

Chapter 3

Research Design and Methodology

This study was conducted in order to survey students' learning style preferences and then to design a supplementary material project based on the results of the survey. In this chapter, the Bio-Data of the subjects, the instruments used in eliciting the data, the processes of collecting the data, and the strategies of analyzing the data will be described respectively.

Subjects

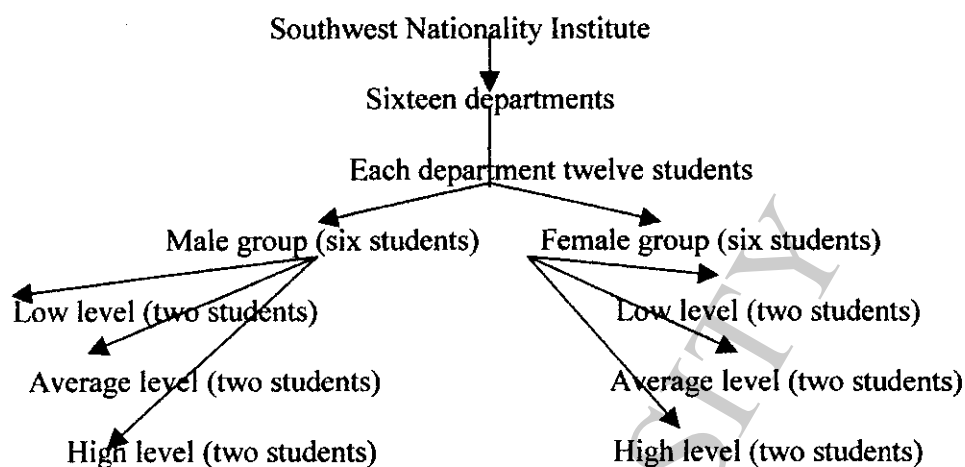
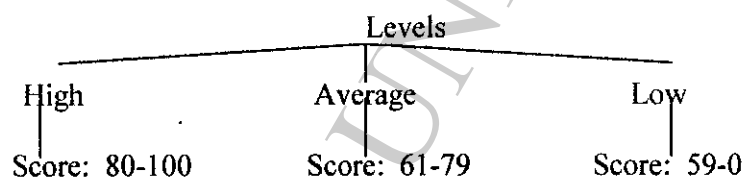
One hundred and ninety-two second year Non-English majors, from 18-20 years old, were sampled from 16 departments in different English proficiency levels (see table 1). These subjects came from different ethnic groups from different parts of China (see figure 1). According to the subjects' English learning backgrounds, they have studied English as a foreign language ranging from 6 to 8 years.

Figure 1: Subjects' Family Living Areas in China



Table 1: Distribution of Subjects at Southwest Nationality Institute

Departments	Subjects (Number)	Subject Gender (Number)
Chinese	12	6 male & 6 female
Business Management	12	6 male & 6 female
Law	12	6 male & 6 female
Accounting	12	6 male & 6 female
History	12	6 male & 6 female
Animal and Plant Medicine	12	6 male & 6 female
Physics	12	6 male & 6 female
Arts	12	6 male & 6 female
Public Policy	12	6 male & 6 female
Chemistry	12	6 male & 6 female
Mathematics	12	6 male & 6 female
Geography	12	6 male & 6 female
Science	12	6 male & 6 female
Music	12	6 male & 6 female
Physics and Education	12	6 male & 6 female
Tibetan language	12	6 male & 6 female
Total: 16 departments	192 students	192 students

Figure 2: Ways of Sampling Subjects**Figure 3: Criteria of English Levels**

The criteria (see figure 2 and figure 3) used in selecting the sample group were department, gender, and language proficiency levels at this Institute.

First, twelve students were chosen from each department.

Second, six male and six female students were taken as sample from each department to participate in this study.

Third, two students were selected from the low proficiency level, the average level, and the high level, according to their English final examination scores in the second semester of 1999.

Instruments

There were three kinds of instruments used in this research:

1. Questionnaire
2. Task framework
3. Classroom observation

Questionnaire

There were two sets of questionnaires used in this study. The first set was divided into two parts based on the understanding of different learning styles according to Reid (1987), Brown (1987), and Parrot and Scarella (1993). The first part (personal information) covered the students' code number, age, gender, years of learning English, and their ethnic groups. The second part (learning style survey) intended to discover the subjects' learning style preferences through 48 closed-type questions considering students' language learning habits and behaviors. In order to avoid the language barrier, the first set of questionnaire was in Chinese mandarin. This questionnaire was done before the design of the supplementary material. For details, see appendix 3.

The second set of questionnaires was used to survey the subjects' opinions towards the SMP through seven questions. Each question had four different answers. This questionnaire was distributed at the end of class. The feedback from the subjects and the results from classroom observations were used to find the SMP's weak points, essential to the improvement of the material. For details, see appendix 5.

Stages of Constructing the Questionnaires

Questionnaire (Set One)

1. Study the characteristics of different learning styles.
2. Choose 12 learning styles according to students' perception, personality, and logical thinking.
3. Study students' language learning habits and behaviors.
4. Construct the questionnaire in English.
5. Improve the questionnaire with the support of specialists.
6. Translate the questionnaire into Chinese.

Questionnaire (Set Two)

1. Observe the classrooms.
2. Study the students' classroom behaviors.
3. Construct the questionnaire.
4. Improve the questionnaire with the support of specialists.

Task Design

This SMP was developed to match the students' language learning style preferences and their interests. The input of each task was selected from authentic materials. Each Task was organized according to the task framework and authentic material input. The criteria of selecting the input and component to design the task framework is shown as follows:

Table 2: Task Component and Authentic Source Input

Components	
1.	Learning styles: based on the students' learning style preferences
2.	Activities: match the learning style preferences
3.	Reason for the activities: why this activity was chosen
4.	Objective: reinforce four language skills in independent study
5.	Skills: four skills and cognitive skill
6.	Input: the materials used in the class
7.	Equipment: the equipment when learn or teach in class
8.	Evaluation: the outcome from the students
9.	Role of teacher: how teachers manage the class
10.	Role of learners: how learners interact with teacher and other peers
Input	
1.	Photos: photos of Chengdu city's environmental pollution
2.	Oral description: the tape recording of Taihu lake pollution
3.	Newspaper: local newspaper for Chengdu city's sand rain
4.	Video: the video tape of a speaker's presentation
5.	Internet: the materials from the Internet searches

Task Framework

The task framework was designed based on the students' learning style preferences, task component, and authentic materials. See table 3.

Stages of Constructing Task Framework.

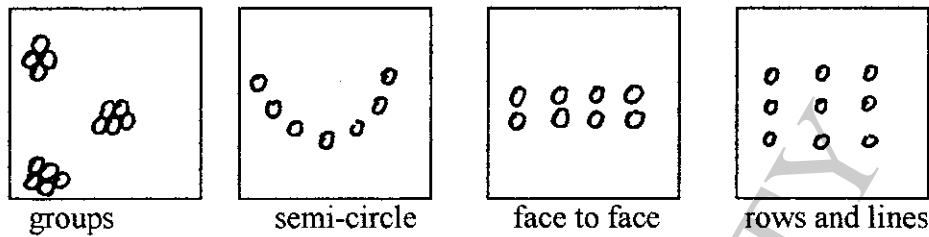
1. Study the characteristics of task-based teaching.
2. Study the task components.
3. List the subjects' learning style preferences.
4. Design the task framework.
5. Select the whole theme according to the students' interests.
6. Select authentic materials related to the topic.
7. Create activities to match the styles.

Observation

Passive participant observation (Lynch, 1996) was used as one instrument to evaluate how effective the SMP was in this study. During the observation, the researcher did not actively participate in the classroom interaction. The observation sheet focused on the teacher's action zone, teacher's talk, learner's interactions, grouping arrangements, seating, and classroom atmosphere. The definitions are presented as follows:

1. Teacher's action zone is indicated by those students with whom the teacher regularly enters into eye contact and to whom the teacher addresses questions; and those students who are nominated to take an active part in the lesson. In this study, the number of times the teacher made eye contact and addressed questions were used to measure the teacher's action zone.
2. Teacher's talk considers the amount of time the teacher talks as compared with the amount of the student's speech in classroom. It was measured by how many minute the teacher talked in the class. Percentages were used as the criteria to measure the time.
3. Classroom interaction refers to how the learners respond to the teacher, activities, materials, and other peers in the class. This study focused on learners' reactions to teachers, activities, and other peers.
4. Grouping arrangement means the choices the teacher makes about the learning arrangements he or she sets up within a lesson. It is frequently generalized as the whole-class; individuals, group work, or pair work. This study emphasized all types of the arrangement.
5. Seating indicates how the teacher making seating arrangement for students to stand, move, or sit. It helps students interact with different people, change the

focus from the teacher when appropriate, and allows a range of different situations to be recreated within the classroom. This study focused on rows and lines, small groups, semi-circle and face to face.



6. Classroom atmosphere indicates the students' moods, actions, and expressions in the classroom. It helps to see how effective the materials and classroom activities are in the class. This study focused on the following criteria:

Excited Silent Passive Smiling
Active Nervous Confused

(Craig 1990)

Observation Sheet

The observation sheet was developed according to the six elements above: The main purpose of the observation was to evaluate the effectiveness of this SMP. The details of the observation were shown in appendix 6.

Stages in the Construction of the Observation Sheet

1. Study classroom management.
2. Choose the focus of the classroom observation.
3. Construct the classroom observation sheet.

Data Collection

Data were collected through seven steps in this study. First, the students' English examination scores in 1999 were collected from the English Department at Southwest Nationality Institute. Second, the learning style questionnaire was administered to the subjects for discovering their language learning style preferences. Third, the SMP was constructed based on task framework and the students' learning style preferences. Fourth, the authentic materials were selected from local photos, newspapers, magazine, and the Internet. Fifth, information regarding the effectiveness of the SMP was collected through classroom observation. Sixth, the feedback of subjects' opinions about using the materials was collected through another questionnaire of the project. And seventh, the SMP was improved in terms of the results of the collected data by this researcher. ✓

Data Analysis

The test scores of the English examination were utilized to classify the students' proficiency levels according to the criteria of the Southwest Nationality Institute, Chengdu. (See figure 3)

The "mean" was adapted to analyze the data from the result of the learning style survey. The aim of the analysis was to discover the subjects' learning styles, which they often used, sometimes used, and occasionally used in their language learning. The criteria were shown as in table 3. ✗

Table 4: Means Adapted for Discovering Learning Style Preferences

Scale	Mean Range	Frequencies Level	Preference Level
1	4.21-5	very often used	prefer most
2	3.41-4.20	often used	often prefer
3	2.61-3.40	sometimes used	sometimes prefer
4	1.81-2.60	occasionally used	prefer less
5	1-1.80	rarely used	prefer least

Percentage was utilized to analyze the amount of the teacher's talk in the class. This criteria (table 4) was constructed based on Craig (1990) with the range of 70%-90% (high proportion), 64.5% (median proportion), and 11%-30% (low proportion).

Table 5: Percentage of Teacher's Talk in Class

Levels of Talks	Percentage Range
Teacher seldom talks	1%-10%
Teacher talks a little	11%-20%
Teacher talks appropriately	21%-49%
Teacher talks a little bit much	50%-60%
Teacher talks a lot	61%-80%
Teacher talks too much	80%-100%