CHAPTER SEVEN

THE EFFECTS OF INSTRUCTION

My objective in this chapter is to investigate treatment-effect from the perspective of readability and feedback-independence. Its purpose is to test H4, i.e., that improved readability and increased feedback-independence are likely outcomes of the instruction provided, as opposed to outcomes of any type of instruction. In section 7.1 I will discuss the limitations of attempting to test H4 on the basis of the revision data available. In section 7.2, I will explain the method of analysis and interpretation adopted in view of those limitations, which is founded on the distinction between the parts of the revision data with an explicit connection with the experimental treatment and the parts of the revision data which are unrelated or only indirectly related to the treatment. Section 7.3 will then summarize the main differences between the two in terms of qualification, reading process and writing product. I will conclude the chapter with the next two sections, which focus on the interpretation of treatment-effect upon readability and feedback-independence.

7.1 Problems of analysing the effects of instruction

On the strength of the evidence presented in chapters four and six, it appears that the participants were able to improve the readability of their writing products after instruction had ceased. Chapter six also discloses evidence which suggests that following the experimental treatment feedback-independence generally increased. What is not as yet known, however, is whether such a development can be attributed to the experimental treatment. To put it differently, it could be argued that the participants would have been able to improve readability and would have become more independent from feedback after receiving some other kind of instruction, as opposed to the specific instruction provided during the treatment. My present objective is therefore to find out whether improved readability and increased feedback-independence are likely outcomes of the instruction carried out in this study.

Ideally, this investigation would involve comparing the benefits attributable to the instruction provided with those attributable to a placebo treatment, i.e., another type of instruction. However, as is often common in educational research, one of the major limitations of the present study was that it was not possible to work with a control group[1]. A less rigorous alternative to working with a control group would be to compare, in general terms, the effects which followed the instruction provided with those

which are known to follow other types of instruction previously submitted to critical scrutiny. Following this orientation, one of the parallels which can be drawn is that previous research in L2 writing has shown that, unlike the discourse-oriented instruction carried out in the present study, traditional product-oriented writing instruction does not result in any major advances in readability[2]. In contrast to this, process-oriented instruction apparently does, although there does not seem to be any evidence in the literature in support of the idea that its effects upon readability will persist after instruction has ceased. Also, to my knowledge there is no evidence to suggest that process-oriented instruction helps L2 writers become more independent from feedback[3]. The absence of studies concerned with finding out answers to questions similar to the ones which motivated the present study therefore makes it difficult to compare the benefits attributable to the instruction provided during the treatment with those attributable to other types of instruction.

7.2 Method of analysis and interpretation

In view of the limitations put forward in the above section, the most viable alternative to finding out whether improved readability and increased feedback-independence are likely outcomes of the instruction carried out was to

single out the part of the post-treatment revision data related to topics specifically addressed during the experimental treatment, and investigate whether this selected data alone disclosed evidence of improved readability and increased feedback-independence.

Having said this, I cannot overly stress that the post-treatment changes considered not to have an explicit connection with the treatment may have nevertheless been influenced by it. This is an especially important point to raise in the light of Kellerman's (1983;1987) framework of learners' psychotypology. Kellerman maintains that learners become more skeptical about correctness in L2 as metalinguistic sophistication grows, a phenomenon which he describes as the "suspicion-inducing influence of teaching". The fact that the treatment actually had this "suspicion-inducing influence" built into one of its main objectives, i.e., to make L2 writers more aware of the distance between their L2 texts and target L2 discourse conventions, may have therefore made the participants reassess and revise not only what had been explicitely discussed during the treatment, but also what had not even been mentioned at the time of instruction. In fact, as described in chapter three, at the time of instruction the participants were encouraged to pay attention to not only the target L2 conventions explicitely mentioned in class,

but also to other L2 conventions which they were able to grasp while reading texts in their areas of specialization by native-speaker authors.

The influence of the experimental treatment upon the revision data with no apparent connection with the instruction provided becomes not only probable, but even likely, if one remembers that the data collection conditions ensured that the pre-treatment final drafts were the best version of text the participants could arrive at on their own before the treatment began. This means that all post-treatment changes, as opposed to only the ones with an explicit connection with the instruction provided, are likely to have been in one way or another influenced by the treatment.

For convenience, I am therefore assuming that while the post-treatment changes with an explicit connection with the instruction provided during the treatment are likely to have been directly motivated by that instruction, the post-treatment changes with no apparent connection with the experimental treatment are likely to have been only an indirect result of the instruction provided. Proof that the post-treatment changes likely to have been directly motivated by the instruction provided contributed towards an improvement in readability and an increase in feedback-

independence will be accepted as an indication that improved readability and increased feedback-independence are likely outcomes of that instruction.

My predictions with regard to the differences between the post-treatment changes with an explicit connection with the instruction provided and the remaining post-treatment changes, in turn, are not as strong as my predictions with regard to the differences between the experimental treatment and a placebo treatment would have been. That is to say, having shown in chapter six that the post-treatment data in general disclosed evidence of improved readability and increased feedback-independence, I do not expect that the revision changes explicitely related to the treatment will affect readability in a predominantly positive way and that the remaining post-treatment changes will not, but I expect the changes with an explicit connection with the treatment to enhance readability to a greater extent than the other post-treatment changes. Similarly, I do not expect that the treatment-specific feedback-independence observations will signal increased feedback-independence and that the remaining ones will not, but I expect the treatment-specific FIO to disclose greater evidence of increased feedback-independence than the remaining post-treatment FIO.

It is obvious that drawing the line between the part of the post-treatment data related to topics explicitely taught during the treatment and the part of the post-treatment revision data which did not have an explicit connection with the treatment is not a straightforward matter. Still, it is possible to operationalize this distinction by keeping the data which is explicable in terms of the specific instruction provided during the treatment apart from the data which is not explicable in those terms. The most reliable and systematic way of doing so, it seems, is to separate the changes in the post-treatment revisions associated with the linguistic resources and discourse conventions highlighted in the course handouts from the changes which hold no explicit relationship with the handouts[4].

Some, but not all, of the changes related to the course handouts can be identified via the system's writing product taxonomy. An example of this would be the changes pertaining to the categories for phrase, clause, sentence and paragraph order. These changes are likely to have an explicit connection with the course handout on "the given-new principle", for the handout contained information on how to make the sequencing of ideas in text more predictable to the English reader by making sure the order of phrases, clauses, sentences and paragraphs in text was such that given information preceded new information. A second type of post-treatment change likely to have been

motivated by the treatment and also indentifiable in terms of the writing product taxonomy are the changes in sentence-complexity. These changes are probably related to the course handout on "sentence-complexity", for the handout drew attention to the pragmatic distinction between the use of simple and complex sentences known to help readers separate main ideas from supporting details of text, and to the effect of syntactic parallelism upon coherence. A third type of post-treatment changes which can considered to be a direct function of the experimental treatment are the ones identifiable in terms of the category for sentence adverbials. Many of these changes are likely to relate back to the course handout on "connectives", which emphasized the need of using connectives to the tie up ideas in text in an explicit way, and to convey the author's comment on the content of his text. The post-treatment changes identifiable in terms of the category for intermediate verbs too are likely to have been influenced by the treatment. These changes have very much to do with the course handout on "certainty and commitment", which encouraged the partipants to choose between different modal verbs and expressions to make their texts more convincing to the reader. The connection with the experimental treatment of the changes identifiable in terms of the category for pro-forms is also quite obvious. Such changes probably relate back to the course handout on "synonyms and reference", which called the participants' attention to problems of ambiguity and contained guidelines

on how to decide between the use of full-forms and pro-forms.

As said before, however, not all topics which were explicitely taught during the treatment are identifiable in terms of the system's writing product categories. For example, the addition or deletion of commas, which obviously relates to the course handout on "the use of commas", cannot be accessed via the category for punctuation, for the category includes other changes in punctuation which are unrelated or only indirectly related to the handouts. It is also impossible to access via the writing product categories the distinction between word-order changes which are likely to be related to the course handouts and word-order changes which are unrelated or only indirectly related to the handouts. The revision of the position of adverbs, for example, is clearly related to the handout on "word order and adverbs"; however, the category for word order also includes other types of word-order revision which have nothing to do with the topics addressed in the course handouts.

There are of course changes which are unrelated or only indirectly related to the handouts, such as those in morphology and paragraph indentation, which are easily identifiable via the writing product categories. However, because the taxonomy distinguishes between only some, and not all, of the changes directly related to the course

handouts and the remaining post-treatment changes, it was impossible to rely on the writing product categories in order to single out the post-treatment changes with a likely connection with the handouts.

In view of this, the procedure adopted in order to separate the changes explicitly related to the course handouts from those which were unrelated or only indirectly related to them involved coding the changes in the post-treatment revisions all over again while referring back to both the handouts and the revisions; the changes with a direct connection with any one of the various linguistic resources and discourse conventions addressed in the handouts were simply coded "treatment-specific changes", and the changes which were not explicable in terms of the content of the handouts were coded "other changes". When sorting out the changes in this way, I deliberately did not consult the previous coding of the revisions according to the three taxonomies of the system. This prevented me from making misconceived a priori associations between the treatment and reading process or writing product, and most importantly, from being influenced by the qualification of the changes.

After the treatment-specific changes by the participants were separated from the remaining post-treatment changes, the "necessary" changes introduced by the native-speaker proofreaders were also sorted out in this way. The

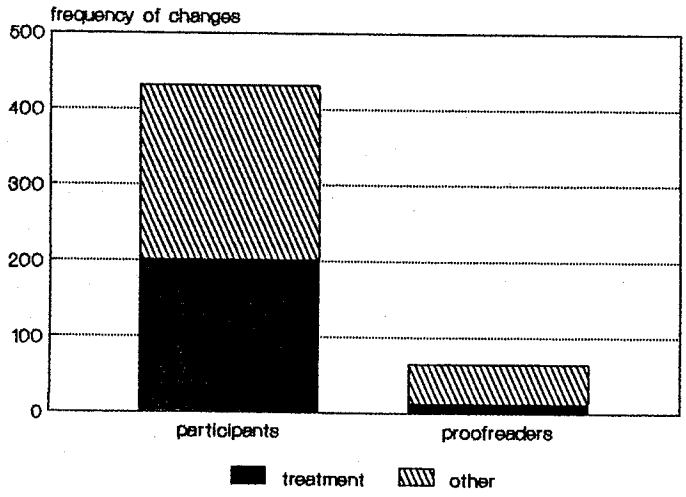
procedure enabled me to compare the treatment-specific changes which should have been made but were not with other changes which should have been made but were not. The coding of the 496 changes by the participants and by the NS proofreaders according to whether or not they were treatment-specific is supplied in appendix VII.

7.3 General differences between treatment-specific changes and changes unrelated or only indirectly related to the treatment

Before going on to the interpretation of the results from the viewpoints of readability and feedback-independence, in this section I will simply go over the differences between the treatment-specific and other changes according to frequency, reading process, writing product and qualification. No cross-references between taxonomies will be made at this point.

To begin with, figure 7.1 below summarizes the distribution of the 431 changes by the participants and the 65 changes by the proofreaders according to those which were treatment-specific and those which were not.

Figure 7.1: Distribution of changes according to those which were treatment-specific and those which were not



As can be seen, slightly over half the changes made by the participants from T3 to T3* were not actually treatment-specific. Although this might be somewhat surprising, it must be remembered that the treatment is likely to have motivated the participants to make changes which had no explicit connection with the course handouts, and that these handouts only addressed the main areas of discourse where the participants in general supposedly needed help. In addition to this, as discussed in chapter two, it is possible that teaching the participants about discourse may have reduced the burden of a number of higher-level writing process constraints, the consequence of which may have been that the participants had more room to pay attention to and hence revise lower-level components of writing which had not been dealt with at the time of instruction. The changes then added by the proofreaders, however, were clearly a lot

more frequently unrelated or only indirectly related to the treatment. This is already an indication that whatever it was that the treatment addressed, it must have addressed in a relatively thorough way.

Figures 7.2 and 7.3 show how the treatment-specific and other changes by the participants were distributed according to reading process and writing product respectively.

Figure 7.2: Distribution of treatment-specific and other changes made from T3 to T3* according to reading process

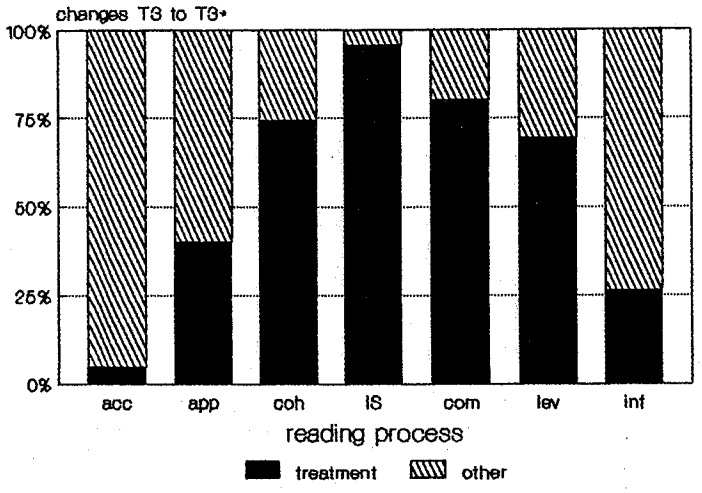
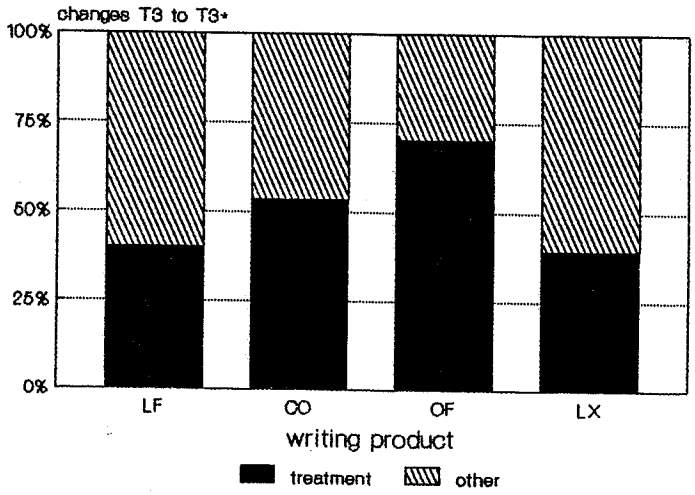


Figure 7.3: Distribution of treatment-specific and other changes made from T3 to T3* according to writing product macro-categories

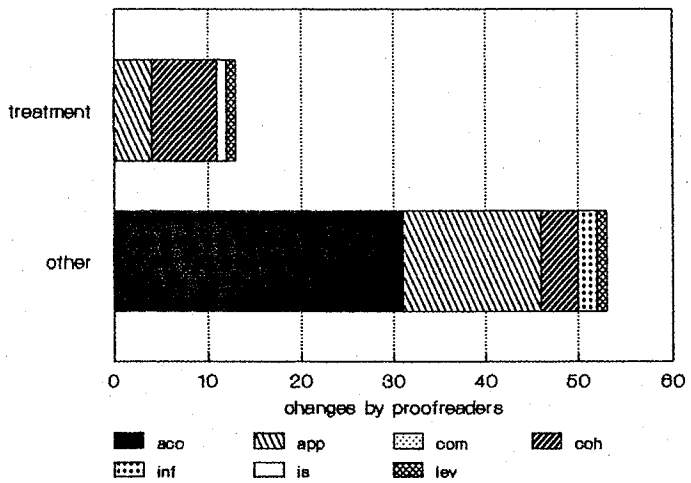


The short instructional period entailed by the treatment has obviously meant that it could not have dedicated equal emphasis to all aspects of reading process and writing product analysed. From figure 7.2 it can be seen that the changes in information-structure, commitment, coherence, and levels effect made from T3 to T3* were predominantly treatment-specific. The changes in accuracy, informativity and appropriateness made by the participants were however predominantly unrelated or only indirectly related to the treatment. Clearly, the treatment seems to have assigned greater emphasis to the more discoursal components of the reading process. From figure 7.3, in turn, it can be seen that when these same changes were distributed according to writing product, the differences between what was and what was not treatment-specific were a lot more evenly balanced. This therefore seems to confirm what was hinted at in chapter six: that in an attempt to help the participants

improve discourse, the treatment assigned greater emphasis to the more discoursal components of the reading process, and at the same time touched a bit of everything in terms of writing product.

As to the changes in reading process subsequently added by the proofreaders, it can be seen from figure 7.4 that the the majority of treatment-specific changes had to do with coherence, and that the necessary changes unrelated or only indirectly related to the treatment were mostly those in accuracy. Accuracy therefore seems to have been what the treatment least addressed, and coherence what it addressed least thoroughly.

Figure 7.4: Distribution of treatment-specific and other changes by proofreaders according to reading process



In terms of writing product, figure 7.5 indicates that the majority of treatment-specific and other changes added by the proofreaders had to do with linguistic form. This probably means that the treatment should have placed greater emphasis to linguistic form had there been more time available.

Figure 7.5: Distribution of treatment-specific and other changes by proofreaders according to writing product macro-categories

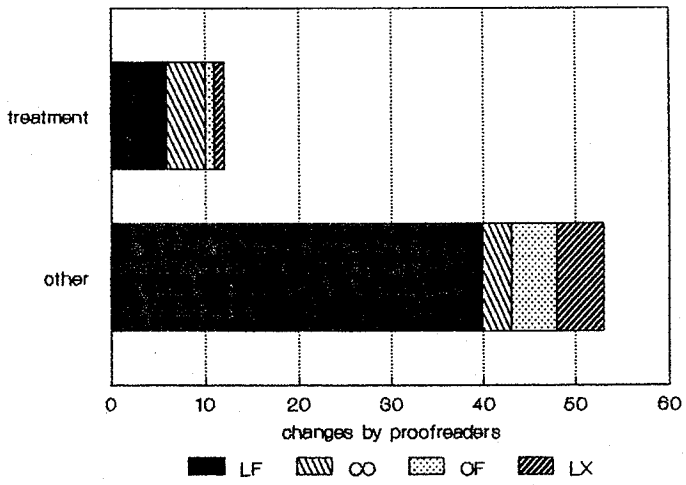
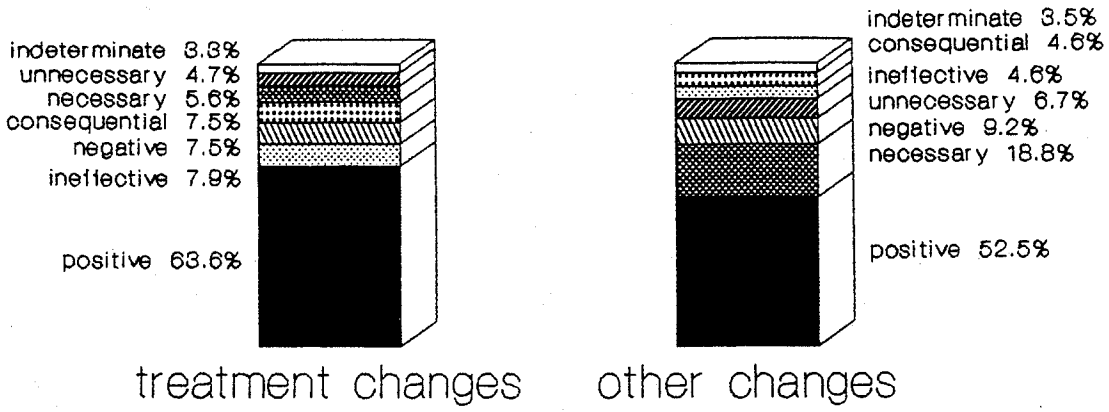


Figure 7.6, in turn, summarizes the overall distribution of the treatment-specific and other changes according to the system's qualification categories.

Figure 7.6: Distribution of treatment-specific and other changes according to qualification categories



It can be seen that that the percentage of treatment changes qualified as positive, ineffective and consequential was on the one hand greater than the percentage of other changes qualified in these ways. On the other hand, the changes not explicitely related to the treatment were comparatively more frequently necessary, negative, unnecessary and indeterminate than the treatment-specific changes. This is already a preliminary indication that the overall outcome of the treatment-specific changes is likely to have been qualitatively better.

Having summarized what the main differences between the treatment-specific changes and the remaining post-treatment changes were, in the next two sections I will attempt to find out whether the treatment-specific changes alone

brought about an improvement in readability and an increase in feedback-independence, and whether their contribution in those respects was greater than that of other post-treatment changes.

7.4 The effects of the experimental treatment upon readability

My objectives in this section are to find out whether the treatment-specific changes alone contributed towards improved readability, and whether their contribution was greater than that of the remaining post-treatment changes. As explained in chapter six, only the positive and negative changes in the revisions need be accessed in the interpretation of the revisions from the viewpoint of readability. The total number of changes relevant to this part of the study is therefore again 326, i.e., an average of 74.2% of the total number of changes per participant[55].

To find out whether the treatment-specific changes alone helped enhance the readability of T3* in relation to T3, the treatment-specific were initially singled out and distributed according to both whether they enhanced or hindered readability and the seven reading process categories into which readability was decomposed. Having

done that, the positive and negative treatment-specific means for each reading process category were compared via matched t-tests. The results obtained are summarized in table 7.1 below.

Table 7.1: Comparison of positive and negative treatment-specific changes per reading process categories (significant**, not significant* for one-tailed test:95%)

CATEGORY	ACC		APP		COH		COM	
PARTICIPANT	+	-	+	-	+	-	+	-
Cida	Ø	Ø	1	Ø	3	Ø	Ø	Ø
Dony	Ø	Ø	2	Ø	3	Ø	2	Ø
Elisa	Ø	1	6	Ø	4	Ø	Ø	Ø
Gustavo	Ø	Ø	3	1	8	1	Ø	Ø
Henrique	Ø	1	3	1	1	1	1	Ø
Silvia	Ø	Ø	1	1	5	1	2	Ø
Thelma	Ø	Ø	11	1	6	1	4	Ø
Wilson	Ø	Ø	12	2	4	Ø	Ø	Ø
MEAN	Ø	Ø.3	4.9	Ø.8	4.3	Ø.5	1.1	Ø
SD	Ø	Ø.5	4.4	Ø.7	2.1	Ø.5	Ø.5	Ø
T-MATCHED	-1.528*		2.839**		5.351**		2.183**	

Table 7.1 (continued):

CATEGORY	INF		IS		LEV	
PARTICIPANT	+	-	+	-	+	-
Cida	2	Ø	4	Ø	Ø	Ø
Dony	2	Ø	3	Ø	5	Ø
Elisa	1	Ø	1	Ø	2	Ø
Gustavo	1	Ø	2	Ø	3	Ø
Henrique	1	Ø	Ø	1	2	Ø
Silvia	4	1	1	Ø	1	Ø
Thelma	4	Ø	2	Ø	7	Ø
Wilson	1	1	4	1	1	Ø
MEAN	2	Ø.3	2.1	Ø.3	2.6	Ø
SD	1.3	Ø.5	1.5	Ø.5	2.3	Ø
T-MATCHED	3.862**		3.416**		3.192**	

As can be seen, the positive treatment-specific changes were significantly more frequent than the negative ones for all reading process categories except accuracy. It is therefore very likely that the instruction provided contributed in a direct way towards an overall improvement in readability. The fact that the experimental treatment does not appear to have directly contributed towards improved accuracy is understandable, for the instruction provided was above all discourse-oriented. It is nevertheless unlikely that improved accuracy would have in itself helped enhance readability.

In order to find out whether the remaining post-treatment changes could have also helped enhance readability, they were submitted to the same kind of analysis as the treatment-specific changes. The results obtained are summarized in table 7.2 below.

Table 7.2: Comparison of other positive and negative changes per reading process categories (significant**, not significant* for one-tailed test:95%)

CATEGORY	ACC		APP		COH		COM	
PARTICIPANT	+	−	+	−	+	−	+	−
Cida	4	Ø	Ø	Ø	1	Ø	Ø	Ø
Dony	4	1	8	7	4	Ø	Ø	Ø
Elisa	4	2	5	Ø	3	Ø	Ø	Ø
Gustavo	1	Ø	3	1	2	Ø	Ø	Ø
Henrique	2	Ø	Ø	Ø	Ø	Ø	Ø	Ø
Silvia	4	Ø	7	1	5	Ø	1	Ø
Thelma	3	2	15	1	1	Ø	Ø	Ø
Wilson	6	1	11	4	2	Ø	1	Ø
MEAN	3.5	Ø.8	6.1	1.8	2.3	Ø	Ø.3	Ø
SD	1.5	Ø.9	5.2	2.5	1.6	Ø	Ø.5	Ø
T-MATCHED	5.227**		2.606**		3.813**		1.528*	

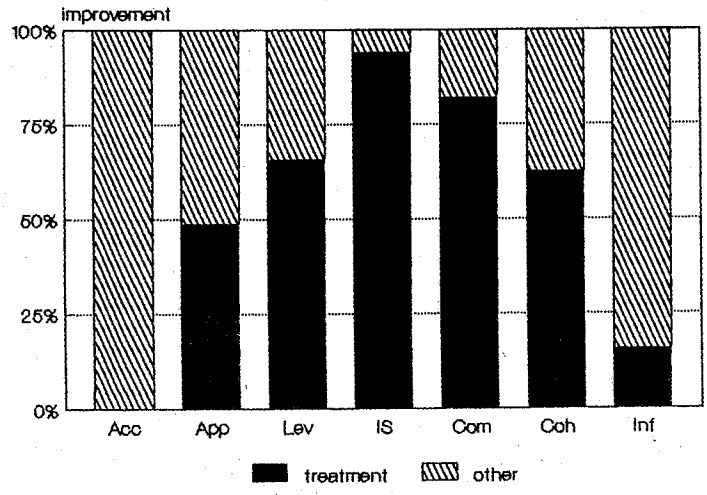
Table 7.2 (continued):

CATEGORY	INF		IS		LEV	
PARTICIPANT	+	−	+	−	+	−
Cida	5	1	1	Ø	4	Ø
Dony	6	1	Ø	Ø	1	Ø
Elisa	6	Ø	Ø	Ø	Ø	Ø
Gustavo	2	Ø	Ø	Ø	Ø	Ø
Henrique	1	Ø	Ø	Ø	Ø	Ø
Silvia	8	2	Ø	Ø	1	Ø
Thelma	4	Ø	Ø	Ø	3	Ø
Wilson	7	2	Ø	Ø	2	Ø
MEAN	4.9	Ø.8	Ø.1	Ø	1.4	Ø
SD	2.4	Ø.9	Ø.4	Ø	1.5	Ø
T-MATCHED	6.454**		1.000*		2.528**	

It can be seen that the results for the changes indirectly related to the treatment were somewhat different. Although they too seem to have contributed towards improved appropriateness, coherence, informativity and levels effect, they do not appear to have resulted in a significant improvement in commitment and information-structure. However, unlike the treatment-specific changes, the ones indirectly related to the treatment are likely to have resulted in improved accuracy.

Because the treatment-specific and the remaining post-treatment changes must have certainly contributed towards improved readability to different extents, my second concern was to investigate whether the former could have helped improve readability more than the latter. In order to compare the two, the negative treatment-specific and other changes for each reading process category were subtracted form the corresponding positive changes. The amount of improvement in readability attributable to the two types of changes is summarized in figure 7.7 below.

Figure 7.7: Improvement in readability by treatment-specific and other post-treatment changes



From the above it can be seen that only the changes indirectly related to the treatment seem to have helped enhance accuracy, and that they appear to have helped enhance informativity more than the treatment-specific changes. The two then contributed practically to the same extent towards improved appropriateness, but improved coherence, commitment, information-structure and levels effect are likely to have been predominantly due to the treatment-specific changes.

It is of course impossible to synthesize these results computationally, for the different components of the reading process under investigation carry different weights. Still, it is very probable that, when overall readability is at stake, accuracy plus informativity carry less weight than coherence, commitment, information-structure and levels effect combined. In addition to this, at this juncture it is worth recalling that, according to the results presented in chapter six, the overall improvement in levels effect, commitment, coherence and information-structure was greater than the overall improvement in informativity, which was in turn greater than the overall improvement in appropriateness and accuracy. The four categories which disclosed the greatest evidence of improvement are therefore the very same categories for which improvement is likely to have been mainly a direct result of the instruction provided; accuracy, the category which improved the least, is in turn

the only category for which improvement is unlikely to have been a direct result of the instruction. Thus apart from the fact that improvement with respect to six out of the seven categories into which readability was decomposed is likely to have been a direct outcome of the instruction provided, the probability that overall improvement in readability was caused mainly by the treatment-specific changes seems to be greater than the probability that this improvement was predominantly a result of the changes indirectly related to the pedagogy tested.

My overall conclusion regarding the first part of H4 is therefore that improved readability is a likely outcome of the instruction provided. In the next section, I will concentrate on the second part of H4, which involves finding out whether increased feedback-indpendence is also a likely outcome of the pedagogy tested.

7.5 The effects of the experimental treatment upon feedback-independence

My objective in this section is to find out whether increased feedback-independence is a likely outcome of the intruction provided during the experimental treatment. As

explained in 7.2, the most viable procedure for testing the above on the basis of the data available involves investigating whether the treatment-specific changes alone disclose evidence of increased feedback-independence, and whether they disclose greater evidence of increased feedback-independence than the changes indirectly related to the treatment.

As said in chapter six, in the interpretation of the post-treatment revisions from the perspective of feedback-independence it is necessary to access the 450 feedback-independence observations identified in the revisions, and distribute them according to those which signal that learning was to a greater or lesser extent sufficient (positive changes) and those which signal that learning, even if partial, was insufficient (negative, ineffective, unnecessary and necessary changes). Since the interpretation of feedback-independence from the perspective of reading process and writing product is only a subsequently useful means of determining what kind of feedback is still, or no longer, needed, reference to reading process and writing product is obviously dispensable when one's objective is simply to find out whether increased feedback-independence is a likely outcome of the instruction provided. In other words, in testing whether increased feedback-independence was brought about by the specific intruction provided as opposed to any type of instruction, and whether increased feedback-independence

is more likely to be a direct rather than an indirect outcome of that instruction, I am simply testing the validity of a specific pedagogical approach; assessing the kind of feedback learners might need in the future is a completely different matter inasmuch as it is about what, rather than how, to teach*.

For the present, all that is therefore necessary is to find out whether the treatment-specific FIO disclosed evidence of an increase in feedback-independence and whether the evidence they disclose is greater than the evidence of increased feedback-independence attributable to the remaining FIO. The first step taken was to distribute the 450 feedback-independence observations according to those which were treatment-specific and those which were not, and then distribute the two according to those which signal that learning was sufficient (LSO) and those which signal that learning was insufficient (LIO). The results are summarized in table 7.9, which also supplies the t-matched values for the statistical comparison of the means.

Table 7.3: Distribution of treatment-specific feedback-independence observations and other feedback-independence observations according to those which signal that learning was sufficient (LSO) and those which indicate that learning was insufficient (LIO) plus comparison of means (significant** for one-tailed test:95%)

	TREAT		OTHER	
PARTICIPANT	LSO	LIO	LSO	LIO
Cida	10	6	15	13
Dony	17	6	23	25
Elisa	14	4	18	8
Gustavo	17	8	8	6
Henrique	8	10	3	8
Silvia	14	8	26	10
Thelma	34	5	26	20
Wilson	22	8	29	21
MEAN	17	6.9	18.5	13.9
SD	8.1	2.0	9.3	7.2
T-MATCHED	3.160**		1.929**	

From the above it can be seen that for both the treatment-specific FIO and the remaining FIO the learning-sufficient observations were more frequent than the learning-insufficient observations. In addition to this, from the statistical comparison of means it appears that the two also disclosed acceptable evidence of increased feedback-independence. This is hardly surprising, for as I said in the beginning of the present chapter, given the likelihood of the experimental treatment having influenced changes with no explicit connection with the instruction provided, I did not expect that only the treatment-specific FIO would disclose acceptable evidence of increased feedback-independence.

What I did expect, however, was that the treatment-specific FIO would disclose greater evidence of increased feedback-independence. To find out whether they actually did, the treatment-specific and the other feedback-independence observation LSO:LIO ratios were compared. The results are shown in table 7.4 below.

Table 7.4: Comparison of treatment-specific and other LSO:LIO ratios (significant** for one-tailed test:95%)

PARTICIPANT	TREAT LSO:LIO	OTHER LSO:LIO
Cida	1.7	1.2
Dony	2.8	Ø.9
Elisa	3.5	2.3
Gustavo	2.1	1.3
Henrique	Ø.8	Ø.4
Silvia	1.8	2.6
Thelma	6.8	1.3
Wilson	2.8	1.4
MEAN	2.8	1.4
SD	1.8	Ø.7
T-MATCHED	2.Ø77**	

From the above it is clear that for all participants except Silvia the treatment-specific LSO:LIO ratios were greater than the LSO:LIO ratios pertaining to the remaining feedback-independence observations. In addition to this, while the treatment-specific LSO were on average 2.8 times more frequent than the LIO, the LSO indirectly related to the treatment were only 1.4 times more frequent than the corresponding LIO. The statistical comparison of the two then reveals that the treatment-specific LSO:LIO ratios

were actually significantly higher than the equivalent ratios for the remaining feedback-independence observations.

In view of the above results, it appears that increased feedback-independence is a likely outcome of the specific instruction provided during the treatment, and that the probability that increased feedback-independence was a direct outcome of the specific instruction provided during the treatment is greater than the probability that increased feedback-independence was an indirect outcome of that instruction.

My overall conclusion regarding the effects of the instruction provided is that it must have contributed towards improved readability and promoted an overall increase in feedback-independence.

Notes to chapter seven

1. The reason why it was not possible to work with a control group is explained in chapter three.

2. The idea that product-oriented instruction does not result in any major advances in readabilty is supported by Bizzel (1986), Zamel (1982), Watson (1982), Raimes (1983), Robb et al. (1986) and others.

3. Raimes (1983) contends that process-oriented feedback on earlier drafts can help L2 writers improve the readability of final drafts, but says little about what occurs in the absence of feedback, and about what is likely to occur after instruction has ceased.

4. See section on treatment materials (chapter three) for a description of the handouts, and appendix IV for copies of the handouts.

5. See table 6.1 in chapter six.

6. It is obviously important that all post-treatment changes, as opposed to only the treatment-specific changes, be considered in order to determine the right focus for future instruction. That is to say, the analysis of the feedback that is still, or no longer, needed depends on a global evaluation of what was and what was not learning-sufficient in the revisions, irrespective of the direct or indirect effects of previous instruction.