

lognostics

The impact of study abroad on the vocabulary development of different proficiency groups.

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Background

For more than 30 years, a substantial period of residence abroad has been a compulsory requirement of language degree courses in Britain: Coleman (1996) reported that "12,000 students a year are going abroad, at least half to a French-speaking country" (p58). Similarly, Freed (1995) has reported very large figures for the United States, both in terms of incoming and outgoing students, and in recent years the European ERASMUS and LINGUA programs, now subsumed in SOCRATES programs, have promoted widespread movement of students throughout Europe. These are but some examples of global movements of language learners that imply a firm belief in the benefits to be gained from immersion exposure by students of languages. Clearly, linguistic gains are not the only motive for study abroad: there are many cultural, educational and motivational benefits to be gained too, which in the European case are particularly important. However, in Britain at least, it has become an article of faith that serious language learners can progress only so far without living for an extended period in the foreign country.

That said, a number of articles and studies (Coleman, 1996; Freed, 1995; Meara, 1994b; Milton and Meara, 1995) have drawn attention to the relative ignorance surrounding the real benefits of such exposure for improved language proficiency. Previous research has tended to focus largely on the quality of the student experience during the year abroad or to involve impressionistic observations of improvements in global skills, such as listening and speaking competence, or of the cultural and maturational benefits to be gained. Meara (1994b) concludes: "our current belief in the importance of a year abroad rests on some very flimsy and largely anecdotal evidence" (p38). Coleman (1996) similarly comments that "the objectives of compulsory residence abroad in terms of maturity, cultural insight and foreign language proficiency are ill-defined and its benefits are inadequately researched" (p8) before going on to suggest a wide research agenda in this area. In particular, he notes: "exactly what components of learners' proficiency improve as a result of residence abroad is still a matter for debate and

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further research" (p85). Freed (1995) also provides an extensive review of relevant research but concludes that:

With a few notable exceptions, the findings from the studies to date tell us little about actual language use and serve, therefore, as preliminary explorations of this topic. No study has yet described the range of linguistic variables (phonologic, syntactic and/or semantic), sociolinguistic and discourse features, that may be influenced as a result of a study abroad experience (p16).

The aim of the current study has been to investigate one aspect of language proficiency in the study abroad context, namely vocabulary development. Our main objective was to assess the type and rate of progress made by learners of different proficiency levels. A fundamental concern was whether different groups benefit in the same way or whether there might be qualitative differences in the progress made.

A principal reason for focusing on vocabulary has been the increasing acknowledgement of the central role vocabulary plays in the perceptions of learners. Nation (1990) states:

Both learners and researchers see vocabulary as being a very important, if not the most important element, in language learning. Learners feel that many of their difficulties in both receptive and productive language use result from an inadequate vocabulary (p2).

Elsewhere it has been suggested that vocabulary knowledge correlates well with proficiency level (Milton and Meara, 1995, p6), so advances in vocabulary may tentatively be generalised to reflect progress in proficiency, and such evidence of language progress from study periods abroad is what we wish to provide.

A further motivation for our study has been that vocabulary has been cited elsewhere as one aspect of language competence that noticeably improves as a result of study abroad. Davie (1996) for instance, talks of "marked improvement as a result of the year abroad in vocabulary" (p75), although it should be noted that this improvement is inferred from students' *perceptions* that their vocabulary has improved, rather than from any attempt to measure the improvements.

Milton and Meara's (1995) study of vocabulary progress made by incoming ERASMUS and LINGUA students during a study period in Britain also found that vocabulary improved substantially although, significantly in the context of the present study, it noted differential improvements according to proficiency level: "it has also become clear that those students who will gain the most linguistically are those who start at a relatively low level of fluency -- between 2500 and 4500 word vocabulary levels in this

study" (p31). By contrast, they noted that "students who already possessed a native like or near native like level of fluency did not progress" (p22). Near native in this context means having a vocabulary of around 10,000 words. It should be noted that several studies reported by Coleman (1996), not necessarily in the area of vocabulary development, have suggested that during periods abroad weaker students make more progress than more advanced students.

One of the main challenges facing research into language improvement during study periods abroad is to develop adequate tools with which to work. Milton and Meara used a relatively new research tool, the *Eurocentres Vocabulary Size Test*, which allows vocabulary size to be measured and hence permits a more accurate picture of student ability and improvement than is possible in other more impressionistic studies. Here, researchers working with learners of English are fortunate in having a number of research measures at their disposal, including the Eurocentres Test, developed by Meara and Jones (1990). Another well-known test is the vocabulary levels test, developed by Nation (1990, pp261-272), which permits placement of the learner within a band determined by vocabulary frequency levels.

The language under observation in our study was Spanish (as an L2 for native speakers of English). In relation to Spanish, however, few such research tools exist at the moment, and any research that wishes to assess vocabulary improvement is faced with the daunting task of first developing a reliable measure. This is a more complex task than is sometimes assumed (see Meara 1994a for a review of some of the complexities involved in producing even apparently simple vocabulary testing instruments that are robust enough to be reliable). Fortunately, tests for Spanish are now beginning to be developed (see, for example, Suárez, Seisdedos and Meara, 1998).

One new test being developed for Spanish has already undergone substantial trials and is the instrument used in this research. This test, known as the *Three Word Association Test* or A3VT (Vives Boix, 1995), permits assessment of vocabulary gain in terms of improvements in lexical organisation rather than simply in terms of number of items acquired, which has been the type of test mainly used in the past. As noted above, past research has suggested that advanced learners appear to make relatively little progress, compared to less proficient learners, during the period abroad. This is inevitable if tests measure only percentage improvement in number of items acquired: there is a ceiling effect which means that the higher a learner's score in the first place, the more difficult it is to achieve a significant percentage improvement in any subsequent test. On the other hand, a subject with a lower initial score has much more room for improvement. Freed (1995) comments in relation to apparent lack of progress among more proficient learners:

To the extent that assessment instruments are unable to capture the progress made by more advanced students, we will always have the impression that it is the lower-level students who have made the greatest gains, at home or abroad. (p20).

We contend that a measurement of vocabulary size alone in fact obscures other types of change that may have occurred. Vocabulary knowledge is complex and is not limited purely to the recognition and use of lexical items. In our view, increased proficiency will lead to greater depth and greater interconnection between lexical items so that the learner's lexicon resembles more closely that of a native speaker. Arguably, such progress will occur more naturally in a study abroad context in which learners are able to benefit from a degree of immersion, even taking into account the varying success learners have in integrating into the host society. Our aim in this research, therefore, was to ascertain whether any indication of such progress can be found and whether the apparent lack of progress made by advanced learners can in fact be shown to be a qualitatively different type of progress.

The study

The subjects

The study reported here was conducted over a period of two years with students from two successive cohorts of Spanish learners from a British university. For all the subjects in the sample, Spanish was a major element of their degree program. Some were studying Spanish plus a non-language subject. Others were studying Spanish plus another language. Those studying two languages normally spend only one semester in Spain, because they also have to spend a semester in a second country, but other students spend two semesters in Spain. The rationale for this system is that the two language students are experienced learners who, as regards language learning skills, have a head start over those who study only one language. The latter may need more time to catch up to the others.

Table 1 summarises the make up of the subjects. Over the two cohorts, a core of 36 students to part in the whole study (table 1). Roughly two thirds spent one semester away; the rest two. In practice, most were away for between four and eight months. Apart from being shorter in some cases, the study experience of all the students in Spain was broadly similar. In all cases the time was spent at one of the 10 Spanish universities that have formal exchange arrangements with the home University. Students are sent in small groups of not more than four, sometimes as few as one or two, in order to minimise contact with friends from home although in effect they are nearly always in contact with other foreign students, some of them English speakers. The context is therefore one of modified immersion.

The usual arrangement for such exchange students is for them to attend normal classes

Table 1. Subject and placement profile

Initial proficiency level

Intermediate	21	Advanced	15				
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Time abroad

1 semester	25	2 semesters	11				
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Total months

Under 4	5	4 to 5	19	6 to 8	2	Over 8	10
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Living arrangements shared with...

English	9	Foreigners	9	Spaniards	12	Student residence	6
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Language at home

English	12	Spanish/English	7	Spanish only	15	other	2
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Social Life: friends were...

English	12	Spanish/English	7	Spanish only	15	other	2
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Language spoken

English	6						
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Spanish used in

One context only	3	Two contexts	6	Three contexts	15	Four plus	12
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Study arrangements

Special classes	23	Natives' classes	30	Homework marked	19	Took assessments	28
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Hours in class per week

Under 4	1	4 to 7	7	8 to 12	21	More than 12	7
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within the foreign University, studying alongside the host university's own students and taking the same assessments. They may also receive special language support classes, although this is by no means universal provision. In fact, in this sample, around two thirds attended such classes. Systems vary from one receiving university to the other, so that some students submit homework that is corrected, others do not: just over half did in this case. All students are expected to take assessments, but not all do: in the sample, 28 submitted themselves for assessment. As for hours spent in class, the majority were in class for over eight hours a week and a few for more than 12 hours.

Living accommodation is occasionally supplied within a university residence, but more often than not students share flats with other students, sometimes Spanish students, sometimes other foreign students, sometimes their own English compatriots (in spite of this being discouraged). Again, since home life is likely to be a vital factor in social integration and subsequent language use, students were questioned about the type of accommodation they had and the subsequent social interaction derived from it. Almost half the students lived with or among Spanish students, approximately one third in shared accommodation, another six in student residences. The rest lived either with English students or other foreign students, or a mixture of the two. Somewhat fewer than half reported having spoken only Spanish at home while another eight spoke a mixture of Spanish and English. The others, unfortunately, spoke English.

There were no major variables distinguishing the two different year cohorts: all have followed fundamentally similar programs prior to departure. Within the combined cohorts as a whole, the major variable was their proficiency level at the point of departure for the study placement. Typical of learners of Spanish in Britain, the groups were not homogeneous in proficiency level since many learners begin to learn Spanish at university, or begin their university course with only an intermediate level of proficiency in the language. It has always been argued that the period of study abroad will play a major role in reducing the proficiency gap within any cohort by the final year of their course. Just over a half of the students in this sample had only three or fewer years of exposure to the language. Others have substantially more, usually between six and eight years. The sample was thus divided into two categories, advanced and intermediate, on the basis of length of prior exposure. Those classed as intermediate had to 3 years exposure; the rest were classed as advanced.

The study abroad experience of the two proficiency levels proved to be remarkably similar apart from the fact that more intermediate students went in semester one and more advanced in semester two, the result of a deliberate policy to encourage immediate consolidation among the less proficient learners. Otherwise, the pattern of class attendance, time spent in class, homework and assessments done, was broadly similar.

The research instrument

As indicated above, the study makes use of the A3 VT, an innovative test of vocabulary knowledge. This test was developed in the context of another study (Vives Boix, 1995). In its entirety, the A3VT consists of 120 items, each consisting of three words. In each of these three word sets, selected during developmental trials with native speakers, two of the words had been identified by natives as being strongly associated to each other while the third is not generally associated to the other two. The subject's task is to identify the word that is the misfit in each set.

In the earlier developmental phase, Vives Boix administered the 120 item test to 26 subjects. The test items were designed to cover a basic vocabulary of about 2000 words. Three sub-tests, each consisting of 40 items were constructed. Analysis of this data showed that the three sub tests produced essentially comparable results. The summary data is presented in table 2 below.

Table 2 A3VT mean scores (Vives Boix 1995)

Test components	Mean %	sd
Sub-test 1	76.54	16.66
Sub-test 2	75.58	18.28
Sub-test 3	75.38	18.97
Whole Test	75.83	17.05

N=26

The correlations between the three sub-tests were high (S1-S2 = .847; S1-S3 = .822; S2-S3 = .878). These figures give a value of .942 for Cronbach's alpha. This is taken to indicate that the A3VT test has high internal consistency.

All the subjects also took a translation test in which they were asked to provide L1 translations of all the items in the main test. Again, the correlations between the A3VT test and the translation test were very high ($r=.903$), though the A3VT test tends to produce lower scores than does the translation test. This is not really surprising, as a correct answer on A3VT requires more in-depth knowledge than is necessary for a simple translation. In addition, a small number of subjects were asked to complete the A3VT test and the translation test in think aloud mode. The transcripts produced were subjected to a detailed analysis to reveal the extent of guessing behaviour on the A3VT test. Successful guesses accounted for only 1% of all the data collected. Vives Boix takes these findings to indicate that the A3VT test has good construct validity.

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In a further study, Vives Boix repeated these analyses with a large group of subjects (N=85) and a further set of tests designed to cover a much larger vocabulary range -- up to 10,000 words as defined by the Rodríguez Bou list (Rodríguez Bou 1952). This set of tests produced results essentially similar to the earlier ones: the correlations between the three sub tests were high (.736, .773 and .836) with a Cronbach alpha coefficient for the whole test of .93. Correlations tended to be higher for the more advanced subjects. These findings are taken to indicate that the A3VT test works reliably over a wide range of lexical competence.

Finally, although the number of subjects was rather small (N=85), Vives Boix also carried out a formal Rasch analysis of this data, which allowed her to calibrate the 120 items used in the test. This analysis indicated that the data was essentially unidimensional. Reliability for items was .95; reliability for persons was .94. The small number of misfitting persons were all identified as students who had received less than two years of Spanish instruction. Again, these findings point to the A3VT test being a reliable instrument.

Vives Boix suggests that this technique provides very reliable data about subjects' organisational vocabulary knowledge. Because the test items reflect native speaker choices, the subjects scoring well on the test can be said to be approaching a native like organisation of the lexicon.

Materials for the current study.

The current study continued the format used in Vives Boix's earlier work and involved two tests. First, the A3VT test, based on a 10,000 word corpus, was administered to subjects as three sub-tests of 40 items each. A sample subtest, with instructions and examples, is shown in appendix A.

Secondly, subjects were also required to translate all the words contained in one of the sub-tests of the A3VT (120 words in all) into their mother tongue. This provided a more orthodox measure of the increase in number of items known after the period of study at the and permitted comparison with the increase in organisational knowledge. This test, referred to as the *translation test*, can be found in appendix B, again with instructions and examples.

Procedure

Subjects were tested for the first time at the end of the second year of their university program, prior to going abroad. The tests were conducted in class, under staff supervision, with no dictionaries or other support materials allowed. Time allowed for completion of both the A3VT and the translation test was one hour in total. This required the subjects to work quite quickly. Subjects were asked to work systematically

through the booklet, in which the three A3VT subtests appeared first, followed by the translation test. They were asked to respond to all items, because the scoring method for the test involves a correction for guessing. The method makes an estimate of the guesses in the subjects wrong response rate, the formula used being:

$$\text{Score} = (\text{Raw score} - \text{wrong responses}) / N - 1$$

The details and justification for the method are discussed more fully in Vives Boix (1995).

On return from their period abroad students to the same tests again under similar conditions. They were also asked to complete a questionnaire asking for details of their experiences abroad.

Hypotheses

The research questions we wished to test in the course of our study related to the linguistic progress made during the study placement, as reflected in vocabulary development. We expected all students to make progress during the time abroad to the extent that they would know more lexical items on their return than before they went away and this we expected to be gauged by our translation test. In addition, it seemed reasonable to expect that learners will also make progress in lexical organisation, as reflected by the A3 VT. These assumptions were the basis for our first hypothesis:

- 1: the overall vocabulary level of the subjects will improve during the study period abroad, where improvement is measured in terms of
 - (a) the number of words known
 - (b) significant gain on a test that measures depth of lexical knowledge

On the other hand, the findings reported in Milton and Meara (1995), indicated that we would find differences in the amount of progress corresponding to proficiency level. That study, which concentrated on gains in number of lexical items, led us to expect that the lower proficiency group would appear to make more progress than the more advanced group in terms of new words learned (as reflected by the translation test). Our experience based on previous use of the A3VT (Vives Boix, 1995), led us to expect that it was the more advanced learners who were likely to show higher levels of lexical organisation, a more demanding aspect of lexical knowledge. We surmised that these levels would increase during the period abroad, possibly more among the more proficient learners than among less proficient. This led to a second hypothesis:

- 2: Level of proficiency at the beginning of the study period will influence
 - (a) are the number of words gained during the study period

(b) the degree of lexical organisation achieved.

One difficulty in conducting a study of this type was the lack of a control group. Since it is not possible to interfere with the students' prescribed educational experience there was no chance of retaining a control group in the UK for purposes of experimentation. We had one or two students who, for different reasons, did not go on a study placement and these were available for comparison, but the numbers were so small as to render any statistical comparison unreliable. A technique used by Milton and Meara was to calculate the number of words per year that students had acquired prior to departure. The progress during the year away could then be compared to see if it had accelerated. The A3VT does not claim to indicate vocabulary size and therefore any similar claim would not be well founded. In a sense, however, the two different cohorts in our study could act as each other's control. Similar results for each year-cohort, one year apart, would suggest stability within our findings. Similarly, parallel results for different proficiency groups maintained over two cohorts, would again help to corroborate the stability of our data. However, the lack of a proper control group must be recognised and proper experimental comparisons may not therefore be appropriate at this stage. Nonetheless, previous trials lead us to believe the A3VT is sensitive enough to allow us to place some confidence in our findings.

Inevitably, the question that arises in a study such as this is whether variables other than proficiency level might affect outcomes over the period under observation. Although this was not the major focus of our study, following suggestions in the literature (Milton and Meara, 1995, for example) we asked students in a post-experience questionnaire about factors that might affect language acquisition during a period of residence abroad. These included degree of social integration (as indicated by the use of the target language at home, in social interaction and among friends), type of educational experience (reflected in numbers of hours in class, level of language support and independent learning activities), and motivation (as reflected in personal reactions to the country, the people and the study abroad experience). The hypothesis tested on the basis of expectations can be summarised as follows:

- 3: Improvement will vary according to experiential factors, such that:
- (a) better integrated learners will improve more than those less integrated;
 - (b) those away for longer periods will improve most;
 - (c) more motivated students will improve more than less motivated ones.

Results

Hypothesis 1

The results for the two different year cohorts suggested stability in the testing technique (see discussion above). In each year, student performance overall improved significantly

from time 1 to time 2 on both the A3 VT and the translation test as shown in table 3.

Although the second cohort's scores were always slightly lower than those of the first cohort, the pattern for each group was remarkably similar and the gain scores at the end of the period abroad was of similar proportions in each case. On each occasion, both cohorts achieved substantially higher scores on the translation test than on the A3VT, the difference on average being around 30 items more for the translation test. This was to be expected, since the A3VT involves a more demanding task in asking for demonstration of knowledge of associative links between three lexical items. The gain for each cohort on each test was also similar: on the translation test, a mean gain of 15.7 items for the first cohort, and 16.8 for the second; on the A3VT, a gain of 16 items for the first cohort and 14.8 for the second.

Table 3. Cohort mean scores on the two vocabulary tests.

Cohort/Time	n	A3VT			Translation		
		Mean	sd	F	Mean	sd	F
Cohort 1							
Time 1	23	37.63	19.15		34.73	12.97	
Time 2	23	53.67	21.76	F(1,22)=27.79 p<.001	49.5	17.4	F(1,22)=64.52 p<.001
Cohort 2							
Time 1	13	68.13	16.48		65.15	17.71	
Time 2	13	83.78	14.12	F(1,12)=8.66 p=.012	81.92	12.35	FD(1,12)=37.1 p<.001

The second cohort therefore improved marginally less than the first cohort on the A3VT test and slightly more on the translation test, as well as having slightly lower scores all round. If our second hypothesis is correct, that more proficient students gain more in the area of vocabulary organisation during the period abroad, this initial finding would be consistent because the second cohort contained an imbalance within the group towards lower proficiency learners. However, the differences are so slight as not to be statistically significant. The important factor to note therefore is the significant increase for both groups, on both tests from Time 1 to Time 2.

In relation to our first hypothesis, the evidence from this study supported both parts of hypothesis 1. The question is whether the picture looks different when proficiency levels are considered.

Hypothesis 2

The results according to proficiency level are summarised in table 4. Analysis of this data showed that the improvement from T1 to T2 was again significant for both tests for both proficiency groups. In other words the more proficient as well as the less proficient learners improve both in terms of number of items and degree of organisational knowledge.

Across the two cohorts, subjects classified as advanced seems to improve more in terms of vocabulary organisation, with a mean improvement of 15.5, compared with an 11.27 mean improvement in knowledge of single items. By contrast, the intermediate subjects improve more in terms of knowledge of single items (+19.5) compared with a 15.6 mean improvement on the organisational lexical measure. However, there were no significant interactions between test and group or time and group. This suggests that both the advanced and intermediate students are in fact improving to a similar extent, though the intermediate group performs at a consistently lower level.

Table 4. Mean scores by test and proficiency level.

Cohort/Time	n	A3VT			Translation		
		Mean	sd	F	Mean	sd	F
Advanced							
Time 1	15	51.9	13.39		82.6	8.18	
Time 2	15	67.4	14.2	F(1,14)=20.14 p<.001	93.87	8	F(1,14)=29.99 p<.001
Intermediate							
Time 1	13	25.64	8.99		55.95	11.53	
Time 2	13	41.29	16.44	F(1,20)=16.79 p<.001	75.43	10.89	F(1,12)=97.43 p<.001

These results do not support Milton and Meara's suggestion that low-level learners improve more than advanced learners during periods of residence abroad. On the

contrary, these results suggest that both groups make progress and indeed that they make progress in both types of test. The trend is towards the advanced students making more progress in associative knowledge than in knowledge of discrete items, and towards the reverse situation among intermediate students. However there is no statistically supportive evidence on this occasion to support such a claim. In relation to hypothesis two, therefore, we have to say that the hypothesis was not statistically supported by the evidence of these data: there is no firm support for proficiency level influencing either the total number of words being all the increasing level of lexical organisation, although trends within the data suggest that further research in this area would not be misplaced.

Hypothesis 3

Of the environmental variables thought to be potentially influential in vocabulary development, namely, the level of integration, duration of stay, and degree of motivation, only one showed any significant relationship to higher scores on the tests. This variable was length of stay, as measured by the number of months spent in a foreign country. A significant correlation was found between overall time spent abroad and gains on the A3VT ($r=.5471, p<.001$).

Closer scrutiny of the one/two semester effect corroborated the effects of length of stay. Table 5 shows the gains made by all students and by the different proficiency groups according to whether one or two semesters was spent abroad. The table shows clearly the very large gains made especially on the organisational vocabulary test by all subjects who spent two semesters abroad, as compared with those who only spent one. Among the advanced learners the improvement in organisational knowledge was almost 3 times the improvement made over just one semester, while among the intermediate students the improvement was 3½ times greater than that achieved over one semester.

Table 5. Mean item gains by test, proficiency and time abroad

Test/Time away	n	Advanced		n	Intermediate	
		Mn gain	sd		Mn gain	sd
A3VT						
One semester	9	7.8	4.9	16	9.7	12.97
Two semesters	6	27	12.7	5	34.8	23.4
Translation						
One semester	9	8.2	4.8	16	18	8.6
Two semesters	6	15.8	8.9	5	24.6	7.2

The improvement for the advanced group on the A3VT was also substantially more than the improvement made on the translation test, though it must be remembered that the higher score achieved on the translation test in the first place makes a significant improvement harder to achieve. Even on the translation test, this group doubled the improvement when away longer.

Among the intermediate students, even one semester away lead to substantial improvements on the translation test, as we had expected, given that initial scores were lower and therefore improvements more achievable. The difference made by staying away longer was less marked than for the advanced students, but still quite noticeable.

The small numbers of students spending two semesters away (6 advanced, 5 intermediate) means that we cannot read too much into these figures and no conclusive statistical correlation was evident. However, if the trends noted here are sustained with larger groups of subjects, they suggest that even a short time spent away is beneficial to less proficient learners. On the other hand, a longer period spent away is even better and also for advanced students who, far from making no progress, make even more progress in the demanding associative tasks represented by the A3VT.

Although level of integration could not be shown to have any demonstrable effect on vocabulary gains, it is worth mentioning that the level of integration, as calculated, was clearly linked with duration of stay. Five social contexts were used as the basis for determining the level of integration: in the home, in class, when socialising, when engaged in part-time work, and for shopping or dealing with banks. Not surprisingly perhaps, the integration levels shown on this count by students who spent two semesters abroad were higher than those of students who spent only one semester abroad. All used Spanish regularly in at least three of the contexts identified and a third of them reported using it in four. Because not all found part-time work, this often represented all contexts. Among those going away for only one semester a number of students did not manage more than two contexts. At an informal level, therefore, it might be suggested that duration of stay will at least be influential in extending range of language use within which vocabulary development can take place.

Finally, we could not find any significant correlation between level of motivation and test performance. The motivation variable was computed by summing up all variables such as enjoyment of the period abroad, perceptions of improvement, positive feelings about the stay, and liking for the country. The analysis of subjects' results in relation to a motivation rating show only a weak connection for subjects in the advanced group ($r = .3810$ and $.3513$ for the A3 VT and translation test), and even weaker for subjects belonging to the intermediate level group.

In summary, we found no evidence in support of hypotheses 3(a) or 3(c); we found some tentative evidence in support of hypothesis 3(b) to suggest that duration of stay may be a significant factor in levels of improvement.

Discussion

The results of this study suggest to us that both proficiency groups are making significant lexical progress during the period of study abroad, contrary to the indications of previous studies. Intermediate learners progressed considerably, as expected, but somewhat unexpectedly, advanced learners also made progress both in relation to the number of lexical items gained and in relation to organisation of the lexicon, as represented by associated vocabulary knowledge. This is an aspect of vocabulary knowledge that has not been measured before. It is worth mentioning that the advanced learners themselves, according to questionnaire responses, felt their vocabulary improved in 75% of the cases while at the same time reporting little effort having been poured into attempting to learn words by conscious means. This intuition on the part of the learners appears to be captured quite convincingly in the results of the A3VT tests.

Although no correlation could be found on this occasion between specific social and motivational experiences of the learners and the degree of progress made, the general experience certainly seems to have been influential, and the type of development seems to have been one of increased confidence in the use of words and an increased solidity of words in the lexicon, in the sense that more connections have been built to tie them to other words. Because of the lack of a real control group we cannot show conclusively that the same development would not have occurred at home, but it is unquestionably true that the learning experience would have been very different, and it is unlikely that the sense of integration and motivation and the opportunity to use the language naturally would have occurred to the same degree.

Although we found no statistical evidence in this study to this effect, nonetheless, the data point to a trend towards greater vocabulary gains as a result of a longer period away, both in terms of items gained and in terms of increased lexical organisation. Because it was clear that those away for a longer period succeeded in using their language in a wider range of contexts, this may well have been the major distinguishing feature of the experience in determining better lexical development. If the general immersion experience is conducive to vocabulary gain, it is likely that longer = better, if only because added time gives a better chance of social integration. However, conclusions in this area must inevitably be tentative in the absence of more solid statistical evidence to support our view. It must also be remembered that subjects spending one semester away were also studying the second foreign language and had to spend a semester in the second foreign country either before or after their stay in Spain. The capacity of the lexical expansion among the one semester group may therefore be

limited to some degree by competition from an L3 and not solely by the shorter period of residence in Spain.

We noted earlier that the period abroad has sometimes been seen as a levelling experience between students of different proficiency levels. Our study suggests only a marginal narrowing of the gap where knowledge of discrete items is concerned. It should be noted also that, on return, the intermediate subjects in this study had in general only just reached the levels of vocabulary knowledge shown by advanced learners *before* they went abroad, as shown by our translation test. Also, even though the intermediate group improved their lexical organisation knowledge while abroad, this too did not reach the levels achieved by the advanced learners but reflected the group's progress at a lower-level. It is worth stressing, however, that the small group of intermediate subjects who were able to spend a longer period away in the foreign country seemed to make quite remarkable gains on the A3VT (as shown in table 5). This suggests that a longer period for less advanced learners could lead to the kind of levelling that teachers had intuitively felt was possible. Little concrete evidence is available about the optimum length of periods of residence abroad, but if our study can be seen as an indicator of the type of lexical progress that more proficient learners make, then the signs are that, for less proficient learners, two semesters rather than one could be the more desirable pattern of exposure, yet even one semester makes an appreciable difference.

We have also not found any positive correlation between motivation level and performance of the tests. Nonetheless, the levels of enthusiasm indicated for the period abroad suggest that its motivating influence should be positive at a general level, and as we indicated earlier, although our interest has been specifically linguistic, we must not forget that the period abroad is also about cultural and social benefit, factors which are particularly important within the context of European harmonisation, for instance.

Conclusions

Our conclusion as a result of this study is that the period abroad is a viable one in many ways, not least of which is the level of enthusiasm and understanding it engenders for another country and its culture. However, we began by indicating that the more precise linguistic benefits needed to be quantified particularly in relation to more advanced learners. This study suggests to us that in the area of vocabulary development, at least, progress is indeed occurring, as much among more advanced learners as among the less proficient, and we have in the A3VT test a tool which enables us to observe this development more closely and more sensitively. As a result of its use in this study, we are able to highlight in particular that a gap still exists between proficiency levels after the period abroad. We have been able to see that those intermediate learners who spend a substantial time abroad make considerable headway in developing the type of lexical

organisation that is a key feature of higher proficiency. We have also seen that such extended periods may be even more beneficial for advanced learners when they are at the point of developing the associative networks typical of native language use.

We recognise that the A3VT is still in relatively early stages of development and some features might be modified in future developments of the test nonetheless, in the context of this study it was relatively easy to administer and has provided data for use in future research. Clearly, its uses need not be limited to the study abroad context. It provides us with a badly needed measure of progress at higher levels of proficiency and can thus lend itself to research in range of contexts. In particular, it allows for future studies of the effects of teaching methods or independent learning strategies at a level where progress is notoriously difficult to assess.

We hope that this study may serve to stress the need for future developments of tools such as this one (and such as that used by Milton and Meara, 1995) to generate a better understanding of the ways in which learners' competence is progressing at any given time. This is not purely a quest for knowledge for its own sake. In the context of study abroad, a perceived lack of linguistic progress by advanced learners, which as we have seen has been suggested in the past, could be a vital factor in any future decision about the value of such periods of study. Yet this research indicates clearly that this group is achieving important linguistic progress during the period abroad. It is essential therefore that appropriate instruments are available to enable us to make informed assessments that may be needed to influence significant policy decisions whether in this or any other area. Inevitably the time it takes to develop and to test these can be a major deterrent, but it is to be hoped that other developments will continue to expand the range of research tools at our disposal.

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Appendix A
A3VT subtest 1

Instructions

In each item, there are two words which are strongly linked to each other while third one is not. Put a cross against the one that is NOT linked to the other two.

Answer all the items.

Example

- | | | | |
|----|--------------------------------------|--------------------------------------|--|
| 0 | <input type="checkbox"/> sacerdote | <input type="checkbox"/> iglesia | <input checked="" type="checkbox"/> región |
| 1 | <input type="checkbox"/> aceptable | <input type="checkbox"/> válido | <input type="checkbox"/> pitar |
| 2 | <input type="checkbox"/> meseta | <input type="checkbox"/> alojamiento | <input type="checkbox"/> posada |
| 3 | <input type="checkbox"/> salir | <input type="checkbox"/> airoso | <input type="checkbox"/> fango |
| 4 | <input type="checkbox"/> sencillez | <input type="checkbox"/> modestia | <input type="checkbox"/> angosto |
| 5 | <input type="checkbox"/> rival | <input type="checkbox"/> freno | <input type="checkbox"/> embrague |
| 6 | <input type="checkbox"/> estropear | <input type="checkbox"/> lavadora | <input type="checkbox"/> irrealizable |
| 7 | <input type="checkbox"/> creciente | <input type="checkbox"/> veneno | <input type="checkbox"/> pocima |
| 8 | <input type="checkbox"/> tapón | <input type="checkbox"/> perfumiar | <input type="checkbox"/> colonia |
| 9 | <input type="checkbox"/> clínica | <input type="checkbox"/> consultorio | <input type="checkbox"/> centurión |
| 10 | <input type="checkbox"/> infante | <input type="checkbox"/> hervir | <input type="checkbox"/> verdura |
| 11 | <input type="checkbox"/> hilera | <input type="checkbox"/> soldado | <input type="checkbox"/> mecer |
| 12 | <input type="checkbox"/> madera | <input type="checkbox"/> ave | <input type="checkbox"/> plumaje |
| 13 | <input type="checkbox"/> coronel | <input type="checkbox"/> nube | <input type="checkbox"/> clima |
| 14 | <input type="checkbox"/> sacar | <input type="checkbox"/> tiempo | <input type="checkbox"/> choza |
| 15 | <input type="checkbox"/> uva | <input type="checkbox"/> vino | <input type="checkbox"/> frito |
| 16 | <input type="checkbox"/> aspereza | <input type="checkbox"/> suavidad | <input type="checkbox"/> gente |
| 17 | <input type="checkbox"/> repercusión | <input type="checkbox"/> batidor | <input type="checkbox"/> fruta |
| 18 | <input type="checkbox"/> grifo | <input type="checkbox"/> enlazar | <input type="checkbox"/> mano |
| 19 | <input type="checkbox"/> vigilia | <input type="checkbox"/> sueño | <input type="checkbox"/> gritar |
| 20 | <input type="checkbox"/> cría | <input type="checkbox"/> caballo | <input type="checkbox"/> velero |
| 21 | <input type="checkbox"/> camisa | <input type="checkbox"/> alumbrado | <input type="checkbox"/> calle |
| 22 | <input type="checkbox"/> charco | <input type="checkbox"/> agua | <input type="checkbox"/> defensa |
| 23 | <input type="checkbox"/> ciruela | <input type="checkbox"/> mermelada | <input type="checkbox"/> causa |

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- | | | | |
|----|------------------------------------|---------------------------------------|--|
| 24 | <input type="checkbox"/> percha | <input type="checkbox"/> pan | <input type="checkbox"/> integral |
| 25 | <input type="checkbox"/> nido | <input type="checkbox"/> pájaro | <input type="checkbox"/> golpe |
| 26 | <input type="checkbox"/> albóndiga | <input type="checkbox"/> vacío | <input type="checkbox"/> ventana |
| 27 | <input type="checkbox"/> debajo | <input type="checkbox"/> verdad | <input type="checkbox"/> cierto |
| 28 | <input type="checkbox"/> puerta | <input type="checkbox"/> goma | <input type="checkbox"/> ventana |
| 29 | <input type="checkbox"/> mazorca | <input type="checkbox"/> maíz | <input type="checkbox"/> cara |
| 30 | <input type="checkbox"/> traducir | <input type="checkbox"/> literalmente | <input type="checkbox"/> tienda |
| 31 | <input type="checkbox"/> camarero | <input type="checkbox"/> desmayar | <input type="checkbox"/> desvanecersse |
| 32 | <input type="checkbox"/> festivo | <input type="checkbox"/> día | <input type="checkbox"/> uña |
| 33 | <input type="checkbox"/> peine | <input type="checkbox"/> olfatear | <input type="checkbox"/> perro |
| 34 | <input type="checkbox"/> encuentro | <input type="checkbox"/> clandestino | <input type="checkbox"/> tirar |
| 35 | <input type="checkbox"/> caja | <input type="checkbox"/> embriaguez | <input type="checkbox"/> borracho |
| 36 | <input type="checkbox"/> risa | <input type="checkbox"/> exento | <input type="checkbox"/> libre |
| 37 | <input type="checkbox"/> agobiante | <input type="checkbox"/> alegría | <input type="checkbox"/> calor |
| 38 | <input type="checkbox"/> pluma | <input type="checkbox"/> avestruz | <input type="checkbox"/> hielo |
| 39 | <input type="checkbox"/> ganada | <input type="checkbox"/> secar | <input type="checkbox"/> vacuno |
| 40 | <input type="checkbox"/> pared | <input type="checkbox"/> vega | <input type="checkbox"/> río |

Appendix B

The Translation Test

Instructions

Translate into English ALL the words in Test 1.