

How do pupils respond to the use of self-made picture cards to help them with the retention of Latin vocabulary? An investigation of a Year 9 Latin class in a co-educational independent school.

Georgia Sams

HOW DO PUPILS RESPOND TO THE USE OF SELF-MADE PICTURE CARDS TO HELP THEM WITH THE RETENTION OF LATIN VOCABULARY?

AN INVESTIGATION OF A YEAR 9 LATIN CLASS IN A CO-EDUCATIONAL INDEPENDENT SCHOOL.

Georgia Sams

Newnham College

University of Cambridge

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WORD COUNT: 8,340

SECTION 1C ASSIGNMENT

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1. INTRODUCTION

I investigated how pupils' creation and use of illustrated vocabulary cards affects acquisition and retention of vocabulary. My three research questions were (i), how did pupils perform in vocabulary tests before, during, and after use of the picture cards, (ii) what did they say about how they responded to the cards, and (iii) what sort of illustrations did they draw. My decision to research this topic was influenced by my own experiences of learning vocabulary. At school, no advice was given on how to learn vocabulary: it was either written in a notebook, and never looked at again, or (for GCSE and A level) provided as a Defined Vocabulary list, learnt alphabetically week by week. Before A levels, I learned vocabulary by reading and repeating it – and after the tests I forgot it. At A level, I developed my own tactics for learning vocabulary: copying it out into groups of different conjugations and declensions; writing Latin words on one side of business cards, the meanings on the

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other; and drawing illustrations. As a result, I retained the vocabulary for longer, and when revising, my lists, cards and pictures were effective aids.

It seems to me that, during the early years of Latin, understanding the vocabulary is more than half the battle. As pupils progress, knowledge of grammar becomes more important; however, in the beginning, a strong knowledge of vocabulary and logical methods for approaching Latin often yield an accurate translation. This is not to devalue grammatical knowledge, merely to acknowledge that a bedrock of lexical knowledge is prerequisite for successful translation.

The pupils with whom the research was carried out were boys and girls aged 13-14 years who had only studied Latin for one and a half terms. The results of their vocabulary tests prior to the research were mixed: some pupils attained nearly full marks on every test; others gained acceptable marks, with the occasional severe underperformance. It might seem strange to carry out this research on a group which was not under-performing; a brief discussion of their learning habits will explain this. Many pupils, especially those who did not always attain high marks, arrived at lessons cramming for vocabulary tests. Sometimes they would ask, "What were we supposed to learn?" I deduced that acceptable marks in the tests were sometimes due to exercise of the short-term memory, rather than real knowledge. Therefore, the purpose of the research was not just to investigate a particular method of learning vocabulary, but also to see whether it had an effect on longer-term retention.

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The school itself is independent, co-educational and “one of England’s three largest boarding schools” (Oundle School website, 2011). Pupils enter the school at Year 7 or Year 9, after an entrance exam. Despite the school being selective, the ability range of the class in question was broad (as discussed above). The most recent ISI report describes the quality of the boarding experience as “outstanding” and states that it supports the pupils’ education (Oundle School website, 2011). However, in my eyes, the boarding aspect had a disadvantage for pupils’ learning; whatever the method by which I learned vocabulary, there was always a parent or fellow student to test me. At this school, with ten Year 9 sets learning from a range of text books, only pupils in the same set cover the same material at the same time. Moreover, with fourteen Houses (only one of which is a Day House), the odds of having a partner to test you in your own House are slim (two pairs of boys in the class shared Houses). Finally, homework is completed silently in studies from 7 - 9 pm; the chances peer-testing are small. I therefore wanted to devise a method wherein the pupils could test themselves, capitalising on pupils’ self-reliance by personalising their learning.

For these reasons – my own experiences of learning vocabulary, the importance of a solid knowledge of vocabulary in early stages Latin learning, and concerns that pupils were not adequately retaining vocabulary – I chose to investigate how pictorial representation, a process I myself used effectively, affected vocabulary acquisition with this group.

2. LITERATURE REVIEW

Studies of vocabulary acquisition within Classics

There are few research articles on strategies for vocabulary acquisition dealing specifically with Classical languages. One tested the usefulness of English derivatives for retention (Anderson and Jordan, 1928), another the effects of imagery, and grouping items of vocabulary in different ways (Carter, Hardy and Hardy, 2001). Both studies focussed on methods of aiding vocabulary acquisition, so are worth discussion.

Anderson and Jordan (1928) tested a group of thirty-one 12-13 year-olds, with no experience of Latin, on 250 high-frequency words used by Caesar. Since there was no prior knowledge of Latin, there was no interference from classroom learning or words being met in the context of translation (an issue in my research). This vocabulary was divided into three groups, and was tested immediately, on the next day, after one week, three weeks and eight weeks. Retention was most successful when items had near-identical derivations with the same meaning, such as *provincia* ('province'). Words which had English derivations which were further from the Latin meaning were well-remembered, provided that the derivation was already known. This suggests that wide readers in English may have an advantage in learning vocabulary in related languages, as they are more likely to have met with derivationally linked items. Indeed, the researchers suggested a strong correlation between reading ability and word memory. Long term retention was measured at just above fifty percent.

Carter, Hardy and Hardy (2001) divided 121 high school Latin pupils into four groups, giving each group the same 21 items of vocabulary to be learnt in fifteen minutes, with a further test two weeks later. One group was the control and learnt the 21 words as usual, the other three groups were given the words in 'chunks' of 7 items, each grouped randomly, or according to "related definitional categories" (one assumes this means the items were thematically linked). One group was also given five minutes of "imagery treatment" prior to the first test; what form this took is unclear, but presumably involved visualisation of vocabulary. Both chunking, (especially with related definitional categories) and imagery treatment improved scores and retention after two weeks.

Therefore, within Classical education, English derivations, logical word groupings, and imagery have all been investigated and found to aid vocabulary acquisition and mid-term retention.

Theories of Vocabulary Acquisition within other Second Languages

A number of issues mean that theories concerned with modern foreign language acquisition may not directly apply to Classical languages. These are fundamentally concerned with the different uses of language: receptive (reading and listening) and productive (writing and speaking). In modern language learning, both receptive and productive knowledge is drawn upon; pupils must understand the language they receive and create their own responses. This productive use is usually extremely limited in the early years of learning Classical languages. One reason may be time restrictions within the school environment, with many schools offering Classical

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subjects out of school hours. Another may be that the aim of the teaching is for the pupil to reach a proficient level of reading, rather than being able to manipulate the language themselves (as with the Cambridge Latin Course). Indeed, translation of English into Latin and Greek is now relatively rare (even at degree level at Cambridge it is only an optional paper); moreover, this form of translation (prose composition) is not truly productive, as it translates a given piece of text, rather than creating a new one, as would be the case modern foreign languages.

Despite the tendency of Classical teaching toward purely receptive learning, Griffin (1992) concluded that, if only receptive or productive learning is available, productive learning may be more efficient. This notion is supported by both behaviourist theory (ie that regular use of language helps to form correct 'habits'), and by information-processing theory (ie that regular practice improves fluency), as discussed by Mitchell and Myles (1998, p 21). Classicists who have practised prose composition often conclude that such use of the language requires deeper knowledge.

Therefore, despite time restrictions and the aims of text books, it seems that selective use of prose composition might increase pupils' proficiency in Classical languages.

There is a further problem which impacts strongly on vocabulary acquisition: in modern foreign languages, vocabulary meanings are usually shared with the learners' first language. Commonly learnt vocabulary includes items which are part of the pupils' common cultural vocabulary, such as 'car', 'shower', 'telephone'. This is often not the case with Classical languages, where vocabulary may not tally with pupils' cultural experiences; in the research, a number of pupils illustrated *consul*,

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consulis as a games console, since they assumed this was the correct meaning.

This relates to Milton's (2009, p 13) discussion of "depth of word knowledge"; pupils had learnt the translation of the word, but not its real meaning.

Moreover, much language theory concerns learning through interaction, for example Krashen's Input Hypothesis (Krashen, 1982, 1985) that language is acquired by understanding input and Long's Interaction Hypothesis (Long, 1980, 1981, 1983), that language is further acquired through interaction which includes a series of repetitions, confirmation, comprehensions and clarification checks; when pupils are using vocabulary which is removed from their own vernacular, understanding and acquisition is likely to be impeded. Therefore, in order for pupils to learn through interaction, a certain amount of direct learning of vocabulary must be developed, prior to contextual learning.

Strategies for direct vocabulary acquisition

Nation (2001, p 2-3) suggests that a quarter of language learning time should be devoted to direct learning of language items, as, though the process of language acquisition is cumulative, this process can be given "a strong boost by the direct study of certain features". Direct learning is consolidated by contextualised learning using meaning-focused input (ie reading and listening – using receptive knowledge), meaning focused output (ie writing and speaking – using productive knowledge) and developing fluency (ie repetition until speed of comprehension is increased). It is necessary to focus on the direct learning of vocabulary, since this is what my research investigated.

Common strategies for direct vocabulary acquisition

Several strategies and their efficacy have already been commented on, such as learning from a list, Anderson and Jordan's (1928) use of derivations, and Carter, Hardy and Hardy's (2001) use of grouping and imagery. It is the latter two strategies which relate closely to my methodology and must therefore be discussed.

Grouping items of vocabulary into sections seems to have various degrees of success, depending on the grouping criteria. Carter, Hardy and Hardy's (2001) study shows that giving groups which were "definitionally-related" had a positive effect on vocabulary learning. However, this result may also have been brought about by the fact that test subjects were given three groups of seven words, rather than a list of twenty-one; it may be that it was not the groups' relations which caused better learning, but the fact that they were broken down into smaller 'chunks' to learn. Nation (2000) states that, in fact, grouping items by lexical relation (in Classics one might consider the names of the different winds, or types of weapon), confuses the learner, as similarities between items cause interference. Tinkham (1997) suggests that grouping words thematically (for example, military or maritime terminology) might help pupils learn. However, it seems to me that there must be some cross-over between thematic and semantic grouping; some pupils in the research group regularly muddle *gladius* ('sword') and *gladiator* ('gladiator'). Overall, it seems that the main advantage of grouping words is that it divides them into small sets, thus making them more manageable. In my research, words were grouped by grammatical type (all nouns), the reasons for which will be discussed later.

The strategy for vocabulary learning which is most relevant to my research is use of imagery. Carter, Hardy and Hardy (2001) reported that getting pupils to visualise vocabulary before testing improved scores. As a pupil, I used to draw and label vocabulary to help me learn. My research combines this practice with another visualisation technique - the Keyword strategy - which Nation (2001) discusses.

This technique involves linking a first-language word which the unknown word sounds like with the meaning of the unknown word, by picturing an image involving both the first-language word and the meaning. For example (taken from Nation, 2001, p 312), to learn the word 'candid', one might picture a *can*, with its contents honestly labelled; thus the word 'candid' means 'honest'. This strategy has two strengths; firstly, it provides a bi-directional link with the unknown word since it aids recall of the meaning if given the word and vice versa, and secondly, it provides a highly personalised, and therefore memorable method of recall. The personalisation of memory in vocabulary learning links to the wider study of the memory. In a recent article in the Sunday Times (03/04/2011), Allen-Mills quotes the winner of the American memory championships 2005 stating that memorising is "actually all about creating these images in the mind's eye, so strange, so colourful, so beautiful, ugly and lurid that you won't be able to forget". The sentiment that to remember an item, one must make it memorable, influenced my method.

The final technique for vocabulary acquisition is less a strategy and more a prerequisite for successful retention: repetition. Nation (2001, pp 74-81) states that "repetition adds...to the quality of knowledge and...strength of this knowledge". He argues that, since there is much to learn about vocabulary items (spelling,

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morphology, semantic range), it takes numerous meetings for a learner to gain a deep understanding of a word (linking in with Milton's (2009) comments on depth of knowledge). He states that "the older a piece of learning is, the slower the forgetting"; the more times the learning is repeated, the older the learning becomes and the longer it will be retained. According to Kachroo (1962) and Crothers and Suppes (1967) most learners fully learn most vocabulary after they have met it six or seven times. (Of course, some learners take longer, and some vocabulary proves more difficult to recall.) The fact that repetition aids recall is important as it highlights the usefulness of direct learning of vocabulary in tandem with, or consolidated by, meeting vocabulary in context.

Overall, it has been shown that several techniques for learning vocabulary have been previously studied. The aim of my method was to adapt visualisation techniques and give pupils a way of learning which would include self-testing; from this I arrived at the idea of getting pupils to make a hard copy of their visualised vocabulary, in the form of an illustration.

3. METHODOLOGY

As stated in the Introduction, there were three main research questions to be answered by the study. Firstly, how the pupils performed in vocabulary tests was investigated by analysis and comparison of their test scores prior to, during, and after use of the method. Denscombe (2010, pp243-284) points out the advantages of this kind of quantitative, documentary evidence are its permanence and ease of analysis and presentation; however, one must remember the context – noting pupils' health, tiredness, whether they were late for a test & c. Secondly, how pupils responded to the method was explored through interviews. Selection for interview was based on pupils' scores and comments, aiming to get a range of responses. Five pupils were interviewed in groups of two and three, due partly to wanting pupils to discuss the method amongst themselves, partly for ease of recording responses, and partly as a result of timetabling. These qualitative data afforded a variety of different interpretations of the research method, this might prove advantageous, but could lead to neglecting other valid interpretations; also, personal responses might be influenced by reactions to the interviewer rather than the method. The final research question - what sort of illustrations the pupils draw - was investigated by looking at and discussing the picture cards during the interviews. This combined the qualitative and quantitative styles of data collection discussed above.

As Denscombe (2010 pp 134-139) states: “the use of more than one method allows the researcher to use *triangulation*”; understanding of an investigation is improved if

one “views it from different positions”. So, by comparing qualitative and quantitative data (my interviews, test scores and picture cards) findings could be corroborated or questioned. Indeed, the final test, after the method had been carried out, gives a fuller picture and thus complements the other data collected. However, as Denscombe also points out, the disadvantages of triangulation are threefold: the researcher must perform multiple methods of data collection, there may be difficulties in integrating the results, and the results may not corroborate each other. Overall, however, using these three different methods of data collection seemed the most reasonable way to answer my three research questions.

Limitations caused by circumstance

Before my method can be discussed, certain limitations which informed it must be outlined. Firstly, due to the organisation of my PGCE placement, there was only one set which I taught continuously at the time the research was to be conducted. This set was a good target for my research, as the pupils had only begun to learn Latin the term before I commenced my placement; thus there was plenty of unlearnt vocabulary for testing. The attainment of the set was diverse: at the lower end pupils struggled with Latin, performing poorly on vocabulary tests, and producing translations which were far from completed; at the other end were pupils with academic scholarships, and one pupil who had already taken a GCSE in another subject the previous year. This range proved advantageous, as it allowed me to monitor whether my method raised the attainment of the lower pupils in the set, and also whether the method affected pupils already achieving high marks.

This set, then, was a good candidate for my research. It yielded two restrictions. Firstly, the sample size was very small; the set contained only twelve pupils (one of whom was ill during the research and missed two tests). As a result of the small sample size, analysis of my research can offer only tentative conclusions. The second restriction was the time needed to carry out the research. The set had lessons on Tuesdays, Wednesdays and Fridays, with fifteen minute homework slots on the first two nights and a thirty minute slot on the Friday. Needing to maintain steady progress, the thirty minute homework slot was allotted to written work (some of the lower attaining pupils would translate only five or six sentences over the course of thirty minutes). Both fifteen minute slots could have been given over to written work, but marking would have been difficult, since books could not be taken in after the first homework, as the second fifteen minutes would be completed the following day. Moreover, to test how my method affected learning on an immediate level, as well as over time, learning was tested in the lesson directly following the homework, with a cumulative test of all vocabulary a week after the original testing finished.

Therefore, due to outside factors, my sample group was limited to twelve Year 9, mixed ability pupils; with vocabulary learning to be done as homework in fifteen minute homework slots and tested in the following lesson.

Choice of vocabulary to be tested

My main aim was to investigate whether attaching pictures to vocabulary aided retention. The first consideration when planning my method was what vocabulary would be learnt. The text book used was *Disce Latinum I*, in which common vocabulary is provided in boxes; however, the number of items varies, and it would have been necessary to move far beyond where the pupils were in the text book, possibly into the second volume. Moreover, there would be interference with the research, since items recently translated in context were more likely to be remembered correctly (a problem regardless of the source of vocabulary chosen, but exacerbated by taking vocabulary from the text book). Therefore I chose to use vocabulary from the GCSE Defined Vocabulary list. Since the pupils had just learned the third declension, they therefore were unfamiliar with most nouns of this type – this was ideal for testing. I decided, for the first four tests, to restrict vocabulary to nouns to alleviate time pressure on the pupils, (it seemed sensible that nouns would take less time to illustrate than verbs and conjunctions). A fifth test explored the way in which pupils dealt with other types of words.

Method of learning vocabulary

I considered several ways of using pictorial representation to learn vocabulary. First of all, there was a choice to be made between providing images for the pupils, or asking them to create their own. The advantage of providing images is that it saves time the pupils would otherwise spend drawing, allowing them more time to 'learn'. I considered the possibility of providing them with Classically-themed paintings, and

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asking them to label these with the vocabulary given, thus providing a strong visual link to vocabulary, in a Classical context. However, I believe that this would be a better activity for consolidation than original learning, since the process of transferring vocabulary from one sheet of paper to another can be done without concentration; therefore there was a danger that pupils would complete the homework without paying attention to the vocabulary. Moreover, it is my own experience that drawing pictures oneself roots the item of vocabulary in one's mind, as one is more likely to be able to visualise and retain an image which has been personally created. This links to the research done on keyword techniques discussed earlier.

Having decided that the pupils would create their own images, the next decision was whether to provide vocabulary which could be illustrated by a single scene, or to ask pupils to draw each item individually without reference to other items. Due to my decision to take vocabulary from the GCSE list, the first option would have been difficult to implement. Moreover, it would have been more time-consuming for the pupils to integrate all the items into a scene; due to time limitations, I decided it would be better to draw each item individually.

The final decision was how best to organise pupils' images: whether to draw all their illustrations on one sheet or on individual cards. On the one hand, if pupils drew all the items on one sheet, they might be able to remember vocabulary by making connections to other items in their visual memory. However, this would then also

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test how grouping affects learning, causing interference. I decided that pupils should draw each image on separate pieces of card, with the Latin word written on the same side, thus further linking the image to the vocabulary, and with the English translation on the other side, so that pupils could check the meaning. I realised that that this would cause interference, as it would provide pupils with another means of learning vocabulary – vocabulary cards. However, given the brief time the pupils had to create their cards, I was confident that the primary means of learning vocabulary would be illustration. In order to facilitate the best use of pupils' homework time, I provided them with pre-cut, blank cards, and envelopes to keep their cards organised. They were advised to spend one minute per drawing, giving time enough to concentrate on developing a meaningful image and sketch it, leaving five minutes at the end to look over their work, in a way which might draw on the secondary tool of vocabulary cards. Examples were looked at on the board in class when the method was first introduced, exploring different ways of illustrating vocabulary and emphasising that the pupils should draw images which represent the vocabulary items to themselves, which need not necessarily be an accurate depiction of the word itself. Some examples will be discussed in the analysis section.

Method of testing vocabulary

Due to the fifteen minute time limit, I chose to set ten words per homework; this was the ratio of words:time to which pupils were already accustomed. For four tests, pupils learned eight third declension nouns, and one each from the first and second declensions. The first and second declension nouns were selected from an

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alphabetical list, choosing items which, to the best of my knowledge, pupils had not previously encountered. For testing third declension nouns, all items on the list numbered 1-4 alphabetically, and then grouped according to their number (ie all 1s together &c). As I was interested in whether the act of considering how best to illustrate more 'difficult' items of vocabulary aided learning, I set a fifth test with a selection of word types to see how pupils handled non-nouns.

In the tests pupils were tested both on Latin to English and on English into Latin. This was because such was the format to which the pupils were accustomed; I felt that testing only their receptive knowledge would have a positive skew on their marks as they would feel Latin to English was "easier" (a point made by several pupils at interview). When translating English into Latin, during the first five tests, half a mark was awarded for the nominative, and half for the genitive; this was due to the fact that most of the vocabulary was third declension, and therefore it was important that the genitive stem be learnt. In the final test, although English into Latin was given, pupils were marked purely on the nominative, in order to make data-handling easier. A tally of how many genitives the pupils gave was kept, and can be seen in the appendices. The decision to include English into Latin testing will be further discussed later in the essay.

A week after the fifth test, a test of all words was given; this aimed to measure retention of the words, so no warning was given and no extra learning set. In Anderson and Jordan's (1928) research, retention of vocabulary learnt was around

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fifty percent; I wanted to explore whether picture cards affected this statistic. Copies of all the vocabulary sheets and tests are provided in the appendices.

Finally, five pupils were interviewed and asked to discuss how they normally learn vocabulary, and how useful they found using (a) illustrations and (b) cards in both the short and long term. Their feelings concerning English into Latin, the amount of time spent on the learning homework and tests were also discussed. Moreover, some pupils showed and talked about some of their illustrations. Some discussion was prompted by interesting 'mistakes' in the final vocabulary test - which will be discussed in the next section.

Expected Restrictions and Interference

There were four factors expected to affect the research. Firstly, the small sample size means that only tentative conclusions can be drawn. Secondly, individual pupil effort and attitudes to testing would be variable, for example, if a pupil found the method superfluous to their learning, they might not make full use of it. Thirdly, outside factors, such as a whole school trip to Birmingham, would affect the time pupils had to spend on homework, and their concentration in the following test (test 3). Finally, although care was taken to select random vocabulary, items which had been recently met in the text book might be more easily remembered, as the pupils would have had greater exposure to those words.

4. FINDINGS AND ANALYSIS

Issues encountered during the testing process

Before the results of the research can be analysed, interference and issues encountered during the research must be discussed. Firstly, the school trip to Birmingham appeared to affect negatively only a few pupils' scores; the average result for that test was no lower than the others. Secondly, one of the pupils was away due to illness for tests three and five – averages given have been adapted accordingly. Moreover, due to the extent of her illness (she was absent from school for almost three weeks), although she sat the final test, her marks have been discounted from this average, as she had not learnt forty percent of the vocabulary tested. Her percentages of words recalled have also been adjusted to reflect the missed tests. Finally, one pupil arrived over five minutes late for the final test, and so had less time to complete it; in the interview he stated: "I ran out of time so I just did the ones I knew obviously". The average of the final test may have been slightly affected by this.

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Results of the vocabulary tests (Table A)

Pupil	average score on vocab tests prior to research / 10	Test number (marks / 10)					average test score / 10	total words recalled correctly in the 5 tests	final test score / 50	%age words recalled correctly / all words tested, ie / 50	%age words recalled correctly / total original recalled correctly
		1	2	3	4	5					
A	8.5	8.5	10	8	8	8	8.5	42.5	22	44	52
B	7.5	9	10	9	9.5	10	9.5	47.5	33	66	69
C	10	8	6	9.5	9	7	8	39.5	45	90	114
D	9.5	8	9.5	9.5	9	9.5	9	45.5	33	66	73
E	9	8.5	8	6.5	5	9	7.5	37	17	34	46
F	8	10	10	10	10	10	10	50	40	80	80
G	8	10	8.5	10	8	10	9.5	46.5	38	76	82
H	10	10	10	10	10	10	10	50	48	96	96
I (ill)	8	8	7.5	-	8	-	8	23.5	(14)	(47)	(60)
J	7	10	8.5	7	8	7.5	8	41	25	50	61
K	8	9	7.5	7	9	8	8	40.5	11	22	27
L	9	9.5	7.5	9.5	9	10	9	45.5	35	70	77
class average	9	9	8.5	9	9	9	9	44	31.5	63	71

NB 1) averages rounded to nearest .5

2) Pupil I's final test scores are discounted from class averages due to her absences

Caveat concerning Test Scores

Before the scores can be analysed, an issue must be raised with marking. As stated in the method, I tested vocabulary knowledge in Latin to English and vice versa, since this was the format to which pupils were accustomed, and to test only from Latin into English would be perceived as easier than usual, and might skew pupils' perceptions of the tests. There was, however, a prominent issue in testing in this way, and in testing pupils on genitives as well as nominatives. The problem was that pupils may have nearly got the correct Latin word, but not spelled it correctly. In marking in English, a mark would probably be given for a misspelling; in marking in Latin I did not award marks for misspellings, because it showed the pupil did not know the word exactly. However, the harshness of this marking system means that pupils' familiarity with the vocabulary is slightly under-represented. This was, to a certain extent ameliorated in the final test, when marks were only taken for the nominative, and scores for the genitives kept as additional data. However, for example, pupils who wrote *leon, leonis* for 'lion' did not receive a mark, as they did not give the exact nominative, but are clearly familiar with the Latin word. Examples which were slightly further from the Latin included *mars, martis* sea, and *cana, canae* dog, where clearly, pupils had remembered the first part of the word, but then created their own endings – however, they would still be able to recognise the Latin word and translate correctly.

These marking issues prompt the question of how they could be improved. Of course, the problem could have been sidestepped by testing only Latin to English,

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but then the research would not have tested fully pupils' vocabulary knowledge. An improvement might be to award two marks, rather than one to each answer, giving two marks for a correct English translation of a Latin word, and one mark each for correct Latin nominatives and genitives, and deducting half a mark for each Latin word misspelt, where clearly the main word stem has been remembered. Tests could have been conducted separately for Latin into English, and vice versa; however, the pupils would then be likely to score highly on whichever test was second, due to the first test acting as revision. In discussing the scores from this research then, it must be borne in mind that level of pupils' familiarity with vocabulary is slightly underplayed due to the stringency of the mark scheme.

Analysis of Test Scores

Overall, pupils scored very highly on the vocabulary tests. As the table shows, the class average score of 9/10 in tests remained unaffected by the research method. However, there was movement within the scores; the averages of several pupils rose by up to 2 marks (pupils B, F, G and J), whereas the averages of some pupils who attained highly before the research dropped by up to two marks (pupils C, D and E). The difference of reactions to the method was expected, as the visual/kinetic nature of drawing illustrations would appeal more to some types of learners than others. It is interesting that, pupil H stated that he did not find the process necessary - both he and pupil F memorised adequately from vocabulary lists - and continued to score the same marks as before the research; whereas pupil C reacted strongly against the method, complaining that it didn't work for him, and scoring lower marks than usual.

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A possible reason might be that pupil C disliked the method and therefore switched off; another reason might be that the method simply did not suit him, in the same way that learning straight from a vocabulary list did not suit some other pupils.

Overall, it seems that the method was useful to some pupils, irrelevant to some, and disadvantageous to others.

The scores for retaining vocabulary are above the fifty percent of Carter, Hardy and Hardy (1928) who used derivational relations as a means of learning vocabulary.

This would seem to suggest that creating their own picture cards for vocabulary boosts pupils' longer-term retention, more than working from derivatives. Indeed, as mentioned above, pupils' familiarity with the vocabulary tested is actually underrepresented, due to the harsh mark scheme in this test. Besides this, the average may be slightly lower due to Pupil A being more than five minutes late for the final test; as he "ran out of time [he] just did the ones [he] knew obviously"; a comment which is supported by his answers, which consisted of words used in class and those with obvious English derivations. Moreover, as can be seen in the appendices, some pupils were able to recall large numbers of genitives as well as the nominatives when asked to translate into Latin. (Pupil C's final score was anomalous as it increased significantly, suggesting that, having found the method difficult, he relearned the vocabulary from lists after the tests.) Indeed, when the fact that no warning had been given is taken into account, the percentage of words remembered in the final test from those originally recalled in the first tests - and therefore successfully learnt - suggests that the method was very successful at

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rooting the vocabulary items into the pupils longer term memories (see the final column of Table A).

There are, however, two caveats when considering this data. Firstly, due to the brief research period, although some vocabulary had been learnt three weeks prior to the final test, some had been tested only the week before, meaning that pupils had less time to forget these items. Secondly, some vocabulary, for example *mercator*, was encountered outside of the tests, in the text book or during class, and it seems likely that this consolidated pupils' memory. Indeed 10/12 of the pupils correctly translated 'merchant' into Latin in the final test, whereas only 3/12 correctly translated 'young man' as *iuvenis*, a word which had not been met often in class. Overall, it seems that the method was successful at rooting vocabulary in the pupils' mid-term memory at least, especially when combined with meeting the same words in a classroom context.

Discussion

The Advantages and Disadvantages of Picture Cards

As stated, the test scores showed that the method improved some pupils' vocabulary learning and retention, but had no effect, or a negative effect on others. As one would expect, those whose marks were not negatively affected expressed that

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drawing pictures helped, for a range of reasons, which were mostly due to the time taken to complete the exercise, and the concentration required.

Firstly, the drawings act as proof that the pupil has spent time learning vocabulary. Pupil A, whose usual technique for vocabulary tests was to “read it through in the morning, before the test” pointed out that, with this method “you have to...prove that you’ve done it, so you have to do it and do it quite well”. Therefore, for pupils who usually shirk learning vocabulary for homework, and cram before the test, this method is a reliable way of checking that they have spent time learning what has been set. The result of this may not show in Pupil A’s results, since before and during the research his scores averaged 80%; however, a pupil with a similarly *laissez-faire* attitude to homework, Pupil B, does show improvement: before the research period he was getting 75% correct; during the research he averaged 95% correct. Therefore, the first benefit of this method is that it ensures pupils do the learning which has been set.

Pupil A also insisted that he felt that by illustrating vocabulary items, they “stick in your mind more than they used to”. At first, this may seem to link back to the extra time he spent on learning; usually he would “do alright in the test and then forget it”, whereas by learning the vocabulary better in the first place, he would naturally retain more. However, he was adamant that the illustrations themselves were the reason for longer-term retention, as they help the learner to “picture it [the vocabulary] in your mind”. Other pupils who were interviewed agreed with this, stating that when

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trying to recall the vocabulary item, they could visualise the images which they had drawn. Certainly the test scores seem to reflect that the method had a positive effect in the longer-term, with pupils scoring higher marks in the final test than other research would expect (though the limitations of this data have already been discussed).

It seems logical that this process of longer-term memory through visualisation worked because pupils were creating their own personal connection with the vocabulary, as was discussed in the literature review. For example, Image 1, shows pupil H's depiction of *quod*, where he used his mnemonic for remembering how to spell 'because' ("Betty eats cakes and Uncle sells eggs") as his image – and he got it right in both tests.

Another example, Image 2, shows how pupil F illustrated *vita, vitae* ('life'). The combination of the world, a figure, and a smiley face show that pupil F considered the meaning behind the word, rather than just learning the meaning without fully considering it. This is a benefit of the method, which had a strange side effect to be discussed later. She also got the word right both times she was tested. Both pupils who remembered to bring their cards with them when they were interviewed attained full marks in the first five tests; it is possible that their marks were high because the pupils were diligent in their learning and have a natural aptitude for learning vocabulary. However, it may also be the case that the method of learning vocabulary assisted them.

Some pupils, however, could visualise the image, but not the word attached to it. There are two logical reasons for this. Firstly, concentration during the drawing stage may have been a factor. Pupil A stated “sometimes I just drew the pictures and then wrote it down, but didn’t really think about the writing”. This is what I tried to avoid by not providing images but making the pupils create their own. It seems that if pupils were not creative with their illustrations, they were less likely to recall the vocabulary. Secondly, the pupils did not have long to look over their cards once they had created them. Nation (2001, p 315) states that learners must use repetition to aid vocabulary acquisition when using cards; this could not happen when there was no time for repetition. The question might be raised as to whether, if there had been time, would this have been testing the effect of vocabulary cards, rather than imagery; the answer is, of course, that it would have tested both. Although it would be difficult to distinguish which strategy was affecting pupils’ learning, or whether it was a combination of both, the point made in the literature review still stands: repetition is not a strategy for learning, it is a prerequisite.

Does the method work for non-nouns?

Considering that abstract nouns, adjectives, and conjunctions had been learnt most recently (Test 5), the numbers recalled in the final test are surprisingly low (see Table 2). Therefore there is no evidence to suggest that pupils retained items of vocabulary which were difficult to depict more easily by using this method.

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Words which pupils found difficult to draw (Table 2)

Word	number correct in final test /11
because (<i>quod</i>)	7
high, deep (<i>altus, -a, -um</i>)	4
<i>nam</i> (for)	7
courage (<i>virtus, virtutis</i>)	6
<i>quoque</i> (also)	6
<i>benignus, -a, -um</i> (kind)	4

Is the method useful for English into Latin?

My reasons for testing English into Latin were that it would maintain the style of testing to which the pupils were accustomed, and investigate whether or not the visualisation process created a bi-directional memory in terms of recalling both the Latin and English forms of the vocabulary items. It seems that this was the case for some pupils, but for others, the image was recalled, but not the word itself (as discussed earlier). Pupil H suggested that if learning was required in this direction, perhaps the cards could be better used by placing the Latin word on the opposite side to the image, in order to enable the pupils to test themselves. It would be interesting to explore this further.

I feel that my method may be useful as the first step in the process of translating English into Latin, which would then be followed up with prose composition

sentences. These are rarely used in class, and, as a result of considerations made during the research process, I wonder whether, either the pupils should do more simple prose composition of sentences (rather than just simple words and phrases to practice points of morphology), or less focus should be put on learning vocabulary bi-directionally, if this knowledge is not to be built upon. The reason that vocabulary has been learnt both ways until now, is the assumption that it roots the item more firmly in the pupils' minds. It now seems apparent that this is not the case if direct learning of vocabulary out of context is the only way in which the pupils engage with prose composition.

Interesting 'mistakes'

The "strange side effect" mentioned earlier when discussing how the method invites pupils to consider the full meaning of vocabulary was this: a number of pupils in the final test offered translations which were not the correct answer, but were related to the item's semantic range. For example, pupil J translated *deus* as "king" rather than "god". It is easy to see the connection between the two translations – both are rulers, and are often used synonymously in religious contexts. Pupil J had clearly illustrated a god on his card (bearing the hallmarks of Christian iconography – halo, wings, throne), so it is interesting that he made this link in the final test. Moreover, when interviewed, pupil J said that he found using the pictures to help him remember "a lot easier", and when questioned on this item, stated that he "wouldn't have got those if [he] didn't have the cards."

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Image 3 is Pupil F's card for *benignus, -a, -um* ("kind"); she explained it thus: "well, it's a door, and you open it and then you're going to be kind...you're starting". The link with "beginning" on the card is due to a song called 'New Beginning' which she was learning in Music. Here the pupil has unconsciously followed the keyword strategy, linking an English word which sounds like the Latin and then creating an image involving both. In the final test she translated the word incorrectly as "friend"; again the semantic link is clear, and it is especially easy to see why she translated the word thus, when one considers that her visualised image was a person who was kind. Other examples of incorrect translations which were closely semantically linked to the correct answer were *clamor, clamoris* ("shout"), translated by Pupil E as "voice" and *lux, lucis* ("light"), translated as "moon" by pupils C and L, (although in this case there may have been interference with *luna, -ae*, which had been met recently in a passage). It seems possible that pupils were offering incorrect translations which were linked semantically because the method encouraged them to consider the meaning of the word rather than just learning a translation.

Even more interestingly, it seems that some pupils were making these mistakes when translating from English into Latin. For example, pupil B translated "leader" (*dux, ducis*) as *rex, regis*, once again showing the semantic link between two words which mean different types of rulers. (He translated "although" (*quamquam*) as *tandem* – since he regularly confuses this with *tamen* it is possible that here also he was aiming for a word which was semantically similar in meaning; though I concede that this point is somewhat conjectured). Pupil F translated "young man" (*iuvenis, iuvenis*) as *senex, senator*. Again, this is very much a mistake, however it does

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show clearly that the pupil is making connections to the right sorts of words. It could be suggested that this sort of mistake is due to the interference of learning lexically related items which Nation (2000) discusses (see literature review).

Overall then, it seems that the method of illustrating vocabulary may prompt pupils to become acquainted with the meanings of words in a deeper way than merely knowing the 'correct' response when questioned out of context. This may stand them in good stead when they translate in context, since they will be more attuned to words having a semantic spectrum of possible answers, rather than just one 'correct' translation.

Using cards

Pupils stated that they found the card aspect of the method useful, but organisationally difficult. All five pupils interviewed said that they would use them again, if they knew where to get them, or if cut card was provided. Pupil J, H and F all made the point that, since the process of creating these vocabulary cards took time, they would be more willing to use them on important or difficult vocabulary. These criticisms are logical, since more effort should be expended learning vocabulary which occurs frequently, and only little time spent learning *hapax legomena*.

5. CONCLUSIONS

On the whole, it seems that pictorial depictions of nouns work well for some pupils as a means of recalling these vocabulary items in the short and mid-term. The long term effects were not examined in this research due to the brevity of the period spent with the class. For some pupils, this method is not at all satisfactory, and pursuing it led them to gain marks lower than usual. For others, it may have had a positive effect on the mid-term retention of words, but I suspect that these pupils would have performed equally well in the tests without using illustrations - indeed their average marks did not change on the application of the method. The answer to my first research question, then, is that the method produced average scores similar to those prior to its application; however individual performances were affected both positively and negatively.

The answer to my second research question was that most pupils felt the illustrations useful in helping them remember vocabulary, provided that they concentrated on the Latin word and linked it to the picture in their mind. If they did not do this, they remembered only the image, and not the accompanying word. They found the method unnecessary when there was another obvious means of recalling the item (derivations). In answer to my third question, pupils illustrations varied greatly, from the obvious to the obscure. Those illustrations which created a personal memory (eg pupil H's "Betty eats cakes..."), made a lasting impression of the general meaning of vocabulary, though not necessarily its dictionary definition (for example, pupil F's benign 'friend').

Using the method with items of vocabulary which were difficult to depict yielded mixed results and was not guaranteed to improve learning. I suspect such items, for example, conjunctions would be better learnt in the context of model sentences, since by their very nature they are connected to the rest of the sentence. The use of vocabulary cards was regarded as helpful by many pupils, though the argument was made that creating cards and illustrations is time-consuming and therefore should be used to learn important vocabulary. Overall, it seems that the method is best offered as an option for learning lists of nouns, where illustrations are possible and can be creative enough to provide a memorable link. Moreover, these items of vocabulary should be relatively high-frequency, due to the high cost of time and effort in this method.

Recommendations for future research/practice

It must be stressed that the findings yielded from this research are tentative due to the small sample size and brief period of testing. Therefore, there are many avenues to explore for further research in this area. For example, testing whether the high level of retention is maintained in the longer term – a month, or two, after the original learning. Exploring the effect of putting the Latin word on the opposite side of the card, and whether this would aid productive memory. Giving pupils lessons on how exactly to utilise the cards in the longer term – allowing them to revise from these cards and seeing how that boosts knowledge. Investigating the use of multiple images on one piece of paper rather than cards; for example,

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thematically linked vocabulary, such as a maritime scene. Exploring these methods with pupils at different types of schools, for example, day schools and comprehensives. All of these suggestions are possibilities for future research into this area.

As regards future teaching practice, since the method seemed to work well for some pupils, it seems sensible to offer drawings and vocabulary cards as an option. Moreover, from the interviews, it seemed that pupils did not have a range of strategies for learning and recalling information. Therefore, not only should this method be offered, but other techniques should be presented to pupils, such as wall charts and posters, songs and rhymes (my own university experience included singing Greek principal parts to a variety of tunes), and perhaps even mnemonics such as pupil H's "Betty eats cakes...", for Latin words.

Finally, the most important implication for future practice is that direct learning on its own is not enough; it is the repetition of vocabulary in the direct learning process, and the consolidation of meeting words again and again in the classroom, the text book and in homework which reinforces and deepens pupils' acquisition of vocabulary.

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APPENDICES:

1. Vocabulary Lists
2. Vocabulary Tests
3. Final Vocabulary Test
4. Table 3: English into Latin - Genitive scores
5. Examples of Pupils' Vocabulary Cards

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1. VOCABULARY LISTS

NB Formatting has been altered to make best use of space in the appendices.

Vocabulary List 1

amor, amoris	m	3	love
captivus, captive	m	2	captive, prisoner
civis, civis	m	3	citizen
corpus, corporis	n	3	body
epistola, epistolae	f	1	letter
frater, fratris	m	3	brother
imperator, imperatoris	m	3	emperor, general, leader
legio, legionis	f	3	legion
mater, matris	f	3	mother
mors, mortis	f	3	death

Vocabulary List 2

ars, artis	f	3	art, skill
clamor, clamoris	m	3	shout, shouting, noise
custos, custodias	m	3	guard
deus, dei	m	2	god
gens, gentis	f	3	family, tribe, race, people
hora, horae	f	1	hour
iter, itineris	n	3	journey
leo, leonis	m	3	lion
mercator, mercatoris	m	3	merchant
navis, navis	f	3	ship

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Vocabulary List 3

canis, canis	c	3	dog
comes, comitis	c	3	comrade, companion
dux, ducis	m	3	leader
homo, hominis	c	3	man, human being
ianua, ianuae	f	1	door
inimicus, inimici	m	2	enemy
iuvenis, iuvenis	m	3	young man
lux, lucis	f	3	light, daylight
miles, militis	m	3	soldier
nomen, nominis	n	3	name

Vocabulary List 4

caput, capitis	n	3	head
consul, consulis	m	3	consul
flumen, fluminis	n	3	river
hostis, hostis	m	3	enemy
insula, insulae	f	1	island, block of flats
labor, laboris	m	3	work
mare, maris	n	3	sea
modus, modi	m	2	manner, way, kind
mons, montis	m	3	mountain
nox, noctis	f	3	night

Vocabulary List 5

altus, -a, -um			high, deep
benignus, -a, -um			kind
nam			for
promitto, -ere, promisi, promissum			promise
quamquam			although
quod			because
quoque			also, too
tempestatas, tempestatis	f	3	storm
vita, vitae	f	1	life
virtus, virtutis	f	3	courage, virtue

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2. VOCABULARY TESTS

Vocabulary Test 1

1	imperator, imperatoris	
2	death	
3	civis, civis	
4	corpus, corporis	
5	mater, matris	
6	captive, prisoner	
7	love	
8	legio, legionis	
9	frater, fratris	
10	letter	

Vocabulary Test 2

1	gens, gentis	
2	ship	
3	custos, custodis	
4	lion	
5	clamor, clamoris	
6	mercator, mercatoris	
7	journey	
8	ars, artis	
9	deus, dei	
10	hour	

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Vocabulary Test 3

1	comrade, companion	
2	ianua, ianuae	
3	soldier	
4	iuvenis, iuvenis	
5	leader	
6	nomen, nominis	
7	inimicus, inimici	
8	canis, canis	
9	man, human being	
10	lux, lucis	

Vocabulary Test 4

1	caput, capitis	
2	hostis, hostis	
3	work	
4	river	
5	mare, maris	
6	mons, montis	
7	consul	
8	nox, noctis	
9	manner, way, kind	
10	insula, insulae	

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Vocabulary Test 5

1	promitto, promittere	
2	quoque	
3	although	
4	nam	
5	altus, -a, -um	
6	storm	
7	because	
8	virtus, virtutis	
9	vita, vitae	
10	kind	

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3. FINAL VOCABULARY TEST

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1	amor, amoris	
2	nomen, nominis	
3	imperator, imperatoris	
4	caput, capitis	
5	lion	
6	captivus, captivi	
7	high, deep	
8	hora, horae	
9	tempestatas, tempestatis	
10	because	
11	deus, dei	
12	nam	
13	river	
14	island, block of flats	
15	letter	
16	work	
17	sea	
18	mons, montis	
19	comes, comitis	
20	ianua, ianuae	
21	death	
22	inimicus, inimici	
23	custos, custodis	
24	ars, artis	
25	manner, way, kind	
26	mater, matris	

27	lux, lucis	
28	miles, militis	
29	courage, virtue	
30	young man	
31	quoque	
32	journey	
33	ship	
34	citizen	
35	consul, consulis	
36	promitto, -ere	
37	merchant	
38	benignus, -a, -um	
39	hostis, hostis	
40	corpus, corporis	
41	gens, gentis	
42	vita, vitae	
43	although	
44	dog	
45	legio, legionis	
46	man, human being	
47	nox, noctis	
48	brother	
49	leader	
50	clamor, clamoris	

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4. FINAL TEST: ENGLISH INTO LATIN, GENITIVE SCORES (Table 3)

pupil	# Latin words recalled /21	# nouns recalled /18	# genitives recalled /# of nouns recalled
A	5	5	1
B	14	9	0
C	17	15	11
D	11	10	5
E	7	5	5
F	16	14	12
G	12	12	10
H	19	18	13
I (ill)	6	6	2
J	8	8	7
K	3	3	1
L	11	10	8

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5. EXAMPLES OF PUPILS' VOCABULARY CARDS

Image 1



Image 2



Image 3

