

CHAPTER THREE

RESEARCH METHODS

The purpose of this study is to compare co-teaching NEST and non-NESTs' beliefs and their manifestation on classroom practices examined under the framework of a modified version of Clark and Peterson's (1986) model of teacher's thought and action. The study explored five aspects of teachers' beliefs, including beliefs about native and non-native issues, team teaching, the English language, language learning and learners and English teaching with emphasis on sentence structures. The research is conducted in a case study approach in order to have an in-depth and holistic understanding of the complex and dynamic nature of teachers' beliefs and their practices (Johnson, 1992). Four instruments used to collect naturalistic data, elicited information, and existing documents are reported below. This chapter covers the instruments, participants, procedure, data analysis and limitations of this study.

3.1 Instruments

This study employed data triangulation, where multiple sources of evidence were gathered to explore same issue. These types of information are gathered to strengthen the construct validity of this research as they show different facets of the same phenomenon (Yin, 2003). The first type of evidence is naturalistic data, which is information derived from natural setting with as little interruptions as possible; in this study, it refers to classroom observations (Johnson, 1992). Another type of data gathered is elicited information, where it is produced by the participants using tools such as interviews and beliefs inventories. The last type of data is existing information which the participants already have, collected for further analysis.

3.1.1 Classroom Observations

In order to investigate whether the teachers' practices are congruent with their

stated beliefs, it is necessary to conduct non-participant classroom observations. Observation is a major tool used in qualitative research as it allows close-up examination of a phenomenon (Yin, 2003; Seliger & Shohamy, 1997). To document the events in the classroom, video recording is the superior choice when compared to taking notes or audio recording. Video recording allows more details, such as verbal data and nonverbal aspects of communication, which are information imperative to the study, to be captured (Wallace, 1998). Finally, the videos enable the researcher and participants of the study to revisit the lesson at any time since they are permanent recordings of past events.

3.1.2 Semi-Structured Interviews

To probe into the numerous aspects of the participants' beliefs, face to face semi-structured interviews are used to elicit information. Semi-structured interviews use a set of core questions but interviewers could branch off the questions depending on the answers they receive (Seliger & Shohamy, 1997). Such flexibility in the questions and responses permits more insight into areas being researched. The first type of interview contains questions on the teachers' outlook on different areas of their teaching, while the second type consists of stimulated recall questions which target specific techniques and activities used by the teachers during the classroom observations. Stimulated recall interviews is another instrument for probing into the teachers' beliefs since the teachers need to explain the reasoning behind their actions.

3.1.3 Beliefs Inventories

To understand the teachers' approaches to language teaching and learning from another angle, two beliefs inventories are administered to elicit the teachers' written responses. The first inventory is Johnson's (1992) "Approaches to ESL instruction", a belief questionnaire aimed at investigating the participants' views on second language

teaching (see Appendix 01). Participants circle five out of fifteen statements in the inventory, which reflect whether the teachers favored a skill-based approach (statements 4,6,10,12,14), a rule-based approach (statements 1,3,5,8,11), or a function-based approach (statements 2,7,9,13,15). The second inventory used in the study is Horwitz's (1987) "Beliefs about language learning", which was originally developed to explore students' opinions on issues related to language learning. The inventory is adapted by Richards and Lockhart (2005) to investigate teachers' beliefs about language learning (see Appendix 02). Participants choose how much they agree with the twenty statements based on a five-point Likert scale (i.e., 1 for strongly disagree, 5 for strongly agree) and answer two multiple choice questions. The statements show teachers' beliefs regarding foreign language aptitude (items 1-4,8,9,13,19,20), difficulty of language learning (items 21-23), nature of language learning (items 6,10,11,15,18), and learning and communication strategies (items 5,7,12,14,17).

3.1.4 Document Collection

Besides collecting naturalistic and elicited data, existing documents is another source that sheds light into the research questions (Johnson, 1992). The researcher asked the participants to provide her with any documents related to their teaching, which would in effect, present more insight to their beliefs system. Documents collected included the syllabus, lesson plans, classroom handouts, tests and NEST training notes. The syllabus showed the amount of content covered on a weekly basis over the course of a semester. The lesson plans showed the activities teachers originally prepared for the class, which may or may not be carried out in the actual lesson. Handouts and tests for the students contain specific content that the teachers find most important for them to learn. Finally, NEST teacher training notes could be

an influencing factor on her beliefs.

3.2 Participants and Teaching Context

3.2.1 Criteria of Choosing the Participants

To answer the research questions, the researcher looked for participants who qualified under the following criteria (see Table 1). First of all, since this study is time consuming, willingness is a priority because classroom observations and interviews take up hours of the teachers' time. The researcher looked for one NEST and one non-NEST who co-teach in the same school willing to spare their time. Secondly, the researcher looked for NESTs and non-NESTs who have at least a year of co-teaching, but not necessarily with each other. With that one year- experience, the teachers should have formed some beliefs as to what co-teaching should be like. Finally, the researcher narrowed the scope of non-NESTs to only those who teach higher elementary grades (grade five and six) because it is the subject teachers who teach English, while it is homeroom teachers who teach English to lower grades students (grade one and two). Therefore, it is expected that English subject teachers are more proficient than homeroom teachers, and have formed some beliefs about English teaching and learning. Another reason for choosing higher- grade non-NEST is that they teach twice weekly, once with NEST and once by themselves, as opposed to homeroom teachers who co-teach once a week. It is more likely that teaching additional lessons per week attribute to forming English teaching beliefs.

Since finding participants who matched the described profile was a daunting task, the researcher sought help from another professor who is involved in Hsin Chu city English program. Within weeks the professor was able to locate Emily¹, a NEST and teacher Portia, a non-NEST, who met all the requirements. They were both fifth

¹ These are pseudonyms used to protect the identities of the NEST and non-NEST

grade teachers co-teaching in the same school, and willing to participate in the study. For Emily, this is her second year of co-teaching, also the second year of with Portia. For Portia, this is her fourth year of co-teaching, the second year with Emily (see Table 2). The researcher and one of her professors met with the two teachers to discuss the details of her study. Once the teachers fully agreed to participate in the research, the data collection began, which was a week after the meeting, on October 24th, 2006.

Table 1: Criteria for Choosing the Participants

Criteria	Emily (NEST)	Portia (non-NEST)
1. A pair of willing NEST and non-NEST who co-teach in the same school	✓	✓
2. Teachers with at least one year of experience in collaborative teaching	✓	✓
3. Teachers teach higher elementary grade level	✓	✓

3.2.2 NEST's Background

To construct a picture of the NEST who participated in this study, details such as her reasons for coming to Taiwan, education background, and working experience are revealed.

3.2.2.1 Reasons for coming to Taiwan

There were several reasons why Emily chose Taiwan as the destination for teaching English. The main reason is her love and desire to learn about orchids. Emily knows that orchids are popular in Taiwan, and many species in the world originate from this country. Secondly, Emily felt she had reached a plateau in her career, so she needed a challenge. "I strongly believe that it's important to keep oneself challenged before you fall into a comfort zone and life becomes easy... (10/31/2006)." Emily has taught English as a first language and as a second language, but not as a foreign language level. Next, coming to Taiwan would also enable her to learn mandarin, as

her goal was to learn to speak it during the process of teaching. Furthermore, Taiwan's job market accepts teachers from South Africa, while other countries do not because North American accents are preferred. Finally, Emily mentioned that government program in Hsin Chu city was good to be in financially.

3.2.2.2 Education background

Emily is exposed to multilingual environment while growing up. Her basic introduction to education was in English, and it is now her primary language of use as she thinks in English. Emily attended an English elementary school, then an Afrikaans high school. For her university education, she took three subjects as her majors, English, northern Sutu, which is an African language in South Africa, and literary science. Lastly, Emily took a post-graduate education program, which lasted a year, to qualify her to teach at a high school level.

3.2.2.3 Working Experience

Emily held various teaching positions after she graduated from university. She got into teaching because she enjoyed working with people, and she wanted to give back to the community. Since Emily had a wonderful high school experience, teaching would be the right career to achieve those two goals. Emily has taught for eleven years and at various language levels. She taught in a first language context for six years, teaching twelfth grade on everything ranging from grammar to literature. She also taught in a second language context for three years, at an Afrikaans all girls' high school, where English was the compulsory second language. Her experience of teaching foreign language level in Taiwan, February of 2005 and this is her second year here. There were no vacancies in Hsin Chu city English program when Emily first arrived so she worked temporarily at a nearby cram school. She was in the research and development department working on lesson plans and teaching

elementary late in the late afternoons. After six months, Emily finally landed a teaching position in a public school. During the data collection period, Emily was teaching seven grade ones, seven grade threes, and seven grade fives, which tallied up to twenty-one periods of English per week.

3.2.3 Non-NEST's Background

To give a full picture of what the non-NEST was like, information such as her education background and working experience are detailed below.

3.2.3.1 Education background

The non-native English speaking teacher, Portia, comes from the country side of southern Taiwan, and she did not learn English until she enrolled in junior high school. She studied in department of foreign language and literature of an university in middle Taiwan. Although she had the most contact with English when she was a freshman, it was a painful period for her because she could not speak much English. Nevertheless, she was able to improve her English proficiency gradually. For her higher education, Portia obtained her Masters of Business Administration (M.B.A) in U.S.A.

3.2.3.2 Working experience

Unlike Emily, Portia did not hold formal teaching positions right after graduation. After obtaining her bachelor's degree, Portia worked in a trading firm for two and half years, and taught English to adults in cram schools at night. When she obtained her Master's degree, Portia worked at an American firm in Taiwan. The working environment was stressful and she often had to work late. Then, in 1999, the Ministry of Education held an elementary English teacher examination and Portia was encouraged by her family to take it. Her mother wanted her to become a teacher but Portia was reluctant, because she felt if she really wanted to teach, she would not have needed to obtain her M.B.A degree. Nevertheless, Portia decided to take the exam

despite the lack of preparation. She passed the exam, so the next mandatory step for her was to take TESOL and General Education courses. After completing more than twenty hours of classes, Portia began her teaching internship as a substitute teacher for a year at an elementary school in central Taiwan. Then, her family moved to Hsin Chu city, so she found a teaching position there. Portia has a total of five years of elementary English teaching experience, five of which is in Hsin Chu city. Portia is also a seed teacher who is required to attend monthly meetings at the city hall and pass on the results of the meetings to her fellow colleagues. During the research period, Portia was teaching six third grade classes, five fifth grade classes, and three sixth grade classes; for fifth and sixth grade classes, she teaches them twice weekly, hence it tallied up to twenty-three periods of English per week.

Table 2: Details of the Participants

	Teacher Emily (NEST)	Teacher Portia (non-NEST)
Education Background	<ul style="list-style-type: none"> ◆ English elementary school ◆ Afrikaans high school ◆ University majors- English, northern Sutu, and literary science 	<ul style="list-style-type: none"> ◆ Department of Foreign Language and Literature in a central Taiwan university ◆ M.B.A degree in the U.S.A
Reasons for becoming a teacher	<ul style="list-style-type: none"> ◆ Enjoyed high school ◆ Give back to the community ◆ Enjoys working with people 	<ul style="list-style-type: none"> ◆ Disliked long hours at previous jobs ◆ Family encouragement
Teacher Training	<ul style="list-style-type: none"> ◆ Post-graduate education program for teaching high school 	<ul style="list-style-type: none"> ◆ Ministry of Education elementary English teacher examination to obtain English teacher certificate ◆ TESOL and General Education courses
Working Experience	<ul style="list-style-type: none"> ◆ Taught English as a first language for six years in South Africa ◆ Taught English as a second language for three years in South Africa ◆ Taught English as a foreign language for two years in Taiwan 	<ul style="list-style-type: none"> ◆ Worked two and half years in a trading firm after obtaining bachelor's degree. ◆ Worked in a foreign firm after obtaining master's degree ◆ Taught English one year as elementary substitute teacher ◆ Taught English four years as formal elementary teacher in Hsin Chu city
Years of Teaching	<ul style="list-style-type: none"> ◆ Eleven years 	<ul style="list-style-type: none"> ◆ Five years
Current teaching status	<ul style="list-style-type: none"> ◆ Seven first grades, seven third grades and seven fifth grade classes 	<ul style="list-style-type: none"> ◆ Six third grade, five fifth grade, three six grade classes ◆ Twenty-two periods per week

	◆ Twenty-one periods per week	
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3.2.4 School Background

The teachers work at an elementary school located in Hsin Chu city established in the late 1950s. There are a total of seventy-four teachers and forty-five classes of 1,373 students. Each class consists of thirty to thirty five students. Portia estimated that twenty percent of the students have parents working in the science park, which implies a high socioeconomic class. Other students' parents come from blue collar background, and many work in the near by traditional market.

3.3 Procedure

The researcher followed a series of steps to construct and refine the instruments used in the study. Each instrument was employed at various time periods over the course of the research.

3.3.1 Classroom Observations

The co-teaching model in higher elementary grade levels of Hsin Chu city consisted of a joint session between NEST and non-NEST and an individual session by the non-NEST in a week, though not necessarily in that order. The researcher originally planned to video record one particular class so that both co-teaching and individual teaching for that same class could be observed. However, as the researcher was unable to make two trips to Hsin Chu city in weekly due to her academic schedule, she decided to observe two classes, class 502 and 504 on the same day. Every Tuesday is the first day of the week when fifth graders have their English lesson. Class 502 is taught individually by Portia, the non-NEST, while class 504 is co-taught by Emily, the NEST and Portia. The main advantage of this arrangement is that that the researcher was able to observe how the two teachers taught the same

content.

The researcher originally scheduled for eleven weeks of classroom observation. The lessons in first week were not video recorded for she wanted the students and teachers to become accustomed to her presence in the classroom. The following ten weeks of classroom observations would have tallied up to twenty video recorded lessons. However, in the actual situation, English classes were canceled due to events such as sports fair, rehearsing for chorus competition, and watching Christmas play. In one of the weeks, the teachers informed the researcher that it was unnecessary to visit the classes because they were going over the exam answers, and there will be no actual lesson planned. As a result, the researcher video recorded the lessons thirteen times, seven co-teaching lesson and six of Portia's individual lessons.

Video recordings the lessons lasted over two months, from October 24th, 2006 to December 26th, 2006 (see Table 3). Observing the classrooms half way through the semester allowed the researcher to ask the teachers to reflect upon their teaching earlier in the semester. Each period was forty minutes long and the English lesson for class 502 began from 9:30 to 10:10 A.M, while class 504 began from 11:10 to 11:50 A.M on Tuesdays. The researcher assumed the role of a non-participant during classroom observations to remain as unobtrusive to the teaching context as possible. She operated a video camera stationed at the back the classroom to avoid any distractions to the students.

Table 3: Classroom Observation Dates

Date	Observation	Class	Teacher	Observation	Class	Teachers
10/24/2006	1	502	non-NEST	2	504	NEST & non-NEST
10/31/2006	3	502	non-NEST	4	504	NEST & non-NEST
11/07/2006	5	502	non-NEST	6	504	NEST & non-NEST

11/14/2006	7	502	non-NEST	8	504	NEST & non-NEST
11/21/2006	9	502	non-NEST	10	504	NEST & non-NEST
12/12/2006	Class 502 canceled due to sports fair rehearsal			11	504	NEST & non-NEST
12/26/2006	12	502	non-NEST	13	504	NEST & non-NEST
Six observations for class 502				Seven observations for class 504		

3.3.2 Interviews

Several steps were taken in order to construct a list of questions for semi-structured interviews focusing on NEST and non-NEST teaching beliefs (see Appendix 03). Since numerous topics are investigated, the researcher first gathered ready-made interview questions from literature in following areas: teacher's background information (Richards & Lockhart, 1996; Nien, 2002), beliefs about advantages and disadvantages of being NESTs and non-NESTs (Arva & Medgyes, 2000), co-teaching (Luo, 2004; Lin, 2002; Chou, 2005), the English language, language learning and learners, language teaching (Richards & Lockhart, 1996; Nien, 2002) and sentence structure teaching (Hsieh, 2004). Next, the researcher chose the most relevant ones and reworded others from the pool of questions; she also added her own questions to fulfill purpose of her study. For instance, she added the question, "Do you think you could overcome the disadvantages of being a NEST/non-NEST?" when interviewing the teachers on their views about native and non-native issues. Moreover, to ensure the usefulness of the interview, the researcher went over the questions with her advisor and made the appropriate changes. In each interview, it covered two to three topics; however, the researcher may start off the interviews by asking the teachers about the lesson she just finished observing or continue with interview questions from previous session.

The researcher also incorporated a stimulated recall interview where the teachers were asked to explain about various techniques and activities they used in class. The answers would offer another dimension in understanding the teachers' beliefs towards language teaching and learning. To formulate those questions, the researcher reviewed classroom observations and took notes on techniques and activities that were relevant to her research questions. She went over the stimulated recall questions with her advisor and made the appropriate changes. The researcher originally planned to play video clips of the targeted activities, then pausing the clips to ask the teachers for their explanations. However, as she conducted the first interview with the Portia, the teacher mentioned that switching the DVDs of the classroom observations back and forth was time consuming. Therefore, the researcher decided right on the spot to describe selected activities and ask Portia to provide reasoning behind the implementation of these activities. To preserve consistency through out the research, the same format of oral description was used for the stimulated recall interview with Emily.

A total of nine semi-structured in-depth interviews were conducted (see table 3-4) usually taking place right after the second classroom observation. The teachers were interviewed while having their lunch, either in faculty meeting room or in restaurants. The interviews were conducted in the participant's native language, i.e., Mandarin Chinese for non-NEST and English for NEST, and they were provided with a hard copy of the questions in English at the beginning of the interviews. The interviews were audio recorded and later transcribed. Lengths of the interviews varied, from twenty minutes to a little over two hours; in total, there are twelve hours and twenty minutes of audio data. The reason why some interviews were much shorter than the others was because the participant and the researcher did not spend time eating lunch.

Table 4: Interview Sessions

Date	Interview	Teacher	Time	Topic
10/24/2006	1	Non-NEST	1 hr. 45 min.	<ul style="list-style-type: none"> ◆ Teaching situation ◆ Teacher's background information
10/31/2006	2	NEST	1 hr. 42 min.	<ul style="list-style-type: none"> ◆ Teaching situation ◆ Teacher background information
11/14/2006	3	Non-NEST	1 hr. 53 min.	<ul style="list-style-type: none"> ◆ Native and non-native English teacher issues ◆ Team teaching
11/21/2006	4	NEST	2 hr. 10 min.	<ul style="list-style-type: none"> ◆ Native and non-native English teacher issues ◆ Team teaching
12/12/2006	5	Non-NEST	1 hr. 27 min.	<ul style="list-style-type: none"> ◆ Stimulated Recall ◆ Beliefs about English ◆ Beliefs about teaching
12/16/2006	6	Non-NEST	25 min.	<ul style="list-style-type: none"> ◆ Beliefs about teaching ◆ Beliefs about learning
12/19/2006	7	NEST	1 hr. 38 min.	<ul style="list-style-type: none"> ◆ Stimulated Recall ◆ Beliefs about English ◆ Beliefs about teaching ◆ Beliefs about learning
01/02/2007	8	NEST	1 hr	<ul style="list-style-type: none"> ◆ Beliefs about sentence structures
01/18/2007	9	Non-NEST	20 min.	<ul style="list-style-type: none"> ◆ Beliefs about sentence structures

3.3.3 Beliefs Inventories

The researcher made a slight change to Richard and Lockhart's (2005) inventory which was originally adapted from Johnson (1992). For example, the word "EFL" was added next to "ESL" since the context, Taiwan, was an English as foreign language environment. Richard and Lockhart's (2005) inventory and Horwitz's (1987) inventory were given to each participant in December and they were told to return it whenever they were most convenient. The researcher received the inventories during

the last day of data collection, on January 18th, 2007.

3.3.4 Document Collection

The researcher asked the participants to provide her with any documents related to their teaching. She collected syllabus (see Appendix 04), lesson plans (see Appendix 05), lesson handouts (see Appendix 06), tests (see Appendix 07) and NEST training handouts (see Appendix 08) throughout the course of research. The syllabus showed weekly progress for the content to be covered in the first semester of 2006 (September 2006 to January 2007). As for the lesson plans, only Emily's lesson plans were collected because they were required by the native teacher's management agency to be handed to Portia. The lesson plans collected consist of a monthly lesson plan for November 2007 and seven weekly lesson plans from week nine (October 23rd to 27th) to week eighteen (December 25th to December 29th). In addition, three handouts for classroom activities and three for homework assignment, and the first and second English exams also collected. Finally, the researcher received copies of teacher training notes provided by the management agency.

3.4 Data Analysis

To compare and contrast the NEST and non-NEST beliefs and check if these beliefs are congruent with their classroom practices, the researcher collected vast amount of information, which include thirteen classroom observations, nine semi-structured interviews, two sets of beliefs inventories, and numerous handouts. To analyze the information, the researcher adopted Freeman's (1998) model of data analysis, which prescribed four pivotal activities- naming, grouping, finding relationships, and displaying. Naming is the process of taking the data apart, and labeling the parts. The labels can come from the data itself, called grounded codes, or from outside of the data, also known as priori codes. The next step, grouping, is

assembling the codes into categories. It creates a structure around the data, very much like the scaffolding on a building. The structure must be strengthened by finding relationships between the categories, similar to adding cross-braces to the scaffolding. Finally, data display is to show the relationships and patterns between the categories, forming a complete picture.

The researcher applied the four steps to the data she collected. In the coding activity, the researcher used priori codes- the five aspects of beliefs: beliefs about native and non-native issues, beliefs about co-teaching, beliefs about learning and learners, and beliefs about teaching, with emphasis on sentence structures. The researcher transcribed all the interviews (see Appendix 09) and classroom observations; the latter was performed using a worksheet she designed (see Appendix 10). It contained activity type, summary of teaching activity, time, aids, students' responses and notes. As for the beliefs inventories, each item was coded according to the type of approaches or learning beliefs the teachers' held. In the grouping activity, the researcher categorized the different sources of data. Beliefs were represented by interviews and beliefs inventories, while classroom practices were represented by observations and handouts. Significant and repetitive beliefs and practices were categorized into separate tables. The next activity was to find the patterns in each teacher's beliefs and practices, and check to see if each belief item was present in their practices. Lastly, the researcher interpreted these patterns and relationships and displayed them as clearly as possible.