

## Is Grammar Good For You?

### The relationship between metalinguistic knowledge and success in studying a language at university<sup>1</sup>.

Cathie Elder, Alan Davies, John Hajek,  
Diane Manwaring and Jane Warren  
The University of Melbourne

This paper reports on a project (funded by a small Australian Research Council grant) investigating levels of metalinguistic knowledge (of English and other languages amongst first-year undergraduate learners of French, Chinese and Italian and the relationship between this knowledge and success in studying a language at university. The study is a partial replication of research undertaken by Alderson, Clapham and Steel (forthcoming) in relation to learners studying French at a number of British universities.

Results show that while undergraduate language learners have serious lacunae in their knowledge about language, those who have studied a language other than English (LOTE) at school do better on some measures of metalinguistic knowledge than those who are beginning language study from scratch. However, the results also show that for all three languages there is a weak relationship between metalinguistic knowledge and second language ability (as measured by learners' scores on a battery of proficiency tests and by the marks obtained on class achievement tests). The findings therefore offer no support for the widely-held view that there is a strong connection between learners' knowledge about language and their success in foreign language study.

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<sup>1</sup> This article is based on a paper presented at the American Association of Applied Linguistics Conference (AAAL) in Orlando, Florida. The first part of the paper has already been published (in abbreviated form) in a recent issue of *Australian Language Matters* (Davies et al 1997)

## 1. Introduction

This study is concerned with levels of metalinguistic knowledge amongst undergraduate students of LOTE (languages other than English) at an Australian university and with the question of whether knowledge about English contributes to success in studying other languages (whether Asian or European) in the university context.

In recent years there has been increasing interest amongst SLA researchers in the role of grammar in classroom-based second language learning, but this interest has been for the most part confined to an investigation of the effect of explicit L2 grammar instruction on learning outcomes (see for example McKay 1996; Lando 1996) or to a discussion of methodologies for enhancing learners' ability to focus on the formal features of L2 input (see for example Rutherford 1987; Sharwood Smith 1981) for the purpose of improving the efficiency of the language acquisition process. In L1 educational circles, there has been a parallel interest in increasing learners' understandings about the nature of language as evidenced in the growing popularity of the knowledge about language (KAL) movement in both the United Kingdom and Australia. Proponents of KAL claim that language awareness should be taught as part of mainstream school education both because it is important in its own right, in so far as it increases learners' understanding of the role and value of language in everyday life (Donmall 1985), but also because it aids both L1 and L2 development (Richmond 1990). However, as James and Garrett (1991) point out, there are few studies investigating the effectiveness of LA programmes and the assertion that knowing about L1 contributes positively to either L1 or L2 learning remains unproven.

In university foreign language departments there has long been a view that the lack of knowledge about language amongst incoming university students is linked to decreasing levels of grammatical accuracy and proficiency in second language study (see for example Mitchell 1988) and this lack is sometimes blamed on the failure of schools to teach formal grammar in the mainstream English classroom. Studies conducted by Bloor (1986a, b and c) in the UK confirm that undergraduate students have a remarkably low level of metalinguistic knowledge and this is borne out by subsequent

research conducted by Alderson (1995) and Alderson, Clapham and Steel (forthcoming) in relation to advanced learners of French across a number of British universities. Since the methodology adopted by many tertiary foreign language teachers generally assumes familiarity with English grammar and metalinguistic terminology, this lack of knowledge about language amongst incoming undergraduate students is a matter for concern. Alderson et al (forthcoming), however, found that the relationship between levels of metalinguistic knowledge and proficiency in French was not a strong one, and their findings suggest that the role of metalinguistic knowledge in learning a foreign language at tertiary level may not be as crucial as is sometimes claimed.

## 2. The study

In this paper we report on the findings of a project (funded by an Australian Research Council grant) which has brought together three departments of the University of Melbourne's School of Languages (the Department of Linguistics and Applied Linguistics; Japanese and Chinese; French and Italian). The purpose of the project was to build on the findings of the Alderson et al. studies cited above by conducting similar research in the Australian context and extending it across a range of languages (Italian and Chinese as well as French). Italian and Chinese were chosen because both of these languages, unlike French, tend to be studied by a heterogeneous learner population. Students of Chinese may be either a) foreign language learners from English-speaking backgrounds, or b) native or background speakers (ie learners with a home background in the target language or a dialectal variety, or c) learners from non-English-speaking backgrounds whose L1 (eg Japanese or Korean) is linguistically closer to Chinese than is English. Students of Italian may likewise be from English- or non-English-speaking backgrounds and many of them are second- or third- generation immigrants who have varying degrees of exposure to a dialect or contact variety of Italian in the home. It was felt that the presence of learners with different kinds of language learning experience might produce findings which were different from those reported by Alderson et al (forthcoming).

Our project therefore sought answers to the following questions:

1. What do first-year undergraduates studying a LOTE at the University of Melbourne know about language?
2. What factors in the LOTE students' background influence their levels of metalinguistic knowledge?
3. Is there a relationship between metalinguistic knowledge and success in university LOTE study and is this relationship the same across languages?
4. To what extent are the findings of our study comparable with those of Alderson et al?

## 2.1. Methodology

### 2.1.1. Participants

The participants in the study were a sample of first-year undergraduates taking Beginners' Italian (n = 94), Beginners' Chinese (n = 57), Beginners' French (n = 78) or Advanced French (n = 105) at the University of Melbourne in 1996. By Advanced French we are referring to the course offered to those who have passed the VCE (Victorian Certificate of Education) end-of-school French examination which assumes 4 to 6 years of prior French study at secondary school.

### 2.1.2. Instrumentation

The research questions formulated above were investigated by administering a battery of tests to the above participants. Some of these tests were designed to elicit aspects of metalinguistic knowledge/language awareness and others were measures of achievement/proficiency in the TL. In the process of administering these tests, information was also gathered about various aspects of learners' language background which we considered might have a bearing on students' level of language awareness or aptitude for second/foreign language study.

#### 2.1.2.1. Tests of metalinguistic knowledge/language awareness

There were four tests designed to measure various aspects of participants' metalinguistic knowledge. A brief description of the tests is provided below:

1. Metalinguistic Assessment test (MAT) English (15 mins, 45 items)
2. Metalinguistic Assessment test (MAT) French (15 mins, 45 items)
3. Words in Sentences test (MLAT) (15 mins, 45 items)
4. Inductive Language Learning test (Swahili) (10 mins, 30 items)

The first two of the tests listed above were developed at the University of Lancaster in the UK (and in fact were administered as a single test in the Alderson et al study). They are both designed to determine students' understanding of those aspects of grammar (of English and French respectively) considered by teachers to be fundamental to success in language study, as well as their knowledge of basic grammatical terminology. Candidates were required to a) identify parts of speech (eg noun, auxiliary, conjunction) occurring in sample sentences, and b) correct errors in a further series of sentences and then state the rule which had been violated using the appropriate metalinguistic terminology.

The remaining two tests measure different aspects of language knowledge. The Words in Sentences test is taken from the Modern Language Aptitude test (Carroll and Sapon 1955) and measures the ability to identify the grammatical function of an underlined word in a sentence (without necessarily knowing the correct grammar term) and then to choose the word or phrase with the same function from a range of options provided in a second sentence. Here is a hypothetical example:

Peter sold MARY his car

If they work hard, I'll give them a day off next week.

A

B

C

D

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To answer this item correctly, students would need first to be aware that MARY had the function of indirect object in the first sentence and then to notice that option B (them) served the same grammatical function in the second sentence and was therefore the appropriate choice.

The Inductive Language Learning test was an adaptation of an earlier test of inductive reasoning developed by Davies (1971). This test requires learners to read a story in an unfamiliar language (Swahili) of which part has been translated into English. Using clues relating to word meanings and word relationships provided in the earlier (translated) part of the passage, they are asked to complete the English translation of the story.

The above tests were administered during class time early in the first semester of 1996.

#### 2.1.2.2 Tests of language achievement/proficiency

The outcome measures for this study were the class achievement tests and exams which are administered routinely to undergraduate students of French, Italian and Chinese during the first semester of language study. Although care was taken to ensure that these tests cover more or less the same ground (ie they measured similar skills in each of the three languages under investigation) tests of this kind cannot be expected to meet professional validity and reliability standards and this should be borne in mind in evaluating the results of this study.

In addition to these measures of class achievement, a subset of 32 of the Advanced French learners opted to sit for a suite of standardised French proficiency tests:

- a) a C-test developed by Klein, Braley and Grotjahn (cited in Coleman 1996) used for a study of the French language proficiency of university undergraduates<sup>2</sup>;
- b) a multiple choice test of French reading comprehension developed for school leavers at CITO in the Netherlands;

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<sup>2</sup> The C- test is similar to a cloze test but consist of partial word deletion rather than of the deletion of whole words within a text.

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- c) an open-ended test of writing ability requiring learners to produce a text of 300 words in length which was developed at the University of Lancaster and was assessed for its accuracy, content and style. Marks (on a scale of 1-5) allocated against each criterion were then aggregated to produce an overall writing score.

The fact that we used the same tests as those adopted for the Alderson et al. study allowed a comparison to be made between the two sets of findings.

#### 2.1.2.3. Language background information

Participants were asked to state a) how many years of prior foreign language study they had undertaken at school<sup>3</sup>; b) whether their first language was English, the target language or a language related to the target language; c) whether one or other of their parents spoke the target language at home; and d) how much time (if any) they had spent in a country where the target language was spoken. These data were numerically coded and entered into a data base alongside each student's scores on each of the tests described above.

## 2.2. Results

Results relating to each research question will be reported below.

### 2.2.1. *What do first-year undergraduates studying a LOTE at the University of Melbourne know about language?*

In Table 1 the maximum (possible) scores for each test are presented together with the means and standard deviations relating to test performance of the whole sample.

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<sup>3</sup> Foreign language study encompasses study of the target language (in the case of the advanced French students) or of another LOTE (language other than English) or indeed of English (if the student was a non-native speaker and had studied EFL in his/her home country).

	N	Maximum score	Mean score	SD
MAT English	333	48	24.9	6.5
MAT-French	87	42	27.4	9.9
Words in Sentences	193	45	19.6	6.4
Swahili	271	30	19.6	4.7

**Table 1. Results on the tests of metalinguistic knowledge/awareness**

As is obvious from this table, learners' average level of performance falls far short of 'perfection', and few learners achieved anywhere near the maximum possible score on any one of the tests. Analysis of test data has revealed a wealth of information with regard to what students understand (and fail to understand) about language. Some key features of the results are summarised below:

- Only three or four English grammatical items were identifiable by a solid majority of the students, namely: Subject (94%), Noun and Verb (both 86.9%) and Adjective (73%). At the other extreme, Predicate proved itself unique for being almost unidentifiable (6.5%).
- Students had little difficulty correcting grammatical errors in English sentences. (In most cases successful correction occurred at levels greater than 90%.) However, students' ability to explain errors was far less developed. For example, while 98% were able to correct a sentence such as the following:

"When him told a lie, his mother punished him"

only 18.7% were able to provide the correct explanation for this mistake.

- In French (and we are referring only to the advanced group of French learners) the four grammatical categories that most students were able to identify were, in descending order, Noun, Adjective, Infinitive Verb and Subject. Again the grammatical term that caused by far the most difficulty was the Predicate, followed by Object Pronoun and Indefinite Article. (The latter is



somewhat surprising since it is one of the first grammatical items presented in most French language textbooks).

- Students were able to identify and correct basic errors in French such as lack of adjective agreement, misplacement of the direct object pronoun and use of a double negative (also a very easy item on the English grammar test). However, the proportion of correct responses on this type of item was lower than for English, as we might expect, given that candidates are non-native speakers. Although formulation of the rules of French grammar was again more difficult than error identification, students were more willing to attempt to supply a rule about French grammar than was the case on the corresponding MAT English test items, for which there were large numbers of missing responses.
- On the Words in Sentences test it is curious that six of the most difficult test items (answered incorrectly by over 90% of students) required recognition and identification of the Subject of the sentence. This is odd given that this was one of the easier parts of speech to identify on both MAT English and MAT French. It appears that the Words in Sentences test demands a deeper and more sophisticated understanding of the function of the grammatical components of a sentence than do the other two tests.
- On the Inductive Language Learning test (Swahili), the items which were easiest were those involving correct translation of words which had already appeared in the earlier (translated) part of the story. The most difficult items were those which required sensitivity to grammatical relationships or the ability to draw inferences (eg about the tense or mood of a verb) from parallel instances in the text.

There were interesting differences across target language groups on those tests which were taken by all groups. Results reported in Table 2 indicate that the French Advanced learners outperformed all other groups on MAT English, and an ANOVA test indicates this difference was significant ( $F = 13.31$ ,  $DF\ 3$ ,  $p = 0.000$ ). On the Swahili test there was also a significant difference across groups ( $F = 5.999$ ,  $DF\ 3$ ,  $p = 0.001$ ) with French beginners performing significantly worse than all the others. On the Words in Sentences test, however, there were no significant differences

according to the language studied ( $F = 0.84$ ,  $DF\ 3$ ,  $p = 0.494$ ), although again the French beginners performed at a slightly lower level than those studying Italian or Chinese.

	<i>Mean test performance</i>		
	MAT Eng	Swahili	WIS
French beginners	28.0	20.9	*
Chinese beginners	22.3	17.8	18.8
Italian beginners	24.1	21.5	20.3
French advanced	24.4	20.6	20.8

\*Advanced French candidates did not sit this test

Table 2. Results on the tests of metalinguistic knowledge according to language group

### 2.2.2. What factors in LOTE students' background influence their level of metalinguistic knowledge?

The reasons for the differences across groups reported above can be accounted for at least partly by various factors in the learners' background. Results of an ANCOVA analysis which treated learner background factors as independent variables and scores on each of the metalinguistic tests as the dependent variable are reported in Table 3 below. This analysis shows that while in-country experience and students' first language (whether English or other) has no effect on scores obtained on the MAT English test, prior study of a language other than English (whether or not this is the target language) is positively related to successful performance. Hence the superior performance of Advanced French learners, all of whom have had up to 6 years' of prior French instruction at school and some of whom have studied or are studying other languages as well. On the Swahili test (see also Table 3) there is no evidence from the statistical analysis that any single background variable makes a

difference to performance, but the fact that beginners French is studied mainly by learners from monolingual backgrounds, who also tend to have less experience of foreign language study and of using languages other than English than those studying other beginners languages at the university, may contribute to the relatively poor performance of this group of learners. Prior language study again emerges as a significant variable in determining performance on the WIS test, which, although it does not assume knowledge of metalinguistic terminology, requires an in-depth understanding of English sentence-level grammar.

	<i>F values yielded by ANCOVA analysis</i>		
	MAT Eng	Swahili	WIS
L1	1.3 ns	0.6 ns	0.1 ns
Prior LOTE study	7.8 **	0.2 ns	6.03**
Parents speak TL	3.7 **	0.2 ns	1.02 ns
In-country experience	0.54 ns	1.2 ns	2.6 ns

\*\*  $p \leq 0.01$

Table 3. Effect of background variables on test performance

What is clear from the above findings is that what the university lecturers so often complain of is true, namely: that students have serious lacunae in their knowledge about language (including the ability to name and recognise parts of speech and to formulate rules about grammar, sensitivity to grammatical patterns in sentences and ability to use inductive reasoning to draw inferences about meaning both at the word and sentence level) and that there are very few grammatical concepts which university LOTE lecturers can take for granted that their learners understand.

It is also interesting (but hardly surprising) to find evidence in our data that studying a LOTE in a formal setting contributes positively to at least some aspects of students' knowledge about language. It appears, on the other hand, that acquiring a language naturalistically in the context of a trip overseas makes no difference to performance on any of the above tests. Nor is having a first language other than English a significant predictor of levels of

metalinguistic knowledge. However, it does emerge that having a parent or parents who use the target language in the home may be an advantage as far as grammatical knowledge about English is concerned. It remains unclear whether this means that Chinese-French- and Italian- speaking parents are more metalinguistically aware on account of having had to learn English as a second language and that their knowledge about language is transmitted to their children, or that the children acquire this metalinguistic knowledge by virtue of trying to explain aspects of English language structure to the parent/s. More detailed language background data would be required to clarify the nature of this phenomenon.

*2.2.3. What is the relationship between students' level of metalinguistic knowledge and their success in studying LOTE at university?*

The two sets of test scores (ie tests of metalinguistic knowledge on the one hand versus tests of achievement/proficiency in French, Italian and Chinese on the other) were correlated and findings are summarised briefly in Table 4.

French beginners: (MAT English n = 78; Swahili n = 38; WIS n = 46)

Performance on the tests of grammar knowledge/awareness are not related to results on the class tests of achievement in beginners' French. The only exception is a 0.31 correlation (DF 44,  $p \leq 0.05$ ) between results on the Words in Sentence (WIS) test and performance on a 20-item French cloze test. The overall French achievement score is not however significantly correlated with performance on any of the metalinguistic tests.

Chinese beginners: (MAT English n = 57; Swahili n = 53; WIS n = 51)

Again, the results of the class tests of Chinese are in most cases not significantly related to performance on the metalinguistic battery. There are two exceptions: a) the correlation between students' scores for WIS and their level of achievement on an essay test are significant ( $r = 0.29$ , DF 49,  $p < 0.05$ ); b) so too is the correlation between MAT English (testing error identification and knowledge of grammar rules in English) and a multiple-choice test of listening comprehension in Chinese ( $r = 0.33$ , DF 55,  $p < 0.05$ ). These

correlations are not however strong and there is again (as for the French beginners) no relationship between overall first semester results for Chinese and performance on the metalinguistic tests.

Italian beginners: (MAT English n = 93, Swahili n = 86, WIS n = 93)

The findings for Italian are somewhat at odds with those for the other two beginners' languages. There is a significant (although not a strong) relationship between each of the metalinguistic tests and overall achievement in Italian as measured by class exercises/tests administered during the first semester.

	← tests of knowledge about language →			
	MAT French	MAT English	Swahili	Words in Sentences
French beginners	N/A	0.13 ns	0.17 ns	0.21 ns
Chinese beginners	N/A	-0.12 ns	-0.11 ns	-0.05 ns
Italian beginners	N/A	0.21*	0.23*	0.43**
French advanced	0.56**	0.43**	0.15 ns	N/A

\*  $p \leq 0.05$

\*\*  $p \leq 0.01$

**Table 4. Relationship between overall class achievement scores for each language group and the results on the various components of the metalinguistic test battery**

There are also a number of significant relationships between the various sub-tests/exercises and the metalinguistic/language aptitude battery, particularly the WIS test. Oddly, the strongest correlation was between results on the literature test ( $r = 0.5$ , DF 91,  $p < 0.01$ ) and those for WIS.

French advanced: (MAT English n = 106; MAT French n = 90; Swahili n = 91)

The relationship between overall class achievement in Advanced French and performance on the metalinguistic tests is significant for only two of the tests: MAT English ( $r = 0.43$ ,  $DF\ 104$ ,  $p < 0.01$ ) and MAT French ( $r = 0.56$ ,  $DF\ 88$ ,  $p < 0.01$ ). These results suggest that, as was found in the case of beginners Italian, the ability to identify errors and to formulate grammatical rules using appropriate metalanguage (particularly in French) is linked to success in language learning at the university, but that the link is very weak. Results on the Swahili (inductive reasoning) test do not appear to be related to achievement in French. (NB Due to timetable limitations the students in this group were unable to sit for the WIS test).

Table 5 shows the results for the subset of advanced French learners ( $N = 32$ ) who offered to sit for three of the proficiency tests used in the Alderson et al study. (Note that we have combined the results for MAT English and MAT French since this is how they are reported in the Alderson et al study).

	C-test Alderson	C-test Elder	Reading Alderson	Reading Elder	Writing Alderson	Writing Elder
Metalanguage (Fre & Eng combined) Alderson et al	0.49**		0.38**		0.44**	
Metalanguage (Fre & Eng combined) Elder et al		0.31*		0.53**		0.60**
Inductive reasoning (Swahili) Alderson et al	ns		-		ns	
Inductive reasoning (Swahili) Elder et al		ns		ns		ns

\*  $p \leq 0.05$

\*\* $p \leq 0.01$

Table 5. Results of Alderson et al and Elder et al studies compared

The highest correlation in the Alderson et al study was achieved by the total score on the Metalinguistic Assessment test (MAT) and score for the C-test (0.49) but the correlation between these two tests was somewhat lower (although still significant) in our study. The correlations between total MAT scores and results achieved by students on both the reading comprehension and writing tests were on the other hand somewhat higher in our study than in the Alderson et al's. We should not, however, give undue attention to the differences between the two sets of correlations, which are unlikely to be significantly different from one another given the discrepancies in sample size across the two studies (32 vs. approximately 500 in the Lancaster study). What is more important is the similarity between the two sets of findings, namely:

- 1) In both studies performance on the Swahili test results is unrelated to scores on any of the French proficiency tests. Alderson et al explain this non-relationship by the fact that students taking French at university have already demonstrated their aptitude for foreign language learning. (The Swahili test was designed to identify aptitude among students who might not have previously learned a foreign language.)
- 2) Significant correlations in the Alderson et al study are in all cases matched by significant results in the present study. This suggests that there is nothing random about either set of findings. Note that the significant relationships in both studies are between French proficiency and grammatical knowledge as measured by the MAT tests. This suggests that this particular kind of metalinguistic knowledge (ie ability to formulate grammar rules in English and the target language) may have some role in language learning but that there are clearly a host of other factors which come into play in determining levels of performance in the target language.

### 3. Discussion

Across the three beginners' languages what emerges most strongly from these research findings is the lack of relationship between English grammatical knowledge and performance at the early stages of learning (NB Even for Italian, the correlations, though

significant, are quite low<sup>4</sup>). The kind of grammatical sensitivity measured by the WIS test (which does not assume any knowledge of grammatical terminology) seems to have a bearing on some aspects of performance, particularly in the case of Italian, but it is not highly influential.

What would be interesting to explore further is whether the relationship between English metalinguistic knowledge and success in acquiring a language other than English becomes stronger as language study progresses. It may be that at this early stage of learning (it should be noted that we are talking about the first semester of LOTE study) the features of language being measured are quite trivial (eg ability to remember basic vocabulary, simple formulae and/or elementary characters in the case of Chinese) and that the participants in the study have had insufficient opportunities for both input and output to show their 'true colours' as language learners. (Indeed, in the case of Chinese, this process may take longer than for European languages). A follow-up study, which tests the beginning learners on both English metalinguistic knowledge and target language achievement at the end of second semester and again at later stages of study might therefore be worth undertaking.

However, if it were the case that it is at later stages of learning that metalinguistic knowledge 'kicks in' to the learning process, then we would expect stronger relationships between the two sets of tests than those which emerged with respect to the Advanced French learner group. The findings of this study suggest that learners' generally low levels of metalinguistic knowledge (as operationalised by the tests used in this research) are not necessarily an obstacle to their acquisition of a second language in the university context, whether at beginners, or advanced level. Our results confirm what Alderson et al found with a much larger sample of students, ie that metalinguistic understanding of the kind measured by the tests used for this study cannot be assumed to be

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<sup>4</sup> It has been suggested by the lecturer concerned that the difference between Italian and the other two languages may simply be due to the fact that the Italian language curriculum is grammar based and a larger number of grammatical structures are taught in the early stages than is the case for French and Chinese. The Italian teachers may therefore draw more heavily on learners' general metalinguistic knowledge in teaching the course than do the French and Chinese teachers.



crucial for success in foreign language learning, although, as reported in Section 2.2.2. of this article, it seems that the experience of learning a second language in a formal context contributes to learners' store of metalinguistic knowledge. Metalinguistic knowledge, in other words, may be good for you in some general intellectual sense and is arguably an important part of general education, but it does not appear to do you much good as far as your performance in learning languages at university is concerned.

#### 4. Recommendations for further research

There are nevertheless a number of research possibilities which arise out of this study and which may throw further light on the relationship between language knowledge and language use

1. In the first part of this study we found that those LOTE learners from families with a parent or parents who speak the target language at home are better equipped in terms of their ability to identify errors in English and to formulate rules about English grammar than those whose parents use English or indeed another language (other than the target language) at home. It is conceivable that these learners would also have better metalinguistic knowledge about the target language. However we were unable to explore this further because most of the subjects in our study (with the exception of the Advanced French group, the majority of whom were from English-speaking backgrounds) were beginners and therefore not in a position to sit for a test of metalinguistic ability in the language they were studying. This is however an issue worth exploring with more advanced learners, particularly in languages like Italian and Chinese, where there are large numbers of background speakers in the student population.

2. Although the relationship between metalinguistic knowledge and language proficiency, broadly measured, is weak, it may be the case that there is a relationship between learners' knowledge of the rules governing particular structures and their ability to use these structures accurately (see for example a study by Lando 1996). This possibility could be further investigated using data already collected from this study. Responses on the various items of, say, the French C-test, could be classified grammatically and matched to the various items on the metalinguistic assessment tests (whether in English or French) to determine whether or not learners' ability to

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formulate a particular rule correctly corresponds to their ability to apply that rule.

3. It may also be the case (as suggested by Alderson et al 1997 forthcoming) that acquisition of some linguistic items is more amenable to explicit instruction (ie instruction which appeals to learners' knowledge about language) while others are best acquired through naturalistic exposure with no focus on form. Furthermore, it may be that the language features which can be learned via instruction are those which differ markedly from learners' L1. This issue is worthy of investigation, particularly with Asian languages like Chinese and Japanese which are typologically distant from English.

4. It may moreover be the case that learners can only make use of knowledge about language in particular circumstances eg where planning time is available and/or self-correction is possible, but not in situations where automatic processing is required (eg in listening and speaking) or where the task is performed under time constraints (eg on language tests of the kind used in this study). An experimental study testing knowledge of a particular feature and the ability to apply that feature under different conditions could be undertaken.

5. It seems likely that particular kinds of language learner may be able to make better use of metalinguistic knowledge in learning a second language than others. For example, the knowledge /proficiency relationship may be stronger for, say, field independent rather than field dependent learners (Chapelle & Green 1992). Further research exploring the interaction between learning style, metalinguistic knowledge and language proficiency may therefore be worth undertaking.

6. Ellis (1986: 275) suggests that the kinds of strategies used by learners in acquiring a second language are limited by such variables as motivation. While motivation is thought to influence the process of learning and thereby determine success, it may also be the case that motivation acts as an intervening variable which may influence learners' linguistic interest in the target language or, more precisely, their willingness to draw links between what they know about language generally and the language forms that they are exposed to in the classroom. It would be useful in any further

research on this topic to include an instrumental measure of motivation in order to assess its role as an intervening variable.

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