement test. To understand this interaction, the descriptive statistics must be examined. They show that grammar-approach learners did better on the Written judgement test, while the communicative-approach learners did better on the Oral judgement test. On one hand, the results of the analysis of variance support the hypothesis that L2 learners from a communicative-approach to learning perform significantly better on the oral judgement test, which makes high demands on control of linguistic processing. On the other hand, L2 learners

from a grammar-approach to L2 learning perform significantly better on the Written judgement test which makes low demands on control of linguistic processing.

According to the Bialystok and Ryan (1985a) model, some tasks are more difficult than others for learners, depending on the level of analysed knowledge and control of linguistic processing required to complete the task. The significant interaction of the analysis of variance lends support to Bialystok's (1994) claim that the development of the two components is governed to some extent by different factors, such as learning approaches and experiences.

These results draw attention to Bialystok's (1982) claim that a model of L2 learning must provide a means of accounting for variability. Bialystok (1982) suggests that rather than asking how often a learner produces the correct response, the question should be formulated as: Under what circumstances does the learner produce the correct response? In a similar vein, Tarone (1987) and Ellis (1987) suggest that discussions of learners' abilities should be placed in the context of a description of the demands being placed on learners. The differences between these learners on two metalinguistic tests which differ in their mode of presentation, and consequently in their levels of control of linguistic processing, point to the importance of examining task demands.

Analysing tasks for the level of analysed knowledge and control of linguistic processing required to complete them, and interpreting learners' performance in light of those demands, will provide information on learners' level of the components. Once learners and tasks are assessed for analysed knowledge and control of linguistic processing, it will be easier to understand why learners' performance in one situation is not necessarily indicative of performance under different circumstances. On one hand, the relevance of such information is that learner

performance can perhaps be predicted under certain conditions. On the other hand, when learners do not perform well on certain tasks, the reason may be related to the degree of analysed knowledge and control of linguistic processing the task requires in relation to learners' level of the components.

4.3.6 To Summarize

This discussion has examined the results of the study according to each hypothesis and in light of the theoretical framework adopted. The relationship between MLA and L2 proficiency is, as expected, clearer when first individual tasks are analysed for their demands on analysed knowledge and control of linguistic processing and, second, when subjects are grouped according to whether they have been exposed to communicative or grammar-approaches to learning. The results show that generally the more metalinguistically aware the advanced-level learner, the greater the L2 proficiency. The results also provide evidence that learners' performance on tasks varies depending on the degree of analysed knowledge and control of linguistic processing required for successful task completion and depending on the type of L2 learning approach. Although correlations between tasks were not always consistent with predictions, the study does not provide evidence to refute the model.

Chapter V

Exploratory Phase of Study

5. Introduction

The purpose of this chapter is to present a more detailed profile of subjects' performance on the grammaticality judgement tests. The reader is advised that the information and the data presented here stem from an exploratory analysis and are intended to be descriptive. Learner performance in judging grammaticality is examined according to grammatical class of errors, and according to whether they were able to identify and correct the error, or identify, correct and provide the rule for the error. Interest in these levels of judgement ability stems from the claim (1) that being able to articulate the rule demonstrates greater MLA, and (2) that higher levels of MLA should be related to greater L2 proficiency. MLA has been defined, for the purpose of the present study, as conscious knowledge about the formal aspects of the language. Consequently, the different categories of the judgement task are particularly relevant to the operationalization of conscious knowledge. Identifying an incorrect sentence and locating the error are tasks that may be carried out without conscious knowledge (Bialystok, 1991; Reber, 1976). It is only the correction of the error and the grammatical description of the rule violated that force the learner to access conscious or analysed knowledge (Bialystok, 1982; Bialystok & Ryan, 1985a, 1985b; Gass, 1983; Sorace, 1985).

First, the nine French grammar rules which were violated in the twenty-one grammatically incorrect sentences per judgement test are presented. These rules relate to the types of errors which subjects were required to identify, correct and ultimately explain. An

identifier (e.g., A1, P2, V3 etc.) is used in tables to refer to the type of error that the sentence contained. There were a total of 42 incorrect and 18 correct sentences in the judgement tests (see Appendix B). When item numbers appear in the tables, they refer only to sentences which needed to be corrected, and for this reason range from number two to fifty-seven.

Descriptive statistics for the three grammatical classes (adjective/ verb/ pronoun) which made up the grammaticality judgement tests are presented next. In each of the judgement tests, there were seven sentences from each grammatical class. The results of the analysis of variance with repeated measures on the grammatical classes of the judgement tests are then presented (see Table 4), followed by an explanation of the tabulation method for scoring the judgement tests. Table 8 presents a concise overview of the results of a conditional probability analysis which was carried out in order to look at the probability (for each item) of someone who obtained a score of 2 going on to earn a score of 3 according to group membership. This is followed by the results of an analysis using a T criterion to detect notable differences. The analyses were run on sub-groups of learners who either scored 2 or 3 on the judgement tests and their scores on the sub-tests of the French Proficiency Test.

Due to the amount of detailed information presented in this chapter, the results are first summarized and then followed by a discussion of the implications of this exploratory phase of the study. The discussion is carried out in light of the theoretical framework driving the present study, along with comments concerning another study (Alderson et al.,1996) where the same type of grammaticality judgement test was used.

5.1 French Grammar Rules

The following French grammar rules represent the error types according to each grammatical class. Each judgement test contained at least two examples of each error type, for a total of six sentences. A seventh sentence contained a randomly selected third example of one of the error types.

- Adjective:** A1. Colour adjectives always follow the noun.
 A2. If the noun is feminine, the adjective which describes it is also feminine.
 A3. The adjectives 'bon(ne) and 'grand(e) come before the noun they describe.
- Pronoun:** P1. The object pronoun comes directly before the verb.
 P2. The direct pronouns *le, la les* always come before the indirect pronouns *lui* and *leur*.
 P3. The direct object pronoun conforms in number to the noun it replaces.
- Verb:** V1. The subject determines which form of the auxiliary verb is used.
 V2. Reflexive verbs form the 'passé composé' with *être*.
 V3. To form the 'passé composé', use the correct form of 'avoir' and 'être' plus the past participle of the verb

5.2 Descriptive Statistics for Grammatical Classes

The descriptive statistics (see Table 7) reveal that the means for correct treatment of sentences according to the grammatical classe of the error range from 12.97 to 16.55 on the Written judgement test, and from 13.15 to 16.32 on the Oral judgement test (maximum score per test = 21), thus indicating a reasonable spread of candidates across a range of possible scores.

Table 7**Descriptive Statistics According to Grammatical Classes on the Written and Oral Judgement Tests**

Class	Written Judgement Test				Oral Judgement Test			
	Group							
	Communicative		Grammar		Communicative		Grammar	
	M	SD	M	SD	M	SD	M	SD
Adjective	15.94	4.34	16.55	4.89	16.32	3.37	13.36	6.14
Verb	14.45	4.88	15.70	4.78	15.48	4.30	14.97	4.48
Pronoun	12.97	3.70	14.70	3.57	14.03	4.13	13.15	4.08

Mean scores for the sum of verb and adjective items for both groups were slightly below the median, therefore demonstrating some negative skewness. As shown in the following tables and in Figure 3, although mean differences between the groups according to grammatical class are not large, the Grammar Group did consistently better than the Communicative Group on the Written judgement test, while the Communicative Group did consistently better on the Oral judgement test. There were nine correct sentences per judgement test. Although these correct sentences did not form a variable, a frequency count of learner scores shows that on the average, 82% of the subjects were able to recognize correct sentences as correct.

5.3 Analysis of Variance with Repeated Measures

Similar to the reasoning behind the use of a univariate design to approximate a multivariate analysis in order to validate Hypothesis 3, favourable conditions led to the decision to use an analysis of variance with repeated measures to detect significant differences between the grammatical classes. Homogeneity of variance-covariance matrices between the two groups was tested using Box's M test which provided evidence of equality of variance-covariance (Box's $M = 26.25$ $p = .317$). A reliability analysis on the items of the Written judgement test and the Oral judgement test produced an alpha coefficient of internal consistency of 0.83 and 0.84 respectively. The 7 items per grammatical class can therefore be considered equivalent. In Table 4, what is of relevance to this exploratory phase is presented under **Within Subjects** and pertains to the rows with the following captions - **Grammatical Class, G. Class x Groups, Tests x G. Class, Tests x G. Class x Groups**.

The results of a univariate design with repeated measures (see Table 4) show a significant

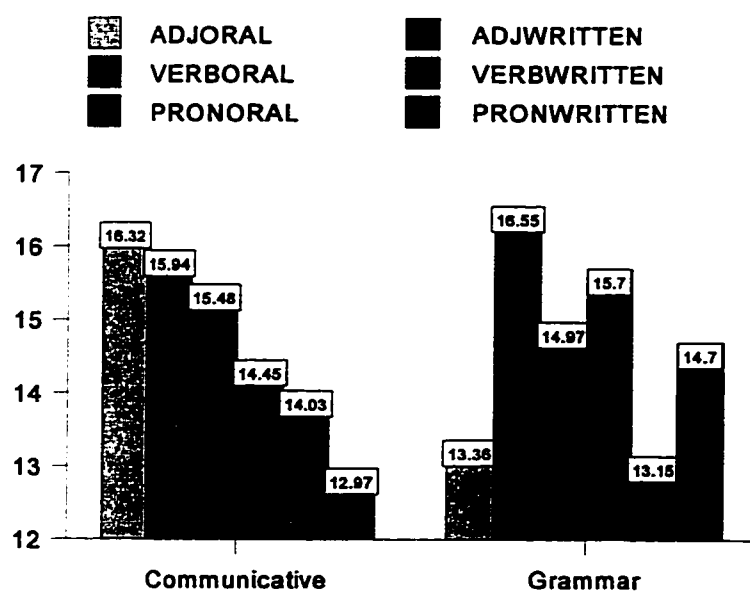


Figure 3 Scores on Judgement Tests According to Grammatical Classes for the Communicative and Grammar Group

difference between the three grammatical classes (MS error = 118.71, $df = 2$, $F = 9.71$, $p = .000$).

An interaction was found between type of test and grammatical class of errors (MS error = 20.75, $df = 2$, $F = 3.05$, $p = .029$). This can be interpreted as a difference between patterns of type of test and grammatical class as observed from the means on the dependent variable, the judgement test. In other words, certain items are more difficult depending on whether they are presented orally or written. There is no significant interaction between group and errors according to grammatical class (**G. Class x Groups**). Generally, if one grammatical class (e.g., pronoun) is more difficult than another for one group, it is so for the other group. The exception to this is in the adjective grammatical class of the Oral judgement test where the greatest difference between the groups is found. As Figure 3 above shows, the mean score of 16.32 for the Communicative group on the adjective errors of the Oral judgement test corresponds to their highest score for the three grammatical classes. In the case of the Grammar Group, their mean score of 13.36 on the adjective errors of the Oral judgement test corresponds to their second highest score on the grammatical classes. Results also show that there is no significant interaction between type of test, grammatical class and group.

5.4 Tabulation of Scores on the Grammaticality Judgement Tests

Responses on the written and oral grammaticality test were assigned a score of 0, 1, 2, or 3, according to whether:

- (1) the learner was not able to identify an incorrect sentence (score = 0)
- (2) the learner was able to identify an incorrect sentence but unable to correct the error (score = 1)

- (3) the learner was able to detect and correct the error but provides no rule or incorrect rule (score = 2)
- (4) the learner was able to detect the error, correct it and provide the correct grammar rule (score = 3)

5.5 Test of Equality of Binomial Proportions

The importance of examining the performance of those learners who are able to identify and correct an error in comparison to those who can also provide the rule required, stems from the theoretical framework of this study (Bialystok & Ryan, 1985a, 1985b). Bialystok (1981a, 1994) has long claimed that being able to articulate the rule demonstrates greater metalinguistic awareness.

The population of interest in the test of equality of binomial proportions consists of those subjects who have scored at least a 2 on the items of the grammaticality judgement tests. This means that an individual can either identify and correct an error (score 2) or identify, correct and provide the rule (score 3). The interest is not in subjects who have scored less than 2, since the claim in this study is that the ability to both identify and correct an error can be viewed as initial evidence that the learner is metalinguistically aware (Bialystok, 1982).

Table 8 presents the results of a conditional analysis requiring a test of the equality of two binomial proportions. What is being tested is whether or not the proportion of individuals who have scored exactly 3 is the same for both the Communicative Group and the Grammar Group. Table 8 shows, according to each occurrence of an incorrect sentence, if there is a significant difference between the groups in whether they remain at score 2 or go on to score 3 at the 95%

Table 8

Results of the Test of Equality of Two Binomial Proportions between Communicative Group (Group C) and the Grammar Group (Group G) on the Written and Oral Judgement Tests

Error Type	Written Judgement Test			Oral Judgement Test		
	Group displaying significant better chance of scoring 3 for each of the 7 errors			Group displaying significant better chance of scoring 3 for each of the 7 errors		
ADJECTIVE - A1	Grp C	ND		ND	ND	ND
ADJECTIVE - A2	ND	Grp C		ND	Grp C	
ADJECTIVE - A3	Grp G	ND	Grp G	Grp G	Grp G	
VERB - V1	Grp G	Grp G	Grp G	Grp G	Grp C	
VERB - V2	Grp G	ND		ND	ND	
VERB - V3	ND	Grp G		Grp G	ND	Grp C
PRONOUN - P1	Grp G	Grp G		Grp G	Grp G	Grp C
PRONOUN - P2	Grp C	Grp G		Grp C	Grp C	
PRONOUN - P3	Grp G	Grp G	Grp G	Grp G	Grp G	

confidence level. Results are presented according to grammatical class and error type on both the Written judgement test and the Oral judgement test. Within the table under “**ERROR TYPE**” are the three types of errors per grammatical class. To the right of **Adjective-A1, A2, A3, Verb-V1, V2, V3** and so forth are codes which refer to the occurrence of an error type in a sentence. The codes - **Grp C, Grp G** or **ND**- refer either to the group (**Grp C** or **Grp G**) which has the significantly better chance of scoring a 3 for that particular item or to no difference (**ND**) between the groups on a particular error. For example, an examination of Table 8 informs the reader that in the Written judgement test there are two errors in the adjective pertaining to rule A1, two pertaining to A2 and three pertaining to A3.

5.5.1 Description of the Results for Written Judgement Test

Table 8 shows that in the Written judgement test, with respect to the two errors which relate to the rule - **A1 Colour adjectives always follow the noun** - in one instance Group C has a significantly better chance of obtaining a score of 3 than Group G, while in the other instance there is no significant difference between the groups. For the two errors which relate to rule - **A2 If the noun is feminine, the adjective which describes it is also feminine** - results show that in one case, Group C has the significant better chance of going on to provide the rule (score = 3) while in the other instance, there is no significant difference between the groups. For the three errors which relate to rule - **A3. The adjectives ‘bon(ne) and ‘grand(e) come before the noun they describe** - in two instances, it is Group G which has the greater chance of providing the rule, while in one instance there is no significant difference between the groups.

Within the grammatical class 'verb', the results are as follows: In three instances of errors relating to the rule - **V1 The subject determines which form of the auxiliary verb is used** - Group G has a significantly greater chance of providing the rule than Group C. In the two instances of errors pertaining to rule - **V2 Reflexive verbs form the 'passé composé' with être** - in one instance, Group G has a significantly greater chance of providing the rule than Group C, while in the other instance there is no significant difference. With respect to the two errors pertaining to rule - **V3 To form the 'passé composé', use the correct form of 'avoir' and 'être' plus the past participle of the verb** - in one instance, Group G has a significantly greater chance of providing the rule than Group C, while in the other instance there is no significant difference.

Within the grammatical class 'pronoun', which the mean score indicates as having been the most difficult of the grammatical classes, in 6 out of 7 instances, the Grammar Group has the significant greater chance of obtaining a score of 3.

To summarize: According to this estimate of equality of two binomial proportions, there are 13 items on the Written judgement test for which there is statistical evidence of a significant difference in favour of Group G. There are 5 items on the Written judgement test which do not appear different between the groups and there are 3 items where Group C has a statistically better chance of getting a score of 3 than Group G.

5.5.2 Description of Results for Oral Judgement Test

Table 8 shows that in the Oral judgement test, with respect to the three errors which relate to the rule - **A1 Colour adjectives always follow the noun** - there is no significant difference

between Group C and Group G in the test of significant difference in the proportion reaching a score of 3. For the two errors which relate to rule - **A2 If the noun is feminine, the adjective which describes it is also feminine** - results show that in one case, Group C has the significant better chance of going on to provide the rule (score = 3) while in the other instance, there is no significant difference between the groups. This result is identical to the one found for A2 in the Written judgement test. For the two errors which relate to rule - **A3. The adjectives 'bon(ne) and 'grand(e) come before the noun they describe** - it is Group G which has the greater chance of providing the rule.

Within the grammatical class 'verb', the results are as follows: In the two instances of errors relating to the rule - **V1 The subject determines which form of the auxiliary verb is used** - in one instance Group G has a significantly greater chance of providing the rule while in the other it is Group C. In the two instances of errors pertaining to rule - **V2 Reflexive verbs form the 'passé composé' with être** - there is no significant difference between the groups. With respect to the three errors pertaining to rule - **V3 To form the 'passé composé', use the correct form of 'avoir' and 'être' plus the past participle of the verb** - Group C has a better chance in one instance of attaining a score of 3, Group G in the other instance, while there is no significant difference between the groups in the third occurrence.

Within the grammatical class 'pronoun' and with respect to the rule - **P1 The object pronoun comes directly before the verb** - Group G, in 2 out of 3 instances has a better chance of getting a score of 3 than Group C. Group C has a better chance of getting a score of 3 in the other instance. With respect to rule - **P2 The direct pronouns *le, la les* always come before the indirect pronouns *lui and leur*** - in both occurrences it is Group C which has a better chance of

getting a score of 3 than Group G. For the 2 errors related to rule - **P3. The direct object pronoun conforms in number to the noun it replaces** - it is Group G in both instances which has the better chance of getting a score of 3.

To summarize: According to this estimate of equality of two binomial proportions, there are 8 items on the Oral judgement test for which there is statistical evidence of a significant difference in favour of Group G. There are 7 items on the Oral judgement test which do not appear different between the groups and there are 6 items where Group C has a significantly better chance of getting a score of 3 than Group G.

5.6 Linking the Ability to Provide a Rule and Aspects of L2 Proficiency

Since it has been stated in Chapter I that the more metalinguistically aware the learner is, the more likely they are to have higher levels of L2 proficiency, a logical sequence in this exploratory phase of the study was to examine if there are notable differences in the results of the sub-tests of the French Proficiency Test between learners who are only able to identify and correct errors and those who can identify, correct and provide the rule. The model claims that being able to provide the rule is indicative of greater metalinguistic awareness. Two sub-groups from the entire sample were created for each item. Those who scored only a 2 on an item of the judgement tests formed one sub-group, while those who scored a 3 on an item formed the other sub-group. Using a T criterion as a standard comparison, learners' scores on the three sub-tests of the French Proficiency Test were compared with those who can score a 2 and those who score a 3 on the grammaticality judgement tests. Although the use of the T criterion was for purely descriptive purposes, the results are interesting. On 12 out of 42 items on the grammaticality

judgement tests there are notable differences between those who score 2 or 3 and their scores on the sub-tests of the French Proficiency Test.

5.7 To Summarize

In the Written judgement test, the descriptive statistics for the grammatical classes show that for all subjects the mean scores are highest for correcting sentences containing an error in the adjective, followed by sentences containing verb errors, then those containing pronoun errors. In the Oral judgement test, differences between groups are found. The adjective produced the highest mean score for the Communicative Group, while the verb scores were highest for the Grammar Group. For the Communicative Group, the second highest mean score was for verb errors, while the adjective was the second highest mean score for the Grammar Group. For all subjects, in the Oral judgement test, the pronoun produced the lowest mean score. The results of the analysis of variance with repeated measures (see Table 4) provides further evidence that certain items are more difficult depending on whether they are presented orally or written.

The conditional probability analysis shows that there is a significant difference in the proportion of individuals in the Communicative and Grammar groups who are able to provide the rule which was violated. On a majority of items in both the Oral and Written judgement tests, the Grammar Group has a significantly better chance of going on to a score of 3 than the Communicative group.

The use of a T criterion as a standard comparison shed light on differences between two sub-groups. These sub-groups were made up of those who scored 2 and those who scored 3 on the judgement tests. Results showed that on 28.5% of the items, there is a notable difference

between those who can correct the error (score = 2), those who can provide the rule (score = 3) and their scores on sub-tests of the French Proficiency Test. For the most part, the difference was found with the Cloze Test.

5.8 Discussion

In Chapter I, on the one hand, it is stated that the communicative-approach to second language learning which places emphasis on meaning through communicative activities should result in greater increases in control of linguistic processing. On the other hand, the claim in Chapter I is that because the grammar-approach to second language learning stresses the importance of knowledge about the formal aspects of the language, learners from this approach should have higher levels of analysed knowledge. Bialystok and Ryan (1985a, 1985b) and Bialystok (1991) claim that judgement tasks which require learners to identify and correct and provide the rule make greater demands on analysed knowledge than judgement tasks which require the learner to identify or correct or provide the rule. In most studies where learners have to make grammaticality judgements, the task is usually to identify the error, correct the error, or both (Bley-Vroman et al., 1988; Hulstijn, 1984; Liceras, 1983; White, 1985; Bialystok, 1979, 1982). One of the goals of the exploratory phase of this study was to provide more empirical evidence on learners' performance on metalinguistic tasks which are comprised of three categories or steps of grammaticality judgements, and particularly to see whether being able to provide the rule can be linked to greater proficiency in the target language. Correlation results presented in Chapter IV show generally that the more metalinguistically aware the learner, the greater L2 proficiency. What the analyses using a T criterion show is that notable

differences between those who can correct the error and those who go on to provide the rule, and the sub-tests of the French Proficiency Test are not frequent. While this may not put into question Bialystok's (1994) claim that providing the rule demonstrates more MLA, it does point to inconclusive evidence on the association between knowing the rule and aspects of L2 proficiency.

Alderson and Steel (1994) and Alderson et al. (1996) are among the few who have had the same L2 learners carry out all three steps of the judgement task. Their study (Alderson et al., 1996), contained a metalinguistic assessment test where 15 out of 65 items required learners to carry out the three steps of the Written judgement test in the target language, French. Alderson et al. (1996) claim that "on the whole, students were good at French error correction, and their ability to state which rule was violated was better than their ability to use metalanguage when stating such rules"(p. 9). Since Alderson et al. (1996) do not provide examples of learners' inability to use metalanguage correctly while apparently providing a good rule in the L2, it is difficult to know exactly the type of answer to which their statement refers. In the Alderson et al. (1996) study, the reader is not advised if a rule correctly stated without correct use of metalanguage was marked correct or incorrect.

Frequency counts for the Alderson et al. (1996) study show that on the average 71% of the students were able to correct the error in the judgement task while 50% were able to provide the rule. In the present study, on the average 74% of students were able to correct errors, while 56% on the average were able to go on to provide the rule. An examination of the 65 metalinguistic items in the Alderson et al. (1996) study shows that half the items are in English and pertain to knowledge about the mother-tongue. Consequently, it is perhaps not all that

surprising that metalinguistic knowledge was not significantly related to L2 proficiency in their study. This draws attention to Bialystok and Ryan's (1985a) claim that descriptions of L2 proficiency and metalinguistic proficiency should be placed in the context of what the learner is being asked to do.

The Bialystok and Ryan (1985a, 1985b) theoretical framework posits that when demands are very high on the process of analysis, control of linguistic processing, or both, learners will only be able to meet the demands if they have the required level of analysed knowledge, control of linguistic processing, or both. Moreover, it is when task demands are particularly high on one or both components that differences in learners' metalinguistic abilities become evident. The detailed profile of learners' performance on the judgement tasks in this study shows that L2 learners from a grammar-approach have a significantly better chance of providing the rule in the majority of sentences in both the oral and written grammaticality judgement tests than learners from the communicative- approach.

Because of the high demands the Oral judgement test was thought to place on the control of linguistic processing component, it was not initially expected that in the Oral judgement test, the Grammar Group would have a significantly better chance of going on to provide the rule. However, as expounded upon in the discussion of Chapter IV, because the judgement tests appear to be measuring to some degree the same thing, these results are more comprehensible. What is interesting, is that the lead which the Grammar Group has over the Communicative Group in the Written judgement test, on items for which they have a significantly better chance of providing the rules, diminishes greatly in the Oral judgement test. In the Written judgement test, there are 13 items where the Grammar Group has a significantly better chance of going on to

score a 3, compared to 3 items where the Communicative Group has the significantly better chance of going on to score a 3. In the Oral judgement test, there are 8 items where the Grammar Group has a significantly better chance of going on to score a 3, compared to 6 items where it is the Communicative Group which has the significantly better chance of scoring a 3.

The results of the test of equality of binomial proportions point to the Grammar Group as having the greater chance of going on to score a 3 on more items than the Communicative Group. This could be viewed as supporting a claim made earlier that it appears that learners' level of analysed knowledge may counter-balance the demands made on the control of linguistic processing component. If such is the case, then perhaps an increase in the level of control of linguistic processing is not as important for advanced adult learners as has been shown for child learners. Yet, another possible conclusion is that these advanced grammar-approach learners have achieved the balance between analysed knowledge and control of linguistic processing which is indicative of what Bialystok (1994) claims is needed to be bilingual.

Chapter VI

Conclusion

6. Introduction

In the conclusion, the major findings of this study are reviewed in relation to each hypothesis and are interpreted in light of the theoretical framework adopted. This is followed by remarks on the exploratory phase of the study. Two questions which stem from the results of this investigation, as well as implications of the findings, conclude this chapter.

6.1 Hypothesis 1

The primary objective of this investigation was to examine the relationship between MLA and L2 proficiency, in an attempt to test the first hypothesis which stated that there is a positive relationship between the grammaticality judgement tests and aspects of French Proficiency. Previous studies (Alderson & Steel, 1994; Alderson et al., 1996; Masny, 1991; Sorace, 1985) have provided inconclusive evidence with respect to the degree of importance of MLA to L2 proficiency, and none has examined the question in light of different learning approaches. Hypothesis 1 which links MLA to greater L2 proficiency was confirmed for the entire sample. The findings revealed however, that when the entire sample was divided into groups according to the general emphasis of learning approaches, a positive relationship was found between MLA and a general measure of L2 proficiency for the Grammar Group, but not for the Communicative Group. This provides support for the claim made in previous chapters that different learning approaches may lead to differential increases in levels of analysed

knowledge and control of linguistic processing, and that such differences will be reflected in learners' performance on metalinguistic tasks.

6.1.1 Hypothesis 2

The model (Bialystok & Ryan, 1985a) which was being tested in the present study claims that tasks can be classified according to the level or degree of analysed knowledge and control of linguistic processing which are required to successfully complete them. The second hypothesis states that the relationship between MLA and L2 proficiency is higher when the tasks make the same demands and lower when the tasks differ in demands. Consequently, all tasks were assigned levels of analysed knowledge and control of linguistic processing. This provided a means of fine-tuning the notion of L2 proficiency and allowed for a more detailed examination of what learners are being asked to do in terms of the processing components - process of analysis and control of linguistic processing.

The second hypothesis was partially confirmed. For the entire sample and for both groups, both judgement tests were significantly correlated with the Cloze test of the French Proficiency Test; the sub-test considered to tap knowledge about grammar. The Written judgement test and the Cloze test, which make similar demands on the processing components, were expected to be significantly correlated. It is not known why the Oral judgement test, considered to make high demands on control of linguistic processing, was significantly correlated with the Cloze test which makes low demands on control of linguistic processing. One possible explanation relates to the fact that the Oral judgement test had to immediately follow the Written judgement test. This may have contributed to a certain level of expectancy or familiarity

with the error types which affected the degree of control of linguistic processing necessary to complete the task. As a result, the Oral judgement test became a task whose demands were similar to those of the Written judgement test. Consequently, in light of this conclusion, it would be presumptuous to invalidate Hypothesis 2, and to interpret the results as discrediting Bialystok's claim that the relationship between MLA and L2 proficiency is higher when the tasks make the same demands and lower when the tasks differ in demands. What can be said is that there is some evidence that such is the case, but that significant correlations exist between tasks which differ in demands and that this may stem from the methodology.

6.1.2 Regression Analyses

Since MLA was shown to be significantly related to L2 proficiency, examining whether the judgement tests could predict results on the sub-tests of the proficiency test was of relevance. Regression analyses showed that the Oral judgement test is the better predictor of success on the Cloze test for the Grammar Group, while the Written judgement test is the better predictor of success on the Cloze test for the Communicative Group. The latter result was expected for both groups in light of the similar demands of the Written judgement test and the Cloze test. Since the results of regression analyses stem from the strength of correlations, this finding corroborates the conclusion that grammar-approach learners' analysed knowledge may have reduced the burden on the control component. For the Grammar group, the possibility that the Oral judgement test was to some degree a repetition of the Written judgement test means that the Oral judgement test became a task which made demands similar to those of the Cloze test. Consequently, such a conclusion renders the finding that the Oral judgement test is the better predictor of success on

the Cloze test more comprehensible. In fact, the possibility that the Oral judgement test took on the attributes of the Written judgement test constituted one of the favourable conditions which led to the use of a univariate design with repeated measures. This is not to imply that the judgement tests are not generally different from one another in terms of the demands on the components, but to propose that the manner in which they were administered may have influenced the results.

With respect to the Communicative Group, the level of control of linguistic processing doesn't appear to have played a role in reducing the high demands placed on analysed knowledge in the judgement tests. When the communicative-approach learners had to complete the Oral judgement test which required high levels of both analysed knowledge and control of linguistic processing, the regression analyses do not show it as being the better predictor of the Cloze test. Therefore, as was expected, the Written judgement test is the better predictor of success on the Cloze test. The implication that the control of linguistic processing component has a limited effect on communicative-approach adult learners' performance on tasks requiring a high degree of both components is a finding which has not been singled out in previous research. Moreover, studies in child MLA (Bialystok, 1988) point to learners' increased levels of the control component as being the bilingual advantage that differentiates between children in their success in carrying out different metalinguistic tasks. One may interpret these findings as suggesting that for adult L2 learners, greater analysed knowledge can positively affect learners' performance on tasks requiring even a high degree of control of linguistic processing, whereas a high degree of control of linguistic processing appears not to compensate for learners' lack of analysed knowledge. Such a conclusion also supports Bialystok and Ryan's (1985c) claim that the

processing component works in an orderly fashion; a certain degree or level of analysed knowledge must exist in order for control of linguistic processing to function. The apparent importance of analysed knowledge also lends support to those who call for knowledge about grammar to be considered as an important facet of L2 learning, as was outlined in Chapter I.

6.1.3 Hypothesis 3

This investigation collected data from learners who were grouped according to whether they came from a communicative-approach or a grammar-approach to learning French in order to test the third hypothesis. The third hypothesis claims that learners from a communicative-approach to learning perform better on tasks which make greater demands on control of linguistic processing while learners from a grammar-approach perform better on tasks which make lesser demands on control of linguistic processing. Hypothesis 3 was partially confirmed. One multivariate analysis showed no significant global differences between the groups on the Cloze (+A -C), Listening (+A +C), and Reading (+A +C) sub-tests of the French Proficiency Test. Two possible explanations for this finding are that the Grammar Group learners' analysed knowledge compensated for the demands made on control of linguistic processing or that task demands on analysed knowledge and control of linguistic processing were not of the claimed levels.

Another multivariate analysis showed significant global differences between the groups on the judgement tests, which differed in the level of control of linguistic processing. This was followed by an analysis of variance with repeated measures on the judgement tests, which showed a significant interaction between groups and type of judgement test. An examination of the means for the groups on the judgement tests shows that the Communicative Group did better

on the Oral judgement test, while the Grammar Group did better on the Written judgement test. In light of the descriptive statistics, the interaction detected between group and type of judgement test can be interpreted as providing evidence that the Communicative Group did significantly better on the judgement test requiring a high level of control of linguistic processing and that the Grammar Group did significantly better on the judgement test requiring a low level of control of linguistic processing. Therefore, with respect to the grammaticality judgement tasks, the third hypothesis was confirmed.

6.1.4 The Exploratory Phase

In the exploratory phase of the study (Chapter V), learners' performance on two of the steps of the judgement tasks - correcting the error and providing the rule which was violated- provided a clearer indication of possible group differences in levels of MLA. Here, the important finding is that there is a significant difference in favour of the Grammar Group, in the proportion of learners who are able to go on to provide the rule violated. Since the primary goal of the present study was to investigate the relationship between MLA and L2 proficiency, examining whether being able to provide a rule can be linked to better performance on the sub-tests of the French Proficiency Test was of importance. When the results of the sub-tests of the French Proficiency Test are examined for notable differences between two sub-groups - those who can correct the error and those who can correct the error and provide the rule - differences between the two sub-groups are low. This suggests that learners who are able to articulate the rule generally do not perform significantly better on the sub-tests of the French Proficiency Test than learners who can only identify and correct the error. Although this finding does not invalidate

Bialystok's (1994) claim that high levels of analysed knowledge are responsible for metalinguistic proficiency, it does not provide evidence that being able to articulate a grammar rule is related to increased L2 proficiency.

6.1.5 Implications for Future Research and Questions which Arise

In the case of the grammaticality judgement test, it is learners' ability to both identify and correct an error or to provide the rule which is considered to demonstrate MLA. For this reason, it was not appropriate in the present study to focus on tasks which made low demands on analysis and high demands on control of linguistic processing. Yet, with the results suggesting that communicative-approach learners' degree of control of linguistic processing does not appear to reduce the demands on analysed knowledge, future studies could concentrate on the role of control of linguistic processing outside the realm of the judgement test for adult L2 learners. An avenue for future research would be to examine communicative and grammar-approach learners' performance on different tasks which make high demands on control and relatively low demands on analysed knowledge, such as an oral production task.

From these results, which suggest that communicative and grammar-approaches to learning a L2 result in different increases in analysed knowledge and control of linguistic processing two questions arise - (1) Can we conclude that a L2 learning approach which appears to result in a higher level of analysed knowledge is more beneficial to the learner than a L2 learning approach which appears to result in a higher level of control of linguistic processing; and (2) What are the implications of these findings? The view is that the communicative approach aims to develop control of linguistic processing by emphasizing the importance of

attending to relevant information to process the language and by focusing on meaning (Bialystok, 1994). The grammar-approach aims to develop analysed knowledge in order to build up mental representations of structure (Bialystok, 1994).

The answer to the first question posed depends on what the purpose of learning a second language is. On one hand, the required level of analysed knowledge needed for someone to function during a vacation in France is not going to be the same as for a university student who goes off to a French university to obtain a degree. On the other hand, a young Canadian working as a “nanny” in France, or as a tour guide in Vimy, France, will need to attend to relevant information to process language fluently and, therefore, may find demands on control of linguistic processing greater than demands on analysed knowledge.

However, as Bialystok and Ryan (1985a, 1985b), Menyuk (1985), and Bialystok (1994) state, one can only access knowledge which to some degree is analysed. The more analysed the knowledge the more accessible it will be, and this sometimes gives the impression of greater fluency (Bialystok, 1994). In a similar vein, the results of the present study point to learners’ analysed knowledge as alleviating the burden on the control of linguistic processing component, but not the reverse. One might conclude that if a certain level of analysed knowledge is needed for the control of linguistic processing component to be able to function, it may be that increasing analysed knowledge should be an ongoing concern of L2 learners and L2 learning. This conclusion provides support for those who call for an emphasis on grammar to be considered as an important facet of L2 learning (Celce-Murcia, 1992; Larsen-Freeman & Long, 1990; Hammerly, 1991; Garrett, 1991; Nemni, 1985).

In response to question 2, ideally, instructional programs should include some

combination of tasks from both a communicative and a grammar-approach to learning, in an attempt to increase levels of both analysed knowledge and control of linguistic processing. The results of the present study have shown that learners who have been part of distinct learning approaches appear to perform differently, depending on the demands of the tasks. In other words, learners may have a different mastery of the language when task demands change.

Although Krashen (1981) maintains that learned grammar cannot be used communicatively, a number of researchers claim, especially in the case of adult L2 learners, that knowledge about grammar is important to L2 proficiency (Bialystok, 1981; McLaughlin, 1978; Rutherford, 1988; Sharwood-Smith, 1981; Higgs & Clifford, 1982; Sorace, 1985). For Bialystok (1994) the importance of knowledge about grammar lies in it being responsible for moving unanalysed knowledge along the continuum to the level of it becoming analysed knowledge. Bialystok (1982) claims that “because the structure is apparent, the learner is able to operate on this knowledge by transforming it, comparing it to other events, and using it as a means of problem solving. The assumption is that if knowledge is analysed, then certain uses may be made of that knowledge which cannot be made of knowledge which is unanalysed” (p.183).

Adult learners can and should be made aware of the relevance of increases in both information-processing components and that such increases are governed by different factors, such as different learning approaches. In this sense, learners will have a role in ensuring that the end result of their efforts to learn a second language is a balance between their levels of analysed knowledge and control of linguistic processing. Greater analysed knowledge should improve learners’ performance on tasks related to accuracy while an increase in control of linguistic processing should improve learners’ performance on tasks related to automaticity and fluency.

Making second language learners aware of the relevance of increases in both components, is, in a way, a means of empowering them, and therefore an important step towards creating the autonomous learner. Learner autonomy can be defined as the ability to take charge of one's learning. Little (1991) claims that such an ability depends upon "detachment, critical reflection, decision making and independent action"(p. 4). He further states that L2 learners' capacity for critical reflection and analysis "develops in interaction with [...] analytical knowledge, including metalinguistic knowledge - knowledge about the structures, functions, and processes of language" (Little, 1993, p. 4). The role of metalinguistic tasks in enhancing critical reflection is that accessing analysed knowledge makes students aware of implicit knowledge and in turn makes knowledge explicit. Learners need analysed or explicit knowledge in order to think critically.

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Appendix A**Questionnaire****Tables Pertaining To Questionnaire Responses**

Questionnaire

Student's name: _____

Phone No.: _____

Office use: _____

In order for us to have an understanding of the type of French Second Language programs, courses, and/or past experiences of the participants, you are asked to complete the following questionnaire.

- (1.) Circle the grades in which you have participated in some form of French Immersion:**

1 2 3 4 5 6 7 8 9 10 11 12 13

- (2.) Circle the grades in which you have been part of a Core French Program which refers to having studied French for approximately 200 minutes per week (i.e. one 40 minute lesson per day)**

1 2 3 4 5 6 7 8 9 10 11 12 13

- (3.) Circle the category of hours which you think you would have spent reading in French on an average per week in junior high school.**

1 - 3 4 - 6 7 - 9 10 - 12 13 - 15

- (4.) Circle the category of hours which you think you would have spent reading in French on an average per week in high school.**

1 - 3 4 - 6 7 - 9 10 - 12 13 - 15

- (5.) In grades 7 or 8, teachers devoted the following amount of time to French grammar - (tick one of the following)**

☐ less than 25% of the time

☐ 51% to 75% of the time

☐ 25% to 50% of the time

☐ 76% to 100% of the time

- (6.) In grades 9-13, teachers devoted the following amount of time to French grammar - (tick one of the following)**

☐ less than 25% of the time

☐ 51% to 75% of the time

☐ 25% to 50% of the time

☐ 76% to 100% of the time

Below are statements which refer to your French Second Language learning experiences after elementary school as well as statements about how you feel about your knowledge of French. Select 1. if you strongly agree with the statement ; Select 2. if you more or less agree with the statement; Select 3. if you disagree with the statement ; Select 4. if you strongly disagree with the statement.

- (7) Outside of the time-span selected in question (5.) and regarding the same grades, my French classes and/or classes conducted in French focused on meaning and (e.g. little or no correction of speakers' errors), group work, speaking in the French language, student involvement.

☐1. ☐2. ☐3. ☐4.

- (8) Outside of the time-span selected in question (6.), and regarding the same grades, my French classes and/or classes conducted in French focused on the teacher drawing attention to the structure of the French language, correction of errors, speaking in English, not much student involvement.

☐1. ☐2. ☐3. ☐4.

- (9) I feel that enough emphasis was placed on reading throughout junior and high school.

☐1. ☐2. ☐3. ☐4.

- (10) I feel that I read well enough.

☐1. ☐2. ☐3. ☐4.

Table B1

**Percentage of Subjects Enrolled in French Immersion or Core French Programs
According to Grades and Number of Years of Study**

Grades	Number of Years of Study	Percentage of entire sample according to number of years in type of program	
		French Immersion	Core French
1-8	5-8	37.4%	23.4%
9-13	5-8	26.6%	14.1%
1-8	4	3.1%	1.6%
9-13	4	7.8%	23.4%
1-8	3	4.7%	9.4%
9-13	3	3.1%	14.1%
1-8	2	12.5%	7.8%
9-13	2	6.3%	3.1%
1-8	1	6.3%	1.6%
9-13	1	4.7%	0%
1-8	0	35.9%	56.3%
9-13	0	51.6%	29%

Note. This table pertains to Questions 1 and 2.

Table B2**Range of Hours Spent Reading in Grades 7/8 and Grades 9/13 by Group**

	Communicative Group					Grammar Group					
	Range of hours					Range of hours					
	1-3	4-6	7-9	10-12	13-15	0	1-3	4-6	7-9	10-12	13-15
	Percentage of subjects					Percentage of subjects					
Hours spent reading Grades 7/8	35.5	29	19.4	12.9	3.2	21.2	51.5	12.1	3	3	9.1
Hours spent reading Grades 9/13	32.3	25.8	19.4	19.4	3.2	3	51.5	21.2	6.1	9.1	9.1

Note. This table pertains to Questions 3 and 4

Table B3**Percentage of Subjects by Percentage of Time Devoted to Grammar in Grades 7/8 and Grades 9/13**

	Communicative Group				Grammar Group			
	Percentage of Time				Percentage of Time			
	- 25%	25-50%	51-75%	76-100%	- 25%	25-50%	51-75%	76-100%
	Percentage of Subjects				Percentage of Subjects			
Focus on grammar Grades 7/8	19.4	48.4	29	3	6.1	15.2	33.3	45.5
Focus on grammar Grades 9/13	19.4	51.6	22.6	6.5	9.1	18.2	48.5	24.2

Note. This table pertains to Questions 5 and 6.

Table B4

Percentage of subjects who agree with description of a communicative approach as corresponding to their L2 learning program in Grades 7/8

Group	Strongly Agree	Agree	Disagree	Strongly Disagree
Communicative	22.6%	64.5%	12.9%	0%
Grammar	15.2%	33.3%	30.3	15.1

Note. Communicative Approach refers to description provided in Question 7.

Table B5

Percentage of subjects who agree with description of grammar approach as corresponding to their L2 learning program in Grades 9/13

Group	Strongly Agree	Agree	Disagree	Stronly Disagree
Communicative	9.7%	38.7%	41.9%	9.7%
Grammar	18.2%	27.2%	27.3%	21.2%

Note. Grammar Approach refers to description provided in Question 8.

Table B6**Percentage of Subjects who Agree/Disagree with the Amount of Emphasis Placed on Reading in Junior and High School**

Group	Strongly Agree	Agree	Disagree	Strongly Disagree
Communicative	9.7%	35.5%	29%	25.8%
Grammar	21.2%	27.3%	39.4%	12.1%

Note. This table pertains to Questions 9.

Table B7**Percentage of Subjects who Feel that they Read Well Enough**

Group	Strongly Agree	Agree	Disagree	Strongly Disagree
Communicative	32.3%	45.2%	19.4%	3.1%
Grammar	25%	50%	21.9%	3.1%

Note. This table pertains to Questions 10.

Appendix B

Grammaticality Judgement Tests' Items

Written Judgement Test Response Sheet

Written Grammaticality Judgement Test Items

1. Il s'est dépêché, mais l'autobus était déjà parti.
2. Il voulait des livres, mais il ne l'a pas vus.
3. Elle a choisi une nouvelle robe, mais elle ne l'a pas achetée.
4. Hier, mon petit noir chat a vu un oiseau et il l'a tué.
5. Avant de partir pour l'Europe, elle a promis lui d'écrire.
6. Il lui les a prêtés, mais elle ne les a jamais rendus.
7. Marc ne comprend pas, mais il ne lui demande pas d'explications.
8. Il a acheté un beau bracelet qu'il lui a donne pour Noël.
9. Mon frère a caché ma jupe rouge, et je ne les ai pas trouvée.
10. Le mariage de la belle princesse était une occasion grande.
11. Nicole a fait des gâteaux délicieux qu'elle nous a offerts.
12. Le garçon est malade à cause de la mauvais nourriture.
13. On le lui a raconté, mais il l'ont oublié.
14. Pendant les grandes vacances, ma petite soeur ne s'a jamais lavée.
15. Ma mère a perdu son joli blanc chapeau dans le métro.
16. Mon père cherche toujours ses lunettes et il les trouve sur son nez.
17. André a reçu de grandes nouvelles et il leur les a dites.
18. Hier, ma grand-mère m'a raconté une histoire mystérieux.
19. Il veut acheter une bicyclette bonne, mais il n'a pas d'argent.
20. Le mari de mon amie nous a vendre sa belle voiture.
21. Le chien s'a approché de ma vieille tante, et elle l'a frappé.
22. Les soeurs de Jean, Marie et Isabelle, sont douces.
23. Le professeur d'anglais lui dit qu'il fait souvent de graves fautes.
24. Notre père nous avons aidés à trouver de jolis petits cadeaux.
25. Nous avons trouvé un livre qui nous plaisons beaucoup.
26. Kingston, qui est située en Ontario, n'est pas une ville grande.
27. Il a cherché ses enfants partout , mais il ne l'a pas vus.
28. Ils se sont contentés de peu quand ils étaient pauvres.
29. Il lui a offert des roses jaunes pour son anniversaire.
30. Il lui a fait un bon dîner, mais elle n'a pas l'aimé.

Oral Grammaticality Judgement Test Items

31. Maintenant, je leur montre les images qui sont dans le grand livre bleu.
32. Alain lance le ballon à Henri, mais il ne les attrape pas.
33. Les enfants les regardent par la fenêtre après le petit déjeuner.
34. La bouteille de rouge vin que mon père t'a donnée vient de France.
35. Ton papa lui a demandé du fromage et il a le mangé.
36. Elle a fait des gants pour Marie et elle lui les a donnés.
37. C'est Jacques qui a vu cette petite annonce dans le nouveau journal.
38. Le grand méchant chien a mange les beaux souliers de mon frère.
39. Maman a acheté des souliers bruns, mais elle ne la porte pas.
40. Elle met le livre dans son sac grand avant de prendre l'autobus.
41. Elle leur a lu l'histoire du petit prince, mais ils ne l'aimaient pas.
42. Il ne prend pas sa nouveau voiture, mais il la laisse chez lui.
43. Nous avons acheté une grosse orange que nous a mangée.
44. Nous nous avons rencontrés après la grande fête du Carnaval.
45. Je t'ai vu avec ton ami François qui a un brun chien.
46. Ce détail que Michel n'a pas remarqué est très important.
47. Il a trouvé de belles photos et il leur les a montrées.
48. Nos bons amis nous ont chanté une beau chanson de Noël.
49. Ce matin, ils se sont levés d'heure bonne pour étudier.
50. Mon grand frère a dormir toute la nuit en face de la télé.
51. Elle s'a arrêtée au restaurant après sa dernière classe.
52. Il a écrit une longue lettre, mais il n'a pas l'envoyée.
53. Nous nous sommes bien amusés avec nos vieux amis français.
54. J'ai acheté les bottes que tu m'avons montrées dans le magasin.
55. Les garçons ont dites qu'ils étaient fatigués.
56. Ton fils, j'ai vu lui avec ses amis cet après-midi dans le parc
57. Tous les gens du village pensent que c'est une fille bonne.
58. Lucie a dit qu'elle s'est bien amusée à Québec.
59. Ta voiture, je l'ai vue devant la maison.
60. Marie et sa soeur qui sont des filles sympatiques et douces.

**Written Grammaticality Judgement Test
Response Sheet**

Student name: _____ **Phone No.:** _____ **Course:** _____

Sample sentence: Ce n'est pas la pomme, c'est la mienne.

☐ Correct ☒ Incorrect (circle error)

Correct version _____ *la mienne* _____
Rule: Possessive pronoun must agree with noun to which it refers

1. Il s'est dépêché, mais l'autobus était déjà parti.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

2. Il voulait des livres, mais il ne l'a pas vus.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

3. Elle a choisi une nouvelle robe, mais elle ne l'a pas achetée.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

4. Hier, mon petit noir chat a vu un oiseau et il l'a tué.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

5. Avant de partir pour l'Europe, elle a promis lui d'écrire.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

6. Il lui les a prêtés, mais elle ne les a jamais rendus.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

7. Marc ne comprend pas, mais il ne lui demande pas d'explications.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

8. Il a acheté un beau bracelet qu'il lui a donné pour Noël.
Correct version _____

☐ Correct ☐ Incorrect (circle error)
Rule: _____

9. Mon frère a caché ma jupe rouge, et je ne les ai pas trouvées. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
10. Le mariage de la belle princesse était une occasion grande. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
11. Nicole a fait des gâteaux délicieux qu'elle nous a offerts. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
12. Le garçon est malade à cause de la mauvais nourriture. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
13. On le lui a raconté, mais il l'ont oublié. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
14. Pendant les grandes vacances, ma petite soeur ne s'a jamais lavée. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
15. Ma mère a perdu son joli blanc chapeau dans le métro. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
16. Mon père cherche toujours ses lunettes et il les trouve sur son nez. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
17. André a reçu de grandes nouvelles et il leur les a dites. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
18. Hier, ma grand-mère m'a raconté une histoire mystérieux. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____
19. Il veut acheter une bicyclette bonne, mais il n'a pas d'argent. ☐ Correct ☐ Incorrect (circle error)
Correct version _____ Rule: _____

20. Le mari de mon amie nous a vendre sa belle voiture.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
21. Le chien s'a approché de ma vieille tante, et elle l'a frappé.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
22. Les soeurs de Jean, Marie et Isabelle, sont douces.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
23. Le professeur d'anglais lui dit qu'il fait souvent de graves fautes.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
24. Notre père nous avons aidés à trouver de jolis petits cadeaux.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
25. Nous avons trouvé un livre qui nous plaisons beaucoup.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
26. Kingston, qui est située en Ontario, n'est pas une ville grande.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
27. Il a cherché ses enfants partout , mais il ne l'a pas vus.
☐ Correct ☐ Incorrect (circle error)
28. Ils se sont contentés de peu quand ils étaient pauvres.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
29. Il lui a offert des roses jaunes pour son anniversaire.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____
30. Il lui a fait un bon dîner, mais elle n'a pas l'aimé.
Correct version _____
☐ Correct ☐ Incorrect (circle error)
Rule: _____

Appendix C
Memo from Second Language Institute



Université d'Ottawa • University of Ottawa

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Faculté des arts
Institut des langues secondes

Faculty of Arts
Second Language Institute

MEMO

To: Janet Renou

From: Doreen Bayliss 

Subject: French Proficiency Tests

Date: November 27, 1997

The French Proficiency Test was developed by the Second language Institute to provide a measure of passive second language skills. According to the regulations laid down by the University, a pass (50%) was considered to be an adequate fulfillment of the bilingual requirements.

In brief, the test consists of three sections: listening, reading and a cloze test with all questions presented in multiple choice format. The first two sections aim at measuring comprehension only, while the third measures knowledge of grammar, structures and vocabulary. The three sections do share some common variance which is probably the result of two main factors: all sections rely on sufficient reading skill to be able to decipher the questions in the case of the listening section and to comprehend the narrative thread in the case of the cloze test; secondly, it reflects the way in which students acquire the language in the North American context.

The test was designed and validated around the premise that students enrolled in intermediate proficiency level courses would obtain a composite pass score. Obviously, although information pertaining to the test has never been published externally, a great deal of documentation exists which could be consulted upon request.

Appendix D

Figure D1. Distribution of Scores for the Communicative and Grammar Group on Grammaticality Judgement Tests

Figure D2. Mean Scores for the Communicative and Grammar Group on the Sub-tests of the French Proficiency Test

Figure D3. Mean Scores for the Communicative and Grammar Group on the Grammaticality Judgement Tests (Written/Oral)

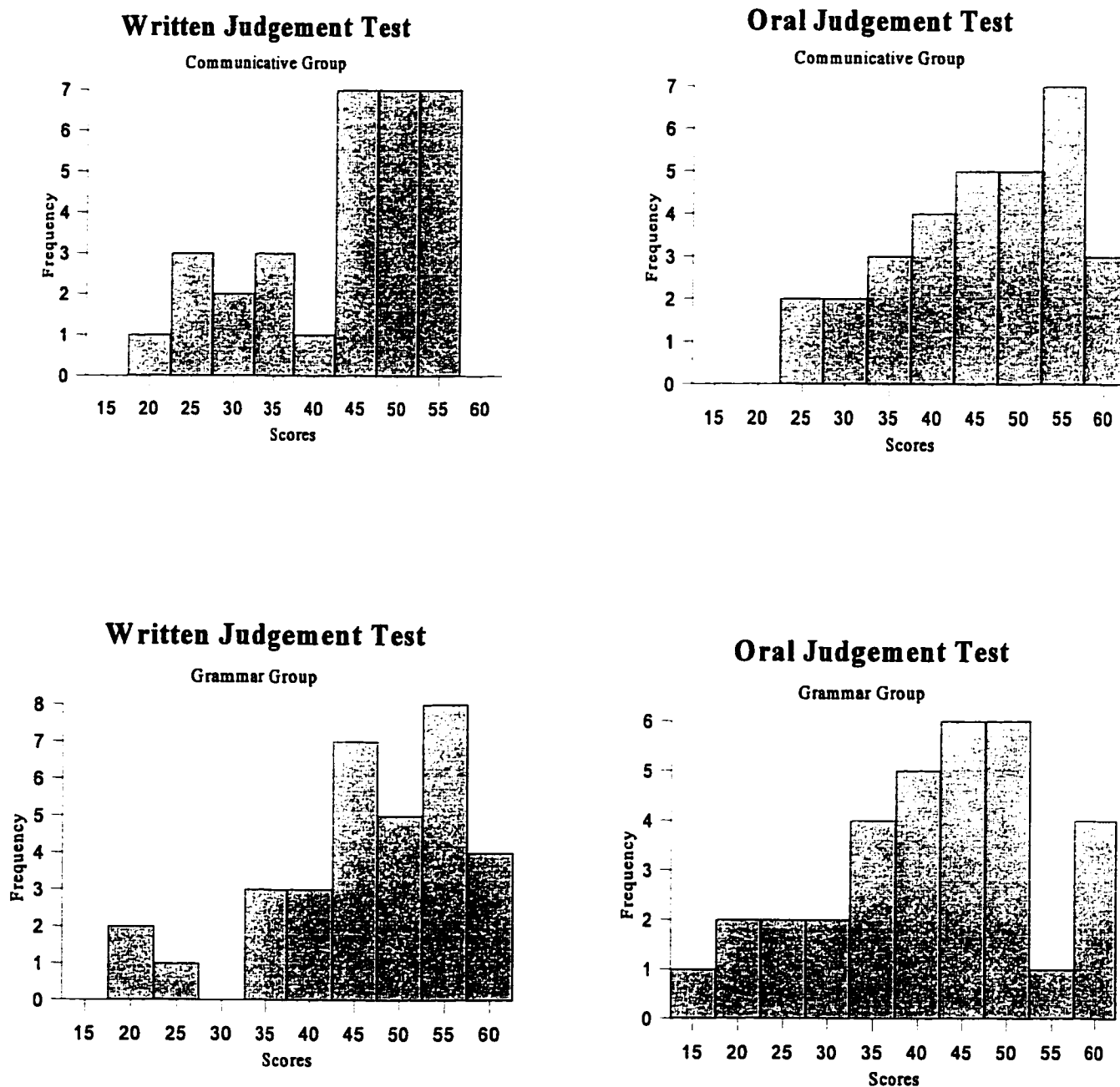


Figure D1. Distribution of Scores for the Communicative and Grammar Group on Grammaticality Judgement Tests (Written/Oral)

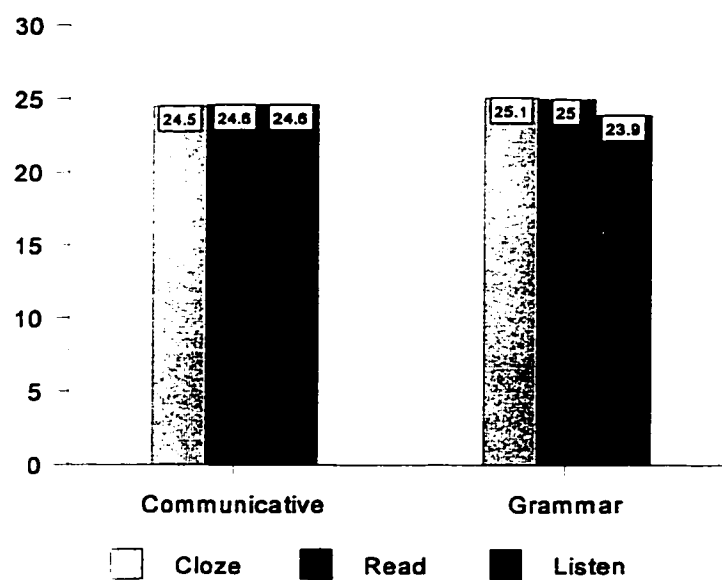


Figure D2. Mean Scores for the Communicative and Grammar Group
on the Sub-Tests of the French Proficiency Test

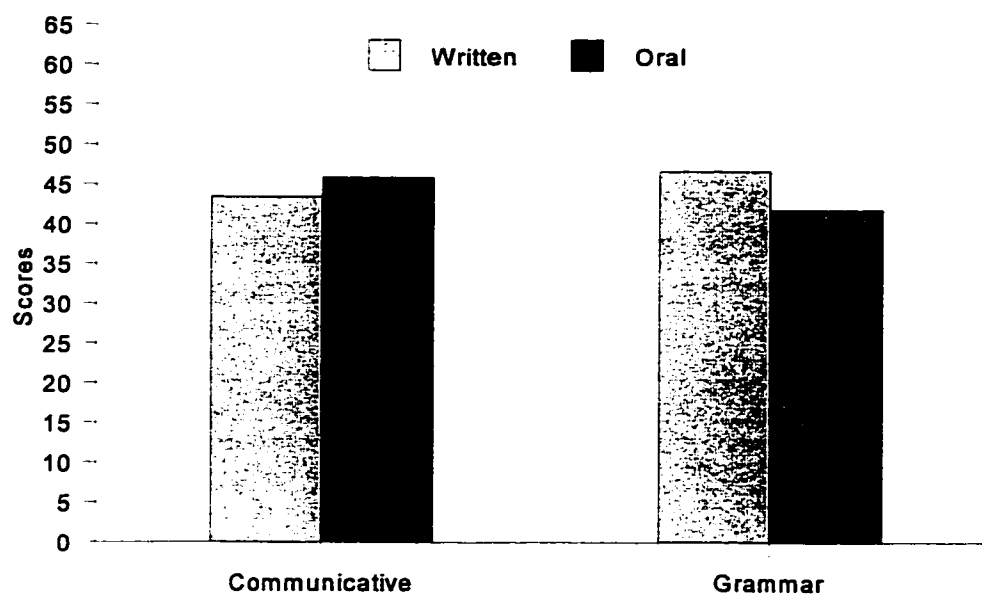
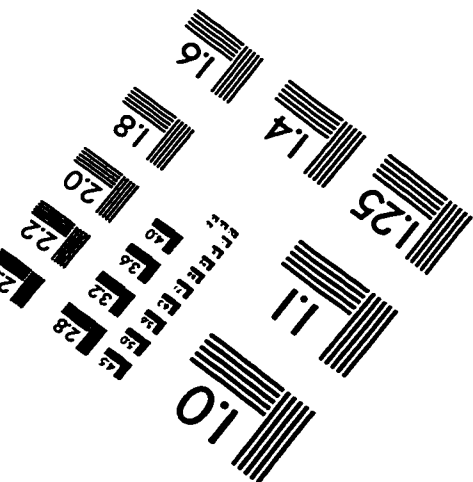
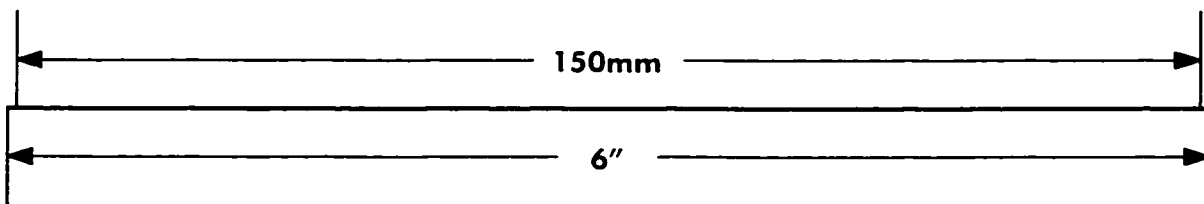
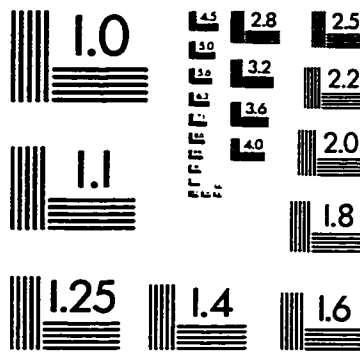
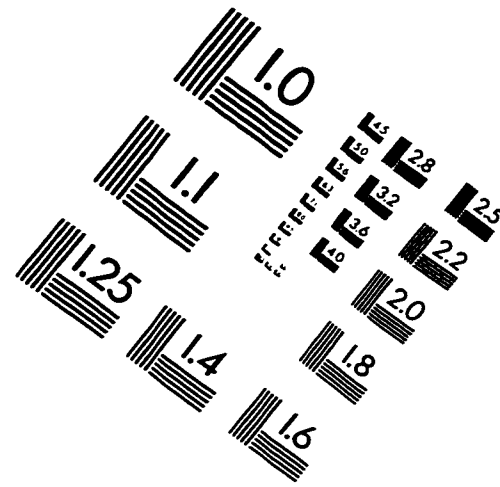
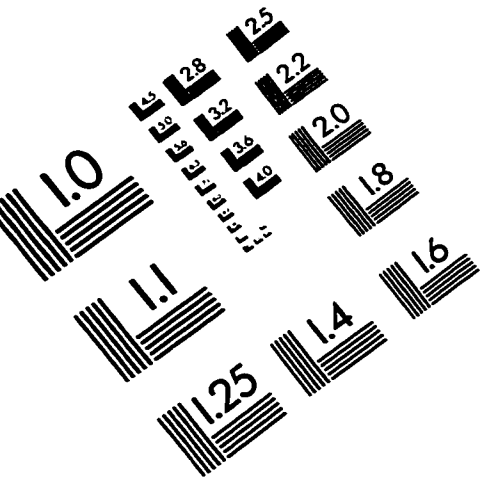


Figure D3. Mean Scores for the Communicative and Grammar Group on the Grammaticality Judgement Tests (Written/Oral)

IMAGE EVALUATION TEST TARGET (QA-3)



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