CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter explains the methods applied in the research. First, the design of the study will be presented. Then, data collection, including respondents, instruments, and administration of the questionnaires and interviews, will be introduced. The researcher will report the data collection procedures through which the data was collected. The chapter will conclude with a description of the tools of data analysis.

3.1 Research Design

In this study the researcher has adopted a mixed methods approach, using both quantitative and qualitative data. A questionnaire was used to obtain the former; it was designed and administered to 210 international students in two faculties at the university, and statistical analyses were used to identify the most frequently mentioned problems. Qualitative data was obtained via interviews conducted with 25 of the participants in the study in order to further validate the findings from questionnaires and also triangulate the data. The use of mixed methods and triangulated data has been encouraged and recommended in the literature of needs analysis (Long, 2005). By applying both quantitative and qualitative methods the researcher hoped to get a better and more real picture of the situation as far as the problems of the international students with the use of English for Academic Purposes were concerned.

Also, using two complementary methods for data collection and analysis would yield better results and cover the drawbacks or the problems of either one used just by itself.

3.2 Data Collection

3.2.1 Respondents

3.2.1.1 International Students

This study proposed to survey the problems that the international students face when they use English for Academic Purposes in the University of Malaya. In order to do so, the students from two faculties were chosen to represent the whole population of the international students in the university. The two faculties which were chosen were the Faculty of Computer Science and Information Technology (representing the hard sciences), and the Faculty of Education (representing the humanities). The other rationale for the selection of these two faculties was the fact that these two faculties held the largest number of international student enrolment among the different faculties of the University of Malaya in the first semester of the academic year 2008-2009. (See tables below).

Table 3.1 Number of International Students in the Faculty of Computer Science and Information Technology (Academic Year 2008-2009)

Country	**IRAN**	**IRAQ**	**S.ARABIA**	**SUDAN**	**INDONESIA**	**CHINA**	**OTHERS**	**TOTAL**
NO. OF STUDENTS	93	38	18	18	14	12	80	273

In the academic year 2008-2009 there were 273 active international students in the Faculty of Computer Science and Information Technology (FCSIT) at the postgraduate level. These students were from 31 different countries, mostly from Asia and Africa, except for one from England. The number of post graduate students from Iran (93), Iraq (38), Saudi Arabia (18), Sudan (18), Indonesia (14), and China (12) was above 10 and these countries had the biggest population of post graduate students in the Faculty of Computer Science and Information Technology. Following Iran were the Middle East Arab countries (Iraq, Jordan, Palestine, Saudi Arabia, Yemen, U.A.E., Kuwait, and Oman) which composed 90 of the whole population of the international post graduate students in this faculty. (According to the Institute of Post Graduate Studies of the University of Malaya)

Table 3.2 Number of International Students in the Faculty of Education

(Academic Year 2008-2009)

Country	**IRAN**	**INDONESIA**	**CHINA**	**OMAN**	**OTHERS**	**TOTAL**
NO. OF STUDENTS	40	37	24	16	33	150

At the same time there were 150 registered international post graduate students in the Faculty of Education (FE). Again, the largest number was from Iran (40), followed by Indonesia (37), China (24), and Oman (16). Middle East Arab students were altogether 20, from Jordan, Oman, Saudi Arabia, and Syria. The students in the faculty of Education came from 23 different countries of Asia and Africa, with the exception of one student from England. (According to the Institute of Post Graduate Studies of the University of Malaya)

3.2.1.2 Lecturers

The other group of participants in this study was the lecturers of the two Faculties (5 from FCSIT and 4 from FE). They were the people who taught the students in the two faculties, supervised their research and theses, and were generally involved in the academic activities of the students. In the first semester of the academic year 2008-2009 there were 57 lecturers in the FCSIT and 73 in the FE. Their academic rank varied from professor, associate professor, senior lecturers, and lecturer. Almost all the lecturers were Malaysian, although most of them had done at least some part of their education abroad, except for two, one in FE and one in FCSIT who were visiting professors from the U.S.A and the U.K respectively. Not all these lecturers taught at the graduate level and supervised theses. However, those asked to participate in the study all taught at the graduate level and supervised post graduate theses at masters and/or doctoral levels. The researcher emailed all of the lecturers and explained the study and asked if they were willing to help her to collect some data through interviews with them. As mentioned above, 5 lecturers from the FCSIT and 4 from the FE responded saying they could participate in the study. Some lecturers replied they were on leave, some said they did not supervise graduate theses, some mentioned they did not have the time to participate, and some did not reply the emails.

Table 3.3 Lecturer Participants from the Faculties of Computer Science and Information Technology and Education (Academic Year 2008-2009)

Faculty	Professors	Associate Professors	Lecturers	Total
Computer	1	2	2	5
Education	1	2	1	4

3.3 Instruments

As stated earlier, in order to answer the research questions and achieve the objectives of the study two instruments were used: a questionnaire and interviews. Also, as mentioned earlier, interviews were conducted to validate, clarify, and elaborate the findings of the survey.

3.3.1 Questionnaire

The questionnaire was a means for understanding the problems that the international students in the mentioned faculties encountered with the use of English for Academic Purposes. It consisted of two parts; the first part included questions about the respondents' bio data (See appendix I). The second part listed a number of problems that students might have faced with the use of English for Academic Purpose. They had to grade their responses on a 4 point Likert Scale. The questionnaire was in English and the language used was as simple as possible so that the students would find it more accessible.

In order to develop the questionnaire, the researcher initially listed down the areas of language use in the university and the problems that may arise in each. In order to do this, she did informal interviews and surveys around the campus by asking fellow students from different faculties, especially those from the FCSIT and FE, about the different areas in their post graduate studies where they used English, for example comprehending lectures, writing reviews, and answering exam questions. At the same time, the students were asked about the possible problems one may face while using English in these domains. This was added to the list that the researcher herself had prepared.

Literature was also consulted (Tanaka, 2002) to check if every thing had been mentioned. The final list included 7 items:

- Understanding lectures,
- Note taking during lectures,
- Reading comprehension of text books and journals,
- Writing reviews and other project papers,
- Participating in group discussions and tutorials,
- Oral presentations, and
- Answering exam questions.

The researcher considered the problems that might occur while conducting each task and that was added to what the students had mentioned. The first area was about ‘understanding the lectures’. There were 7 problems mentioned in this category (See appendix I) which varied from the content to the lecturers’ accents and even the examples used to explain the content. The second area was ‘note taking’ which might be difficult due to three reasons: the first is that they might not be able to write fast enough in English, second, they do not know how to summarize lecture points, and third, that it is difficult for them to listen and take notes in English at the same time.

The third part involved reading books and academic journals and what might make it difficult for the second language reader. The problems would vary from a lack of basic proficiency in general English, vocabulary or grammar, to content-related problems where the students have problems understanding the subject matter (See appendix I).

Writing was the fourth task on the questionnaire and the problems associated with that would be considered from different aspects. Lack of a basic grammar knowledge and/or vocabulary would be one side of the problem, and not knowing how to write different genres would be the other side. Transferring from the first language to the second language might also be another source of problem in writing (See appendix I).

There were mainly three barriers to a successful participation in the tutorials or group work activities. The students might have difficulty understanding what is discussed in the group discussions. They may not be good enough to speak fluently and accurately which makes it difficult for the other group members to understand them. Sometimes, thinking in the first language and transferring that into the second language might prevent the students from participating actively in the tutorials.

The other area of language use was ‘giving oral presentations’. This might pose a problem to the international students when they cannot speak well or they can not understand what they are being asked (See appendix I). Finally, ‘answering the exam questions’ was the last area of language use for the international students in an academic setting. As it could be seen in the questionnaire (appendix I), sometimes the students do not understand the questions, although they might know the answer, or sometimes they know the answer but they are not successful in transferring their ideas into the English language.

At the end of each area of language use and the problems involved there was an item named "others" where the students could add any problems which they thought would exist and had not been included. Also, at the end of the questionnaire there was space for students to write any other problems they thought they had with the use of English in the university (See appendix I).

Once the list of different areas of the use of English together with the problems associated with each was prepared, the researcher developed the initial questionnaire. It was piloted on a small number of students (10 from the FCSIT and 10 from the FE) who resembled the actual target population. They were friends or fellow post graduate students who agreed to help to revise the questionnaire. The researcher met them in the faculties, libraries, or the institute of the postgraduate studies. The entire pilot group mentioned that the questionnaire was too long and they believed it had to be much shorter for the final administration to be successful. They also mentioned points about the items and the problems, and even the lay-out of the questionnaire. After considering all the points mentioned and making the necessary changes, the revised version was piloted. This time the researcher gave the questionnaire to both the previous group and a new group of 15 students (9 from FCSIT and 6 from FE) to be piloted again. After the second administration and considering the second feedback, the final version of the questionnaire was ready to be administered to the target population which is comprehensively explained in the data collection procedures section (3.4.1) below.

3.3.2 Interviews

The second instrument used in this study was interviews. Interviews were carried out with the students (15 from the FCSIT and 10 from the FE) and the lecturers (5 from the FCSIT and 4 from the FE) mainly because of two reasons.

As we know, in survey studies, the tools of research are mainly questionnaires and interviews. And it is also known that tools of research can not be 100% perfect due to various intervening factors such as time constraint, or misunderstanding the questions. So complementing the survey with other tools would add to the validity and the reliability of the findings. The questionnaire was designed to quantitatively describe the problems of the students with the use of English; for triangulation purposes interviews were conducted with the participants to validate, clarify, and confirm the findings. So the first reason to have interviews was to benefit from both tools of research in a mixed design.

The second reason to do interviews with the students was to further explore the problems in more detailed ways. Although the questionnaire contained all the areas of language use together with the problems that may have existed with regard to them, interviews were carried out to obtain necessary and relevant elaboration. Also interviews could give a better picture of the situation by going deeper into the problems and the issues involved. So interviews were used to give an in-depth and fuller account of the problems from the students' voices.

As mentioned earlier in the literature review, in the research about the problems of the international students the lecturers' points of view were not taken into consideration. That is the reason for the researcher to have interviews with the lecturers in addition to the students' interviews. By interviewing the lecturers the researcher hoped to see the problems from the view point of the people who were academically involved with the students.

Interview sessions were held in groups and individually. Depending on the students' schedule, the researcher had to do group and individual interviews. For the lecturers all the interview sessions were done individually. A fuller account of the interview sessions and how they were conducted is given in section 3.4.2 below.

The interviews were semi-structured. The sessions started with an introduction of the study. Then, the different areas of language use in the university were reintroduced and the problems with each area were discussed. The students further elaborated on the mentioned areas of language use and their problems. That was a chance for the problems to be more thoroughly investigated. The lecturers also heard the problems at the beginning of the session and later talked about what they believed to be the problems of the students with the use of English as far as they were concerned (See section 3.4.2.2).

3.4 Data Collection Procedures

3.4.1 Administration of Questionnaires

The data collection for this research took about forty five days (from September 7^{th} until October 21^{st} 2008). Once the final revised version of the questionnaire, as described above, was prepared, the researcher started collecting the data.

According to the post graduate offices at the FCSIT and FE, all the post graduate classes were held in the afternoons. For the faculty of education, since most of the students work in schools during the day, some classes are held on Saturday mornings too.

The researcher stationed herself and an assistant, who was thoroughly tutored, at the two faculties for about three weeks to ask the international students to complete the questionnaire. We approached students, introduced ourselves and the study, and asked them if they could take their time to fill a questionnaire. We also asked selected lecturers to let us enter their classes, either at the beginning, during the mid-class break, or at the end, to ask the international students for their cooperation. The other places that we went regularly to look for the international students in these two faculties were the libraries of the two faculties and the laboratories of the two faculties.

In classes the researcher and her assistant stayed for about 15 minutes and gave further explanations on how to fill the questionnaire and walked around to help the students fill up the questionnaires or answer any questions about the items. In other cases the students were briefed on the study, questionnaire, and how to fill this, then they were given a copy. We asked the students to tell us where and how to recollect the filled questionnaires. In these three weeks we also had chosen to sit at a certain place (the lobbies of the two faculty's buildings) for the students to know where to find us if they had any inquiries on filling the questionnaire, or if they wanted to return the completed ones. We also gave them our hand phone numbers so that they would be able to reach us in case of any inquiries. The other places we looked for the international students were the workshops that were occasionally held at the two faculties. Since the electronic mailing system in which all the post graduate students have an e-mail account did not let us send an email to the whole group, by the above mentioned ways we tried to visit as many international students as possible present at the university at the time of data collection.

However, we did not get to meet those students who were on leave that semester, or were doing their theses only and did not go to university as often, or did not go to university during these three weeks for other reasons of their own.

3.4.2 Administration of Interviews

There were two more stages in the data collection procedures: interviews with the students and the lecturers.

3.4.2.1 Students' Interviews

At the end of the questionnaire there was a part which asked the students their telephone numbers and e-mail addresses; not many respondents had left us their telephone numbers or e mail addresses, however.

The researcher wrote e-mails to the students who had left their electronic mail addresses asking them if they could spend thirty minutes on a follow-up interview session on their English problems. She also sent text messages to all who had given her their hand phone numbers. A total of 25 students (15 form the FCSIT and 10 from the FE) agreed to participate in interviews. For those who replied, the researcher arranged interview sessions. She tried to hold the interview sessions in groups for two reasons. The first reason was to benefit from the group discussion potentials: in groups, there would be more views leading to more comprehensive discussions; it could also help to identify if the problems discussed were general or individual. The other advantage was that it could save time in the course of data collection. However, for those students who could not attend the group interview sessions individual interviews were held. In total, 7 interview sessions were held with the students. There were four sessions with 5 participants, one session with 3, and 2 sessions with 2 individuals. The group interviews took around 75 minutes and the individual ones each took about 30 minutes. The interview sessions were recorded and the notes were extracted from the recording on the same day in order to have precise notes with a clear memory of the sessions.

3.4.2.2 Lecturers' Interviews

For the lecturers' interviews the researcher first went to the post graduate offices at the two faculties for a list of the lecturers who taught at the post graduate levels and supervised students' post graduate theses. Once she got the list, she sent them e-mails to introduce the research and ask them if they had the time to have an interview with the researcher.

The lecturers' interviews were done individually, not in groups. The reason was that the lecturers were busy and each of them had allocated a different time for the interview compared with the others, so this made it impossible to have a group interview session with the lecturers. The lecturers, however, were not involved with the language use and its problems as much as the students themselves were; but they could comment on some areas of language use, mostly production (in written or spoken). The lecturers were, however, busy and the interviews had to be as short and fruitful as possible. The interview sessions of the lectures lasted between 15 to 20 minutes each. This concluded the data collection procedures.

3. 5 Data Analysis

The SPSS software (version 15) was used to enter and analyze the questionnaire responses. As mentioned earlier, for each area of language use and the problems associated with that, the students would choose from a four-point Likert Scale, ranging from ‘Never’ through ‘Sometimes’, and ‘Usually’, to ‘Always’. The main tool in the analysis was the frequency of the occurrence of the problems. The researcher looked at both the most frequently occurring problems, including ‘sometimes’, and also those problems that ‘always’ or ‘usually’ occurs to the students. The second set of data, which was obtained from the interviews, relies on what the students and lecturers commented. In this part, the problems mentioned by the students are presented and discussed first, and then their perspectives of how to attend to these problems are given. For the lecturers’ interview results, the same order has also been followed. The results are given in the following chapter.

3.6 Conclusion

This chapter gave a detailed and comprehensive account of the research methodology used in this study. It started by explaining the nature, design, and the method of the research reported. The participants of the study were also introduced in detail. The researcher then discussed the tools and instruments of the research; how they were designed and developed and the rationale for using them. The other focus of the chapter was on the data collection procedures where the researcher gave an in-depth step by step report of the procedures through which the data were collected. The methodology chapter ends with a section on data entry and analysis processes. In the next chapter a comprehensive report on data analysis findings will be presented.