

CHAPTER III: METHODOLOGY

This chapter is devoted to outline the methodology of the research. This chapter describes the main procedures to perform the research. It provides illustration on method of the study, the respondents of needs analysis, the method in collecting data, the method in analyzing data, and the way the collected data would be tested in attaining validity for the data.

3.1 Method of the study

The present study employed a descriptive method. A descriptive method sets out to describe and interpret data as it is (Cohen, Manion, and Morrison, 2007:205). The method was employed to describe information from needs analysis which includes the learning situation or environment, necessities, and wants of the students as suggested by Hutchinson and Waters (1987), and Nation and Macalister (2010). The descriptions were utilized to define the needs of the students which in turn became the basis in developing components of the proposed syllabus for the present study which consist of the goals and objectives, the syllabus, the materials, assessment, and program evaluation.

3.2 Respondents of Needs Analysis

According to Brown (1995:37), there are four groups of people who may be involved in needs analysis: the target group, the audience, the needs analyst, and the resource group. The target group is the group, commonly students, where the information will be ultimately gathered. The audiences (teachers, administrators)

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are those who will act upon the analysis. The needs analyst is the person to conduct the needs analysis and gain information from the other three groups. The resource group is those who provide information on the target group (professors of content course of the students).

For the present study, the target group is represented by the students in pre-service education, the audience is represented by the English instructor and the course coordinator, and finally the resource group is represented by the alumni and the faculty members.

The respondents for the present study's needs analysis were chosen purposively. In purposive sampling, the researcher judges and chooses the sample based on who she or he believes could provide the best information to reach the objectives of a research (Kumar, 1999:164). The descriptions of the groups of participants are as follows:

1. Students in pre-service education

The students in pre-service education were chosen to provide information on wants or subjective needs. The population of the present study was 14 students in the fifth semester of the initiated international class in the chemistry department at UPI Bandung. According to Kumar (1999:152), a bigger sample would provide more accurate findings. For that reason, the present study employed the whole population as the sample of the study which were 14 students in pre-service education.

2. Alumni

Information from alumni represented necessities or required knowledge. Four alumni were chosen as respondents for the present study. They were chosen due to the fact that they have experience in doing their PPL in international schools and have attended an additional ESP course provided by the Chemistry Education Department, thus; they have ideas of the target situation and suitable activities for the ESP course. Meanwhile, learners who have no experience in the workplace may have vague ideas on the situation they will face. This is in line with Long (as cited in Basturkmen, 2008:19) who stated that learners who are unfamiliar with the job they are to perform are not reliable informants.

3. Faculty members

The faculty members provided information on the necessities or required knowledge. The present study involved two faculty members of the chemistry department at UPI Bandung. The two faculty members were chosen because they are involved in teaching in the initiated international class at the chemistry department at UPI. Apart from that, the two faculty members are also lecturers who teach the subject of English in the first semester of the bachelors program in the chemistry department at UPI. For that reason, they had needed information about the chemistry students in initiated international classes.

4. English Instructor

The English instructor provided information on the necessities of the students. The instructor was chosen since he has experience in designing non-compulsory English courses in the department and had recently taught the students in the present study. Therefore, the English instructor has knowledge on the students and their needs.

5. Course coordinator of the chemistry education department

The course coordinator provided information for situation or environment analysis. The course coordinator was chosen since she has knowledge on the facilities for the course which had influence in determining the elements of the proposed syllabus of the present study.

3.3 Data collection

In order to gain information and data needed in conducting the research, a questionnaire and interviews were conducted. A questionnaire was employed as a survey instrument to dig information from the respondents (Shavelson, 2002:102). Meanwhile, interview was conducted to further investigate or gather more detailed and better information of the interviewee (Polkinghome, 2005; Miles and Huberman, 1994; DiCicco-Bloom and Crabtree, 2006). Details about the procedure of data collection are described in the following table:

Table 3.1 Data collection procedure

Instrument	Data source	Sample size
Interview	Course coordinator	1
	Alumni	4
	Students in pre-service education	4
	Faculty members	2
	English Instructor	1
Questionnaire	Students in pre-service education	14

3.3.1 Distribution of questionnaire

The questionnaires were distributed to the 14 students in the pre-service education on the 12th of October 2012 and were returned on the 19th of October 2012. The questionnaire consisted of four sections: personal information, English needs, and suggestions for future ESP course. The personal information section covers the participants experience in previous English study, situation of English use, and proficiency in English. Meanwhile, the English needs section was divided into five sub-sections: language functions, listening skills, speaking skills, reading skills, and writing skills. Lastly, the suggestions for future ESP course section included preferences of students in terms of topic, activities, materials, instructor, time, and assessment for the future ESP course. The results of the questionnaire are shown in part 4.1.1 of the present study.

3.3.2 Conducting of interviews

The interviews were conducted with (a) the course coordinator of the chemistry department at UPI Bandung, (b) 4 alumni, (c) 4 fifth semester chemistry students at chemistry department of UPI, (d) 2 faculty members (academics) at the chemistry department of UPI, and (e) the English instructor of the previous non-mandatory English courses held at the chemistry department at UPI Bandung. The

interviews with each group of respondents had its own objectives. The results of the interview can be seen in section 4.1.2 in the next chapter. Meanwhile the guideline and transcripts of the interviews can be seen in Appendixes 3 and 4.

The interview with the course coordinator was done on the 8th of July 2012 at the Head of the Chemistry Department's office. The objectives were to gain information on: 1. The vision and mission of the chemistry department, 2. The purpose of providing additional ESP course, 3. The facilities for the course, and 4. The suggested assessment for the course.

Meanwhile, the interviews with the alumni were conducted on the 15th and 22nd of July 2012 in front of the Head of the Chemistry Department's office and in the laboratory of a State Senior High School in Bandung. Interviews with alumni were done to seek: 1. Tasks performed during PPL, and 2. Suggestions for future ESP courses.

The interviews with the students in pre-service education were conducted on the 26th of October 2012 in a park at UPI Bandung. The interviews with the students in pre-service education also had its own objectives. The objectives were to identify: 1. The importance of English, 2. Previous English studies, 3. Prospective needs in English Language, and 4. Suggestions for future English course.

The interview with the two faculty members were conducted on the 9th of July 2012 in the Lecturer's room of the Chemistry Department. The objectives were to identify: 1. The English subject in the 1st semester of the Bachelor's program, and 2. The urgent English language needs of the students.

Finally, the interview with the English instructor was conducted on the 26th of October 2012 at his house in Bandung. The objectives were to identify: 1. The suggested method, activities, and assessment, and 2. The urgent needs of the students in English.

3.4 Data Analysis

Data analysis is one of the most important steps in research (Leech and Onwuegbuzie, 2007:562). The interviews of the present study followed the seven steps of interview investigations proposed by Kvale (1996:88) consisting of thematizing, designing, interviewing, transcribing, analyzing, verifying, and reporting.

From the closed questionnaire, the respondents' personal information and suggestions for English courses were summed up. Afterwards, the sum was divided by the number of respondents and multiplied by 100 which gave the percentage (%) of each item. After being put into percentage, the results were displayed, described, and interpreted.

Meanwhile, data concerning English needs were in the scale from 1 (least important) to 5 (most important) as illustrated below in table 3.2. The results of the participants' needs in English were summed up and then divided by the number of respondents to gain the mean (\bar{x}). The mean (\bar{x}) helped indicate the students' needs in English where the higher mean (\bar{x}) indicates higher needs whereas lower mean (\bar{x}) indicates lower needs. Data from questionnaire concerning on the English needs were then displayed, described and

interpreted. The Rensis Likert's scale (as cited in Khaemkaw, 2009:28) employed in the present study is as follows:

Table 3.2 Rensis Likert's scale

Scale	Needs	Problem
5	Most Important	Always (81-100%)
4	Important	Usually (51-80%)
3	Moderate	Often (21-50%)
2	Slightly important	Seldom (1-20%)
1	Least important	Never (0%)

3.5 Validity

The present study employed triangulation by employing two data collection methods to triangulate results: interview and questionnaire. This is in line with Denzin (as cited in Flick, 2002:226) and Oliver-Hoyo & Allen (2006) that triangulation involves the employment of multiple data collection methods. Furthermore, triangulation is important in improving the inflexibility of an analysis (Guba, 1985).

Another validity test conducted in the present study was members check. According to Alwasilah (2009:178), members check is conducted to avoid misinterpretation that a researcher makes. In addition, it helps establish the accuracy of the findings (Cresswell, 2009:191). To avoid misinterpretation, members check was employed to reassure the interpretation made based on

interview. In the present study, member check was done immediately after a respondent makes a statement during the interview. Members check was useful since interpretations by respondents are confirmed in order to provide straight and true information.

Meanwhile to ensure the validity of the questionnaire, the researcher asked for feedback, critics, comments, and suggestions. According to Alwasilah (2009:176), feedback, critics, comments, and suggestions are required to identify threats towards validity. All the inputs gave contribution in designing the questionnaire for the research. The input for the present study was from a senior lecturer of the English department at UPI and also a senior lecturer from the chemistry department who teaches in the international class of the chemistry department and also supervises students who takes their PPL (teaching practice) in international schools.

3.6 Conclusion

This chapter has discussed the methodology of the present study. The chapter covered the method of the study, the participants of the study, data collection, data analysis, and the validity strategies. The present study employed a descriptive method to describe the needs of the students in pre-service education. The needs of the students were then the basis in developing a proposed syllabus. The participants of the research consisting of the students in pre-service education, alumni, the course coordinator, the faculty members, and the English instructor were selected purposively to ensure that the objectives of the study were reached

through the best information on the students collected through questionnaire and interview. For data analysis, the results of questionnaire were analyzed based on a Likert's scale, meanwhile; data from interview were analyzed interpretively. To ensure the validity of the questionnaire, the present study employed feedback. Meanwhile, to ensure the validity of the answers of the respondents of interview, the present study employed member's check.

