THE EFFECTS OF IMPLICIT AND EXPLICIT INSTRUCTIONS ON ACQUISITION OF TWO ENGLISH GRAMMATICAL STRUCTURES

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Tasks have been shown to have a number of potential benefits for learning and their use has become increasingly popular in recent years (cf. Ellis 2003). One aspect of tasks that has received relatively little attention is the effect of the accompanying instructions. Does asking learners to pay attention to a certain aspect of the language help them to learn it? This paper reports on a study of the effects of implicit instructions (exposure only) and explicit instructions (exposure plus a noticing instruction) on acquisition of two grammatical structures. Participants were pretested for prior knowledge of the target structures and then completed three treatments followed by a posttest and a delayed posttest. Performance on the pre,- and posttests was compared to establish if there was a signifcant effect for the instructions that accompanied the treatments. It was found that 1) the explicit instructions did not have an effect on what participants learned from the input, and that 2) the explicit instructions can even inhibit acquisition in the case of relatively complex structures. One of the implications of this study is that teachers need to be aware of the interaction between the types of instructions they give and the complexity of the target structures.

Implicit instructions

Noticing

Tasks

I. Introduction and literature review

The use of tasks is often seen as a means for preparing learners for real-life communication, a way of providing learners with opportunities to practise meaningful communication and to acquire implicit knowledge. "It is clear to me that if learners are to develop the competence they need to use a language easily and effectively in the kinds of situations they meet *outside* the classroom they need to experience how language is used as a tool for communicating *inside* it" (R. Ellis, 2003, p. ix; emphasis in original). There are, of course, many different definitions of tasks. Bygate, Skehan, & Swain list several of these (2001, p. 9), some of which specifically characterise tasks as involving a focus on meaning; "a piece of classroom work which involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is principally focused on meaning rather than form:" (Nunan, 1989), and "tasks are always activities where the target language is used by the learner for a communicative purpose (goal) in order to achieve an outcome (Willis, 1996; see also Skehan, 1998). Other definitions are more general and focus on the structured aspect of tasks: "any structured language learning endeavour which has a particular objective, appropriate content, a specified working procedure, and a range of outcomes for those who undertake the task" (Breen, 1987; see also Carroll, 1993). It is interesting to note that Breen does not focus on tasks as taking place in a classroom; the definition leaves open the possibility that tasks can take place outside the classroom, and perhaps even without teacher guidance. Other definitions do emphasise the classroom setting (cf. Nunan, 1989). Long's (1981) definition is even more open-ended: "a task is a piece of work undertaken for oneself or for others, freely or for some reward" and does not even have to involve the use of language.

Partly in response to the wide range of definitions of tasks that exist, Ellis has proposed a number of characteristics that individual tasks possess to varying degrees. These include: (in summary form):

1) They consist of a workplan with input and instructions.

2) They have a primary focus on meaning.

3) They engage real-world processes.

4) Can involve any of the four language skills.

5) Engage cognitive processes.

6) Have a clearly defined communicative outcome.

Such characteristics can help to more accurately describe and compare different tasks and this is the approach I have taken in my study.

One particularly important question in research on tasks, has been to what extent task characteristics can direct learners' attention to different aspects of the language, including to formal features of the language. In this article the focus is on the effects of the *instructions* that accompany tasks and the extent to which they direct learners to language form. Different instructions can require learners to pay attention to, or make use of, certain linguistic knowledge. An extreme version of this is a task that *necessitates* the use of that linguistic knowledge. Such tasks are designed to help learners notice gaps in their knowledge by requiring them to produce specific linguistic aspects and are referred to as 'structure trapping'. Loschky & Bley-Vroman (1993) suggest that there are varying degrees to which the use of a certain structure is needed for task completion. "Task-naturalness" refers to the extent to which a grammatical structure may arise naturally during task completion. "Task-utility" refers to the situation where use of a particular structure facilitates task completion, but where it is not essential. "Task essentialness" refers to the situation where use of a particular structure is needed to complete the task. The authors point out that task essentialness is difficult to achieve. They also point out that in each of these cases clear feedback is needed for the tasks to result in the greatest amount of learning.

They note that "there is no guarantee that a task in which a structure naturally occurs will, by itself, trigger the initial acquisition of that structure, even if the structure is modelled, primed, or otherwise 'taught' in the task" (p. 131) and that this type of task may be more useful for the automatising of existing knowledge, rather than the learning of new knowledge. Willis (1996) argues that the role of the teacher is not to push learners towards using particular structures but to help them notice what language is required to do a particular task. One way to do this is by including in the task specific instructions that draw attention to aspects of the language in the input. Although there has been a range of studies investigating the relative effects of instructions that are more explicit compared with those that are more implicit, this has not been the case for studies into the effects of tasks (which is the subject of the present study).

As an example of such studies, N. Ellis (1993) investigated the effects of explicit instructions on acquisition of 'soft-mutations' (word-initial consonant shifts) of Welsh as a second language. Participants were assigned to receive 1) exposure only, 2) rule presentation, followed by exposure, or 3) rule presentation with examples, followed by exposure. Rule presentation comprised of a list of consonants and information about whether they mutate or not, but did not include a formal grammatical explanation of the underlying rules. The exposure-only group quickly learned the items they were exposed to, but showed little or no transfer. Participants who were shown the rules slowly learned the rules but were not able to apply them systematically in practice. Participants in the rule presentation plus examples group learned slowest but showed evidence of abstraction of the rules and transfer.

Alanen (1995) also investigated the effects of rule presentation but compared this with the effects of input enhancement on acquisition of locative suffixes and consonant alternation in Finnish as a second language. There were four experimental groups: 1) exposure only (acting as a control group), 2) input enhancement (with target words in italics), 3) rule presentation (which involved a full-page explanation of the target structures), and 4) rule presentation plus input enhancement. Participants were told that they would be asked questions about the content but

were also unexpectedly given a word translation and a sentence translation task. The effects for the four groups on acquisition were as in the order above. Rule presentation in particular had a clear beneficial effect. Think-aloud protocols showed input enhancement to stimulate recall and use of the targets. A clear finding was that the locus of attention during task performance influenced learning outcomes to a large extent.

Radwan (2005) investigated the effects of 1) input enhancement, 2) rule provision, and 3) a focus on meaning only, on a) learning, and b) awareness of English dative alternation. He also investigated if c) differences in awareness affected learning. Forty-two lower-intermediate participants were pretested for prior knowledge of the target structure, and one day later given a short story to read which contained a high number of datives. Reading of the short story was followed by comprehension questions. The next day, a similar treatment was administered but in addition participants were given a narration task which involved describing a set of pictures. Participants were asked to think aloud while completing the task in order for the researcher to gauge their awareness. The treatments were followed by a posttest (one day later) and a delayed posttest (one month later). A control group only completed the tests, but did not receive any treatments. Radwan found a significant advantage for the rule-group over the other groups on acquisition, which failed to make significant progress. This advantage was maintained on the delayed posttest. He also found that participants showing a greater degree of awareness during the narration task did better on the tests. However, awareness at the level of noticing was not as good a predictor of learning as awareness at the level of understanding.

Such studies give us important insights into the differential effects of instructions, but not in the context of tasks. The study drew on the studies mentioned above and reports on the effects of two types of task instructions, implicit and explicit, on participants' acquisition of two English grammatical structures of differing complexity.

II. The study

The research question the study addressed was:

1) Is there a differential effect for implicit and explicit instructions accompanying tasks on acquisition of English adverb placement and negative adverbs?

Participants in both the implicit and the explicit condition completed tasks (described below) that contained numerous instances of the target structures. Participants in the implicit condition only received instructions on how to complete the tasks. Participants in the explicit condition were also instructed to pay attention to the target structures (see below for the instructions given).

1. Design of the study

Participants completed a pretest to establish their prior knowledge of the target structures. They were then randomly assigned to either the implicit or the explicit condition. There were three separate treatments. The final treatment was immediately followed by a posttest, and a week later by a delayed posttest. There was no separate control group in the study. However, as an alternative to a control group, the participants' performance on the items measuring knowledge of the target structure was compared with their performance on distractor items in the tests. Table 1 summarises the design of the study.

Table 1: Design of the study

Week 1 – Pretest (all participants)		
Week 2-3-4 – Treatments		
	Negative adverbs	Adverb placement
Implicit condition	N=17	N=11
Explicit condition	N=11	N=11
Week 4 - Immediate posttest (all participants)		
Week 5 - Delayed posttest (all participants)		

2. Participants

Participants were 50 students enrolled in a language school in a large city in New Zealand. The students volunteered to join the study in response to posters and flyers that were handed out during break times. In exchange, they received compensation of approximately US$8 per hour. Twenty-nine of the participants were female and 21 male. Twenty-eight of them came from East Asia (Japan, Korea, China), eight from Switzerland and the remaining 14 from an additional 11 countries. Participants had 12 different first languages. Most of the participants had lived in an English speaking country for less than six months. No effect was found for these background differences on participants' performance on the treatments or the tests.

The participants had been given an in-house placement test earlier in the year to determine their class level. After one week, consultation between the student and the classroom teacher, and where necessary the Director of Studies, took place. The school considered intermediate level students to be at the equivalent of level B1 of the European Framework (Council of Europe, 2006) and upper-intermediate level students at level B2. Students were selected at the intermediate level and at the upper-intermediate level to ensure they were developmentally ready to acquire adverb placement and negative adverbs respectively, but without having yet done so.

3. Target structures

The target structures were negative adverbs and adverb placement. Negative adverbs are adverbs or adverbial structures that lead to inversion of subject and auxiliary, as in:

"Seldom **had he** seen such a beautiful woman". (or "rarely", "hardly", etc).

Adverb placement involves determining the correct position of the adverb in sentences such as:

"John **passionately** kissed Mary".

The relative difficulty of these two structures is discussed in detail elsewhere (Reinders and Ellis 2008) but in summary, although both structures are quite complex, negative adverbs are less frequent, acquired later, and more complex than adverb placement (cf. Ellis 2006, Pienemann 2005).

4. Treatments and instructions

There were three different treatment types in the study (described below). Each treatment provided participants with oral or written input on general interest topics that contained the target structure (negative adverbs or adverb placement). There were a total of 36 exemplars of the target structure across the three treatments. As described above, participants had been randomly assigned to either the implicit (N=28) or the explicit condition (N=22). In the implicit condition participants received only procedural instructions on how to complete the task (see below). In the explicit condition they received procedural instructions and in addition were asked to pay attention to the target structure. Although drawing participants' attention to a target structure qualifies as an explicit type of instruction according to Robinson's (1996) definition, it needs to be pointed out that such instructions obviously come at the lower end of the continuum from less to more explicit instructional types. The explicit instructions asked upper-intermediate participants to:

Listen carefully and pay attention to where the auxiliary verb comes in each sentence. For example in the sentence 'Rarely has so much rain fallen in such a short time' the auxiliary is 'has' and it comes before the subject of the sentence 'so much rain'.

And intermediate level participants to:

Listen carefully to the place of the adverbs in the passage. Listen carefully and pay attention to where the adverb is placed in each sentence. For example, in this sentence 'He sent the letter electronically' the adverb is 'electronically' and it comes at the end of the sentence.

There were three types of tasks in the study. In the <u>dictation</u> task participants were asked to listen to a passage of about 60-70 words on a computer, during which they were not allowed to take notes. Next, they heard the passage again but this time part by part. Each part contained no more than 10 words but mostly around seven or eight. Next, they were asked to type in what they had heard. The treatment thus involved immediate recall. The actual treatment was preceded by three practice passages.

In the <u>individual reconstruction</u> task participants were asked to listen to a passage of about 60-70 words twice and then to reconstruct it. This treatment thus involved delayed recall of what was heard. Participants were allowed to take notes. In addition they were asked to talk-aloud as they completed the treatment. Instructions for this treatment were in the form of a video demonstrating talk-aloud. After watching the video participants had a chance to practise the procedure with two passages. If additional practice was necessary, the researcher was able to repeat the passages.

The <u>collaborative reconstruction</u> treatment was similar to the individual reconstruction treatment except that two participants were paired and were asked to reconstruct the text together. It therefore also involved delayed recall. Similar to the individual treatment instructions were provided in the form of a video followed by practice passages.

In order to determine to what extent the above treatments qualify as tasks, reference is made to the list of task characteristics proposed by Ellis (2003), discussed above. All three tasks used in this study consist of a workplan with input and instructions and thus are tasks in this sense. However, of the three task types, dictation may not require a primary focus on meaning. Nonetheless, due to the length of the sentences it is unlikely that they could have been remembered without any attention to meaning. As for the 'real-world' aspect of the tasks, reconstruction and dictation are not activities learners would engage in outside the classroom and thus they do not resemble real-world activities. However, teachers in the school confirmed that

the collaborative and to a lesser extent the individual reconstruction and dictation tasks were commonly used as classroom activities and in this sense they were similar to the types of activities participants engaged in their school lives. The tasks do engage the four language skills, but do not have a clearly defined communicative outcome (except perhaps to a limited extent for the reconstruction tasks). In summary, the treatments used in this study display some, but not all, of the features of tasks as proposed by Ellis. It is probably more accurate to say that the treatments are 'task-like'. In reality many 'tasks' are likely to include some elements of tasks and it is often difficult to distinguish between 'real' tasks and task-like activities (Nunan 1989). For the sake of consistency I shall refer to all three treatments used in this study as tasks, with the caveat provided here.

5. Tests

A timed grammaticality judgement test (GJT) was administered on three occasions – as a pre-test, an immediate post-test and a delayed post-test. This test consisted of 50 sentences, 20 of which contained the target structure (negative adverbs or adverb placement). Of these 10 were grammatical and 10 ungrammatical sentences. The other 30 items consisted of sentences with the structure that was not the target for the particular level of the participant (i.e. adverb placement or negative adverbs) or with sentences related to the difference in form between adverbs and adjectives. At each test administration the order of the items was changed. In the test, sentences were shown on screen and participants had to press the "enter" key if they thought the sentence on the screen was correct, and the left-hand "shift" key if they thought it was not. The keys were labelled with stickers indicating "correct" and "incorrect". There were eight practice sentences during which the researcher was present to give clarification where needed. The tests were first trialed on native speakers and learners of a similar level as those in the study, in order to establish a time limit for each sentence. The time limit for each sentence was longer than the mean time taken by the native speakers on that sentence but shorter than that of the non-native speakers. The learners were given relatively more time on the earlier than the later

items in the test. They were told that they might not be able to respond to all the items in time but that they should try to answer as many as they could.

Acquisition scores were arrived at by totaling the number of correct judgments that the learners made in the GJT. Total scores and also separate scores for the 10 grammatical and the 10 ungrammatical sentences were calculated as previous research has indicated that these measure separate constructs (Hedgcock 1993; R. Ellis 2005). To measure acquisition, gain scores from pre- to immediate posttest, from pre- to delayed posttest and from immediate to delayed posttest were calculated.

Learners' responses to the 30 items in the GJTs that did not contain the target structure were used as the control items in this study. Total scores on these items together with scores for the grammatical and ungrammatical items separately were calculated. Gain scores were then computed.

As participants in the study completed multiple treatments and tests, repeated measures analysis of variance models were used to investigate group differences. For post-hoc analyses the Least Significant Differences (LSD) method was used. This method is considered liberal in that it compares means for all possible data sources separately, rather than combined. Considering the fairly small number of data sources, and considering that the present study was exploratory, the use of LSD was deemed acceptable. For all statistical analyses the alpha level was set at .05. For effect sizes, Cohen's d values were calculated.

III. Results

Below the descriptive results (gain scores) are presented, first for negative adverbs, then for adverb placement.

To find out if the instruction had any significant effect on acquisition, it was investigated whether the gains for target items were greater than those for the control items. For this reason, a 2 (target/control) x 3 (gain scores) ANOVA was performed. If no effect was found no further analyses were performed. Where an advantage for the target items was found, a further ANOVA for instructional type (implicit vs explicit) was performed on scores for the target structure only to establish if there was a differential effect for the instructions accompanying the tasks.

Table 2: Gain scores for negative adverbs and controls on the GJT

Negative adverbs	Target				Control			
	Grammatical		Ungramm.		Grammatical		Ungramm.	
	Gain	SD	Gain	SD	Gain	SD	Gain	SD
Pretest to posttest								
Implicit (n=17)	.241	.245	.058	.2	-.041	.197	.15	.213
Explicit (n=11)	.118	.357	.072	.241	-.009	.347	.127	.2
Pretest to delayed posttest								
Implicit (n=17)	.311	.228	.076	.301	.052	.18	.12	.141
Explicit (n=11)	.081	.354	-.027	.296	-.081	.389	.213	.23
Posttest to delayed posttest								
Implicit (n=17)	.07	.323	.017	.283	.094	.265	-.029	.261
Explicit (n=11)	-.036	.456	-.1	.322	-.072	.337	.086	.282

First, the differences between total gain scores on target and control items were compared by means of a 2 (negative adverbs/control) x 3 (gain scores) repeated measures ANOVA. This showed no statistically significant difference ($F(1,333)=1.16$, $p=.283$). In other words, the treatments had no effect on acquisition of negative adverbs as measured by total scores on the GJT. However, looking specifically at the grammatical items the gain scores for the

negative adverbs were significantly greater than for the control items (F(1,165)=9.71, p=.002) with a medium effect size (d=.48). There was also a significant difference on the ungrammatical items (F (1,165)=4.49, p=.035), but this was to the advantage of the control items.

Next, an ANOVA was performed to establish if there was an effect for instructional type (i.e. the implicit and explicit instructions). This was not the case for gain scores on the grammatical items from pretest to posttest (F(1,54)=.31, p=.581). However, from pretest to delayed posttest there was a difference (F(1,54)=4.95, p=.03), to the advantage of the implicit condition. There was a medium effect size (d=.62).

Table 2 shows the mean gain scores for adverb placement. As with the results for negative adverbs, it was first investigated whether there was a difference in the gain scores for target and control items. This proved not to be the case (F(1,261)=.73, p=.393). There was also no difference on grammatical items (F(1,129)=.01, p=.911) or on ungrammatical items (F(1,129)=.88, p=.354). In other words, the treatments did not have an effect on acquisition of adverb placement.

Table 3: Gain scores for adverb placement and controls on the GJT

Adverb placement	Target				Control			
	Grammatical		Ungramm.		Grammatical		Ungramm.	
	Gain	SD	Gain	SD	Gain	SD	Gain	SD
Pretest to posttest								
Implicit (n=11)	.03	.37	.107	.262	.153	.278	.038	.25
Explicit (n=11)	.066	.25	-.033	.132	.133	.269	.033	.154
Pretest to delayed posttest								
Implicit (n=11)	.138	.301	.153	.225	.107	.259	-.023	.265
Explicit (n=11)	.166	.295	-.032	.374	.233	.433	-.016	.301

Posttest to delayed posttest								
Implicit (n=11)	.107	.246	.046	.185	-.04	.236	-.061	.138
Explicit (n=11)	.1	.269	.001	.324	.1	.531	-.05	.246

In summary:

- The treatments did not have an effect on acquisition of either negative adverbs or adverb placement.
- The only effect for the treatments was found on negative adverbs where there was an advantage for the implicit over the explicit instructions on gain scores of grammatical items from the pretest to the delayed posttest.

IV. Discussion

The research question of the study asked whether there was a differential effect for the implicit and explicit instructions accompanying tasks, on the acquisition of English adverb placement and negative adverbs. Before answering this question it is important to establish if the treatments had any effect on acquisition at all. The results showed that this was not the case. The treatments may have been unsuccessful in encouraging participants to process the input for any other purpose than dealing with immediate task demands. The treatments used in this study were inductive, did not include rule presentation at any stage, nor offer corrective feedback or negative evidence. Such treatments may simply not able to affect acquisition of grammatical structures of a complexity like the ones used in this study (which corroborates findings from studies by N. Ellis, 1993 and Radwan ,2005). In the words of Williams: "if learning distributional rules is critically dependent upon the subjects initially paying attention to relations between elements in the input, then it follows that even the simplest rules might not be learned if the subjects for some reason fail to attend to those relationships" (1999, p. 32). Participants in this study appear to have

noticed the target structures, but not the underlying rules governing the behaviour of those structures. Another reason could have been the relatively limited amount of input. N. Ellis (2002a, 2002b) emphasises the importance of extensive exposure for incidental learning to take place. In this study the target was presented a total of 36 times over three treatments and this may not have been sufficient.

As mentioned above, there was no effect for the explicit instructions on acquisition. On the contrary, in several instances the explicit condition resulted in lower scores than the implicit condition and in one case this difference was significant; on the timed tests there was an advantage for the implicit condition on negative adverb grammatical items. To investigate if this difference was significant a 2 (implicit/explicit) x 2 (negative adverbs/adverb placement) ANOVA was performed on the gain scores. The results are shown below:

Table 4: ANOVA for type, structure, and time for grammatical items

Effect	DF	Value	Pr > F
type	1	2.56	0.111
structure	1	35.06	**<.0001**
type*structure	1	7.69	**0.006**

Table 3 shows an effect for structure, as well as a significant interaction between the two treatment conditions and the two structures. A plot is included below to visualise these results. These confirm the observations made above from the descriptive statistics: negative adverb scores are higher for the implicit condition than for the explicit condition. For adverb placement there is a greater variation in the scores in the explicit condition than in the implicit condition and higher total scores. It could be that the effects for the implicit condition are similar for most participants. The effects for the explicit condition are likely to be more dependent on individual factors (cf. Reber, 1989).

Figure 1: Interaction between type and structure
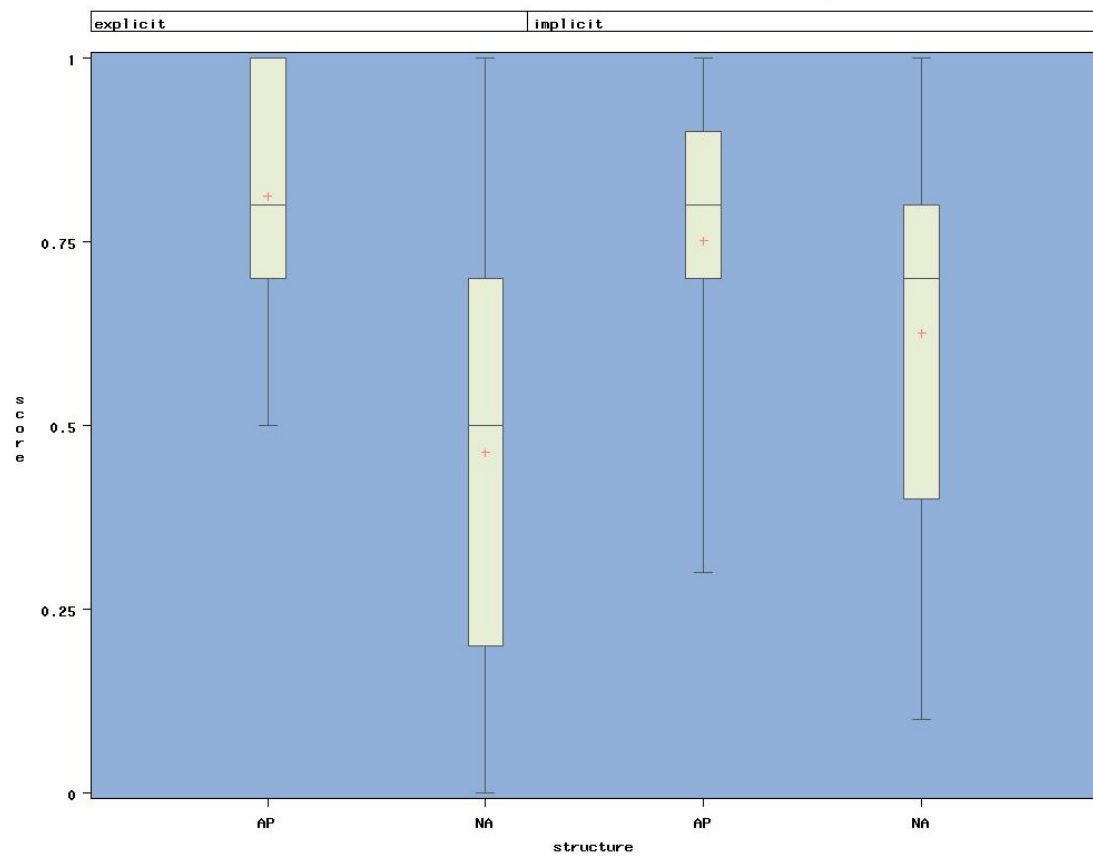
AP=Negative Adverbs, NA=Negative Adverbs, Score=score (as a percentage) on the untimed GJT

This interaction between structure and treatment type is likely to have resulted from the difference in complexity between the two structures. Negative adverbs were more demanding for participants than adverb placement (as shown by the overall lower scores for negative adverbs). The explicit condition may not have been sufficient to affect a change in participants' ability to correctly recognise use of the negative adverbs and in fact, appears to have *inhibited* learning. As for performance on adverb placement, this was better for the explicit condition. As the structure was easier, it was more likely that if participants paid attention to it, they would be able to distil the underlying rule. This appears similar to some of the findings from Robinson (1996) who found that participants in a rule-search condition were outperformed by participants in an implicit (attention

to meaning only) and an incidental condition (in which participants were asked to remember the position of words in the input), on *the more complex* of two target structures. Data-driven processing may be more successful than an inductive approach like "rule-search" or the explicit treatment received in the present study. (Incidentally, Robinson found a significant advantage for an instructed condition in which participants were instructed and given practice in the target structure). N. Ellis (2002a) quotes Danks & Ganks (1975): "if there is to be explicit instruction then with complex material it is better to explain the structure and content of the rules than merely alert the learner to their existence" (p. 114). This study indicates that this applies not only to instruction in general but also to the instructions accompanying tasks in particular.

V. Conclusion

This study has shown that for grammatical structures of considerable difficulty, implicit or low-level explicit instructions are not sufficient to affect acquisition. It has also shown that explicit instructions (in the form of a noticing instruction) do not differentially affect acquisition and can even inhibit acquisition compared with implicit instructions, at least on relatively complex grammatical structures. It appears that the target structure either needs to be presented more often or that a more explicit type of instructions is needed for acquisition to take place. However, as the present study did not compare the effects of the noticing instruction with more explicit types of instructions this interpretation remains speculative. Further research needs to be done to investigate and compare a wider range of more or less explicit instructional types accompanying tasks.

For teachers, the above findings mean that simply providing input, or input with minimally explicit instructions, may not be sufficient unless perhaps items are presented more frequently than in this study. This may indicate that a more direct pedagogic intervention is needed, at least where relatively complex structures are concerned.

Another important point is the fact that explicit instructions can have a signicantly lesser effect on learning with more complex structures compared with less complex structures. Teachers will need to have an appreciation of the relative difficulty of the language they teach and match instructions accordingly. More complex structures may benefit more from exposure to input only, without participants' attention being drawn to the target structure.

Finally, there are a number of weaknesses of the study that I would like to acknowledge. Firstly, there was no control group, although I was able to use the non-target items in the GJTs as a point of comparison. Secondly, as mentioned above, the amount of exposure to the target structure was relatively small. Finally, the sample size was relatively small. Further research could look at investigating a broader range of instructions to identify whether, as I have speculated above, more explicit types of instructions yield different results.

References

Alanen, R. (1995). Input enhancement and rule presentation in second language acquisition. In R. Schmidt (Ed.), *Attention and awareness in foreign language learning* (pp. 259-302). Honolulu: University of Hawai'i.

Breen, M. (1987). Contemporary paradigms in syllabus design (parts 1 and 2). *Language Teaching*, *20*(2 and 3), 91-92 and 157-174.

Bygate, M., Skehan, P., & Swain, M. (2001). Introduction. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks. second language learning, teaching and testing* (pp. 1-20). Harlow: Longman.

Carroll, J. B. (1993). *Human cognitive abilities*. New York: Cambridge University Press.

Council of Europe (1996). The Common European Framework. [Online document]. Retrieved January 16, 2007, from: http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf

Ellis, N. (1993). Rules and instances in foreign language learning: interactions of explicit and implicit knowledge. *European Journal of Cognitive Psychology*, *5*(3), 289-318.

Ellis, N. C. (2002a). Frequency effects in language processing. *Studies in Second Language Acquisition*, *24*(2), 143-188.

Ellis, N. C. (2002b). Reflections on frequency effects in language processing. *Studies in Second Language Acquisition*, *24*(2), 297-339.

Ellis, R. (1991). Grammar teaching practice or consciousness-raising? In R. Ellis (Ed.), *Second language acquisition and second language pedagogy* (pp. 232-241). Clevedon, Avon: Multilingual Matters.

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.

Ellis, R. (2005). Measuring implicit and explicit knowledge of a second language: a psychometric study. *Studies in Second Language Acquisition*, *27*, 141-172.

Ellis, R. (2006). Modelling learning difficulty and second language proficiency: The differential contributions of implicit and explicit knowledge. *Applied Linguistics*, *27,* 431-463.

Fotos, S. S. (1993). Consciousness raising and noticing through focus on form: grammar task performance versus formal instruction. *Applied Linguistics*, *14*(4), 385-407.

Fotos, S. S. (1994). Integrating grammar instruction and communicative language use through grammar consciousness-raising tasks. *TESOL Quarterly*, *28*, 323-351.

Fotos, S. S., & Ellis, R. (1991). Communicating about grammar: a task-based approach. *TESOL Quarterly*, *25*(4), 46-69.

Hedgcock, J. (1993). Well-formed vs. ill-formed strings in L2 metalingual tasks: Specifying features of grammaticality judgements. *Second Language Research*, *9*, 1-21.

Long, M. H. (1981). Input, interaction, and second language acquisition. In H. Winitz (Ed.), *Native language and foreign language acquisition* (Vol. 379, pp. 259-278). New York: Annals of the New York Academy of Sciences.

Loschky, L., & Bley-Vroman. (1993). Grammar and task-based methodology. In G. Crookes & S. M. Gass (Eds.), *Tasks and language learning*. Clevedon, Avon: Multilingual Matters.

Nunan, D. (1989). *Designing tasks for the communicative classroom*. Cambridge: Cambridge University Press.

Pienemann, M. (2005). An introduction to processability theory. In M. Pienemann (Ed.), *Cross-linguistic asspects of processability theory* (pp. 1-60). Amsterdam: John Benjamins.

Radwan, A. A. (2005). The effectiveness of explicit attention to form in language learning. *System*, *33*, 69-87.

Reber, A. S. (1989). Implicit learning and tacit knowledge. *Journal of Experimental Psychology: General*, *114*, 17-24.

Reinders, H. & Ellis, R. 2008 'The Effects of Two Types of Positive Enhanced Input on Intake and L2 acquisition'. In: Ellis, R., Loewen, S., Erlam, R., Philp, J., Elder, C., Reinders, H. 2008. *Implicit and Explicit Knowledge in a Second Language.* Clevedon: Multilingual Matters (forthcoming).

Robinson, P. (1996). Learning simple and complex second language rules under implicit, incidental, rule-search, and instructed conditions. *Studies in Second Language Acquisition*,*18*, 27-67.

Rutherford, W., & Sharwood Smith, M. (1985). Consciousness-raising and universal grammar. *Applied Linguistics*, *6*(3), 274-282.

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.

Trahey, M. & White, L. (1993). Positive evidence and preemption in the second language classroom. *Studies in Second Language Acquisition*, *15*, 181-204.

Williams, J. N. (1999). Memory, attention, and inductive learning. *Studies in Second Language Acquisition*, *21*(1), 1-48.

Willis, J. (1996). *A framework for task-based learning*. Harlow: Addison Wesley Longman.

Biodata

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