

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

5.1 Introduction

This chapter presents a general summary of the main findings discussed in Chapter Four, and provides answers to the research questions detailed in Chapter One. The implication and recommendations to improve the current TPS modules at BMI are also presented. This chapter ends with several limitations of the study and suggestions for further research.

5.2 Summary of Study

The purpose of this study is to identify the English language needs of HND students majoring in Electrical Engineering at BMI. It seeks to answer the following research questions:

Research Question 1: Language Ability

What is the perception of the students, English instructors and Engineering instructors regarding the students' ability in the listening, speaking, reading and writing skills and sub-skills?

Research Question 2: Language Needs

What is the perception of the students, English instructors and Engineering instructors regarding the listening, speaking, reading and writing tasks that are important for the students?

Research Question 3: Course Design

What kinds of teaching and learning materials, handouts/ notes, teaching aids, assessments and activities do the students and English instructors perceive as suitable for the course?

Research Question 4: Course Evaluation

What is the perception of the students, English instructors and Engineering instructors regarding the current TPS course?

Three different sets of questionnaires form the primary instruments for the study. The three different sets of questionnaires are – the student questionnaire, the English instructor questionnaire and the Engineering instructor questionnaire. The questionnaires were distributed to 80 final semester HND students majoring in Electrical Engineering, 8 TPS instructors and 10 electrical Engineering instructors who have been teaching various electrical Engineering modules at BMI. The data obtained from the student questionnaire, TPS instructor questionnaire and Engineering instructor questionnaire have been analysed and presented in Chapter Four. The discussion of the findings is presented in the next section.

5.3 Discussion of Findings

This section presents the discussion of the findings from the questionnaires and it aims to answer the four research questions.

5.3.1 Research Question 1: What is the perception of the students, English instructors and Engineering instructors regarding the students' ability in the listening, speaking, reading and writing skills and sub-skills?

The following section answers the first research question by presenting the students', TPS instructors' and Engineering instructors' perception of the students' language ability and their difficulties in English listening, speaking, reading and writing skills.

(i) Students', TPS Instructors' and Engineering Instructors' Perception of Students' English Language Ability.

The data revealed that there is a mismatch between the students' perception and the TPS and Engineering instructors' perception of the students' English language ability. Of the four language skills, more than 50.0% of the students perceived themselves as being good in listening, reading and writing skills, while 65.0% perceived themselves as being only average in speaking skills. This is in contrast with the TPS and Engineering instructors' perception as more than 60.0% of them perceived

their students as being weak and average in listening, speaking, reading and writing skills respectively.

(ii) Students', TPS Instructors' and Engineering Instructors' Perception of Students' Difficulties in Listening

There is also a mismatch between students' perception and the TPS and Engineering instructors' perception of the difficulties faced by students in some listening sub-skills. A majority of the students (70.0%) perceived that they had difficulty in only one listening sub-skill, which was in understanding different accents/slang. However, more than 60.0% of the TPS instructors and Engineering instructors perceived that the students not only had difficulty in understanding different accents or slang, but also in distinguishing main ideas and understanding technical description. 87.5% of the TPS instructors also perceived that students had difficulty in understanding the meanings of words.

(iii) Students', TPS Instructors' and Engineering Instructors' Perception of Students' Difficulties in Speaking

The data from the questionnaires revealed that there is a correlation between the students' perception, and the TPS and Engineering instructors' perception of the students' difficulties in two speaking sub-skills. More than 68.7% of the students, TPS instructors and Engineering instructors agreed that the students had difficulty speaking accurately and fluently.

In contrast, even though less than 46.3% of the students perceived that they had difficulties in the other sub-skills, more than 75.0% of the TPS and Engineering instructors perceived that students also had difficulties agreeing and disagreeing as well as in making suggestions.

(iv) Students', TPS Instructors' and Engineering Instructors' Perception of Students' Difficulties in Reading

There is a mismatch between the students' perception and the TPS and Engineering instructors' perception of the difficulties faced by students in most of the listening sub-skills. Less than 40.0% of the students perceived that they had problems in the reading sub-skills; however, the TPS and Engineering instructors seemed to have perceived otherwise. More than 60.0% of them perceived that the students had difficulties in six of the reading sub-skills – skimming, summarizing, understanding technical materials, determining relevant information, scanning and distinguishing main ideas.

It is also interesting to note that there is a mismatch between the Engineering instructors' perception and the students' and TPS instructors' perception about the students' difficulty in distinguishing facts. 80.0% of the Engineering instructors perceived that students had difficulty in distinguishing facts, but less than 37.5% of the students and TPS instructors perceived it as posing a problem to the students.

(v) Students', TPS Instructors' and Engineering Instructors' Perception of Students' Difficulties in Writing

There is a correlation between the students' perception, and the TPS and Engineering instructors' perception of the students' difficulties in two writing sub-skills – writing grammatical sentences and using correct vocabulary. On the other hand, more than 60.0% of the TPS instructors and Engineering instructors perceived that the students had problems in all the sub-skills listed in the questionnaire except for spelling. The sub-skills are choosing words, writing grammatically, linking sentences, combining paragraphs as well as organizing and planning a piece of writing.

5.3.2 Research Question 2: What is the perception of the students, English instructors and Engineering instructors regarding the listening, speaking, reading and writing tasks that are important for the students?

This section answers the second research question by presenting the language needs that the students, TPS instructors, Engineering instructors' perceived as important to the students. The language needs are further categorized into listening, speaking, reading and writing needs respectively.

(i) Students', TPS Instructors' and Engineering Instructors' Perception of the Importance of Listening Tasks

There is a correlation between the perception of the students, and the perception of the TPS and Engineering instructors regarding the importance of the listening tasks as a high percentage of them (87.5%) had the perception that the following listening tasks were 'very important' and 'important' to the students – listening to explanations, listening to lectures, listening to discussions, following instructions and listening to presentations. On the other hand, listening to social conversations was perceived as 'very important' and 'important' by a majority of the TPS instructors (87.5%) and the Engineering instructors (80.0%) respectively, but only 68.8% of the students had the same perception.

(ii) Students', TPS Instructors' and Engineering Instructors' Perception of the Importance of Speaking Tasks

There is a correlation between the students' perception, and the TPS and Engineering instructors' perception of the speaking tasks that were of importance to the students, as a majority of them (75.0%) perceived that most of the speaking tasks were 'very important' and 'important'. The speaking tasks that they perceived as 'very important' and 'important' were communicating in interviews, discussing technical problems, participating in group discussions and in meetings, giving instructions/directions, communicating with people socially, making suggestions and presenting oral reports. In contrast, although a majority of the students (91.2%) and the TPS

instructors (75.0%) perceived interrupting politely as a 'very important' and 'important' task, only 40.0% of the Engineering instructors had the same perception.

(iii) Students', TPS Instructors' and Engineering Instructors' Perception of the Importance of Reading Tasks

There is a correlation between the students' perception and the TPS and Engineering instructors' perception of most of the reading tasks. More than half of them (60.0%) perceived that reading technical journals, newspaper articles, notices and instructions, handouts and notes, technical textbooks, technical magazines, lab/computer manuals as well as reading information on internet websites were 'very important' and 'important' to the students.

However, more than half of the students (63.7%) and TPS instructors (62.5%) perceived reading general magazines as 'very important' and 'important' for the students, but only less than half of the Engineering instructors (40.0%) had the same perception.

(iv) Students', TPS Instructors' and Engineering Instructors' Perception of the Importance of Writing Tasks

There is a correlation between the perception of the students, the TPS and Engineering instructors on the importance of most of the writing tasks. More than half of them (60.0%) perceived that the following writing tasks were important – writing

descriptions, progress/ project reports, proposals, letters, lab reports, instructions/ manuals and recommendation reports.

However, in their perception of the importance of writing lecture notes, a majority of the students (82.5%) perceived it as important, but only half of the TPS instructors (50.0%) and less than half of the Engineering instructors (40.0%) had the same perception. Memo writing was perceived as important by a majority of the students (70.0%) and the TPS instructors (75.0%) but none of the Engineering instructors perceived it as important.

5.3.3 Research Question 3: What kinds of teaching and learning materials, handouts/ notes, teaching aids, assessments and activities do the students and English instructors perceive as suitable for the course?

This section answers the third research question by presenting the students' and TPS instructors' perception of the course design, which specifically looks into the teaching and learning materials, handout and notes, teaching aids, assessments, number of students for activities and tasks, as well as the types of classroom activities.

(i) Students' and TPS Instructors' Perception of Teaching and Learning Materials

There is a correlation between the students' perception and TPS instructors' perception of the content of the teaching and learning materials for the TPS modules. A majority of them (75.0%) agreed that the materials should be related to Engineering subjects, students' daily experiences, social activities and current interests. However, there is a mismatch in their perception of relating the materials to English literary works, as a majority of the students (75.0%) agreed to this, but only half of the TPS instructors (50.0%) had the same perception.

(ii) Students' and TPS Instructors' Perception of Handouts and Notes

There is a correlation between the students and the TPS instructors' perception on some aspects regarding the handouts and notes. A majority of them (87.5%) agreed that the handouts and notes should be modified to suit the learners' level of proficiency. Less than half of them (52.2%) also agreed that the handouts and notes should be taken directly from the original source and produced by students. In contrast, while a majority of the students (80.0%) agreed that language instructors should produce the handouts and notes, only half of the TPS instructors (50.0%) had the same perception. While a majority of the TPS instructors (87.5%) agreed that the handouts and notes should be related to foreign context and culture, only half of the students (50.0%) agreed with the statement.

(iii) Students' and TPS Instructors' Perception of the Use of Teaching Aids

There is a correlation between the students' perception and TPS instructors' perception of the use of all the teaching aids. More than half of them (65.0%) had the perception that all the teaching aids listed – radio and cassettes, conducive classrooms, language labs equipped with computers and compact discs, televisions and compact discs, slides, overhead projector, newspapers and magazines, were 'very important' and 'important'.

(iv) Students' and TPS Instructors' Perception of Assessments

There is a correlation between the students' perception and the TPS instructors' perception on most of the types of assessments. More than half of them (60.0%) agreed that the assessments for the TPS modules should consist of classroom tests (short quizzes), individual project work, group presentations, project work in pairs, project work in a group, individual presentations and listening tests.

On the other hand, 76.2% of the students agreed to have case studies as an assessment, but only half of the TPS instructors (50.0%) had the same perception. A majority of the TPS instructors (75.0%) agreed that the assessment should consist of a final exam, but less than half of the students (46.3%) agreed to this.

There is also a correlation between the students' perception and the TPS instructors' perception on the types of grading for the TPS modules as more than half

of the students (51.3%) and TPS instructors (62.5%) agreed on using marks instead of a grading criteria.

(v) Students' and TPS Instructors' Perception of Number of Students for Activities and Tasks

There is a correlation between the students' perception and the TPS instructors' perception of the number of students for activities and tasks. More than half of them (62.5%) agreed that the activities and tasks should be conducted in small groups of 3 to 4 persons and in pairs. Less than half of them (55.0%) also agreed that the activities and tasks should be conducted individually and in large groups of more than 4 persons. However, there is a mismatch between their perceptions in having activities as a whole class because none of the TPS instructors agreed to it.

(vi) Students' and TPS Instructors' Perception of Classroom Activities

There is a correlation between the students' perception and TPS instructors' perception of all the classroom activities. More than half of them (65.0%) agreed to the following types of classroom activities – public speaking, grammar exercise (exercise completion and discussion), dramas/ role-plays, language games, audio-visual activities, problem-solving tasks, projects and assignments, public speaking, as well as field trips. Less than 65.0% of them agreed to having lectures as part of the TPS modules. This is perhaps due to the nature of lectures in general, which is limited to a one-way interaction between the instructor and his or her students. Therefore,

lectures are felt to be not suitable in language learning as there is a limited opportunity to get students' feedback and to check their comprehension.

5.3.4 Research Question 4: What is the perception of the students, TPS instructors and Engineering instructors regarding the current TPS course?

There is a correlation between the students' perception and the TPS' instructors' perception of some of the aspects in the course evaluation. A majority of them (75.0%) agreed that the current TPS modules provided much information to the students and that sufficient emphasis were given to areas which they were weak in. It was felt that the TPS modules were useful because it helped students understand other technical modules. Half of them (50.0%) also agreed that the materials were interesting for the students.

However, there is mismatch between the students' and TPS instructors' perception as a majority of the students (78.7%) also believed they had no difficulty in understanding lessons taught, but only less than half of the TPS instructors (37.5%) perceived otherwise. In terms of contact hours, a majority of the students (82.5%) felt that the number of contact hours was sufficient, but only half of the TPS instructors (50.0%) agreed with this. In addition, a majority of the students (67.5%) agreed that the lessons were interesting, but less than half of the TPS instructors (37.5%) agreed to this. More than half of the students (68.7%) also perceived that there were sufficient

opportunities for students to practise what was taught in class although only half of the TPS instructors (50.0%) thought so.

The *Engineering* instructors were also asked to evaluate the TPS module by identifying the areas of English language they felt the students should be taught. Based on the analyses of the Engineering instructors' responses, all the respondents indicated that emphasis should be given on the two productive skills – writing and speaking. They further indicated that the students should also be taught relevant grammatical structures to enable them to write technical reports with minimum grammatical errors.

5.4 Implications and Recommendations

Some recommendations are made and discussed below based on the summary of the findings presented in this chapter. The recommendations are divided into the following sub-topics: recommendations on the important language tasks, and recommendations for course design. Recommendations are also made on how to improve the existing scheme of work and assessment scheme used in the TPS modules.

5.4.1 Recommendations on the Important Language Tasks

In the current TPS modules, only a few listening activities are carried out. These activities are limited to listening to job interviews and presentations. As 75.0% of the TPS instructors perceived that the students were 'average' and 'weak' in listening, a lot more listening activities, apart from listening to interview and

presentations, should be carried out. The important listening tasks should include listening to explanations, lectures, discussions, as well as listening to and following instructions. Another activity that should be included is listening to dialogues or speeches by native speakers to overcome the students' difficulty in understanding different accents/ slang.

The TPS modules do provide opportunities for the students to practise speaking as in every semester the students have to carry out at least one speaking assignment such as presenting proposals and reports, and conducting interviews and meetings. However, despite all the speaking assignments, the students were perceived by the TPS instructors and engineering instructors to have difficulties in speaking fluently, agreeing and disagreeing as well as in making suggestions. Therefore, the speaking component should also include activities that generate discussions and exchange ideas and opinions so that students will have practice on language forms and functions.

In terms of reading, one of the main reading components is reading comprehension that covers a period of four weeks. As the students and TPS instructors perceived that the students had difficulties in identifying main ideas and topic sentences, skimming and scanning, as well as summarizing, perhaps the four-week duration is insufficient. Thus, the duration should be extended to enable the TPS instructors to expose the students to more practice in reading.

The reading lessons should also incorporate the use of technical materials, taken or adapted from technical textbooks, technical magazines and technical journals, so that the students can be exposed to technical vocabulary and content. Students should also be taught how to read and understand lab or computer manuals as well as information on internet websites. All these reading tasks were perceived as important by a high percentage of respondents in the study. Therefore, the reading tasks can be integrated in the writing assignment such as in the proposal or report writing assignment by making it compulsory for the students to cite references from technical textbooks, technical magazines, technical journals or internet websites.

In the current TPS modules, the different types of writing tasks and assessments are writing summary, writing letters and memos, writing proposals, writing minutes of meetings, writing resume and application letters as well as writing research reports. From this study, it is recommended that the research reports should be replaced with progress/ project reports and recommendation reports, which were perceived as important by most of the respondents. Writing lab reports and writing instructions/ manuals should also be included in the TPS modules, as they were perceived as important by a high percentage of respondents. It is also recommended that the TPS instructors liaise with the technical instructors in deciding the format of the report so that the students can apply the format that they have learnt in the TPS lessons in writing their Engineering reports.

It is also recommended that the writing lessons should also incorporate the teaching of grammatical structures, and the use of transitional words and cohesive devices to help students improve their writing skills. Not only that, in every lesson there should be a vocabulary enrichment session so that the students can learn new words that can help them in writing. These are to overcome the students' problems in writing grammatically correct sentences and in choosing suitable words.

5.4.2 Recommendations for Course Design

The following recommendations are made to improve the current TPS modules. The recommendations are based on the summary of findings gathered from the students' and TPS instructors' responses on course design and evaluation. In general, the findings revealed that there are similarities in the students' and TPS instructors' perceptions on most of the items regarding the materials, handouts and notes, teaching aids, assessments and types of classroom activities.

In terms of teaching and learning materials, materials related to Engineering courses should be used a lot more in the TPS modules. This would add variety to the teaching and learning materials used in the course as currently many of the teaching and learning materials are taken from books for English proficiency courses. There are not many Engineering-related materials used and this could be due to the difficulty faced by the TPS instructors in comprehending some of the technical vocabulary in the materials and the perception that it would be dull for the students to use Engineering materials again in the TPS classrooms. However, from this study, a high percentage of

both students and TPS instructors agreed that the teaching and learning materials should be related to Engineering content. Not only that, the teaching and learning materials related to English literary works should also be used in the TPS modules as a high percentage of students agreed to it even though only half of the TPS instructors did.

On the use of handouts and notes, a high percentage of students and TPS instructors agreed that the handouts and notes should be modified to suit the learners' level of proficiency. However, it is difficult to modify the handouts and notes in order to suit each learner's level of proficiency as currently the students are not grouped according to their proficiency level. The handouts and notes, therefore, should suit the proficiency level of the majority of the learners. Besides that, a high percentage of TPS instructors also agreed that the handouts and notes should be related to foreign text and culture. The notes and handouts can be taken from foreign books or magazines especially from the United Kingdom, as some of the students will pursue their studies in United Kingdom after completing their HND.

The delivery of the TPS modules should also be done through the use of various teaching aids. This is because a high percentage of students and TPS instructors agreed to the effectiveness of the use of many types of teaching aids. Therefore, it is recommended that the TPS modules should be delivered using a combination of these teaching aids, which include computers and compact discs, televisions and compact discs, slides, newspapers and magazines, as well as radio and cassettes.

Many of the types of assessments that the students and TPS instructors agreed to be included as part of the TPS assessments are currently being applied in the current TPS modules. These include group presentations, project work in pairs for research report writing, project work in a group for proposal writing and individual presentations. Therefore, the only recommendation is to include a listening test as part of the assessments as a high percentage of students agreed to have it as an assessment. This is also in line with the recommendation made in 5.4.1 that is to incorporate more listening activities in the TPS modules. The method of assessing the students' performance in the TPS modules should also be changed from the current practice of using criteria description to the use of marks as preferred by the majority of the students and TPS instructors.

In order to vary the types of classroom activities, as perceived by both the students and TPS instructors, activities like language games, audio-visual activities and field trips should be carried out in the TPS class. This is to add on to the current activities of exercise completion and discussions, projects and assignments, as well as public speaking that are being carried out in the TPS class.

5.5 Limitations of the Study

This study has several limitations due to the constraints in time and resources. The first limitation is the limited number of subjects. Currently there are over 1200 students in this college studying various fields of Engineering such as Electrical, Electronic, Telecommunication, Computer System, Medical Electronics as well as

Engineering and Business Information Technology. However, only students from the Electrical Engineering were selected for this study as they form the largest percentage of the students' population, as compared to the other five courses. Slightly different results may be obtained as these courses differ in terms of student academic background. This is because for certain courses like Electronics, there are more students from the Mara Vocational Institute (IKM), as compared to Business and Information Technology course that has many SPM leavers. The difference in the students' educational background may affect the findings of the study.

As this study focuses on Electrical Engineering students, only the perception of instructors teaching modules related to Electrical Engineering is investigated. The views of other instructors teaching the other five courses are not taken into account, as currently there are over 100 Engineering instructors teaching various Engineering courses in this college. Therefore, due to time restrictions, this study is unable to consider views from all the instructors.

The third limitation of this study is regarding the research method. The data is collected based on the questionnaires given out to students, TPS instructors and Engineering instructors. There is no investigation into the materials that are used in the current course, and all the data obtained is based on the perception of the three categories of respondents.

5.6 Suggestions for Further Studies

Based on the limitations above, it is suggested that further studies be carried out to identify the needs of students in other Engineering courses such as Electronic Engineering or Telecommunication Engineering. The results obtained could then be compared to determine if there are any similarities or differences in the English language needs among students studying the different branches of Engineering. Besides that, further studies can also focus on the same branch of Engineering, but with students undergoing different levels of education like Certificate, Diploma or Degree levels. This is again to investigate the similarities and differences between the needs of students in the same course, but at different levels of study.

Another suggestion for future researchers is to investigate the needs of students with different proficiency levels. Rather than investigating the needs of students from various courses, future researchers can group the subjects according to their proficiency level - advance, intermediate and low intermediate. It would be interesting to find out the differences or similarities in the needs of students of varying proficiency levels.

The third suggestion is that future researchers can make a comparison of the actual classroom practices of ESP and general English proficiency courses. This is to determine the differences between ESP and general English proficiency courses in terms of the materials used or the forms of assessments. This is because several studies have been carried out to determine the needs of the learners and to propose

suitable syllabus or course guidelines based on the identified needs. However, not many studies have concentrated on comparing the types of actual materials used in ESP classrooms and general English proficiency classrooms and on the forms of assessment that cater the needs of ESP courses.

5.7 Conclusion

This chapter summarizes the findings of this study and highlights the similarities and differences in the perception of the students, TPS instructors and Engineering instructors regarding the students' ability and difficulties in the language skills and sub-skills, the importance of language tasks, as well as their perception on course design and evaluation. Based on the findings, several recommendations are made to incorporate the language tasks that are perceived to be important but are not being carried out in the TPS modules. Not only that, several recommendations are presented to improve the TPS modules in terms of materials, handouts and notes, teaching aids, assessments and types of classroom activities. Suggestions for further research are also presented based on the limitations of this study.