

## Chapter Four

### Results and Discussion

This chapter presents the major findings of the present study and discusses them in greater detail. First, the subjects' performance in the experimental tests is reported and analyzed with statistical instruments. Then, the results are further considered in relation to the research questions raised earlier in Chapter Three.

#### 4.1 Results

In this section, the data collected from the RC judgment, context translation, and passage-rewriting tests are statistically analyzed to answer the research questions, which concern: (1) acquisition of non-restrictive RCs; (2) use of RCs in different pragmatic/discourse contexts, including identifying, characterizing, presentative, and parenthetical; and (3) use of RCs in writing as a useful backgrounding device. Analyses of each research question incorporate performance differences between the two groups of subjects, i.e. the first- and third- graders.

##### 4.1.1 Acquisition of Non-restrictive RCs

The first research question of the present study deals with the acquisition of NRRCs by Taiwanese EFL learners of senior high school in reference to (1) the tendency to overuse RRCs; and (2) the use of NRRCs in different NP contexts. To answer this research question, the data collected from the RC judgment test (see Appendix A for further details) were scored and analyzed, in which the subjects were

to judge several RCs as either restrictive or non-restrictive on the basis of context. During the data-analysis session, elimination of a small number of test items was necessary due to the subjects' failure to complete all the items in time, to provide a brief explanation for judging a given RC as non-restrictive, or to render non-restrictive judgments solely based on the degree of referential accessibility of head NPs in context (as opposed to other irrelevant factors), as could be determined from their explanations. Accordingly, the subjects' accuracy rates in this test were obtained by dividing the total correct items by the total number of applicable items.

Table 5 summarizes the subjects' overall performance in the RC judgment test:

**Table 5: Overall accuracy rate of each RC type in the RC judgment test**

Frequency		RC type	
		Restrictive	Non-restrictive
Total applicable items		840	1332
Correct	No.	719	670
	Rate	85.60%*	50.30%*

\*p < .05

For items expected to be restrictive, 719 out of 840 were given a correct judgment, with an accuracy rate of 85.60%; for those expected to be non-restrictive, 670 out of 1332 were answered correctly, with an accuracy rate of 50.30%. Apparently, the accuracy rate of NRRCs was extremely low, as opposed to that of RRCs. To determine whether the two accuracy rates differed to a significant level, a Chi-square test was conducted, and the difference was found to be statistically significant

( $p = .000$ ). The results indicate that generally, the subjects did not yet completely acquire NRRCs, since they still encountered considerable difficulties using them correctly.

To investigate whether the subjects tended to overuse RRCs, the mean percentages of their restrictive and non-restrictive responses to items in the RC judgment test were calculated in Table 6:

**Table 6: Percentages of the subjects' restrictive and non-restrictive responses in the RC judgment test**

Total applicable items	Restrictive responses		Non-restrictive responses	
2172	1381	63.58%*	791	36.42%*

\* $p < .05$

Of a total of 2172 RCs, irrespective of RC types, 36.42% were given a non-restrictive judgment, while 63.58%, a restrictive one; through a Chi-square test, the percentage of restrictive responses was proven to be significantly higher than that of non-restrictive ones ( $p = .000$ ). These RRC-dominated responses simply indicate a strong tendency for the subjects to use RRCs persistently in most contexts, even in non-restrictive ones, as shown in Table 5, in which half of the NRRCs in the test were incorrectly given a restrictive judgment. Based on their undue use of RRCs, it can be argued that to the subjects, the distinction between RRCs and NRRCs still remained so blurred and unclear that when using RCs, they fell short of properly distinguishing between the two by overusing the more prototypical, common, familiar

one, i.e. RRCs.

Since the variable of English-learning experience may very well factor into the subjects' performance in the RC judgment test, the accuracy rates of both RC types for the first- and third-graders are presented in Table 7:

**Table 7: Group accuracy rates of each RC type in the RC judgment test**

RC type		Group		1 <sup>st</sup> graders		3 <sup>rd</sup> graders	
		Correct	Rate				
Restrictive	Correct			340	80.95%*	379	90.24%*
	Total			420		420	
Non-restrictive	Correct			312	46.92%*	358	53.67%*
	Total			665		667	

\*p < .05

The two groups performed similarly in that compared with the 80.95% and 90.24% accuracy of RRCs, their accuracy of NRRCs was relatively low, with the first-graders getting 46.92% (312 out of 665) correct and the third-graders, 53.67% (358 out of 667). As revealed by a Chi-square test, the third-graders significantly outperformed the first-graders not only in RRCs (p= .000) but also in NRRCs (p= 0.014). The results indicate that with more years of learning, the third-graders did make some progress in properly using the more marked form of RCs, though their accuracy of NRRCs was still very low.

In view of the fact that there are different contexts which particularly call for the use of NRRCs, it is necessary to investigate whether performance differences exist among these contexts in the use of NRRCs. To address the issue, the contexts of all

the NRRCs in the RC judgment test were categorized into the following eight types according to the kind of referentially accessible NPs to which their antecedents pertained: (1) linguistically definite NPs; (2) situationally definite NPs; (3) narrowly specified NPs; (4) whole-referring NPs; (5) generic NPs; (6) proper NPs; (7) personal pronouns; and (8) one-of-a-kind NPs. Table 8 gives the overall accuracy rates of these non-restrictive contexts in the RC judgment test:

**Table 8: Overall accuracy rate of each non-restrictive context in the RC judgment test**

Context*		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Frequency							
Total applicable items		107	108	221	118	206	235	114	223
Correct	No.	19	21	44	18	112	175	90	191
	Rate	17.76%	19.44%	19.91%	15.25%	54.37%	74.47%	78.95%	85.65%

\*(1): linguistically definite NPs

(2): situationally definite NPs

(3): narrowly specified NPs

(4): whole-referring NPs

(5): generic NPs

(6): proper NPs

(7): personal pronouns

(8): one-of-a-kind NPs

As displayed in Table 8, large discrepancies existed among the eight non-restrictive contexts, with the accuracy rates ranging from 15.25% to 85.65%. Ranking highest in accuracy was “one-of-a-kind NPs” (85.65%), followed by “personal pronouns” (78.95%) and “proper NPs” (74.47%). Accuracy began to decrease by about 20% in “generic NPs” (54.37%), and then dropped drastically to under 20% in “narrowly specified NPs” (19.91%), “situationally definite NP” (19.44%), “linguistically definite

NPs” (17.76%), and “whole-referring NPs” (15.25%). From these figures, it is clear that the subjects’ performance in using NRRCs indeed varied from context to context.

The performance disparities among different non-restrictive contexts basically reflect an inadequate understanding on the part of the subjects of when to use NRRCs, in the sense that they applied their use of NRRCs only to a few, not all, referentially accessible NPs. To be more precise, they tended to limit their use of NRRCs to NPs whose referential accessibility stemmed from their lexical connotation of “uniqueness,” or “being the only one” (e.g. one-of-a-kind NPs, personal pronouns, and proper NPs), to the virtual exclusion of those referentially accessible due to such non-lexical factors as prior discourse (linguistic definite NPs), speech situation (situationally definite NPs), additional qualifications (narrowly specified NPs), entire-class referring (whole-referring NPs), and particular-class referring (generic NPs). Table 9 makes a comparison of accuracy rates between the two groups of referentially accessible NPs, with the former termed as “lexically accessible NPs,” and the latter, “non-lexically accessible NPs”:

**Table 9: Comparison of accuracy rates between “lexically accessible NPs” and “non-lexically accessible NPs” in the RC judgment test**

Context		Lexically accessible NPs	Non-lexically accessible NPs
		Frequency	Frequency
Total applicable items		572	760
Correct	No.	456	231
	Rate	79.72%*	30.39%*

\* $p < .05$

As confirmed by a Chi-square test, the subjects' performance in using NRRCs significantly differed between the two NP contexts ( $p = .000$ ). In lexically accessible NP contexts, the subjects were usually able to use NRRCs in preference to RRCs, with the accuracy rate reaching as high as 79.72%, whereas in non-lexically accessible NP contexts, their use of NRRCs was sporadic, which yielded an extremely low accuracy of 30.39%.

A close look at the subjects' explanations for judging a given RC as non-restrictive further reveals that their propensity to confine the use of NRRCs to lexically accessible NPs has something to do with their associating NRRCs with uniqueness-referring NPs. As found in their explanations in the test, the subjects' non-restrictive judgments were often based on whether head NPs were one-of-a-kind NPs or proper NPs, i.e. whether head NPs themselves connoted the sense of being "the only one." The finding bears the implication that for the subjects, the overriding factor that determined the employment of NRRCs was not so much the referential status of head NPs (i.e. whether their referents are readily established in context) as the existence of specific head NPs, including personal pronouns, proper NPs, and one-of-a-kind NPs. Given their association of NRRCs with uniqueness-referring, rather than referential accessibility, the subjects' inability to properly use NRRCs with referentially accessible NPs, except for those with the sense

of “uniqueness,” was to be expected.

As regards performance differences between groups, Table 10 provides the accuracy rates of the eight non-restrictive contexts for the first- and third-graders:

**Table 10: Group accuracy rates of each non-restrictive context in the RC judgment test**

Context*		Group		1 <sup>st</sup> graders		3 <sup>rd</sup> graders		
		Correct	Rate					
(1)	Correct	8	15.09%	25.59%	11	20.37%	35.17%	
	Total	53			54			
(2)	Correct	14	26.42%		7	12.73%		
	Total	53			55			
(3)	Correct	24	22.02%		20	17.86%		
	Total	109			112			
(4)	Correct	8	13.79%		10	16.67%		
	Total	58			60			
(5)	Correct	43	40.57%	69	69.00%			
	Total	106		100		*		
(6)	Correct	83	70.34%	92	78.63%			
	Total	118		117				
(7)	Correct	41	73.21%	49	84.48%			
	Total	56		58				
(8)	Correct	91	81.25%	100	90.09%			
	Total	112		111				

\*p < .05

\*(1): linguistically definite NPs

(2): situationally definite NPs

(3): narrowly specified NPs

(4): whole-referring NPs

(5): generic NPs

(6): proper NPs

(7): personal pronouns

(8): one-of-a-kind NPs

Generally speaking, the first- and third-graders performed alike. Both groups got the highest accuracy in lexically accessible NP contexts; the accuracy rates of “one-of-a-kind NPs,” “personal pronouns,” and “proper NPs” were 81.25%, 73.21%,



and 70.34% for the first-graders, and 90.09%, 84.48%, and 78.63% for the third-graders. In non-lexically accessible NP contexts, the accuracy rates were all well under 27% for both groups, apart from that of “generic NPs,” which was 40.57% and 69.00% for the first- and third-graders, respectively. It may seem that the third-graders outperformed the first-graders in all the non-restrictive contexts except “situationally definite NPs” and “narrowly specified NPs.” However, statistical analysis by a Chi-square test revealed a significant group difference only in “generic NPs” ( $p = .000$ ), thereby suggesting that overall, the performance by both groups was equally satisfactory in lexically accessible NP contexts, and equally disappointing in non-lexically accessible NP contexts, with the exception of “generic NPs,” where the third-graders performed significantly better.

To sum up, the above analyses of the data in the RC judgment test suggest that even at the senior high school stage, the subjects, by and large, were far from having completely acquired NRRCs. On the one hand, the subjects were observed to use RRCs consistently in most contexts, even in those where NRRCs should be preferred. In the light of their strong tendency to overuse RRCs, it seems that the subjects may have entirely ignored or not fully grasped the difference between RRCs and NRRCs, thereby failing to make a good distinction between the two when using RCs. On the other hand, the subjects exhibited great performance differences among various

referentially accessible NP contexts in their use of NRRCs, which essentially reflects their incomplete knowledge of when to use NRRCs. More specifically, they were able to properly employ NRRCs with NPs whose lexical sense connoted “uniqueness,” including personal pronouns, proper NPs, and one-of-a-kind NPs, but showed a total disregard for other referentially accessible NPs, such as linguistically or situationally definite NPs, narrowly specified NPs, whole-referring NPs, and generic NPs. As attested in the subjects’ explanations for their non-restrictive judgments, their propensity to limit their use of NRRCs to lexically accessible NPs in particular appeared to be the direct result of their relating NRRCs with uniqueness-referring, instead of referential accessibility. These two observed phenomena i.e. the tendency to overuse RRCs in any given context and the propensity to use NRRCs only with lexically accessible NPs, both contributed to the subjects’ poor performance in correctly employing NRRCs in the RC judgment test.

#### **4.1.2 Use of RCs in Different Pragmatic/Discourse Contexts – Identifying, Characterizing, Presentative, and Parenthetical**

The second research question focuses on the extent to which Taiwanese EFL learners of senior high school are able to employ RCs appropriately in different pragmatic/discourse contexts to (1) identify a referent as a known entity; (2) characterize a referent as a particular type; (3) present a topically important referent into the discourse; and (4) interpolate parenthetical assertions about a referent. To

answer this research question, the data gathered from the context translation test (see Appendix B for further details)—in which the subjects were asked to provide appropriate English equivalents for several Chinese sentences in the four contexts aforementioned—were closely examined to determine the subjects’ preferred structure in English for each context. In data analysis, frequencies of RC use in each context were tallied and the main criterion for identifying RC occurrences was this: all errors related to RC formation were dismissed, except for erroneous deletion of relative markers, which was considered an instance of the non-use of RCs as it could be a result of calquing, i.e. the act of translating Chinese directly and literally into English.

Since the main concern of the second research question is the functional aspects of RCs, the subjects’ grammatical errors in RC formation were not further analyzed but only identified for reference. Table 11 lists occurrences of five common types of RC-related errors committed in the context translation test:

**Table 11: Occurrences of RC-related errors in the context translation test**

Type of RC errors \ Group	1 <sup>st</sup> graders	3 <sup>rd</sup> graders	Overall
(1) Wrong placement of head NPs in relation to their RCs	18	7	25
(2) Wrong deletion of head NPs	19	7	26
(3) Wrong deletion of relative markers	6	7	13
(4) Wrong choice of relative markers	10	6	16
(5) Wrong use of resumptive pronouns	5	3	8
Total number of RC errors	58	30	88

Although the first-graders committed nearly two times more RC errors than did the

third-graders, the number of RC errors by each group can be regarded as quite small, suggesting that the majority of the subjects already had a good grasp of the structural complexities of RCs.

Turning now to the subjects' performance in the pragmatic/discourse functions of RCs, Table 12 describes the mean percentage of RC use for each context in the context translation test:

**Table 12: Overall frequency rate of RC use for each context in the context translation test**

Context Frequency		Identifying	Characterizing*	Presentative	Parenthetical*
		Total applicable items	240	240	240
RC use	No.	230	220	117	139
	Rate	95.83%	91.67%	48.75%	57.92%

\*The test included three question items for this context, i.e. items 5, 9, and 10. Nevertheless, in calculating the frequency of RC use for “characterizing context,” item 10 was excluded, because the majority of the subjects somehow misinterpreted item 10 “會在公共場所講話大聲的人很令人討厭” to be “在公共場所講話大聲很令人討厭,” producing sentences with dummy *it* like *It is very annoying to talk loudly in public places, It is very annoying that people talk loudly in public places, or Talking loudly in public places is very annoying*, instead of the target translation *People who talk loudly in public places are very annoying*. Had item 10 been included, the overall frequency rate of RC use for “characterizing context” would have been much lower (80.83%), which could lead to the wrong conclusion that the subjects seemed to use less RCs in “characterizing context” than in “identifying context.”

\*Strictly speaking, in “parenthetical context,” the RC in the target translation should be non-restrictive, i.e. without any comma separating the head NP and the relative marker. Nonetheless, since the main focus was on whether the subjects could use RCs accordingly to add extra information, in determining the RC frequency for “parenthetical context,” the distinction between restrictive and non-restrictive RCs was disregarded.

Apparently, in “identifying context” and “characterizing context,” RCs were used with high frequency, almost 100% of the time, while in “presentative context” and

“parenthetical context,” occurrences of RCs were sporadic, with only 48.75% and 57.92% frequency, respectively. It should be noted that the RC frequencies in presentative and parenthetical contexts could have been even lower if there had been more distracter items (i.e. items whose target translation involved the use of non-RC structures). Due to time constraints, the context translation test included only two distracters (items 6 and 8); therefore, the number of RC occurrences in presentative and parenthetical contexts may have been raised as a consequence of the shadow effect, in which the small number of distracters made the subjects aware that it was RCs that were being targeted, thus causing them to consciously employ more RCs throughout the test. Despite this shadow effect, the RC frequency rates in “presentative context” and “parenthetical context” still remained distinctly low.

Put under the scrutiny of a Chi-square test, the RC frequency rates of the four contexts were shown to differ from one another to a marked degree. To pinpoint where significant differences lay, a posterior comparison of RC frequencies among the four contexts was carried out, as illustrated in Table 13:

**Table 13: Posterior comparison of frequency rates of RC use among the four contexts in the context translation test**

Context \ Context	Identifying (95.83%)	Characterizing (91.67%)	Presentative (48.75%)	Parenthetical (57.92%)
Identifying (95.83%)			*	*
Characterizing (91.67%)			*	*
Presentative (48.75%)				

\*p < .05

As can be seen in Table 13, significant differences in RC use were found between “identifying” and either “presentative” or “parenthetical,” and between “characterizing” and either “presentative” or “parenthetical.” These results indicate that although committing very few gross grammatical errors in RC formation, as previously demonstrated in Table 11, the subjects, in general, failed to acquire a full understanding of the pragmatic/discourse functions of RCs. That is, the distribution of their RC use usually concentrated on the functions of furnishing a referent with information of identification or characterization, and seldom extended to the less prototypical functions of presenting a topical referent into the discourse or inserting parenthetical assertions.

Regarding performance differences between groups, Table 14 displays the frequency rates of RC use for each context by the first- and third-graders:

**Table 14: Group frequency rates of RC use for each context in the context translation test**

Context \ Group		1 <sup>st</sup> graders		3 <sup>rd</sup> graders	
		RC use	Rate	RC use	Rate
Identifying	RC use	112	93.33%	118	98.33%
	Total	120		120	
Characterizing	RC use	100	83.33%	110	91.67%
	Total	120		120	
Presentative	RC use	54	45.00%	63	52.50%
	Total	120		120	
Parenthetical	RC use	65	54.17%	74	61.67%
	Total	120		120	

From Table 14, we can see that for both groups, it was in “presentative context” and “parenthetical context” that RCs were used the least frequently, with their frequency rates ranging from 45.00% to 61.67%. The group frequency rates for each context were submitted to a Chi-square test, and no significant difference was found between the two levels for each context ( $p > .05$ ). These results indicate that when it came to the more sophisticated use of RCs in introducing a thematically important referent or interpolating additional information, the third-graders, despite more years of exposure to RCs in their English study, still performed as poorly as did the first-graders.

To investigate what other structure the subjects seemed to prefer in presentative and parenthetical contexts, their answers in items 1, 2, and 3 were further examined. It was found that with relevant contextual information given, many subjects still thought of independent clauses, the same structure used in Chinese, as appropriate structural equivalents in English for presentative and parenthetical contexts. For example, in questions 1 and 3, the target translation preferably involved the use of presentative and parenthetical RCs, respectively, as in (77) and (78):

(77) Question 1a: There was a king who loved his daughter very much.

(78) Question 3: My favorite animal is the elephant, which is considered the biggest land animal in the world

However, the translation of these questions by the subjects often involved the use of

two independent clauses strung together with either the coordinator *and* or a comma, as in (79) and (80):

(79) There was a king and, he loved his daughter very much.

(80) My favorite animal is the elephant and, it is considered the biggest land animal in the world.

Table 15 presents occurrences of relative and independent clauses in presentive and parenthetical contexts in percentile terms:

**Table 15: Percentages of relative clauses and independent clauses in presentive and parenthetical contexts in the context translation test**

Context \ Group		1 <sup>st</sup> graders (Total = 120)		3 <sup>rd</sup> graders (Total = 120)		Overall (Total = 240)	
		RCs	%	RCs	%	RCs	%
Presentative	RCs	54	45.00%	63	52.50%	117	48.75%
	ICs*	66	55.00%	57	47.50%	123	51.25%
Parenthetical	RCs	65	54.17%	74	61.67%	139	57.92%
	ICs	55	45.83%	46	38.33%	101	42.08%

\*ICs: independent clauses

From Table 15, it appears that in either context, the subjects used relative and independent clauses with nearly the same frequency. However, the frequency of their RC use should be interpreted with caution, because it may have been increased as a result of the shadow effect, an experimental weakness mentioned previously, in which insufficient distracters caused the subjects to consciously use more RCs in their translation. Regardless of such a shadow effect, the recurring use of independent



clauses underlines the very fact that in the subjects' repertoire of English structure for presenting a topical referent or supplying extra information, the simple construction of independent clauses to a certain extent remained as a common alternative to the complex one of RCs.

Lastly, to determine whether there was a tendency for the subjects to misuse the definite article *the* with characterizing RCs, whose antecedents are normally indefinite, all the characterizing RCs produced by the subjects in questions 5, 9, and 10 were categorized into two types according to the kind of article used with the antecedent, i.e. definite or indefinite. Table 16 shows the percentages of characterizing RCs with the indefinite article and those with the definite in the context translation test:

**Table 16: Percentages of characterizing RCs with the indefinite article and those with the definite article in the context translation test**

Context \ Group			1 <sup>st</sup> graders (Total = 134)		3 <sup>rd</sup> graders (Total = 157)		Overall (Total = 291)	
Characterizing	IA*	%	76	56.72%	103	65.61%	179	61.51%
	DA*	%	42	31.34%	49	31.21%	91	31.27%
	NA*	%	16	11.94%	5	3.18%	21	7.22%

\*IA: indefinite article, i.e. *a(n)* (with singular countable head NPs) or  $\emptyset$  (with plural countable or uncountable head NPs)

\*DA: definite article, i.e. *the*.

\*NA: no article present due to inappropriate deletion of either articles or head NPs.

For the first-graders, 134 instances of characterizing RCs were found; 56.72% were preceded by the indefinite article and 31.34%, the definite. For the third-graders, 157 instances of characterizing RCs were identified; 65.61% were headed by the

indefinite article and 31.21%, the definite. Though the percentage of characterizing RCs with the definite article did not appear significant for both groups, it revealed a certain tendency on the part of the subjects, across groups, to misuse the definite article with RCs that were mainly to characterize a new referent (i.e. an indefinite head) rather than identify a known referent (i.e. a definite head).

To recapitulate, the results of the context translation test point to the fact that showing a good command of RC form, the subjects did not necessarily gain complete mastery of RC function. As revealed in their RC performance in the four pragmatic/discourse contexts, the subjects' use of RCs was mainly for tracking down a referent as either a familiar entity (i.e. identifying) or particular type (i.e. characterizing); rarely did they make good use of RCs as a topic-presenting device or an information-adding interpolator. In presentative and parenthetical contexts, they were inclined to replace RCs with independent clauses. Furthermore, it was found that the subjects seemed to have a certain tendency to misuse the definite article with RCs in a characterizing context.

#### **4.1.3 Use of RCs in Writing as a Useful Backgrounding Device**

The third research question inquiries into the extent to which Taiwanese EFL learners of senior high school are capable of utilizing RCs appropriately in writing to background supportive materials. To answer this research question, the data

garnered from the passage-rewriting test (see Appendix C for further details)—in which the subjects were to rewrite a descriptive passage in a more coherent way by rearranging its idea units with proper conjunctions—were scrutinized with respect to the subjects’ repertoire of clause-linking strategies in a piece of descriptive writing. In data analysis, conjunctions used for each pair of sentences to be combined were identified, with frequencies of their use tallied; mechanical errors, such as spelling, tense, and agreement, were dismissed and so were RC-related errors.

Table 17 on page 92 summarizes the subjects’ performance in the passage-rewriting test. Overall, the subjects were quite competent at making good use of RCs to package background information in their rewriting: for each pair of sentences in the passage, more than half of the subjects (56.67% to 80.83%) employed relative markers, like *who*, *which*, *that*, to subordinate the second one, which often carries amplifying information of description for the ongoing discourse, to the first as an RC. Take for example the pair, sentences 12 and 13, which the majority of the subjects rewrote as (81) below:

- (81) { They also feel criticized by other people.  
Other people think that all women should stay at home with their children.

→ They also feel criticized by other people who think that all women should stay at home with their children.

**Table 17: The subjects' performance in the passage-rewriting test**

Pair of sentences		Group		1 <sup>st</sup> graders (Total = 60)		3 <sup>rd</sup> graders (Total = 60)		Overall (Total = 120)	
			%		%		%		%
Ss1-2	<i>who/which/that</i>	%	45	75.00 %	52	86.67 %	97	80.83 %	
	<i>and</i>	%	5	8.33 %	0	0.00 %	5	4.17 %	
	<i>because</i>	%	9	15.00 %	8	13.33 %	17	14.17 %	
	No conjunction	%	1	1.67 %	0	0.00 %	1	0.83 %	
Ss4-5	<i>who/which/that</i>	%	32	53.33 %	39	65.00 %	71	59.17 %	
	<i>and</i>	%	12	20.00 %	7	11.67 %	19	15.83 %	
	<i>because</i>	%	8	13.33 %	8	13.33 %	16	13.33 %	
	No conjunction	%	8	13.33 %	6	10.00 %	14	11.67 %	
Ss7-8	<i>who/which/that</i>	%	33	55.00 %	50	83.33 %	83	69.17 %	
	<i>and</i>	%	6	10.00 %	4	6.67 %	10	8.33 %	
	<i>because</i>	%	17	28.33 %	6	10.00 %	23	19.17 %	
	No conjunction	%	4	6.67 %	0	0.00 %	4	3.33 %	
Ss9-10	<i>who/which/that</i>	%	30	50.00 %	38	66.33 %	68	56.67 %	
	<i>and</i>	%	12	20.00 %	14	23.33 %	26	21.67 %	
	<i>because</i>	%	1	1.67 %	0	0.00 %	1	0.83 %	
	No conjunction*	%	17	28.33 %	8	13.33 %	25	20.83 %	
Ss12-13	<i>who/which/that</i>	%	31	51.67 %	40	66.67 %	71	59.17 %	
	<i>and</i>	%	7	11.67 %	5	8.33 %	12	10.00 %	
	<i>because</i>	%	16	26.67 %	11	18.33 %	27	22.50 %	
	No conjunction	%	6	10.00 %	4	6.67 %	10	8.33 %	
Ss14-15	<i>who/which/that</i>	%	30	50.00 %	44	73.33 %	74	61.67 %	
	<i>and</i>	%	10	16.67 %	5	8.33 %	15	12.50 %	
	<i>because</i>	%	0	0.00 %	0	0.00 %	0	0.00 %	
	No conjunction*	%	20	33.33 %	11	18.33 %	31	25.83 %	
Ss17-18	<i>who/which/that</i>	%	32	53.33 %	47	78.33 %	79	65.83 %	
	<i>and</i>	%	7	11.67 %	5	8.33 %	12	10.00 %	
	<i>because</i>	%	19	31.67 %	8	13.33 %	27	22.50 %	
	No conjunction	%	2	3.33 %	0	0.00 %	2	1.67 %	
Ss19-20	<i>who/which/that</i>	%	32	53.33 %	37	61.67 %	69	57.50 %	
	<i>and</i>	%	6	10.00 %	5	8.33 %	11	9.17 %	
	<i>because</i>	%	0	0.00 %	0	0.00 %	0	0.00 %	
	No conjunction*	%	22	36.67 %	18	30.00 %	40	33.33 %	

\*The reason why a great number of subjects failed to use conjunctions in these pairs of sentences is that they tended to rewrite the sentences as *More and more people share this attitude toward women today* (for sentences 9 and 10); *This belief makes some women feel a lack of balance in their lives* (for sentences 14 and 15); and *These three examples show how it can be difficult for women to achieve balance between jobs and family responsibilities* (for sentences 19 and 20).

When examined across groups, the subjects' performance in using RCs to background information exhibited some differences: the third-graders apparently outstripped the first-graders in the performance by 8% to 28%.

Table 17 further reveals a certain tendency by the subjects to use independent clauses or adverbial clauses as alternative structures for RCs to code the same information: for each pair of sentences, a small number of subjects, across groups (1.67% to 31.67% for the first-graders; and 6.67% to 23.33% for the third-graders), used *and* or *because* instead to have the second one coordinated with or subordinated to the first as an independent or adverbial clause, as can be illustrated in (82), an alternative for some subjects to (81) in combining sentences 12 and 13:

(82) They also feel criticized by other people and / because other people (they) think that all women should stay at home with their children.

In summary, based on the quantitative and qualitative analysis of their performance in the passage-rewriting test, the subjects can largely be said to have gotten to grips with the use of RCs in discourse grounding. The extent of their RC use in writing, nevertheless, is often contingent not only upon their years of learning but also upon their tendency to employ either independent *and*-clauses or adverbial

*because*-clauses in place of RCs for packaging the same piece of information.

## **4.2 Discussion**

In this section, the results reported in the three elicitation tests are further discussed. For each research question under discussion, a comprehensive review of the major findings is offered in terms of plausible explanations for and possible implications of the observed phenomena.

### **4.2.1 Acquisition of Non-restrictive RCs**

The results of the RC judgment test highlight two major problems interfering with the subjects' use of NRRCs: (1) the tendency to overuse RRCs in any given context; and (2) the tendency to employ NRRCs only with lexically accessible NPs (i.e. uniqueness-referring NPs) and disregard other referentially accessible NPs. These problems respectively point to inadequacies in the subjects' acquisition of NRRCs: (1) a failure to draw a clear distinction between RRCs and NRRCs in their mental grammar of English RCs; and (2) a failure to gain a full understanding of when to use NRRCs. Their "flawed" acquisition of NRRCs is explicable in terms of L1 transfer, cognitive complexity, input frequency, and instructional effects.

First of all, the subjects' acquisition of NRRCs may have been affected by the negative transfer of their mother tongue, Chinese. In English, RCs are further categorized into two subtypes according to whether they delimit the domain of

reference of their antecedents (i.e. restrictive RCs) or simply provide additional information about them (i.e. non-restrictive RCs). In Chinese, nevertheless, such differentiation does not exist in that the main and sole function of Chinese RCs is to identify or define their head NPs, that is, Chinese RCs are purely restrictive. In the light of this functional difference in RCs between the two languages, it can be posited that the subjects may have unconsciously transferred the exclusively restrictive nature of RCs in Chinese into their mental grammar of English RCs, becoming oblivious of the dichotomous RC distinction maintained in English. Under the influence of their native language, the subjects seldom sought to further distinguish between RRCs and NRRCs when using English RCs, thereby showing a tendency to overuse RRCs in nearly all contexts.

As valid and important a factor in the subjects' acquisition of NRRCs is the cognitive complexity inherent in the target structure itself—more specifically, their failed acquisition of NRRCs is attributable to their inability to fully grasp the context-based concept of referential accessibility, closely related with the use of NRRCs. Contrasting with their restrictive counterparts in the referential status of the antecedent, NRRCs are used only when the referents of their heads are well established in context. Apparently, in order to acquire NRRCs, one needs to well understand the notion of referential accessibility. This, however, can be a

cognitively difficult task for learners, most of whom are so accustomed to learning English at a sentential level that they may not be able to discern how context, be it lexical, linguistic, or situational, renders a given NP identifiable and prefers NRRCs over RRCs. It is likely that for lack of a deep appreciation of the notion of referential accessibility, the subjects still had a hard time establishing a clear distinction between RRCs and NRRCs in their mental grammar of English RCs, and thus ended up mixing up the two by overusing the prototypical, unmarked type of RCs, i.e. RRCs.

Furthermore, the subjects' unsatisfactory acquisition of NRRCs may be accounted for by their having less exposure to this particular construction. Since instructional materials are often the main source of L2 input for learners, to explore the relationship between acquisition of NRRCs and input frequency, English textbooks published by Far East (Books 1-6)<sup>1</sup>, one of the versions used by senior high schools in Taiwan, were examined to calculate frequencies of RRCs and NRRCs in reading texts. Table 18 shows occurrences of both RC types in the six textbooks:

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<sup>1</sup> The rationale for selecting the Far East version in particular for the examination is based on its wide use not only by the subjects' schools (i.e. National Chia-Yi Girl's Senior High School, National Hu-Wei Senior High School, and Taipei Municipal Xisong Senior High School) but also by the vast majority of senior high schools in Taiwan.



**Table 18: Frequency counts of RRCs and NRRCs in Far East English textbooks of senior high school**

Type \ Book	Book1	Book2	Book3	Book4	Book5	Book6	Books1-6
Restrictive	45	44	58	74	70	117	408
Non-restrictive	7	6	6	20	23	23	85
Total RCs*	52	50	64	94	93	140	493

\* RCs counted here included fully-fledged RCs (with relative pronouns and adverbs), reduced RCs (with participial phrases), headless RCs (with such relatives as *what*, *whoever*), and cleft RCs; occurrences of non-finite RCs (with *to*-phrases) were dismissed.

As can be seen from Table 18, throughout the three years of senior high school, RCs to which learners are exposed are predominantly restrictive, with 408 occurrences observed, as opposed to 85 occurrences of non-restrictive ones. It may follow from the low frequency of NRRC input in text<sup>2</sup> that the total amount of NRRC input received at the senior high school stage still was not enough for the subjects to readily consolidate and internalize this “idiosyncratic” structure into their abuilding mental grammar of English RCs. Accordingly, the subjects were prone to underuse NRRCs, with which they were less familiar, and overuse RRCs, with which they were more acquainted. Moreover, this insufficient exposure to NRRCs in text may partly explain why the accuracy of NRRCs obtained by the third-graders in the present study still remained very low (only 53.67%, as indicated in Table 7), though proven

<sup>2</sup> The result is basically in accordance with the theory of markedness. NRRCs are, by their very nature, a marked structure, and with this markedness comes the implication that not only is this construction more difficult to acquire due to its cognitive complexity but it is also less frequent in the discourse distribution.

significantly better than that of the first-graders.

Finally, instructional effects play a role in the subjects' acquisition of NRRCs. In view of potential interference from L1, cognitive complexity of referential accessibility, and low frequency of NRRC input in text, it becomes all the more important for classroom instruction to underscore the cross-linguistic difference in NRRCs between learners' mother tongue and English, assist learners in better comprehending the concept of referential accessibility, and enhance the saliency of features of NRRCs in textual input. To investigate instructional effects, instructional materials for English, including textbooks of junior and senior high school and grammar books available on the market, were scrutinized with regard to their accounts of NRRCs, examples for illustrating how NRRCs are used, and exercises for practicing NRRCs. The following are some observations made from a survey of instructional materials in terms of their presentation of English NRRCs.

On the whole, instructional materials have overlooked usage of NRRCs. Most material writers tend to devote much of the text to expounding how to construct RRCs with various relative markers, such as relative pronouns (including simple, like *which*, *who* and compound, like *what*, *whoever*), relative adverbs, and quasi-relative pronouns (like *as*, *than*, *but*). Assuming similarities between RRCs and NRRCs in their formation with relative markers, they are inclined to think it unnecessary to

further explicate usage of NRRCs. Under such circumstances, the presentation of NRRCs is often neglected and treated as a dispensable, fragmented adjunct to that of RRCs, merely cramming learners with supplementary *facts* about how RRCs contrast with NRRCs in form and meaning. Little information is provided for learners on how to use NRRCs correctly and appropriately in context.

In addition, instructional materials rarely, if ever, make an attempt to raise learners' awareness of the close relationship between NRRCs and referential accessibility, i.e. the fact that it is essentially the referential status of head NPs, not other factors, that determines the use or nonuse of NRRCs.

For one thing, instructional materials more often than not present NRRCs merely with itemized prescriptive rules, common among which are those listed in (83):

(83) Rule 1: There should be commas or other punctuations like parentheses, dashes, setting off the main clause from the NRRC.

Rule 2: The relative marker *that* cannot be used in an NRRC.

Rule 3: Relative pronouns in the object position of an NRRC cannot further be deleted.

Rule 4: When the antecedent is a personal pronoun, proper NP, or one-of-a-kind NP, an NRRC should be used to modify it.

All these prescriptive rules do little in making learners acutely aware of the correlation between NRRCs and referential accessibility. Rules 1-3 focus learners' attention solely on syntactic restrictions with the formation of NRRCs. While rule 4 identifies for learners certain NP contexts for using NRRCs, it does not offer any explanation for why NRRCs should be used in these NP contexts. When no account

is given of the fact that it is essentially the referential accessibility of these NPs that obligates the use of NRRCs, rule 4 could give learners the impression that the use of NRRCs is decided solely upon the presence of such uniqueness-referring NPs as personal pronouns, proper NPs, one-of-a-kind NPs, rather than the referential status of NPs.

For another, in introducing NRRCs, instructional materials tend to rely heavily on context-reduced examples with both restrictive and non-restrictive interpretations, as in (84):

- (84) a. Sam has a daughter who studies in college. (Meaning: Sam has more than one daughter, and one of them studies in college)
- b. Sam has a daughter, who studies in college. (Meaning: Sam has only one daughter, and she studies in college)

Although examples with parallel sentences like (84) can readily be utilized to make a direct comparison of RRCs and NRRCs in their meanings, they to a great extent desensitize learners to the relationship between NRRCs and referential accessibility in that there is not enough context to accentuate the referential status of the antecedent in question. These decontextualized examples may very well mislead learners into thinking that NRRCs are used only with NPs characterized by the connotation of “being the only one.”

As for exercises for NRRCs, instructional materials, in the main, fail to design context-embedded exercises to help learners practice using NRRCs according to whether their antecedents are referentially accessible in context. This is because the prevalent exercises for NRRCs are sentence-combining, which tends to be context-reduced, as exemplified in (85):

- (85) { The storm caused a lot of damage.  
      { Nobody had expected the storm.

(Ans.: The storm, which nobody had expected, caused a lot of damage)

At best, exercises like (85) merely acquaint learners with how to combine two sentences into an NRRC using appropriate relative markers. They fall short of equipping learners with knowledge of how to use NRRCs in accordance with context, as they do not furnish any contextual clues for learners to perceive the referential accessibility of a given NP and see a need to use an NRRC in preference to an RRC. To put it another way, instead of sensitizing learners to the relationship between NRRCs and referential accessibility, sentence-combining only serves to familiarize them with those prescriptive rules stated in (83), particularly rules 1-3, regarding structural aspects of NRRCs.

The above inadequacies in the presentation of NRRCs by instructional materials—neglect of usage of NRRCs, failure to highlight the relationship between

NRRCs and referential accessibility, and lack of contextualized exercises for using NRRCs with reference to context—may partly be responsible not only for the subjects’ great confusion between RRCs and NRRCs in their mental grammar of English RCs, evinced by a tendency to overuse the former, but also for their insufficient knowledge of when to employ NRRCs, evinced by a propensity to use NRRCs only with uniqueness-referring NPs to the exclusion of other referentially accessible NPs.

What is more, instructional effects may even account for why generic NPs were the only non-lexically accessible NP context that displayed a significant performance difference between the first- and third-graders, as indicated in Table 10. With more years of exposure to instruction, the third-graders may have been more familiar with the prescriptive rule that emphasizes the co-occurrence of NRRCs with uniqueness-referring NPs (e.g. personal pronouns, proper NPs, and one-of-a-kind NPs), and thus more able to generalize the use of NRRCs by analogy to generic NPs, which share a similarity with uniqueness-referring NPs in their semantic meaning of “particularness”: the former refers to particular classes or categories, and the latter, particular entities.

#### **4.2.2 Use of RCs in Different Pragmatic/Discourse Contexts – Identifying, Characterizing, Presentative, and Parenthetical**

In the context translation test, it was observed that the subjects’ employment of

RCs were more bound up with the prototypical functions of identifying or characterizing a referent, and less associated with the atypical functions of presenting a topic or interpolating parenthetical information. The subjects' rare use of RCs for the latter two functions is understandable, considering that generally, EFL instruction makes few attempts to well acquaint learners with such advanced RC uses.

On the one hand, learners may not be familiar with the presentative use of RCs, given that the teaching of RCs is often taken up at a sentential level, with little discourse context to help learners attend to such use. With great emphasis on form, traditional grammar teaching commonly presents language in isolated, decontextulized sentences. Despite its merit in helping learners readily discern structural features in RC formation, such a sentence-based approach to grammar is not conducive to shedding light on the presentative use of RCs, a function best understood only within connected stretches of discourse. As an illustration of this point, consider (86):

(86) Each of us can imagine difficulties that could result from the introduction of a cloned child.

To learners, it would seem that the only function that the underlined RC performs is to characterize the indefinite head NP *difficulties* with new information; there is nothing “presentative” about the RC. Nonetheless, when the same RC is analyzed in larger discourse, as in text (87) below, the discourse function of RCs is made more explicit

and easier for learners to perceive:

(87) Each of us can imagine difficulties that could result from the introduction of a cloned child. For example, it would be very difficult for the parent that was cloned not to have specific ideas about how the “copy” (the cloned child) should act and develop. Seeing their own image would make it awfully difficult not to impose expectation on their cloned child. Conversely, how would the cloned teenager react to the parent, seeing their physical future ahead?

--Ian Wilmu, “To Clone or not Clone: Implications of Human Cloning”  
(from Chen, 2004: 24)

From text (87), it is clear that besides characterizing, the underlined RC also serves to present the new NP *difficulties* into the discourse as a persistent and important referent.

Occurring in the beginning position of a discourse unit, the RC helps mark the new NP as the topic for the ongoing discourse by furnishing it with a salient initial description that facilitates subsequent reference. Moreover, it contributes to the development of this discourse topic by coding information about it that is going to be further discussed, as can be seen from the remaining sentences of the text, all of which elaborate on how difficulties could result from child cloning. In short, the above examples, (86) and (87), simply demonstrate that in the absence of a discourse-oriented approach, traditional grammar teaching may very well be responsible for learners’ failure to fully appreciate the presentative function of RCs and to make good use of RCs in written discourse as an effective strategy for topic construction.

On the other hand, learners may not be cognizant of the parenthetical use of RCs,



for the presentation of NRRCs often focuses not so much on the function of NRRCs as on the formal and semantic differences between RRCs and NRRCs. As pointed out in Section 4.2.1, because of their undue stress on usage of various relative markers in the formation of RRCs, instructional materials tend to give a rather perfunctory and simplistic account of NRRCs. At best, their introduction of the construction is nothing more than a list of features whereby RRCs contrast with NRRCs; they scarcely ever go further to draw learners' attention to the information-adding function of NRRCs themselves. With the under-teaching of NRRCs in EFL instruction, learners are merely crammed with facts about *how* RRCs and NRRCs differ from each other, and they may not have the slightest idea of *when* to use NRRCs. Unaware of such a device, more sophisticated than independent clauses, at their disposal to provide supplementary facts, remarks, or explanations, learners are very likely to end up underusing NRRCs in expressing their stream of thoughts.

In addition to their under-learning of RC functions, the subjects' sporadic use of RCs in presentative and parenthetical contexts, as revealed by a close examination of their translation in the test, also has something to do with their propensity to use independent clauses in place of RCs for such contexts. The finding implicates that when expressing themselves in English, the subjects still had a tendency to transfer the same structure as used in their mother tongue, Chinese, into English, wrongly

assuming that Chinese and English employed the same syntactic strategy to achieve a particular communicative function. In fact, because of their distinctive pragmatic features, Chinese and English differ from each other in their preferred structure for presentative and parenthetical contexts. A discourse-oriented language, Chinese is characterized by a topic chain, which is syntactically realized as a series of independent clauses, with the first clause serving as a common topic and the rest making comments about it. Under this topic chain, the structure preferred in Chinese for presentative and parenthetical contexts is often a pair of independent clauses strung together, with the first one being commented on by the second (Lin, 2002: 108-109). By contrast, English, a sentence-oriented language, typically utilizes different sentence structures to accommodate different kinds of information. In English, there is nothing wrong with using independent clauses for presentative and parenthetical contexts; however, in terms of information packaging (as well as stylistic considerations), RCs are more preferred: RCs used in a presentative context serve to “spotlight” (i.e. foreground) the important information about a topical referent that is going to be further developed in the subsequent discourse, while those used in a parenthetical context help to “sidelight” (i.e. background) the supplementary information in order to distinguish it from the main assertion, coded in an independent clause. Probably because such a cross-linguistic difference in preferred structure is

too subtle to perceive, nearly half of the subjects in the study still viewed independent clauses, the same structure used in Chinese, as appropriate structural counterparts in English for presenting a topical referent or inserting additional information; seldom did it cross their mind that in English, there exists an alternative structure, i.e. RCs, that is used much more commonly for presentative and parenthetical contexts.

Finally, with regard to their use of articles with RCs in a characterizing context, the subjects were found to exhibit a certain tendency to misuse the definite article with characterizing RCs. The finding can partially be seen to provide empirical support for the researcher's observation concerning the influence of false instruction, which motivates the second part of the second research question. As briefly pointed out in Chapter three, quite often, especially in learning when to use the definite article, learners have been told to use the definite article before NPs with RCs. This prescriptive rule in fact makes some sense, since as a post-nominal modifier, RCs add extra information to NPs being modified, and the more information is given, the more likely these NPs are accessible (i.e. definite) to the hearer. Nevertheless, the rule is not infallible in that it cannot account for RCs with indefinite NPs, i.e. those which function mainly to characterize NPs as a particular category or class of people or things, as opposed to identifying them as familiar entities. Under such false instruction, emphasizing the co-occurrence of *the* with RCs without any reference to

their function, learners are very likely to get into the habit of overusing *the* with RCs, even in a characterizing context.

As plausible an explanation for the subjects' tendency to misuse the definite article with characterizing RCs is RC input received during their English study. By glancing through the presentation of RCs in instructional materials, one would get the impression that RCs which he/she comes across are predominantly ones modifying definite NPs, with only a few—or in some extreme cases, “zero”—instances of RCs modifying indefinite NPs. To corroborate this assertion, a survey was conducted with one English textbook and four grammar books concerning occurrences of identifying and characterizing RCs in the examples and exercises of their grammar units for RCs. Table 19 displays the number of each type of RRCs in the five instructional materials:

**Table 19: Occurrences of RRCs modifying definite and indefinite head NPs in five instructional materials**

RRCs \ Material*	TB	GB1	GB2	GB3	GB4
RRCs with definite head NPs	25	18	40	43	27
RRCs with indefinite head NPs	0	8	8	14	15

\* Instructional materials under investigation here included one English textbook, published by Joy (Units 7 and 8 in Book 5), one of the various versions used by junior high schools in Taiwan, and four grammar books on the market: 我的第一本文法書(GB1), 無敵英文文法寶典(GB2), Step by Step 搞定英文文法(GB3), 豎起耳朵學文法(GB4).

From Table 19, it is clear that in these instructional materials, there is a disproportion

of input between identifying and characterizing RCs, with the former greatly outnumbering the latter. Based on the survey, it can be argued that as learners are frequently exposed to input typical of identifying RCs, they may easily lose sight of those RCs with indefinite NPs, thus postulate that RCs always occur with definite NPs, and eventually overuse *the* with every RC produced.

#### **4.2.3 Use of RCs in Writing as a Useful Backgrounding Device**

The results of the passage-rewriting test indicate that in addition to years of learning, another variable exerting influence on the extent to which the subjects utilized RCs in written discourse to background supportive materials is the tendency to employ either independent *and*-clauses or adverbial *because*-clauses for the same information as should preferably be packaged with RCs. This tendency in actuality reflects a common overuse of two clause-chaining strategies adopted by L2 learners: that is, it is typical of L2 learners to draw heavily on the two basic conjunctions, *and* and *because*, in structuring their stream of thoughts in writing.

The wide use of *and* in learners' writing can be identified as a consequence of transfer of strategies for clause linkage characteristic of spoken English into written English. In English, the conjunction *and* is a common grammatical resource for linking two propositions, inasmuch as it plays a multiplicity of ideational roles in establishing semantic relationships between clauses; it can supply, for example,

additive, adversative, causal, and temporal meanings, depending on contextual information (McCarthy, 1991: 48), as shown in (88):

(88) Additive: She's intelligent and she's very reliable.

Adversative: I've lived here ten years and I've never heard of that pub.

Causal: He fell in the river and caught a chill.

Temporal: I got up and made my breakfast.

However, the use frequency of *and* differs to varying degrees between academic writing and conversational speech: comparatively, it is overwhelmingly frequent in the latter, where beyond its usual ideational connective uses, the conjunction further serves as a discourse marker signaling the speaker's continuation of a conversational turn (Celce-Murcia & Larsen-Freeman, 1999: 474-478). Without taking heed to such register differences, most learners unconsciously carry the high frequency of *and* in speech over to writing, making heavy use of the conjunction to indicate inter-clausal relationships in their essays. This overuse of the conjunction *and* not only produces odd-sounding prose with an oral tone, but also renders the flow of information harder for the reader to follow due to some non-essential idea units not being properly backgrounded in such subordinate clauses as RCs.

Also arising from modality transfer of clause-combining strategies is the prevalent use of *because* by learners. Generally speaking, the conjunction *because*

occurs much more frequently in spoken English than in written English.; in speech, apart from the cause-effect relationship, it is commonly used to express the assertion-reason relationship, i.e. as a speech act of stating that “this is the reason I am saying this” (McCarthy, 1991: 49; Givon, 1993: 299-301; Celce-Murcia & Larsen-Freeman, 1999: 530). As an illustration, consider (89):

(89) My friend was probably fired, because I don't see him anywhere.

In (89), apparently, the *because*-clause does not signal the speaker's inability to find the friend as the cause of his being fired; rather, it simply provides a justification or support for the speaker's assertion about the friend's being fired. Typically, learners are inclined to apply to writing the wide distribution and pragmatic function of *because* in spoken discourse; as such, they frequently avail themselves of the conjunction in their essays, not just to *literally* convey causal meaning, but also to *colloquially* present “the knowledge base” for an assertion (Schleppegrell, 1996: 275-277). When learners overuse the conjunction *because* in writing, they give their prose an inappropriately discursive oral quality and more importantly, they fail to consider employing more specific and more writing-oriented cohesive devices like embedding with RCs to effectively get their ideas across.

The above discussion on infelicitous transfer of the oral conjunction strategies with *and* and *because* into written genres, which partially leads to one's failure to

exploit RCs as an useful backgrounding device, may offer an alternative explanation for RC underproduction in L2 learners' English writing, a phenomenon commonly ascribed by SLA researchers to L1 interference, either at syntactic (e.g. Schachter, 1974) or pragmatic levels (e.g. Bley-Vroman and Hounig, 1988, cited in Kamimoto et al., 1992; Zhao, 1989, cited in Kamimoto et al., 1992; Li, 1996).

### **4.3 Summary**

In this chapter, the researcher has reported the main findings from the three elicitation instruments and elucidated them in relation to the research questions.

Firstly, the results from the RC judgment test indicate that overall, the subjects did not yet achieve full mastery of English NRRCs. Their accuracy rate of NRRCs in the test was distinctly low (50.30%) in comparison with that of RRCs (85.60%). Although the third graders were found to perform significantly better than the first graders, their accuracy rate of NRRCs still remained extremely low (53.67%). A further exploration into the results revealed two possible causes for the subjects' poor performance in properly using NRRCs. One was the tendency to overuse RRCs. As shown in their RRC-prevalent responses, the subjects had a strong tendency to use RRCs in most contexts, even where the use of their non-restrictive counterparts would be more felicitous. The other cause was the tendency to use NRRCs only with uniqueness-referring NPs and dismiss other referentially accessible NPs. As attested



by their great performance differences among different NP contexts, the subjects' use of NRRCs seemed to be correlated with personal pronouns (78.95%), one-of-a-kind NPs (85.65%), and proper NPs (74.47%), without being generalized to other equally applicable NP contexts, such as linguistically definite NPs (17.76%), situationally definite NPs (19.44%), narrowly specified NPs (19.91%), whole-referring NPs (15.25%), and generic NPs (54.37%). This rather limited distribution of NRRC use was displayed by both the first- and third-graders: among the eight non-restrictive NP contexts, the two groups performed equally well in lexically accessible NP contexts (75.17% and 84.27%, respectively) and equally poorly in non-lexically accessible NP contexts (25.59% and 35.17%, respectively), except in generic NPs, where the third graders significantly outperformed the first-graders. The subjects' tendency to restrict their use of NRRCs to particular contexts was then confirmed by their retrospective explanations for rendering non-restrictive judgments to have resulted from their inappropriately associating NRRCs with uniqueness-referring, as opposed to referential accessibility.

The subjects' tendency to overuse RRCs in any given context and propensity to limit their use of NRRCs to uniqueness-referring NPs are respectively indicative of two deficiencies in their acquisition of NRRCs: (1) a lack of a definite distinction between RRCs and NRRCs in their mental grammar of English RCs; and (2) a lack of

comprehensive knowledge of when to use NRRCs. The subjects' flawed acquisition of NRRCs is first of all accounted for by L1 transfer. Not acutely aware of the difference in the classification of RCs between Chinese and English, the subjects may have unconsciously transferred the purely restrictive nature of RCs in Chinese into English and thus failed to make a dichotomous RC differentiation in their mental grammar of English RCs. Also postulated to be at the root of the subjects' unsuccessful attempt at acquiring NRRCs is cognitive complexity. To completely understand the context-based notion of referential accessibility, associated with NRRCs, could place great cognitive loads on the subjects, the majority of whom were so used to learning English at a context-vacuumed, sentential level; as such, they may still have encountered considerable difficulties drawing a clear-cut line between RRCs and NRRCs in their mental grammar of English RCs. Furthermore, the subjects' failed acquisition of NRRCs is attributable to input frequency. From a survey of RC input in English textbooks, the amount of NRRC input was found to be scanty and this low frequency of NRRC input in text may have contributed to the subjects' failure to readily consolidate and internalize NRRCs into their abiding mental grammar of English RCs. Last but not least, instructional effects never fail to be irrelevant in the subjects' acquisition of NRRCs. Through an examination of instructional materials, some inadequacies in their presentation of NRRCs were identified as likely causes of

the subjects' inability to well distinguish between RRCs and NRRCs in their mental grammar of English RCs and to gain a full understanding of when to use NRRCs, including overemphasis on RRCs at the expense of usage of NRRCs, few attempts to raise awareness of the relationship between NRRCs and referential accessibility, and a shortage of context-rich exercises for NRRCs. In addition, instructional effects may even help explain the significant group difference in generic NPs: familiarity with the rule stressing the co-occurrence of NRRCs with uniqueness-referring NPs may have enabled the third-graders to generalize their use of NRRCs by deductive reasoning to generic NPs, which share the same semantic feature of "particularness."

Secondly, the results of the context translation test suggest that notwithstanding their syntactic fluency in RCs, the subjects, by and large, lacked a deeper appreciation of the pragmatic/discourse functions commonly served by English RCs. The subjects' frequency rates of RC use exhibited significant differences among the four contexts: identifying (95.83%), characterizing (91.67%), presentative (48.75%), and parenthetical (57.92%). Specifically, they typically employed RCs merely to identify a referent as a known entity or to characterize a referent as a particular type; rarely did they avail themselves of RCs in presenting a topically important referent or interpolating parenthetical assertions about a referent. This pattern of RC use was characteristic of both the first- and third-graders. Besides, no significant difference

was found between the two groups for their RC use in each context, indicating that the third-graders' having more exposure to RCs in their English study did not necessarily translate into their mastery over such advanced uses of RCs as presenting and interpolating. Further analysis of the subjects' translation in the test highlighted one factor in their underuse of RCs: a tendency to consistently employ independent clauses as a common alternative to RCs in presentative (51.25%) and parenthetical (42.08%) contexts. Moreover, it was found that the subjects, across groups, were in the habit of misusing the definite article *the* with RCs which mainly served to characterize an NP as a particular type or category instead of identifying it as a familiar or known entity, though the tendency was not significant (31.34% and 31.21% for the first- and third-graders, respectively).

The subjects' failure to extend their RC use to presentative and parenthetical contexts beyond identifying and characterizing ones basically underlies inadequacies in the teaching of RCs. On the one hand, EFL instruction seldom goes further to draw learners' attention to the use of RCs as a topic-presenting strategy. This is so because often tackling grammar at a sentential level, EFL instruction lacks a more discourse-oriented approach to sensitizing learners to the presentative use of RCs, a function better understood only in connected stretches of discourse. On the other hand, EFL instruction makes few attempts to help learners take heed to the use of RCs

as an information-adding interpolator. With its overemphasis on usage of various relative markers, EFL instruction typically treats NRRCs merely as an adjunct to the presentation of RRCs, providing supplementary facts about how the two types of RCs differ syntactically and semantically; little account is given of usage of NRRCs, let alone the information-adding function of NRRCs. As regards the subjects' tendency to use independent clauses in place of RCs in presentative and parenthetical contexts, the researcher identified the tendency as reflecting a lack of awareness of the cross-linguistic difference between Chinese and English in their preferred structures for the two contexts. That is, on the false premise that both languages utilized the same grammatical resource for a given communicative function, the subjects still deemed independent clauses, the same structure used in Chinese, to be appropriate structural equivalents in English for presenting a topic or interpolating extra information, and hardly ever considered other alternatives like RCs to achieve such functions. Lastly, as for the subjects' misuse of the definite article with RCs in a characterizing context, possible explanations were propounded in terms of the influence of false instruction emphasizing the co-occurrence of *the* with RCs and the exposure to input typical of identifying RCs, namely, RCs with definite NPs.

Lastly, the results of the passage-rewriting test show that the subjects were quite able to make good use of RCs in writing as a useful backgrounding device. In

rearranging idea units in the passage, most subjects (56.67% to 80.83%) were capable of packaging amplifying information of description with RCs. Two variables were found to influence the extent of their RC use in writing. One was years of leaning: the third-graders apparently performed better than the first-graders in employing RCs to background information, with the group difference ranging from 8% to 28%. The other variable was the tendency to use independent *and*-clauses or adverbial *because*-clauses instead of RCs to code the same piece of information.

The subjects' prevalent use of independent *and*-clauses or adverbial *because*-clauses for the same information as otherwise packaged with RCs is explicable in terms of infelicitous transfer of clause-chaining strategies typical of spoken English into written English. Unaware of register differences between speaking and writing in their common grammatical resources for integrating information, the subjects may have transferred the high frequency and pragmatic function of *and* and *because* in speaking into written discourse, thus overusing these two "colloquial" conjunctions where more writing-oriented and more effective strategies for clause linkage like RCs were expected. This modality transfer of conjunction strategies may well serve as another plausible explanation for L2 learners' RC underproduction in writing, typically attributed to either structural or pragmatic interference from L1.