DDL Is in the Details… and in the Big Themes.

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1. Introduction

Much traditional language teaching focuses on the learning and application of overt rules. While rules are intended to simplify learning, it often seems that learners have difficulty in applying them even if they understand and retain them. This is perhaps partly because the very concept of rules is to an extent artificial. However, one thing humans have evolved to be naturally good at is the detection of patterns, and generalising from them to new cases. This capacity is exploited in data-driven learning (DDL), where learners are confronted directly with language data and encouraged to discover patterns of language use for themselves. DDL may therefore provide a useful supplement for some learners and for some language items.

One criticism aimed at DDL is that it ignores the "big themes" of language such as tenses, although there seems little reason for this to be the case beyond the difficulty in collecting appropriate data. To test this, we chose a traditionally popular topic, the formally easy but semantically difficult pair of items *will* and *going to*—the commonest expressions of future meaning in English. 100 French engineering students of roughly intermediate level were divided into two groups: one was provided with edited concordance print-outs, the other with traditional rules from their usual grammar book. Tests were administered before and after the experimental condition to see if the first group was able to detect appropriate patterns from the concordances and to apply these to new situations, and compare results against the group with the familiar rule-based approach. We show that such empirical research can be conducted quite easily, and argue that it is essential if any form of DDL is to appeal to a wider audience.

2. Rules and patterns

Language learning, for most people, requires considerable investment in terms of time and effort, and there is no guarantee of a successful outcome. While few professionals believe that there is a quick and easy solution for all, it does seem that traditional teaching methods are failing many learners, and there are thus continuous attempts to find new and more efficient methods of language teaching and learning. One such is what Tim Johns has called data-driven learning or DDL, which he describes as "the attempt to cut out the middleman as far as possible and to give the learner direct access to the data" (1991b: 30). In this it promotes several key concepts in contemporary language teaching/learning research, including the use of authentic documents, autonomisation, learner-centeredness, the use of information and communication technology, and so on.

"Cutting out the middleman" needs interpreting with care, as simply placing learner and language together is unlikely to be efficient, and an extreme position few

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would defend. For Johns himself (1991b: 31) it implied a new role for the teacher: "abandoning the role of expert and taking on that of research organiser." In other words, the emphasis is on the learner discovering language rather than being taught it, and the DDL literature is full of discussion of inductive learning from Johns (1991a) onwards.

One possible criticism is that this is akin to reinventing the wheel: why should learners spend time and energy on working out how language functions when expert linguists and teachers have already formulated rules in compact packages precisely to simplify the task? There are of course numerous counter-arguments which can be brought to bear, but the one which concerns us here is the assumption that rules actually are easy to learn and to apply.

It is worth a brief diversion into the field of psychology, where this question has given rise to much discussion. One widely-reported experiment is the Wason card selection task (e.g. Barrett *et al.* 2002: 286), which is based on the simple logical rule *if P then Q*. Subjects are given four cards and told that if one has a vowel on one side, it has an even number on the other. They are then shown four cards marked (for example) A, H, 4 and 7, and asked which ones they need to turn over to test this rule (Figure 1). This usually requires some considerable thought, and only about a quarter of subjects arrive at the logically correct answer (the cards marked A and 7). Lengthy discussion is often needed to convince the other participants why this is the right answer. However, reformulating the rule in terms of natural patterns provides quite a different outcome. The example traditionally given is that of licensing laws: given four people in a pub, one drinking beer and one coke, one aged 16 and one 24, which need to be checked to ensure no-one is breaking the law? This is still an instantiation of the same logical rule: *if P then Q*, i.e. if they are drinking alcohol, they must be over 18. The rule does not need to be explicitly formulated, and the task – still given in the form of four cards to turn over – results in three quarters of subjects quickly finding the correct answer, and the others readily understanding why.
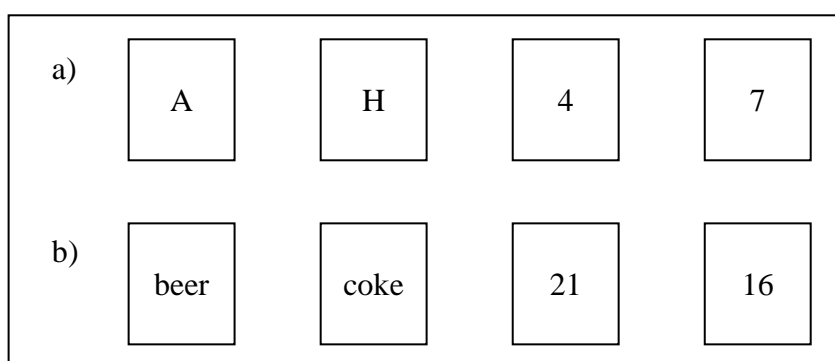

Figure 1: The Wason card-selection task for a) abstract rules and b) natural patterns

The implication seems simple: rules are difficult, patterns come easily. Evolutionary psychology provides a theoretical framework (along with convincing evidence) to explain why we have evolved brains capable of detecting patterns among the chaos which surrounds us, even when none exist (Scott and Tribble 2006: 6). Rules, on the other hand, are an artificial construct, and working with them requires great cognitive effort.

In the field of second or foreign language learning, there has also been much speculation in the past about whether instruction makes a difference, or whether overt learning can become acquisition. The rules may be neat and tidy, but this is no guarantee they will help with learning the grammatical system of the target language (Hughes and McCarthy 1998: 283). In the context of DDL, Gaskell and Cobb (2004: 302) note that language learning "is notoriously impervious to declarative information;" while learners may master the abstract rules, they have great difficulty in applying them to their own use of language. This will be a familiar phenomenon to many teachers, but Gaskell and Cobb's claim is that a corpus-based grammar course can avoid the need for abstract rules as it focuses on the detection of natural patterns:

> Our current best guess is that L2 grammar is learned… through enormous amounts of brute practice in mapping meanings and situations to words and structures. These mappings… lead over a very large number of episodes… to the slow extraction of patterns that are rarely articulated. (Gaskell and Cobb 2004: 304)

The basic idea then is that the earlier paradigm of "presentation, practice, production" can be supplanted by something akin to "observation, hypothesis formation, use" (e.g. Holec 1990; Todd 2001: 91). As Aston (1995: 264) puts it, the learners' task now is "to seek out recurrences and variants in corpus data rather than simply trying to infer or test generalized rules." This process can be greatly facilitated by the use of electronic corpora, especially (but not exclusively) in the form of concordances, which allow the learners access to multiple samples of usage of the same items.

This is not just a case of "rule-hiding" (Johns 1991a: 4). While some (e.g. Todd 2001) do encourage the learners to formulate explicit hypotheses, it may be that learners can see tendencies even if they cannot put these into words (Brodine 2001: 163). Certainly communication generally occurs without recourse to explicit rules, which are clearly a means to an end and not an end in themselves. As Axelsson and Hahn (2000: 24) find for advanced learners in their study, they "have a good sense for when to use the progressive and the non-progressive. When interrogated about rules, however, most students have very vague ideas about the difference between the progressive and the non-progressive."

The conclusions learners come to, whether or not as conscious hypotheses, are no doubt likely to be less complete and accurate than rules derived by professionals, but learners are rarely given complete and accurate rules in any case, especially in the early stages of their learning. Just as the first rules they are presented with are likely to be huge overgeneralizations, so their own hypotheses are likely to be very general and in need of considerable adjustment as learning progresses. This should not be seen as a problem: hypotheses can be seen as "temporary constructs in a continual process of – conscious and subconscious – building of linguistic competence" (Lorenz 2002: 144). Learning itself is thus a continuous process of approximation, as Aston has repeatedly pointed out:

> We saw learners as involved in acquiring partial – and only partially accurate – knowledge of patterns in the language, rather than in rivalling professional descriptive linguists. (Aston 1996: 187-188)
> […] The information they were deriving from the corpus was not, of course, particularly adequate in descriptive terms. But for many of their purposes, this mattered relatively little: often it was enough for them to get an approximate idea… The corpus was providing them with partial information, and provided they were careful not to overgeneralise, that information was often more useful than that available from other reference tools. (p. 189)

3. Evidence and big themes in DDL

It has frequently been remarked that there is a severe dearth of empirical research on whether DDL actually works (e.g. Chambers 2007; Boulton 2007b, 2007c). What little there is tends to avoid two crucial questions. Firstly, the focus understandably tends to be on learning as the outcome, but very little work has been conducted on the foundations: it is an essential prerequisite for DDL that learners are able to detect patterns in authentic data (Aston 1997a: 52). In previous studies of our own we have reported learners' modest success in detecting patterns of use for discourse markers (Boulton 2006) and phrasal verbs (Boulton 2007a), but this highlights the second problem: most empirical studies of DDL concentrate on fairly peripheral items as regards the language as a whole. This is the cause of Hunston's (2002: 184) concern that empirical DDL research is concerned with "minute details of the phraseology of particular words, and may be difficult to reconcile with the 'big themes' of language teaching, such as 'tenses' or 'articles'."

There are a number of possible reasons for this. Firstly, it is a commonplace that corpora show that traditional rules are often fragile, and at times simply wrong. One reaction might be to abandon corpora as "actually detrimental to grammar teaching", although it is perhaps the "prevailing status of the concept of grammatical rule" which should be abandoned rather than DDL (Lorenz 2002: 143). Secondly, it has been argued that some big themes such as tenses can only be understood at the discourse level (e.g. Braun 2005; Hughes and McCarthy 1998). There is no doubt some truth in this, although it is unclear why that should apply only to big themes, and for the time being the position seems to be based on intuition rather than fact.

Thirdly, the big themes are by definition highly frequent items, thus increasing the likelihood of overwhelming the learner in data. Furthermore, precisely because they are frequent, they are likely to have a wide variety of uses, thus making it difficult to detect useful patterns from manageable numbers of concordances. At a more practical level, it can be difficult to search for many of the big themes unless they are explicitly tagged in the corpus. As Gaskell and Cobb (2004: 303) note, "while concordances for lexical and even collocational information are quite easy for learners to interpret and for instructors to set up…, grammatical concordances may be less so." It is true that a few items, such as relative clauses without relative pronouns (Aston 2001: 17), have no surface form that can be searched for. But grammar should be detectable when it does show up lexically, and corpus linguistics has shown this to be more frequent than previously thought: "it is impossible to describe syntax without recourse to lexis or lexis without recourse to syntax, we argue that syntax and lexis are completely interdependent" (Hunston and Francis 1998). A particular form may not be easy to find, but overcoming problems and devising appropriate search strings can be useful DDL activities in themselves – for the learners as well as for the teachers. Although the results may not feature all and only the items desired, "quick and dirty" solutions can often be found to produce results in sufficient quantity and variety for useful learning to take place.

Johns (1991b: 31) described his early DDL work as "reactive", culminating in the concept of kibbitzing (Johns 1997) which shows how DDL can be used for a wide variety of themes, large and small. Gaskell and Cobb (2004) take this one stage further in their course on EFL writing. Here they cover many large grammatical themes, from articles to noun groups, prepositions to pronouns, modals, word order, agreement, and so on. Rather than simply correcting grammatical errors in students' essays, the teachers generated concordances designed to help the learners self-correct.

DDL is well-suited to such "feedback-driven learning", just as it is to other serendipitous approaches (eg Bernardini 2000). Although Gaskell and Cobb do claim some minor advantage for this "corpus-based grammar resource", many teachers will feel that a more complete and structured approach is necessary. The question remains: is DDL appropriate for the big themes of language learning? On the whole, empirical studies to test this are conspicuous by their absence.

4. *Will* and *going to* in corpora and pedagogical grammars

The experiment described below focuses on future time in English as expressed by *will* and *going to* (see also Osborne 2000; Mishan 2004). Although there are of course other ways to express the future, we limit the discussion to these two forms for the sake of simplicity. In particular, they provide a simple lexical contrast which is easy to search for in a corpus, although for complete coverage search strings should also include *'ll*, *won't* and *gonna*. Although neither form can linguistically be called a "tense", as we shall see below, they nevertheless represent a big theme in language learning as they are the commonest ways of expressing future time in English (Mindt 2004). They are both typically dealt with at some length in textbooks and grammar books, suggesting that they are traditionally considered important; and the fact that they are often explicitly contrasted suggests that the distinctions between them are difficult to grasp. In this they reflect Johns' (1991a: 4) observation that "one of the commonest types of question asked by the enquiring learner is 'What is the difference between…?'"

It would seem useful at this point to compare briefly what a corpus-based and a traditional pedagogical grammar have to say about *will* and *going to*. For the former, we will look at Biber *et al*.'s (1999) Longman Grammar of Spoken and Written English (henceforth LGSWE). By its own claim it is the first (and arguably the only) truly corpus-based grammar of English, based on the 40 million words of the Longman Spoken and Written English Corpus. The pedagogical grammar discussed here is the regular grammar book used by the students in the experiment, the new edition of Michael Duckworth's Business Grammar and Practice (2003).

Biber *et al*. (1999) accept the structural view that there are only two tenses in English, present and past, with "no formal future tense in English. Instead, future time is typically marked in the verb phrase by modal or semi-modal verbs such as *will*, *shall*, *be going to*" (p. 456). Detailed treatment of these items is therefore reserved for the section on modals and semi-modals. *Will* is the most frequent of all modals, *going to* the most frequent semi-modal (p. 488-489); yet *will* is nearly nine times more frequent overall, occurring roughly 24,600 times per million words compared to only 2,800 for *going to*. There are significant differences in distribution of *will* and *going to* between registers (as well as between British and American English), suggesting that there is considerable overlap in meaning and use between the two items (p. 487). Indeed, the distinction between the two is "often blurred" (p. 496). Their main meanings are found to be volition and prediction; while *will* is very common in both functions, *going to* is mainly reserved for volition and largely limited to conversation.

Duckworth (2003: 51; 55) falls shy of talking of a "future tense", but with uniquely pedagogical aims treats *will* and *going to* as "the future", quite separate from other modals. The treatment is based exclusively on meaning, with no indication as to frequency or distribution. *Will* is said to have four main uses: for decisions and predictions, in conjunction with future time words (e.g. *if*, *when*, *before*), and in

particular for functions such as offers, promises, requests. *Going to* is given only two main uses: decisions and predictions, both of which clearly overlap with *will*. The differences for decisions are that *will* is used "when we make an instant or spontaneous decision to do something", while *going to* is used "to talk about something we intend to do, or have already decided to do". In predictions, *will* is used "to make predictions and to state facts that will be true in the future", while *going to* is "for making firm predictions when there is some physical evidence than an event will take place". However, "in many cases… it is possible to predict future events using either *going to* or *will*. There is little difference in meaning, but *going to* usually suggests that the event will happen soon."

From this brief comparison, it seems that different perspectives can reveal different aspects of the same language items. This is not necessarily to say that corpus-based information necessarily presents "linguistic facts" as opposed to "textbook fictions" (Aston 2001: 23), although it is a common complaint among DDL researchers that "the discrepancy is sometimes so large as to render further use of the grammar book potentially embarrassing" (Stevens 1995). More importantly perhaps, the considerable overlap in meaning might suggest that the differences are less significant than traditional textbooks suggest. Using one instead of the other rarely brings a substantial change in meaning and is unlikely to cause a breakdown in communication; the result is often perfectly acceptable, and rarely more than a bit odd. This can be tested be substituting them in any concordance – indeed, a major source of difficulty in preparing the experiment described below lay in finding contexts where only one was possible.

Given the considerably higher frequency of *will*, it could be argued that this should be taught for productive use much earlier, although *going to* is sufficiently frequent to be usefully taught for receptive purposes at a fairly early stage. Mindt (2004) advances similar arguments, adding that *will* is generally acquired earlier in L1 and collocates more widely than *going to*. While frequency is not the only criteria for treatment in language learning, similar arguments have been made for other big themes. Biber (2006: 63) and Biber and Conrad (2001: 332), for example, make the case that the overwhelmingly higher frequency of the simple aspect (90 percent in speech, 95 percent in writing) mean it should be taught earlier than other aspects, especially for productive purposes. This of course begs the question of why the contrasts are traditionally introduced so early on.

These observations were borne in mind when designing an experiment based on *will* and *going to*, requiring traditional grammar rules and test sentences as well as concordances. For the former, we used information from the students' regular grammar book (Duckworth 2003). The explanations were reproduced verbatim from units 12 and 13, and include *will* for "spontaneous decisions", "predictions", in conjunction with "future time words", and in "offers, promises, requests"; *going to* for "decisions" and "predictions". For the test questions, the original contexts were left unchanged except for the addition of the alternative form needed for the test.

The concordances were taken from Mark Davies' VIEW interface to the 100 million word British National Corpus.[2] This highly user-friendly software is available free on line and does not need downloading. Although large corpora have received comparatively little attention in DDL (Bernardini 2001), the size and general nature of the BNC means it is suitable for many kinds of research. All the concordance lines were taken from the sub-register of news scripts, chosen as the most compatible with

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[2] Now at http://corpus.byu.edu/bnc/ (accessed : June 2007)

the grammar book examples, which were mainly spoken professional contexts. This is something of a compromise: most spoken registers in the BNC are far removed from the professional sphere, and tend to contain considerable hesitation and other phenomena; other business registers (e.g. business news national broadsheets) are insufficiently "spoken" to provide comparable data, especially of *going to* (only 69 hits in this register). As *will* and *won't* resulted from separate searches, they were included in proportion to their frequency (*will* being 8.48 times more frequent than *won't* in this register).

It was considered important to leave the concordances unedited, although a certain amount of selection was found to be essential at several levels. As the entire experiment required fifty concordances for each item, the first 100 were downloaded, allowing us to discard other uses of the target items (e.g. where *to* is a preposition, or *will* a noun). We also eliminated uses not covered in the grammar information sheets, most notably past uses of *going to* (e.g. *was / were going to*), and aspectual uses of *will* (e.g. *will be* + V-ING and *will have* + V-EN). Repetitions and very similar contexts were also rejected, as were items which were felt to be too "noisy" (e.g. headlines).

5. Method

The overall aim was to see if a group of lower-intermediate level learners of English would be able to detect differences in patterns of use between *will* and *going to* for future meaning. The design is deliberately kept as simple as possible because, as we argued above, empirical evidence is essential if DDL is to break out of its current research confines and convince various professionals (teachers, publishers, decision-makers, and so on) of its potential. By showing that useful experiments can be carried out with minimum resources – "ordinary" learners in their usual classrooms, no expensive equipment and only free on-line software – we hope that more teachers and researchers will be encouraged to conduct experiments of their own. While sophisticated, large-scale, long-term studies are of course desirable, it is possible to break many of the larger questions down into smaller parts for more modest studies. In this way, no single study is likely to hold all the answers, but it can reasonably be hoped that the weight of evidence will reveal useful tendencies, highlight some strengths and weaknesses of DDL, and inform directions for further work.

The subjects were 104 first-year students enrolled at the ESSTIN, a general engineering college in north-east France.[3] Aged 18 to 19, they were overwhelmingly male (76 percent) and with French mother tongue (83 percent), the exceptions being six Arabic speakers and four Chinese speakers. On average the students had been learning English for six and a half years at school prior to their entry to the ESSTIN. Their level of English remains fairly low, however, as their main interests are firmly in sciences: although English is compulsory at the ESSTIN, students generally perceive it as taking time away from their other studies, and rarely as a useful vocational skill for any future career careers (Brown 2004). Before students can complete their degree, college rules require them to demonstrate a minimum level of English as validated by the TOEIC.[4] For this reason, a practice TOEIC is used as a placement test at the start of the first year and can serve as a general indicator of the level of English for this population. The scores ranged from 33 to 79.5 percent, and

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[3] Ecole Supérieure des Sciences te Technologies de l'Ingénieur de Nancy (Université Henri Poincaré – Nancy I).
[4] Test of English for International Communication: http://www.toeic.eu/ (accessed: June 2007)

the average of 51.81 (about 450 points on the TOEIC scale) corresponds to the lower end of the TOEIC "intermediate" level. It should be remembered however that the TOEIC is entirely multiple choice, and scores should exceed 25 percent with random answers alone.

The experiment was conducted towards the end of the academic year during normal class time and with the students' regular teachers. It consisted of three stages, a pre-test, the experimental condition, and a post-test, each lasting a maximum of ten minutes; all three stages were conducted on paper. In the experimental condition, the teachers gave half of the students an information sheet of grammar rules on *will* and *going to*, the other half a set of thirty concordances on each item; the students kept these for consultation during the second test.

The two tests were identical in design so that results should reflect differences arising from the experimental condition in stage two. To ensure the test format would not be skewed by the different information types given in stage two, ten questions in each test were based on traditional full-sentence contexts taken from the grammar book, ten were pairs of concordances (see examples in

Figure 2 below). Each question had two alternatives underlined and in bold, one with *will*, one with *going to*; students merely had to choose which of the two they thought best completed the contexts. Students are familiar with questions of this type, and although the task is arguably inauthentic, it produces few blank answers and is easy to score. As we clearly wanted contexts with a simple right or wrong answer, we used the least ambiguous concordance lines for test questions, i.e. those where the alternative was considered least likely. Each concordance question consisted of two lines to increase the chances of inferring from incomplete contexts, but this is not excessively generous as many DDL activities of this type offer four concordances per question (e.g. Stevens 1991b).

a	I've made up my mind. **I'll buy** / **I'm going to buy** a BMW 730i.

b	He threw his right arm back and I thought **he'll hit**	**He's going to hit** me. He didn't, he picked me up
	the town excluded by the Swindon boundary. If the Conservatives **will get**	**are going to get** back into number 10, candidates like Simon Coombs are

Figure 2: Sample test items for *going to*: a) traditional, adapted from the students' grammar book; b) concordances, from the BNC (as single lines in the test)

The experiment as outlined allows for three possible outcomes:

a) The concordance group scores higher than the grammar group. This would suggest that items such as *will* and *going to* are best studied through DDL and not via traditional grammar teaching. In other words, learners are better able to detect patterns in raw data than they are to understand and apply abstract rules formulated by specialists.

b) There is no significant difference between the two groups. This result implies that DDL should not be sidelined from the big themes, but nor should it be implemented wholesale; rather, it may best be considered an additional learning technique appropriate for some learners in some contexts.

c) The grammar group scores higher than the concordance group. In this case it would seem that DDL has reached its limits in areas such as *will* and *going to*, and is indeed less suitable for the big themes of language learning.

6. Results and discussion

Table 1 shows the overall results of the two tests (T1 and T2) out of twenty, for the two question types (*conc*=concordance format; *trad*=traditional format), and for the two groups (Group 1 had the concordance information sheets; Group 2 had the grammar rules). One of the most striking results is that the scores in general were very low, averaging 11.57 out of twenty on Test 1 and 12.19 on Test 2; as there were only two choices in each case, purely random answers should have given an average of 10/20. There are no doubt a number of possible explanations for this, such as the students' relatively low level in English, or the difficulty of differentiating *will* and *going to* – as we saw above, their prominent treatment in grammar books suggests that the differences are not straightforward. Previous DDL experiments with the same population (Boulton 2006, 2007a) produced similarly low scores, but found this relatively unimportant as long as there was sufficient variation to detect differences between the experimental conditions.

	T1			T2		
	conc	*trad*	TOTAL	*conc*	*trad*	TOTAL
Group 1	5.58	5.81	11.40	5.96	6.02	11.98
Group 2	5.78	5.96	11.75	6.08	6.31	12.39
AVE	5.68	5.89	11.57	6.02	6.17	12.19

Table 1: Overall results; scores out of twenty for each test

It is also immediately apparent that the scores were higher on the questions derived from the grammar book than on the concordance questions in each test. This is to be expected for a number of reasons: full sentences are the more familiar format, come from the students' regular grammar book and have all, presumably, been carefully invented by the author to exemplify the grammar point as unambiguously as possible, using comparatively simple language. Furthermore, it has frequently been pointed out that the use of truncated concordances may be confusing initially. However, the differences in results between the two question types were not statistically significant.

Scores improved significantly between the two tests overall, a 5.32 percent increase from 11.57 to 12.19. The improvement occurred for both question types and for both groups ($p<0.05$ in all cases), suggesting that learners can derive benefit both from grammar rules and from concordance data. Furthermore, both groups improved on both question types; while we would expect grammar rules to be applicable to various kinds of contexts, it is worth noting that patterns derived from concordances do seem to be applicable to other contexts.

Improvement occurred all round, so the crucial question is whether the improvement is significantly greater for one of the two experimental conditions – the group with the concordance information or the group with the grammar information. The grammar group scored higher in Test 2 than the concordance group (12.39 compared to 11.98), which might suggest an advantage of grammar rules over corpus data. However, a similar difference can be seen in Test 1 too where the conditions were in theory identical. The most plausible explanation for this is quite prosaic: the students had been assigned to their group by their teachers, and by chance or design it transpires that those in the grammar group had a slightly higher level on the start-of-year placement test (3.7 percent more). Whatever the explanation, simply comparing the results of Test 2 would be misleading; more appropriate is to compare the change in scores for each group. The grammar group still improved more – scoring 5.51 percent higher compared to than the concordance group's 5.13 percent[5] – but the difference is not significant (p>0.05).

From this experiment then it seems that learners can detect patterns in authentic concordances and apply these to new contexts just as efficiently as they can use grammar rules, there being no significant difference between the two groups. This results supports the second hypothesis above, namely that there can be a place for DDL as well as traditional rules in grammar learning. But this is not perhaps the entire picture. It seems reasonable to suppose that the concordance group would have done better using a more appropriate corpus (i.e. closer to their needs, and with fewer distracting elements) and with more carefully selected concordances. It is also likely that training in the use of concordances would give them a still greater advantage. Further research is needed to test how great a difference this would make, but it seems that those who promote traditional grammar rules should not derive too much comfort from these results.

7. Conclusion

DDL is full of promise in many areas, but empirical support is distinctly lacking, especially in the big themes of grammar learning. The experiment outlined here shows that such research is not difficult to do as long as the aims are modest – in this case looking merely at learners' ability to detect patterns of use for two contrasting items from selected concordances of authentic data. The design is deliberately simple, so we should be careful of attributing too much importance to the findings, especially as *will* and *going to* represent only a tiny area of grammar. However, the results do suggest that learners can use concordances of this type to find patterns and apply them to new cases, and no less efficiently than by using grammatical rules.

Rules and patterns involve very different approaches, and it may well be that each is suited to learners with different profiles (e.g. Cook 1998: 60), or for different types of language point, but it seems that DDL does not have to stop at grammatical questions. There is every reason to believe that the results would have been even more promising given more appropriate corpora, more carefully selected concordances, and especially learner training in interpreting the concordances (Aston 1997b: 62).

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[5] These figures are calculated from the originals; working from the rounded figures in Table 1 gives slightly lower results.

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