

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The main purpose of this research is to study the moral maturity among form four student with different academic achievements in one of the secondary schools in Kuala Lumpur. The school selected for this study is a boys' secondary school which is also the workplace of the researcher. This school is selected because this study does not intend to study sex differences on moral development, so the gender of the sample is not taken into consideration. Furthermore a review of literature has generally shown that there are no significant differences in moral development among male and female respondents. For instance, Walker (1984) in his review of literature based on Kohlberg's male and female samples found that there was no significant sex difference in moral development. Walker's review included studies with 152 samples, which involved a total of 10,637 subjects. Of the 152 samples, a non-significant difference was reported for the vast majority (Walker, 1984, p. 100).

As for local studies, Chuah (1989) showed that there were no significant differences in the overall attitudes towards environmental issues between the sexes. Loganathan (1995) also found that there were no significant differences in moral judgement among male and female students in Malaysian schools. Jeevajothi (1997), in her study using the DIT, revealed that gender and social economic status

showed no significant differences in their moral reasoning in the T-test conducted. It is for these reasons that gender difference is not considered in the selection of school and subsequently the sample in this study.

The following sections discuss the sample and research instrument used in this study. It also discusses the procedures used in administering the instrument and the analysis of the data collected.

Sample

The sample consisted of 60 form four students from the researcher's school. For purpose of confidentiality the actual name of the school is not given in this study. These respondents were selected from a total of 143 students studying Moral Education in form four. The respondents were drawn from students doing Moral Education because the researcher intended to study the moral maturity among students who take the *Pengetahuan Moral* Paper in the *Sijil Pelajaran Malaysia* (SPM).

As the study focuses on the relationship between academic achievement and moral maturity, the sample was selected based on their performance at the form three centralised examination, *Penilaian Menengah Rendah* (PMR). The results were obtained by the researcher from the selected school. The school data showed that there were a total of 143 students who sat for the PMR and currently doing Moral Knowledge in form four.

In the PMR examination results, grading instead of aggregate was used to classify a student's achievement. The grades given for each of the seven subjects range from A to E: for example, A for excellent as shown in Table 3.1.

Table 3.1

Grading System In PMR Examination Results

Grade	Classification
A	Excellent
B	Credit
C	Pass
D	Acquired minimum level of proficiency
E	Failed to acquired minimum level of proficiency

However, in this study, in order to facilitate and determine the student's level of academic achievements, points were allocated for the results obtained as given in Table 3.2.

Table 3.2

PMR Grade and the Allocated Points

PMR Grade	Points Allocated
A	5
B	4
C	3
D	2
E	1

As shown in Table 3.2 the researcher used the above points to grade all students ($N = 143$) before selecting 60 respondents for this study. From the total points allocated to all seven subjects, the level of academic achievement were determined. The highest point that can be obtained by a student is 35 and the lowest is 7. In view of this, the points allocated for each of the 3 academic achievement group is shown in Table 3.3. For example, students who obtained 26 - 35 points were grouped at the high achievement level.

Table 3.3

Points Allocated for each Academic Group
According to PMR Results

Levels of Academic Achievement	Points Allocated According to PMR Results
High	26 - 35
Average	16 - 25
Low	7 - 15

As a point of illustration, Table 3.4 shows how a student’s PMR grade is converted to points and the academic achievement level is determined.

Table 3.4
An Example of PMR Grade and Total Points for a Respondent

Subject	PMR Grade	Points Allocated
Malay Language	A	5
English Language	A	5
History	A	5
Geography	A	5
Mathematics	A	5
Science	A	5
Living Skills	B	4
Total Points	-	34

As shown in Table 3.4, the student with 6As and 1B in the PMR results was allocated a total aggregate of 34 points. Using Table 3.3 as point of reference, the student was then placed in the high achievement group. This procedure was used for all 143 students and the results obtained are shown in Table 3.5.

Table 3.5

Level of Academic Achievement of Form Four Students
Doing Moral Education in the Researcher's School

Level of Academic Achievement	Number of Students (n)
High	50
Average	45
Low	48
Total (N)	143

As shown in Table 3.5, from a total of 143 students, there were 50 students in the high academic achievement group, 45 students in the average achievement group and 48 students in the low achievement group. For these three groups of different academic achievements, 60 students (20 students from each group) were then randomly selected for this present study on moral maturity.

The Research Instrument

The research instrument used in this study was called the Social Reflection Measurement-Short Form (SRM-SF) developed by Gibbs, Basinger and Fuller (1992) (see Appendix A). Permission was obtained from one of the authors, Gibbs, before the researcher carried out the present study on the relationship between academic achievement and moral maturity among form four students (see Appendices C and D). The research instrument consists of 11 questions. In the instrument, a respondent was required to state the importance of the moral question

and then give his or her views for the decision made. The questions in the instrument test the respondent's perception toward various types of values such as contract, truth, affiliation, life, property, law and legal justice (see Appendix A).

In this study, the respondents were given the instrument in English as English is a compulsory second language in Malaysia. Furthermore a pilot test conducted among form four students in 1996 in a secondary school in Kuala Lumpur but with different group of respondents, found that majority of the students could answer the questions in English. The Malay version of the instrument however was given upon request so as to facilitate those respondents who would prefer to answer the questions in the Malay Language which is the medium of instruction used in schools. The Malay Language version was translated by the researcher who was proficient in both languages (English and Malay) and checked for accuracy by a teacher who was also proficient in both languages.

Procedures in Data Collection

In collecting the data for the study, the researcher adhered to the following procedures.

1. First, permission was obtained from the Education Planning and Research Department (EPRD) (see Appendix E). Second, the researcher obtained the approval from the State Education Department in Federal Territory of Kuala Lumpur to conduct the study in the selected school (see Appendix F). Third, the permission from the principal of the selected school was obtained.

As the SRM-SF was administered as a group consisting of 60 students, the researcher also obtained approval for the use of the school hall.

2. Before the instrument was administered, the researcher informed the respondents on the date for completing the questionnaire and the procedures to be followed.
3. On the day of administering the questionnaire, the respondents were given an explanation on the rationale and objectives of performing the SRM-SF. The respondents were initially given a stipulated time of about 30 minutes to write out the answers in the SRM-SF.
4. Respondents performing the SRM-SF were given the option of doing the translated version of the SRM-SF. 15 respondents used the translated version.
5. The researcher, with the help of two other teachers, were in the hall to assist the respondents. They were to ensure that the students carried out their tasks smoothly. They explained the meanings of difficult words and helped the respondents who had difficulties in spelling.

The SRM-SF were collected from the students for analysis. However, problems were encountered when administering the test as given below:

- a) Some respondents initially did not write down the reasons for their choices when doing the questions. The researcher had to ask the respondent to complete them before collecting the questionnaires from the respondents.

- b) The time taken was longer than the recommended time of 30 minutes. The respondents took about an hour to complete the SRM-SF. This is perhaps due to the unfamiliarity of the structure of the questions as such questions had not been previously carried out in the researcher's school.

In spite of these problems, the researcher was able to obtain the data for analysis in this study.

Analysis of Data

After the students have attempted all 11 questions, the researcher matched their responses with the answers provided in Gibbs et al.'s manual (1992). For purpose of reliability in the analysis the researcher followed the manual in determining the level of moral maturity of the respondents. Below are the procedures used when analysing the data:

1. The researcher checked the number of questions answered by the respondents. If a respondent did not attempt a question, a letter "U" was given. A letter "U" was also given to a response that was unscorable. The U-score is equivalent to zero and subsequently was not scored for determining the level of moral reasoning. A further discussion on the U-score is given on pages 51 – 54 in this research report.
2. The researcher then marked all questions answered by matching the student's response with those in the SRM-SF manual.

3. The transitional score was replaced with a numerical value midway. For example in Question 2, if the respondent scored $2/3$ it is replaced with a value of 2.5. If he scored $3/4$, the respondent was given 3.5.
4. The total scores for all questions answered by the respondents were then calculated for the arithmetic mean which constituted the SRM-SF score. The arithmetic mean refers to the total score divided by the number of questions attempted by the respondents.
5. After calculating the arithmetic mean, the researcher assigned a Global Stage status to a respondent's response to the questionnaire, which represented the development vicinity in which an SRM-SF was scored. The Global Stage consisted of a ten-level scale as represented in Table 3.6.
6. The arithmetic mean was then used to determine global scale is given in the manual (see Table 3.6).

Table 3.6

Gibbs et al's SRM-SF Global Scale for Level of Maturity
in Moral Reasoning

Stage	Arithmetic Mean
1	1.00 - 1.25
Transition 1 (2)	1.26 - 1.49
Transition (2) 1	1.50 - 1.74
2	1.75 - 2.25
Transition 2 (3)	2.26 - 2.49
Transition 3 (2)	2.50 - 2.74
3	2.75 - 3.25
Transition 3 (4)	3.26 - 3.49
Transition 4 (3)	3.50 - 3.74
4	3.75 - 4.00

For example, using Table 3.6 as point of reference a respondent who scored an arithmetic mean of 3.15 was placed at Stage 3. These procedures were used in analysing the data for all 60 respondents.

Validity and Reliability

The arithmetic mean scores from all respondents were analysed using the SPSS/PCT (Statistical Package for the Social Sciences). In terms of reliability in the scoring by the researcher, two university lecturers from the Faculty of Education, University of Malaya who were familiar with moral development, then randomly picked 12 out of the 60 respondents' responses. The results showed that

there was little difference between the researcher and the two raters in calculating the arithmetic mean and staging the respondents. The differences that occurred were discussed with both raters and a consensus was reached.