CHAPTER 5

CONCLUSION

5.0 Introduction

In this chapter a brief summary of the study would be discussed in relation to the research questions. Relevant information would be selected from the corpus of data and discussed. The next aspect of this chapter is to highlight the implications of the study as well as the recommendations and suggestions for further research.

The aim of this study was to find out answers to four research questions. The first research question was to find out students' perceptions of their critical thinking skills, having undergone the critical thinking skills course of the WS programme. The second research question was to find out tutors' perceptions of whether the strategies they had employed during this course had contributed to the development of critical thinking skills among the students. The third research question was to examine to what extent the assessment of the WS course measured critical thinking skills. Finally, the last research question was to find out whether there was any correlation between students' perceptions of the critical thinking skills and their performance in the final examination.

The instrument that was used to carry out the research were two sets of questionnaires and document evidence in the form of examination questions. The questionnaires were administered to two groups, namely the matriculation students of the MPIK-UK link

programme and the WS tutors. WS examination questions from 1995 to 1998 were analysed using Marzano's (1992) framework. This was to find out if these questions had elements of critical thinking skills in them.

The data from the two questionnaires were analysed using percentages. However, the scores obtained by the students in the 1998 examination paper were analysed using SPSS to see if there was a correlation between the students' performance in the exams and their perceptions of the critical thinking course after having undergone this course in the WS component. . The results of the questionnaires have been tabulated and also shown in graphs. The students' perceptions of their critical thinking skills were correlated with their examination scores. The result of this analysis showed that there was a significant correlation between students' performances and their perceptions of critical thinking skills course.

(V: 0.330; P: < 0.05)

On the whole the course had in a way, achieved one of the objectives, that is, to develop analytical and critical thinking skills among students pursuing the WS component. This was evident from some of the responses from the students' questionnaire. For example, questions 1 and 2 from the students' questionnaire were to find out the students' ability in categorizing strengths and weaknesses of an issue. 70.8% of the students felt they were able to categorize the strengths while 71.5% of the students were able to categorize the weaknesses of an issue. This indicates a positive element to the key question of being able to categorize an issue, by trying to identify the strengths and weaknesses. Question 3 and Question 5 were regarding the ability to consider other peoples' views and the ability to have

an independent mind respectively. Once again 87.7% of the students believed they were able to consider other peoples' views, and at the same time 83.1% of them considered themselves as having independent minds. This portrays that the students are independent in their thinking and at the same time are willing to listen to others' views which sound logical to them.

Based on the four research questions, this study has shown that to some extent, one of the objectives of the WS course, that is, to develop analytical and critical thinking had been achieved. However, tutors must know explicitly what they mean by CT in the context of their disciplines. Furthermore, they must also provide opportunities for students to practise CT skills. In addition to teaching explicit skills and analytical frameworks, tutors must nurture attitudinal aspects of CT, that is, students' innate source of interest, wonder and inquisitiveness. Besides all the above, creating classroom environments that encourage discussions, questioning, probing and pondering will help towards fostering CT. The inclusion of current reading materials that foster students' interest is also important.

In short, CT needs to be freed from a narrow frame of reference and expanded to include a variety of more open and subjective responses. These responses should include personal comments that are bias free.

5.1 Implications of the study

This study has provided additional support for the teaching of critical thinking. This support could further enhance the need to include CT skills in teaching. Piaget (1976) has mentioned aptly that children do not receive knowledge passively but rather discover and

construct knowledge through activities. As children interact with their physical and psychological environments, they begin to form what Piaget calls 'structures of thought'.

Teaching of the sciences is very much content-based. Facts and figures are updated extremely fast, that at times, one may not be able to keep pace with this phenomenon. As a result of this information boom, learners tend to memorize facts and figures, with minimal thinking. This is reflected in students' essays when they regurgitate these facts during tests and examinations. In this context, the teaching of CT becomes an important component because learners could be trained to think critically before accepting any information.

In relation to the above argument, individuals could be ultimately developed into 'more thinking individuals'. Teachers would welcome this situation, rather than having learners who are mere 'sponges'.

The insight gained through the process involved in teaching WS could be of help to teachers and all other educationists. In the case of teachers, their teaching would become lively and interesting. Teachers may also demonstrate their CT abilities implicitly in the way they organize lectures, revise questions and engage students in discussions. Curriculum planners could incorporate thinking skills in the curriculum, so as to make the syllabus more challenging and meaningful to the students, teachers and the society at large.

This study was carried out on a group of English as Second Language matriculation students whose medium of instruction was the English Language. Nevertheless, teachers

teaching in other languages and other subjects may wish to include critical thinking skills in their teaching. These teachers could then share their experiences and move towards including CT skills in our school curriculum and in the institutions of higher learning in the future.

5.2 Suggestions for further research

An experimental study would be a better method to determine the extent one had gained in pursuing a course. As such, giving the course participants a pre-test and a post-test could provide more valid results.

Studies similar to the present one could be extended to other students in schools and in institutions of higher learning. This could be a practical way to find out the thinking abilities of students in a college or at a school during the beginning of an academic year.

5.3 Conclusion

The results of this study showed that critical thinking skills can be taught to students quite successfully. In view of this, teachers will have to play an important role in including critical thinking skills in their daily teaching.

Furthermore, the challenge in today's curriculum is to teach students to become independent learners. This can only be achieved, if both the teachers and learners work together closely. The learners should work cooperatively or alone, to make sense of the enormous resource materials that are easily available to them. There is a need for one to be

selective in collecting information because the amount of information available through computers and media seems to have surpassed the ability to process and use the information. Thus it is important that students master the thinking and reasoning skills that they will need to process and use the wealth of information that is readily available. Knowles (1980:28) says that, as a result of new social change, educators must rethink their roles and concentrate on teaching students the skills and attitudes needed for self-directed inquiry.