

## **CHAPTER III**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter provides a detailed description of methodology and instrumentation of the study. It includes an explanation on the subjects, the site, the instrument, the data collection procedure and the method of analysis. The explanation is vital in achieving evident results in response to the main concern of this study that is to find out whether the present ESP writing syllabus for the students of Degree in Computer Science in NDU matches the writing needs required in their job.

#### **3.2 THE SUBJECTS**

In this survey research, two major groups have been identified as vital in order to investigate the research questions. These major groups are the employers and the students.

### 3.2.1 The employers

The employers' views are crucial to evaluate the needs of the written communication in the ICT fields. Therefore, ten high-rank officers at several IT departments were selected.

The personnel have extensive experience in the department. Therefore, these officers would be reliable in providing comprehensive details on the writing skills which are relevant to the IT department.

The departments identified are as follows:

- a) Information and Technology Management Center, Royal Military College.
- b) 75<sup>th</sup> Royal Signal Corps in Sungai Besi Camp.
- c) Air Traffic Control Department of Royal Malaysian Air Force (RMAF), Kuala Lumpur Base.
- d) Electronic Warfare Department of the Royal Malaysian Navy, Ministry of Defence.

These headquarters/units were chosen for a number of reasons. Firstly, the use of English in these units is undeniable as manuals and

instructions are in the English language. This is vital as the focus is to ensure English is used at the workplaces. These places show high frequency use of English because they are the operational units which are service providers for their respective services. Operational units in the MAF use English language in many workplace transactions such as commands, memos and transfer of information to officers as most standard operating procedures, manuals and instructions are written in English.

These officers have vast experience in the MAF as they possess between 5 and 10 years of working experience in the IT department. In addition, they are in charge of students doing their practical, thus they have the authority to provide information about the writing skills and performance of these students. The feedback gathered from the personnel is valuable as the feedback will be able to provide some directions in terms of writing skills and needs of the students in the National Defence University of Malaysia, (NDU).

### 3.2.2 The Students

In this study, 20 students of Degree in Computer Engineering were selected to answer the questionnaire. The students are cadet officers

in the MAF undergoing a Degree in Computer Engineering programme in the National Defence University of Malaysia, (NDU). The reason for having them as respondents is that they are undergoing a formal training to qualify them as officers in-charge of various technical departments in the MAF, thus they are able to provide valuable feedback on their writing tasks in the IT Department. It is during this formal training that these students are required to do the ESP writing course.

After the completion of their Degree in Computer Engineering, they will then venture into the various relevant job categories in the three services in the Malaysian Armed Forces; namely the Army, Navy and Air Force.

### 3.3 THE SITE

It is crucial to provide a brief account of the site of this study as NDU is still a very new University. It may be an unfamiliar university to the public. The research was conducted at the National Defence University (NDU). NDU is located at Sungai Besi Camp in Kuala Lumpur. In the early years of its establishment, it was known as Akademi Tentera Malaysia (ATMA). During that time NDU stood as the only higher

learning institution in the MAF which offered first degree programmes for the MAF cadets. During these years, all degree courses in ATMA were conducted based on a twinning programme with Universiti Teknologi Malaysia (UTM). This means all curriculum, syllabus and examinations were prepared by UTM and the MAF was just responsible for providing facilities, logistics and teaching staff for military subjects only. Among the courses offered at that time were Degree in Marine Engineering, Degree in Aeronautical Engineering, Degree in Computer Engineering, Degree in Information Technology and other technical degree courses.

In 2001, the Ministry of Defence decided to have a university of its own. Hence, ATMA underwent a huge process of upgrading its status from an academy which has been dependent on UTM to a university that can stand on its own. The process of upgrading ended in 2002 and ATMA was given the status of a University in 2002.

Although NDU is an independent university now, 70% of the programmes, syllabus and teaching materials have not been totally changed. The process of constructing its own academic programmes is still in progress. Thus, to keep the academic programmes running, syllabus, curriculum, and academic administration used during the twinning programmes with UTM are still being practiced. Therefore, there

is a need for the academicians of NDU to evaluate and review the current syllabus as to fulfill the writing needs of the students.

NDU is selected as the site for this study firstly because it is the only higher learning institution in the MAF which offers degree programmes to the MAF cadets. Secondly, as the study is concerned about the writing needs of technical departments in the MAF, NDU is the only training institution in MAF that prepares cadets for technical jobs through the technical degree programmes offered here. These are the reasons why NDU was chosen.

#### 3.4 INSTRUMENTS

The instruments for this study were two sets of questionnaires and a set of interview questions for the MAF personnel. The first set of questionnaire was designed for the employers who are the officers in-charge of the various technical departments in the MAF and the second set was for the students of the Degree in Computer Engineering in NDU. Apart from the two sets of questionnaire, the researcher also conducted short interviews with the employers.

### 3.4.1 Questionnaires

Questionnaire is among the popular instrumentation used in many research studies. It is one of the most common instruments in a survey research in order to gather data.

The purpose of using the questionnaire is to gather information about the needs and to find out the gap between the NDU students' needs and the needs at workplace. Therefore, two different sets of questionnaires are prepared for the two subject groups who are the students and the employers.

The questionnaire for the employers consists of three sections. The first section is to gather personal particulars of the respondents, the second section consists of questions related to the needs and expectations in terms of writing skills and the third is an open-ended section for more in-depth responses to section two. The questionnaire for the employers is in Appendix E.

The students' questionnaire also consists of three main sections. Section A contains demographic questions are asked. The second section sought to gather data about the current writing syllabus at

NDU and the third section focuses on the English Writing Needs. In summary, Sections Two and Three focus on the current syllabus and the aim is to find out the students' needs and opinions in relation to writing skills. The questionnaire for the students is in Appendix F.

#### 3.4.2 Interview

In addition to the questionnaire, brief interviews were also conducted with the employers to clarify issues and responses that are vague or lacked elaboration. The interview questions consist of semi-structured and open questions. In fact, the interview was necessary to understand the issues at a deeper level and to strengthen points delivered in the questionnaire. However, due to time constraint, only the personnel were interviewed. Refer to Appendix G for the interview questions.

### 3.5 DATA COLLECTION PROCEDURE

This research intended to analyse the writing needs of the students of Degree in Computer Engineering. It is also meant to find out the needs of the students when studying writing in NDU. Therefore, the main concern



in this study is to identify if there is a mismatch of the writing needs of Computer Engineering students and the employers' needs and expectations in relation to the writing syllabus. The present ESP writing syllabus will be analysed to find out whether it offers something parallel with the needs and expectations of employer and the students or otherwise. To meet the objectives of this study, a set of data collection method was used.

Firstly, the subjects were identified for the research. Letters of permission were sent out to several Army Training centers around Malaysia. NDU has been selected as it is the only military institution in Malaysia. Secondly a pilot study of the questionnaire was conducted. Due to time constraint, only the students' questionnaire was piloted. Students undergoing a Degree in Computer Engineering were selected. After the pilot study, a revised set of questionnaire for students was designed and was used in the research. Data collection also included short interviews with the employers which were done right after the questionnaires were collected from them. This was to clarify and confirm statements based on their feedback in the questionnaire. After the data collection, the responses in the questionnaires were analysed. The responses from the interviews were analysed, coded and summarized to provide support for data collected from the questionnaires. Then, an analysis was conducted to evaluate the

current syllabus with the findings in order to find out whether there is a need to review the syllabus. Finally, the findings of the research were finalized and presented for further discussion.

### 3.6 DATA ANALYSIS

Data gathered from the questionnaires are then tabulated, analyzed and transferred into percentages and presented into tables, charts and graphs. Information obtained from all ten interviewees was transcribed, analyzed and then summarized. Input yield from these two methods has assisted in providing answers and proves to all three research questions. Responses from the interviews are analysed and grouped and later transferred into percentage. The data is then presented as evidence in answering all three research questions.

### 3.7 SUMMARY

In brief, this chapter elaborates the research method in gathering and analysing data for this study among the Computer Engineering Students in the National Defence University (NDU). It presents the process flow of the overall study in collecting the data for accurate representation of information for the study.