

Chapter Three

Experimental Design

This chapter expounds the experimental design of the present study, which aims to investigate how Taiwanese EFL learners use English RCs, in terms of its research questions, subjects, and methodology.

3.1 Research Questions

Before formulating the research questions of the study, it is necessary to first demarcate the scope of RCs under investigation, given a great variety of RCs in English. The present study considers only those prototypical, fully-fledged RCs, with the exclusion of such variant RC types as reduced RCs (i.e. prepositional, participial, or adjectival phrases), free (headless or fused) RCs, cleft RCs, or non-finite RCs (i.e. infinitive *to* phrases). More specifically, it focuses on the following types of fully-fledged RCs: subject, direct object, indirect object, prepositional object, and possessive determiner RCs, while excluding predicative complement and adverb RCs. This narrowing of research focus is justified by practical constraints of eliciting data in a classroom setting.¹

Essentially, this study is intended as an extension from previous empirical studies on English RC acquisition, most of which center on the impact of either L1

¹ Having said this, it is also acknowledged that focusing on these five RC types only and excluding other possible RC types is indeed a limitation of the present study, and it is hoped that this limitation will be addressed in future RC studies.

interference or universal factors on L2 learners' RC performance—namely, whether their error patterns in RCs reveal the influence of their mother tongue, or whether their learning difficulties with various RC types can be predicted by such processing-based hypotheses as the Parallel Function Hypothesis, the Perceptual Difficulty Hypothesis, and the Noun Phrase Accessibility Hierarchy Hypothesis.

On the one hand, given that previous RC research concentrates predominantly on restrictive RCs, the present study extends its research scope to investigating how Taiwanese EFL learners acquire (or use) non-restrictive RCs, with a view to gaining more insights into what factors may interfere with their mastering this special type of RCs. To be more precise, the study attempts to investigate (1) whether Taiwanese EFL learners tend to overuse restrictive RCs; and (2) whether they perform differently among various NP contexts in their use of non-restrictive RCs. When it comes to the acquisition of non-restrictive RCs, the tendency to overuse their restrictive counterparts warrants some attention. This is because the subtle difference between restrictive and non-restrictive RCs can be so difficult for learners to discern or grasp that they may fail to make a good distinction between the two in their mental grammar of English RCs and thus have a propensity to use restrictive RCs, the prototype of RCs, in most contexts, even where non-restrictive ones should be much preferred. Besides, since non-restrictive RCs are commonly used with such

referentially accessible NPs as linguistically definite NPs, situationally definite NPs, narrowly specified NPs, whole-referring NPs, generic NPs, personal pronouns, proper NPs, and one-of-a-kind NPs, as noted in Chapter 2, it is worthwhile to examine learners' performance in employing non-restrictive RCs among these different NP contexts in order to determine whether they have achieved a full understanding of when to use non-restrictive RCs.

On the other hand, in view of an undue preoccupation with the structural aspects of RC acquisition by the majority of previous RC research, the present study concerns itself primarily with the functional dimensions of RC acquisition by Taiwanese EFL learners.

The study first of all intends to investigate the extent to which Taiwanese EFL learners are able to use RCs in various pragmatic/discourse contexts to perform such functions as identifying, characterizing, presenting, and interpolating. Here, there are two research foci in particular. One research focus relates to whether Taiwanese EFL learners are inclined to use independent clauses in presentative or parenthetical contexts, for both of which the use of RCs is normally preferred. As pointed out in the review of relevant RC literature (Bley-Vroman & Houn, 1988, cited in Kamimoto et al., 1992; Zhao, 1989, cited in Kamimoto et al., 1992; Li, 1996), there are pragmatic differences between English and Chinese in their preferred structure for

presentative or parenthetical contexts. For these two contexts, English prefers RCs, but Chinese favors independent clauses, rather than RCs, which in Chinese serve no other functions than being a noun modifier for either identification or characterization. If not aware of such pragmatic differences, Chinese learners are very likely to have a tendency to underuse RCs in English by overusing independent clauses for presenting a thematically important referent or interpolating additional information. The other research focus relates to whether Taiwanese EFL learners are apt to misuse the definite article *the* with RCs which function mainly to characterize NPs as a particular type, rather than to identify them as a known entity. In a typical L2 classroom, learners are often taught to always use *the* to introduce the information that RCs qualify (Parrott, 2000: 355-356). Useful as it may seem, this rule of thumb is not water-tight, inasmuch as it fails to help learners recognize and understand the function of RCs without *the*—namely, those RCs with indefinite NPs, which serve to define a particular category or class of people or things (Swales & Feak, 2003: 37-38). Under the influence of this false instruction, learners are very likely to get into the habit of using the definite article with most RCs, even in a characterizing context.

The study further seeks to investigate the degree to which Taiwanese EFL learners are capable of employing RCs in writing as a means of backgrounding supportive materials. Learners often know very well how to construct RCs, but this

knowledge does not necessarily translate into knowledge of how to use RCs in writing with respect to discourse grounding (Tomlin, 1994: 167). As such, they may underuse RCs in their writing by mistakenly “foregrounding” minor information units in independent clauses, which in fact should be “backgrounded” in such subordinate clauses as RCs. More specifically, learners generally “have little idea about how to accommodate different kinds of information in different sentence structures, how to achieve textual coherence, and how to structure their thoughts in a way to which native speakers are more accustomed” (Chen, 1999: 139). In the light of this, the researcher sees a need to explore the issue of how well learners can utilize RCs in written discourse to background non-essential, amplifying information.

To sum up, the main purpose of the present study is to look into the use of English RCs by Taiwanese EFL learners with reference to the following three research questions:

1. How is the acquisition of non-restrictive RCs by Taiwanese EFL learners?
 - (a) Is there a tendency for them to overuse restrictive RCs?
 - (b) Are there performance differences among various NP contexts in their use of non-restrictive RCs?
2. To what extent are Taiwanese EFL learners able to use RCs appropriately in different pragmatic/discourse contexts, including identifying, characterizing,

presentative, and parenthetical?

(a) Is there a tendency for them to use independent clauses in place of RCs for presenting a topic or interpolating parenthetical assertions?

(b) Is there a tendency for them to misuse the definite article *the* with RCs in a characterizing context?

3. To what extent are Taiwanese EFL learners able to use RCs appropriately in writing as a useful backgrounding device?

3.2 Subjects

There were 160 subjects participating in the formal testing of the study, who came from different senior high schools, including National Chia-Yi Girl's Senior High School, National Hu-Wei Senior High School, and Taipei Municipal Xisong Senior High School. According to their average years of learning English as a foreign language, the subjects were divided into two groups: (1) 80 first-graders, who on average had four years of English-learning experience since the first grade of junior high school; and (2) 80 third-graders, whose mean length of English instruction was approximately 6 years.² In the data-analysis session, with a small number of samples eliminated, a total of 120 subjects were included, with 60 for each group.

The rationale for selecting subjects from senior high school, as opposed to junior

² It needs to be pointed out that some subjects in the study may have begun their study of English even earlier at elementary or cram schools, rather than from the first grade of junior high school. Therefore, their individual years of learning English could actually exceed an average of 4 or 6 years.

high school, is based on the consideration that for junior high school students, the acquisition of English RCs is still at its very early stage, as it is not until the third grade of junior high school that Taiwanese EFL learners have begun to study basic usage of relative markers, such as *who(m)*, *which*, *that*, and *whose*, in the formation of RRCs and the difference between RRCs and NRRCs. Hence, in order to make sure that one's RC performance in experimental tests would reflect his/her true competence in English RCs rather than indicate his/her incomplete learning of English RCs, the present study selected senior high school students as the subjects for the formal testing.

3.3 Methodology

RC data analyzed for the present study were collected from three kinds of tests: an RC judgment test, a context translation test, and a passage-rewriting test. Most of the test materials were taken or adapted from Azar (1999), Frodesen and Eyring (2000), Riggenschach and Samuda (2000), and Thewlis (2000). To ensure that the subjects' RC performance, especially that of the first-graders, would not be affected by their failure to understand the language of the tests, vocabulary and sentence structure were kept at a level comprehensible to them, and difficult words or phrases annotated with Chinese definitions in parentheses. The three tests³ are discussed in

³ To ensure the internal validity of the present study, a pilot study was conducted with 20 senior high school students (10 first-graders and 10 third-graders) prior to the formal testing, and based on the results, subsequent revisions were made to the three tests.

greater detail in Sections 3.3.1 and 3.3.2, regarding their rationale, content, and administration.

3.3.1 Instruments

The RC judgment test

The RC judgment test (see Appendix A) was used to tap into the subjects' acquisition of English NRRCs. It required the subjects to examine English sentences containing RCs and then make judgments as to whether these RCs should be restrictive or non-restrictive. To preclude them from randomly guessing without answering in reference to the degree of referential accessibility of RC heads in context, the subjects were asked to give a brief explanation (in Chinese) in the space provided as regards why they considered a given RC non-restrictive. This brief explanation for a non-restrictive judgment would further help the research determine whether the subjects were acutely aware of the close relationship between referential accessibility and NRRCs.

The RC judgment test was composed of 18 questions with 19 RCs, of which 7 were restrictive and 12, non-restrictive. The antecedents of the 12 NRRCs included six common types of referentially accessible NPs⁴, as categorized in Chapter 2, namely, NPs whose domain of reference rarely needs any further restriction for either

⁴ The test focused on NRRCs whose antecedents were NPs; thus, those NRRCs with sentential heads were not considered here.

identification or characterization: (1) NPs which are definite by virtue of the prior discourse; (2) NPs which are definite by virtue of the speech situation; (3) NPs which are narrowly specified with extra modifications; (4) NPs which refer to the entire class, rather than part of it; (5) NPs which refer to a particular class or category of people or things; (6) personal pronouns, proper NPs, and one-of-a-kind NPs, all of which are referentially identifiable due to their lexical connotations of “uniqueness” or “being the only one.” The following are the 12 NRRCs in the RC judgment test, introduced in terms of the type of referentially accessible NPs to which their antecedents pertain:

(65) Linguistically definite NPs

Question 2: According to the news, the police arrested the man who had robbed the First National Bank. The man, *who was wearing a plaid shirt and blue jeans*, was caught shortly after he had left the bank

(Cf. the police arrested the man *who had robbed the First National Bank*.)

(66) Situationally definite NPs

Question 15: This book, *which I finished reading yesterday*, has many interesting stories.

(Cf. Question 3: The magazine *which you just talked about* has photos of

famous stars.)

(67) Narrowly specified NPs

Question 13: She just bought a beautifully-tailored, pink silk skirt, *which I have always wanted to have.*

(Cf. Question 7: Susan is wearing a dress *which I have never seen before.*)

Question 18: Their expensive, new car, *which broke down last night*, is being fixed in a garage today.

(68) Whole-referring NPs

Question 5: I taught English to some children today. To my surprise, all the children, *who were 9 years old*, were really quiet and attentive during the class.

(Cf. Question 16: We took some children to a playground for different games. As soon as we arrived, children *who wanted to play soccer ran to an open field* and the others just stayed nearby to play basketball.)

(69) Generic NPs

Question 9: Humans, *who need water to survive*, may someday run out of pure water.

(Cf. Question 12: People *who drink* should not drive, because it is very

dangerous to do so.)

Question 11: An elephant, *which is the world's largest land animal*, has few natural enemies other than human beings.

(70) Personal pronouns

Question 4: I, *who am a student at this school*, come from a country in Asia.

(Cf. Question 14: Anybody *whom you give a ticket to* will be welcome in my music concert.)

Proper NPs

Question 8: Jean, *whose English is very good*, applied for a job as a secretary.

(Cf. Question 10: Women *who are able to type 50 words in a minute* can apply for this job.)

Question 1: PS2, *which stands for Play Station 2*, has become quite popular with both adults and youngsters in Taiwan.

One-of-a-kind NPs

Question 6: Mary looked up at the moon, *which was very bright that evening*.

Question 17: Jos's father, *who exercises every day*, is still healthy and energetic.

The context translation test

The context translation test (see Appendix B) was employed to scrutinize the subjects' use of English RCs in different pragmatic/discourse contexts. In the test, the subjects were to translate Chinese sentences into appropriate English according to contexts given. They were told that instead of strictly adhering to exact Chinese wording or sentence patterns, they were free to write down whatever they thought should be appropriate English counterparts for these Chinese sentences in particular contexts. To make this test less demanding, difficult English words and phrases were initially given for the subjects to readily incorporate into their English translation.

The context translation test consisted of 10 questions. Among them, questions 6 and 8 were distracters, namely, items designed to lower the subjects' awareness of the target structure in the test by eliciting non-relative constructions, as shown in (71):

(71) Question 6: He is an English teacher of junior high school.

Question 8: She caught a cold today.

The rest of the questions involved Chinese sentences constructed in such a context that their appropriate English equivalents would preferably involve the use of RCs to perform such functions as identifying, characterizing, presenting, and interpolating.

These RC-targeting questions are introduced as follows:

(72) RCs serving to identify NPs as a known entity

Question 4: The one *who is talking with Mary* is my father.

Question 7: I went to see the movie *which you introduced to me yesterday*.

(73) RCs serving to characterize NPs as a particular type

Question 5: He is looking for a girl *who shares the same interests*.

Question 9: It is a device *which can save computer files*.

Question 10: People *who speak loudly in public places* are very annoying.

(74) RCs serving to present an important, new topic into the discourse

Question 1a: There was a king *who loved his daughter very much*.

Question 1b: A beggar came *who wore very strange clothes*.

(75) RCs serving to interpolate parenthetical assertions

Question 2: Today I ran into Mr. Smith, *who used to live next door to me*.

Question 3: My favorite animal is the elephant, *which is considered the biggest land animal in the world*.

It needs to be pointed out that this experimental test essentially differs from the traditional Chinese-to-English translation due to its provision of contextual information. For example, question 1 supplies one with a presentative context, wherein the Chinese sentence to be translated opens up a discourse unit to introduce a new topic; questions 2 and 3, a parenthetical context, wherein the Chinese sentence to

be translated acts as a thrown-in remark or afterthought. With reference to contextual information, the subjects could concentrate more on finding the *appropriate* structural counterpart in English for a specific context, and less on giving a *literal* translation from Chinese into English. Moreover, as such contextual information could serve as clues that motivated the subjects to use the target structure, the need was obviated to employ “Europeanized” Chinese items, namely, those awkward Chinese sentences whose syntactic patterns are “assimilated” into English for ease of eliciting the target structure in the translation (Wu, 2005) (e.g. deliberately changing Chinese sentences from independent clauses to RCs in order to prompt the subjects to use RCs accordingly in their English translation).

The passage-rewriting test

The passage-rewriting test (see Appendix C) was to examine the subjects’ ability to make good use of RCs in writing in relation to discourse grounding. In the test, the subjects were directed to study a short passage containing several pairs of sentences and then rewrite it in a better way without leaving out any of the information; basically, they were to combine each pair of sentences into one sentence by using appropriate conjunctions. Different from the traditional mechanical sentence-combining, this rewriting task allowed the subjects more freedom as to how they would like to combine sentences, and foremost, provided context for them to

choose proper conjunctions by taking into account such discourse factors as propositional arrangement and textual coherence (Kameen, 1978).⁵

The passage to be rewritten in the test was adapted from text (76) below by changing all its RCs into independent clauses:

- (76) It's interesting to talk with women who have had similar experiences. Balance, for example, is a topic to talk about. Achieving balance may be a challenge for those women who have jobs and family responsibilities. Some women don't have jobs outside their homes. They sometimes feel criticized by other people who think that all women should have careers. This is an attitude that more and more people share toward women today. Some women work at jobs and have young children. They also feel criticized by other people who think that all women should stay at home with their children. This is a belief that makes some women feel a lack of balance in their lives. Some women never have children. They may feel pressure from their own parents, who worry that they will never have grandchildren. The above are three examples that show how it can be difficult for women to achieve balance between jobs and family responsibilities.

The idea of designing such a rewriting task to test grounding ability with RCs was actually inspired by Bardovi-Harlig (1990), who suggests that a text can slightly be modified, for instance, by changing all subordinate clauses into independent clauses, and used for learners to identify what he calls "pragmatic mismatches" (pp. 58-59) and rewrite these mismatches for a better fit in terms of discourse grounding. By analyzing the subjects' clause-combining strategies observed in their revised text, the researcher could probe into their communicative competence in utilizing appropriate

⁵ Kameen (1978) suggests three types of sentence-combining tasks according to the degree to which these tasks impose control on and give context to L2 learners in combining sentences: mechanical, meaningful, and communicative.

sentence structures to package different idea units with reference to their contribution to the development of the discourse—that is, independent clauses for marking foreground information, and subordinate clauses (here RCs, to be exact), background information.

3.3.2 Test Administration

The present study is by its nature a blindfolded experiment inasmuch as its subjects were not informed that the tests they took would be analyzed for research purposes. Prior to the formal testing, they were only told that in the next two periods, there would be three tests to help them review what they had learned before (but they did not know that the target structure in these tests was English RCs); the testing was conducted during their regular English classes by their own school teachers (rather than by the researcher himself), who were beforehand given a copy of test administration guidelines (see Appendix D). The purpose of blindfolding the subjects was to increase the reliability and validity of the study, considering that if they had been conscious of the research nature of the tests, they might have taken the tests in a perfunctory and reluctant manner, instead of doing their best to answer them (since how well they performed in these tests had no bearing at all on their school “grades”), and their true competence in English RCs would not have been observed.

The three experimental tests were administered in two separate sessions. In the

first session, the subjects were initially given 30 minutes to complete the passage-rewriting test. After their passage-rewriting test sheets were collected, they were given another 20 minutes to take the context translation test independently in order to avoid the possible influence of the previous test.

In the second session, the subjects were given 30 minutes to complete the RC judgment test. The purpose of conducting this RC judgment test last was to prevent the subjects from being aware that it was English RCs that were being targeted in the passage-rewriting and context translation tests. If the order of test administration had been reversed, i.e. administering the RC judgment test at the very beginning, then by the time for the passage-rewriting and context translation tests, the subjects might have become cognizant of the target structure, thus deliberately using more RCs in these two tests, and such conscious over-production of RCs would have detracted from the internal validity of the study.