

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Overview

The purpose of this study is to find out whether students' writing improves significantly when it is done collaboratively. It is to attain an understanding into how collaboration can aid the learning and teaching of writing in a typical Malaysian classroom. This chapter, therefore, presents the methodology used to investigate the aforementioned hypothesis. It includes a description of the research design employed and a discussion of how the data is gathered and analysed.

3.2 Research Design

I chose the experimental approach to test the hypothesis that the quality of students' writing can be improved by means of collaboration. The experimental approach is "a controlled look at nature. The experimenter sets up a task in which the structure of the task is explicit, the nature of the performance being studied is explicit, and the question that is being asked is precise" (Paivio & Begg, quoted by Cook, 1986:13 in McDonough & Shaw, 1997:155). The experimental approach was chosen because it allows for a controlled look at the effectiveness of collaborative work in improving the quality of students' writing. Control was necessary as I attempt to determine specifically the effect collaborative work (and not any other variables) had on the quality of students' writing. For instance, I concentrated on a homogeneous group of subjects to keep subject variables to the minimum. Then, the structure of the collaborative work was clearly spelled out so that subjects knew what they were supposed to do. Next, I had to determine exactly the methods used to obtain data that can be made sense of and analysed. This experimental

approach engaged both qualitative and quantitative methods of obtaining data. Observation would constitute a qualitative method because it involves “description and analysis rather than, for example, the counting of features” (Wray, Trott & Bloomer, 1998:95). Quantitative methods, on the other hand, produced data that can be “counted or quantified” (Wray, Trott & Bloomer, 1998:93). The quantitative method was used in this study to quantify the results of pre- and post-tests and to quantify the responses in the questionnaire.

However, there are two drawbacks to this experimental approach. First, there is the practice and fatigue effects in which students “performed better as they got more accustomed to the task (the ‘practice’ effect) and worse as they got tired and / or bored (the ‘fatigue’ effect)” (Wray, Trott & Bloomer, 1998:164). To minimise these effects, Wray, Trott and Bloomer (1998) suggested that the writing activities should not be too long and I decided to heed their advice by not conducting too many practice sessions.

The second drawback is that the experimental approach does not take into consideration students’ opinions, which may shed light on how effective collaborative work is for them. To overcome this, I would administer a questionnaire to elicit students’ opinions on collaborative work.

3.3 Data Collection Method

In this section, I will talk about the participants and setting of my study and also a detailed explanation of the instruments used to obtain data.

3.3.1 Student Participants and Setting

The study was conducted in an all-girl secondary school located in Muar, Johor. As I have taught there for almost four years, it was practical to carry out the study there as

it was convenient to engage the cooperation of the subjects. The subjects selected for the study comprised 24 Form 3 Malay students. They comprised an entire class which I taught during school hours.

It was the intention of this study to focus on a homogeneous group of subjects so as to minimise differences in learner variables. The subjects selected were of the same age, gender and ethnic group. They come from non-English speaking families situated in the town of Muar. They therefore share a similar cultural background and a common mother tongue - the Malay language, which is understood by the researcher. These factors might have a bearing on their exposure, acquisition and proficiency of the target language, which is the English language.

The subjects were also of similar educational background. They each had six years of primary education in a Malay-medium national primary school. They also had two years of secondary education in the national secondary school. This would imply that they had spent a similar span of time in formal English language learning.

Even though subject variables were kept to the minimum, the students' writing competency in English still varied. In terms of writing proficiency, based on the students' marks obtained from last year's second semester examination, some were more proficient than their peers while others were either average or low. However, it was my intention to focus on a homogeneous group of subjects so that the numerous factors that may affect or influence the choice of teaching-learning strategies could be minimised.

3.3.2 Teacher Participants

The study involved two English language teachers and I, all of whom taught in the same school where the study was carried out. I was 28 years of age with four years of teaching English at secondary level. The two teachers were in their late 30s with thirteen

to fifteen years of teaching experience. All of us graduated with a degree in Teaching English as a Second Language (TESL).

I participated in the study itself by assuming the role of a facilitator, particularly in the intervention sessions. These sessions were important because not many students are equipped with the ability to cooperate efficiently, so the collaborative techniques need to be imparted at the outset (Johnson et. al, 1984). The intervention sessions comprised one introductory session, one modelling session and four practice sessions. In the introductory session, I organised students into groups, settled on the students' seating arrangement and explained to students the steps involved in collaborative work for writing. During the modelling session, I showed how students should collaborate in their groups using the steps introduced in the introductory session. The modelling session was followed by four practice sessions in which I facilitated. In the post-test, in which students were required to write an essay using the steps in collaborative work, I ceased my role as a facilitator and assumed the role of an observer to collect data for the study.

The two English language teachers assisted me in this study. The first teacher helped me in conducting observation during post-test as it was impossible to observe 24 students alone. Observation from both the teacher and I were encoded in an observation form. The second teacher assessed the students' post-test essays based on the marking criteria designed by the Malaysian Examinations Syndicate (Appendix I), as I requested. The teacher had more than a decade of experience in teaching writing and in grading student essays. The results from the post-test essays were then compared to the pre-test essays, which I assessed. Both the pre- and post-test essays were marked by two different teachers (the second assisting teacher and I) in order to eliminate bias.

3.3.3 Instruments

As there is no one research instrument that is perfect, a combination of instruments have been employed to compensate for the shortcomings inherent in each instrument. Data collected from the use of different instruments are triangulated. According to Patton (1990:193), triangulation is “a powerful solution to the problem of relying too much on any single data source or method, thereby undermining the validity and credibility of findings because of the weaknesses of any single method”. Therefore, three instruments were utilised to obtain data for this study: pre-test and post-test, observation and questionnaire. The following is a detailed description of the instruments, rationale for the choice of instruments, the procedure and the precautions undertaken during the study.

3.3.3.1 Pre- and Post-Tests

The pre-test and the post-test were chosen because these two instruments provide the results that can be analysed. The results, in turn, would become evidence for the objective of this study. First, pre-test measured the expected outcome of subjects’ writing competence. Results from the pre-test then acted as a foundation for comparability with the outcome generated from the intervention, in which subjects were familiarised with the steps involved in collaborative work. Once subjects had gone through the intervention sessions, they were required to produce essays based on collaborative work. These essays constituted the post-test. Comparisons between the outcome from the pre-test and the post-test would reveal the extent to which collaborative work had been effective in improving the quality of the subjects’ writing.

These instruments basically involved writing sessions, in which the two baselines were established, with intervention sessions in between. For the first writing session (Lesson Plan 1, Appendix A), students were required to write an essay individually and

their essays formed the first baseline. This is also called the pre-test. Then, when intervention was carried out, the steps involved in collaborative work were explained to the students. The steps involved in collaborative work are:

Step 1: Discussing ideas for the essay. It includes activities such as suggesting contents, giving explanations, indicating approval / disapproval and acknowledging others' contributions.

Step 2: Producing a rough version of the essay. It includes activities such as planning / outlining the essay and making a first draft.

Step 3: Sharing and editing essays among group members. By doing so, others can provide remarks which may help the writer write better.

Step 4: Redrafting the essay.

Once students were familiar with the steps in collaborative work, a second baseline was established in the post-test (Lesson Plan 8, Appendix H). The essays from the pre-test and post-test were evaluated based on a marking scheme (Appendix I).

The essays were marked based on the marking criteria designed by the Malaysian Examinations Syndicate (Appendix I). The criteria include:

1. Content – the number and choice of ideas. It must be mentioned that analysis of content includes other elements such as development of the quality of the ideas and elaboration of the details. In this study, only two elements (number and choice of ideas) are analysed as I am focussing on how effective collaboration is in initiating change in number and choice of ideas. The essays were analysed based on changes in the number of ideas. An increase in ideas could suggest that collaborative work has been effective in helping students to generate more ideas. In addition, the essays were analysed based on changes in the ideas themselves. Subjects may

discard ideas in their pre-test essays in favour of ideas discussed during collaborative work. However, it must be noted that an increase in ideas does not necessarily lead to an increase in the quality of students' writing, as other areas such as development or elaboration of ideas and details should be taken into account too if measuring quality.

2. Language – grammar accuracy and diverse sentence structures which include items such as tenses, subject-verb agreement, articles, pronouns and prepositions. As language covers a broad aspect, a holistic assessment was necessary based on the band descriptors in the marking criteria designed by the Malaysian Examinations Syndicate. For instance, accurate language with a few minor errors (tenses, subject-verb agreement, articles, pronouns, prepositions and clarity of meaning) merit an 'excellent'. On the other end of the scale, high density of errors and obscured meaning warrant a 'very weak'.
3. Vocabulary – suitability in the choice of words and phrases. The essays were analysed based on changes and/or addition of words and/or phrases. Suitable words and/or phrases which did not emerge in pre-test essays but were present in post-test essays would suggest that subjects had benefited from collaborative work. Conversely, unsuitable words and/or phrases which emerged in pre-test essays but were no longer used in post-test essays too would also validate the hypothesis of this study that collaboration helps improve students' writing.
4. Mechanics – correct use of spelling, punctuation and paragraphing. The descriptors in the marking criteria designed by the Malaysian Examinations Syndicate were used to analyse the essays. In terms of spelling, essays were

assessed based on the errors committed in spelling words. In terms of punctuation, essays were assessed based on the accurate use of punctuation marks such as full stops, commas and question marks. Therefore, subjects who did not make punctuation errors merited an ‘accurate use of punctuation’. In terms of paragraphing, essays were assessed based on the division of ideas into paragraphs (one paragraph for one main idea). A subject who wrote in one, single paragraph would merit ‘serious errors in paragraphing’.

The marking scheme designed by the Malaysian Examinations Syndicate was selected because it is comprehensive and the descriptors for each criterion are detailed, thus ensuring smooth marking. The descriptors also serve as reminders of aspects that the assessors should look into when assessing the essays. To ensure that there is no bias, I evaluated the pre-test essays, while the assisting teacher was roped in to assess the post-test essays. The essays were compared and the results are presented in the following chapter.

3.3.3.2 Observation

Observation is important because one is observing an authentic situation. Observation was carried out by the assisting teacher and me during the post-test as students executed the steps involved in collaborative work as modelled and practised during the intervention sessions (further details on the intervention are in 3.4.2). During the session, students formed their groups of four efficiently and were seated facing each other to facilitate greater interaction. All the six groups knew exactly what to do and were seen carrying out the steps involved in collaborative work enthusiastically.

Initially, I intended to record on video the writing sessions. However, due to time constraint and the lack of equipment, video recording was not feasible. Furthermore,

McDonough and McDonough (1997:110) argued that video recording may “distract and possibly invite strange behaviour” and “could invalidate the observations as a true picture of what normally occurs”. Hence, I decided to conduct participant observation along with the observation of another teacher to minimise distortion of the data.

According to Patton (1990:207), participant observation involves “understanding the program as an insider while describing the program for outsiders”. Participant observation was feasible because I participated in the study itself by assuming the role of a facilitator. There are two rationales for conducting participant observation. First, by directly observing subjects collaborating, I was in a better position to comprehend the context in which collaborative work was carried out. Second, I was able to observe the extent to which students followed the steps involved in collaborative work. This is important because my study is focussed solely on collaborative work (and not any other instructions or modes of learning) and its impact on students’ writing. Furthermore, the data obtained from the observation would be useful in addressing the first research question (further details are in 4.2.1 and 4.2.2).

Nevertheless, there is one drawback to participant observation. It was impossible to observe 24 students carrying out collaborative work without losing valuable data. As such, I sought help from the assisting teacher to conduct the observation. Notes were taken during the observation. Besides checking the items in the observation form, the assisting teacher and I also observed the behaviour and body language of the students. Verbal exchanges among students while carrying out collaborative work with their peers were also jotted down as examples. The notes could help paint a clearer picture of what happened during collaboration. In addition, we encoded our observation in an observation form with items adapted from Olsen and Kagan (1992) in Kessler (1992:172) (Appendix J). The items include:

1. Requesting explanations / information / examples
2. Giving explanations / information / examples
3. Asking others to contribute
4. Checking understanding of others
5. Requesting assistance while producing a rough draft
6. Providing constructive feedback
7. Indicating approval / disapproval
8. Keeping the group on task

These items were carefully chosen and adapted because they corresponded with the steps involved in collaborative work for writing. For instance, items 1, 2 and 3 were related to Step 1 of collaborative work in which subjects discussed ideas for their essays. It was during this step that subjects took turns to ask for and give information and asking others to contribute. Next, items 4 and 5 corresponded with Step 2 in collaborative work in which subjects produced a rough draft. If a subject faced difficulty during Step 2, they were expected to request assistance from other group members. In return, members should check their peers' understanding after providing assistance. Then, item 6 correlated with Step 3 of collaborative work in which group members shared and edited each other's essays. During this step, subjects were expected to provide constructive feedback to their peers. Item 7 corresponded with Step 4 of collaborative work in which subjects redrafted their essays. During this step, subjects may choose to accept or reject suggestions generated from Step 3. Item 7 was also related to Step 1 whereby subjects indicated approval and disapproval over the ideas brought about by group discussion. Finally, item 8 referred to the role of the leaders of each group in ensuring that members kept to the task at hand, especially in carrying out all the steps in collaborative work for writing.

In conclusion, these items were necessary so that we knew what to look for specifically during observation. Moreover, observation of subjects carrying out these items would demonstrate the extent subjects follow the steps involved in collaborative work for writing. The items ensured the uniformity of the observational data and that the data was relevant to the research study.

3.3.3.3 Questionnaire

Students were required to complete a questionnaire (Appendix L) after the post-test. The purpose of administering the questionnaire was two-fold. The questionnaire was necessary to find out students' opinions on collaborative work. The questionnaire also aimed to determine the extent to which students find collaborative work useful in writing their essays.

Questionnaire was the preferred elicitation technique over interview due to the large number of subjects. As stated by Wray, Trott and Bloomer (1998), questionnaires allow data to be collected in the same, replicable way from a large number of informants, making comparison of the results easier and conclusions clearer. Results obtained from the questionnaire can then be quantified and each item in the questionnaire can be evaluated.

I had come up with a questionnaire based on an evaluation form by Shaw (1992) in Kessler (1992) (Appendix K). The questionnaire consists mostly of close-ended questions to make it easier to be processed and evaluated. As pointed out by Wray, Trott and Bloomer (1998), such questions allow the researcher to steer the survey with precision in the direction chosen.

For instance, Questions 1, 2 and 3 focussed on subjects' opinions on collaborative work, which were not perceivable in their essays. Subjects were asked whether they liked

working in a group, whether they found group work useful and whether they found it easier to write in a group. Question 4 was related to the intervention procedure, in which subjects were asked whether or not the training they received was sufficient and useful. Questions 5 and 6 were related to the steps involved in collaborative work. These two questions attempted to elicit subjects' opinions on whether they found their friends' comments to be useful and whether their friends found their comments to be useful. Questions 7, 8 and 9 sought to find subjects' opinions on collaborative work in producing ideas for their essay, in improving their language and in improving their vocabulary respectively. Questions 10, 11 and 12 are connected to Step 3 of collaborative work in writing in which subjects shared and edited their essays among group members. The categories that they had to be aware of while editing were punctuation, paragraphing and spelling and these three questions sought to find subjects' opinions on collaborative work in improving these three categories. However, close-ended questions may prejudice the issues and possible responses. Besides, there was the danger of students providing the 'right' answers and distorting the evaluation. To avoid that, I included one open-ended question (Question 13) so that students could express their views openly. Students were instructed to provide answers with honesty. An open question might reveal things the researcher did not know were even there to ask about (Wray, Trott & Bloomer, 1998).

The questionnaires were administered simultaneously to the group of subjects. As mentioned by Wray, Trott and Bloomer (1998), it is good for the researcher to be present when the data is collected as a relatively high completion rate is guaranteed with a 'captive' audience. Besides, if anyone finds a question unclear, I could explain what it meant.

3.4 Data Collection Procedure

The main objective of this study is to determine the effectiveness of collaborative work in improving students' writing in a second language. Multiple data have been collected using various instruments. These instruments include a pre-test and a post-test, observations and a questionnaire. Various instruments are employed so as to avoid depending too heavily on any one particular kind of data, which may disrupt the validity and credibility of the result and leave the research open to criticism. Collecting different kinds of data using different instruments is also for the purpose of triangulation. As mentioned in 3.3.3, triangulation could help maintain the validity and credibility of the findings.

3.4.1 Pre-Test

To establish the first baseline, I carried out a pre-test (Lesson Plan 1, Appendix A). During the pre-test, individually, students were required to write an essay on how to reduce air pollution in conjunction with Earth Day. The rubric for the essay was "The city you live in is facing serious environmental problems as a result of air pollution. You have been asked to write an essay on how to reduce air pollution in your city in conjunction with Earth Day". Students were to produce their individual essays in 40 minutes, the suggested time given to complete the writing section in an examination. Their essays were then assessed for writing proficiency.

The essays were assessed based on the marking criteria designed by the Malaysian Examinations Syndicate (Appendix I) which include:

1. Content – the number and choice of ideas
2. Language – grammar accuracy and diverse sentence structures
3. Vocabulary – suitability in the choice of words
4. Mechanics – correct use of spelling, punctuation and paragraphing

When marking the pre-test, the students were addressed as subjects 1A, 1B, 1C, 1D (they constitute a group), 2A, 2B and so on. This is to ensure impartiality and prevent any form of bias when the essays were being marked and graded. Besides, in order for me to identify the pre-test and post-test essays later during the analyses, I kept a list of the subjects' actual names which were cross-referenced to their codenames.

3.4.2 Intervention

The pre-test was followed by intervention. Intervention was carried out in six sessions, over a period of six weeks; one introductory session (Lesson Plan 2, Appendix B), one modelling session (Lesson Plan 3, Appendix C) and four practice sessions (Lesson Plans 4-7, Appendices D-G). The intervention sessions were essential to manage the learning environment and to organise students so that collaborative work in writing can be carried out efficiently later on in the post-test. The intervention sessions were to ensure that students knew the steps involved in collaborative work in writing and that students keep to the time frame.

In the introductory session (Lesson Plan 2 Appendix B), I made known to the students that I was aware of the challenges faced by students when it came to writing. Some of these challenges included not being able to start or continue with a piece of writing because of insufficient ideas and expressing oneself in the target language. Then, I explained that writing need not be a solitary and arduous activity which plunged students into helplessness. Next, I provided examples of real-life writing to illustrate that writing is a collaborative event; for example, so-called professional writers such as authors and journalists have editors to reread, recheck and revise their writing materials. Hence, collaboration would be introduced to help promote interaction in the writing classroom in the hope that challenges faced by students when writing could be overcome. Moreover, it

is hoped that students would internalise the steps involved in collaboration to edit and monitor their own writing, particularly in circumstances which require students to write alone such as examinations and writing letters or e-mails to friends.

I enlightened students that collaboration in writing involves students working together in groups to complete a writing task with the teacher acting as a facilitator. Working in groups implies that students get to work in a more relaxed and enjoyable setting. Students are likely to write better due to collaboration as there would be shared knowledge, increased confidence and cooperation among group members which make writing a less daunting task.

I then asked the students to form groups of four to facilitate collaboration in writing. I decided to organise the class of 24 students into six groups of four as Chitavelu et al. (1995:291) stated that “groups should not be too large so that there will be ‘passengers’, neither should they be too small so that there is not variety of input”. In addition, “experiences show that groups of three or four students, no more than five to six students maximum, works best” (Chen, 2004:3).

Initially, students were told to get into groups, with the freedom of selecting who they wanted to work with. However, after students had formed their groups, I noticed that some students with weak writing proficiency grouped themselves together. As stated by Johnson et al. (1984), student-selected groups often are homogeneous with high-achieving students working with other high-achieving students. This is a common occurrence as students usually stick to their circle of friends when asked to get into groups. As a result, certain groups were found to be made up of students who share a lower command of the target language.

In order for collaboration in writing to be carried out effectively, I am aware that a group should not be made up of students who all share a low command of the target

language. As mentioned in 2.3, such homogeneous grouping would 'label' the students and widen the gap between the different ability groups further (Chittravelu et al. 1995:291). In fact, studies conducted by Johnson et. al (1984) revealed that all students, be they low-, middle- or high-achievers, benefited from heterogeneous grouping. There is no doubt that "the largest gainers from working in heterogeneous cooperative learning groups are the struggling, low-achieving students; the next largest gainers are the middle-achievers" (Johnson et. al, 1984:74). The high-achievers too gained from collaborating with low- and middle-achievers. Johnson et. al (1984:74-75) concluded from their studies that high-achievers "have never done worse than their counterparts...score higher on retention tests...more likely to develop the leadership, communication, decision making, and conflict management skills needed for future career success".

Therefore, I regrouped the students by emphasising on the heterogeneity of students in terms of writing proficiency so that fast and slow students could work together cooperating with one another. This way, there would be better students leading the discussion in the group. As mentioned by Chittravelu et al. (1995), an efficient leader (student with a higher level of ability) can encourage everyone to participate and often students will correct one another's mistakes. Grouping students in the introductory session thus proved useful and essential in ensuring that students know how to group themselves and not change the composition of their groups in future sessions. As pointed out by Chittravelu et al. (1995:292), members need to get comfortable with one another before full participation of all members can be expected. Grouping more capable students with weaker students could also maximise students' gains from collaborative work. Heterogeneous or mixed-ability groupings could allow all groups to proceed at about the same pace, and probably resulting in a more successful implementation of collaborative work in writing in a classroom.

Besides organising students into groups, I also took into consideration students' seating arrangement as seating arrangement can affect classroom interaction. To encourage greater interaction, students were asked to sit in a circle, facing each other. Alternatively, students could turn their chairs so that they faced the students behind their rows. I also made sure that I had a clear access lane to every group. The students were trained to get into groups efficiently with the minimum of disruption (without undue noise and without bothering others) so as to maximise the implementation of collaborative work in the teaching and learning of writing. As mentioned by Johnson et al. (1984:45), work time in groups is a valuable commodity, and little time should be spent moving into groups.

The introductory session continued with a description of the steps involved in collaborative work to the students. The steps involved in collaborative work for writing are:

Step 1: Discussing ideas for the essay. It includes activities such as suggesting contents, giving explanations, indicating approval / disapproval and acknowledging others' contributions.

Step 2: Producing a rough version of the essay.

Step 3: Sharing and editing essays among group members. By doing so, others can provide remarks which may help the writer write better. Suggestions offered should be on meaning (refining ambiguous ideas), spelling, punctuation and paragraphing.

Step 4: Redrafting the essay.

Having described the value of collaboration, organising students into groups and having explained the steps in collaborative work in writing, I proceeded with a modelling session (Lesson Plan 3, Appendix C). As mentioned in 3.3.2, the collaborative techniques

have to be imparted at the start because not many students are prepared to work together effectively. During the modelling session, I demonstrated how students should work in their groups by acting as leader of one of the groups, while the rest of the students observed the modelling group's behaviour.

The topic for the modelling session was first given to the students. The rubric for the essay was "As the president of the Environmental Club, you have been asked to write an article for the school magazine on how to protect the environment". This essay had been done by the students at the beginning of the school year, long before this research was carried out with the class of students. The students had written their essays individually, as in the traditional writing classroom. The reason the same task was chosen again for the modelling session was because I planned to model Step 3 of collaborative work in writing – sharing and editing essays among group members – using one of the essays written by the class of students previously. By using one of the essays (Appendix M), Step 2 and 4 of collaborative work in writing – producing a rough draft and redrafting the essay – were not to be carried out in the modelling session to focus students' attention on Step 1 and Step 3 of collaborative work – discussing ideas for the essay and sharing and editing essays among group members. The rationale was that I felt that Step 2 (producing a rough draft) and Step 4 of collaborative work (redrafting the essay), which involved writing out the essay, need not be modelled, as the main purpose of the research was to find out how the process of collaboration could help improve students' writing. It was in Step 1 (discussing ideas for the essay) and Step 3 (sharing and editing essays among group members) in which collaboration mainly took place and it was essential to model these steps so that students were familiar with them.

While modelling Step 1 of collaborative work in writing, I initiated the discussion and modelled the types of questions students could ask each other while brainstorming

ideas for the essay. I initiated the discussion by reading the rubric for the essay and drew group members' attention to the requirement of the essay. I underlined the phrase "how to protect the environment" in the rubric to remind group members of what they should be brainstorming for. Then, I began the brainstorming session by asking what they could do to protect the environment. One of the group members was quick to reply that rubbish should not be thrown everywhere. I acknowledged the contribution made by the member by thanking her. The rest of the group members then jotted down the first idea.

Afterwards, I prompted group members to elaborate the first idea by asking what would happen if rubbish was thrown everywhere. One of the members responded that the rivers would be blocked. I accepted the idea and suggested the word "clogged" instead of "blocked". I probed further elaboration on the point by asking what would happen if rivers were clogged with rubbish. Members responded by offering ideas such as "dirty", "smelly", "all the fish die" and "water cannot flow freely". I acknowledged all ideas and reminded members to jot down all the points.

I continued the session by asking what other things they could do to protect the environment. One group member mooted the idea of renewing rubbish. Another group member chipped in that the proper term was "recycling" instead of "renewing". I indicated approval and prompted members to write down the second content point. I asked members to expand the second point by asking how recycling helped to protect the environment. A member replied that recycling paper helped save trees from being cut down to make more papers. Another member agreed and added that recycling plastic materials helped ensure rubbish made from plastic, which did not break down easily, did not end up in the environment. I asked other group members if they accepted the expansions. They agreed and jotted down the elaborations to the second idea.

For the third idea, one of the members initiated the discussion by highlighting the disappearance of animals as a result of human activities. I acknowledged the contribution and invited other members to respond to the third idea. One member mentioned that we needed to protect the animals from dying. I prompted further explanation by asking what she meant by that. The member replied by saying that animals disappear and die because humans hunt them. I then introduced the word “extinct” to replace “disappear and die”. After that, I asked how saving animals from extinction protect the environment. One member replied that it all had to do with ecology. Another member asked what ecology meant and the member answered that it meant the relationship between animals and the environment. She continued that if animals were extinct, the environment would be threatened too. The group members indicated approval and jotted down the idea and the elaboration.

That was how Step 1 of collaborative work in writing was modelled to the students. I explained to students that once they had completed Step 1, they should proceed to Step 2 which was producing a rough draft. However, Step 2 was not carried out in the modelling session because the aim was to model how collaboration should be conducted.

In order to model Step 3 of collaborative work in writing – sharing and editing essays – I made copies of one of the students’ essay on the same topic which was written early in the year as an example of a rough draft to be shared and edited (Appendix M). I reminded students that while reading the draft, they should offer suggestions on meaning (refining ambiguous ideas), spelling, punctuation (the use of commas, full stops, etc.) and paragraphing.

First, group members were given a few minutes to read the essay and indicate sections which needed modification or improvement. I provided one example to start the ball rolling by highlighting that the word ‘*government*’ was misspelled as ‘*goverment*’.

Other members acknowledged the error and one of them provided another spelling error; *'bottle'* instead of *'botol'*. Another member underlined the word *'ecossystem'* and said the correct spelling was *'ecosystem'*. As for punctuation, one member pointed out the misuse of a full stop in the middle of the following sentence; *"So, we must protect our environment now. before it become worse."* Other members acknowledged the error too as they knew that a full stop should be used at the end of a sentence. Then, I invited members to look at the sentence; *"Example, we can use paper in front and the behind"* and asked if they understood what the writer was trying to convey. One member explained that the writer meant using both front and back of the paper. The sentence was then corrected and refined into *"For example, we can use both sides of the paper to help save the trees."* I pointed out to group members that by doing so, they had not only improved the structure of the sentence, they had helped refine the meaning of the sentence. During the modelling of Step 3 too, there were also instances in which group members and I corrected grammatical mistakes such as changing *"many wild animal"* to *"many wild animals"* and *"Recycle help us..."* to *"Recycling helps us..."*. I also raised group members' attention to the organisation of the essay by asking them to look at the paragraphing of the essay. All of them concurred that the paragraphing was correct as the writer used one paragraph for one main idea. There were also a clear introduction and a conclusion for the essay.

In short, the modelling session aimed to familiarise students with the steps in collaborative work and ensure that students know exactly what to do and thus be able to carry out collaborative work confidently in the practice sessions and in the post-test.

During the next four weeks, four practice sessions (Lesson Plans 4-7, Appendices D-G) were conducted to assist students in internalising the steps in collaborative work. In the first practice session (Lesson Plan 4, Appendix D), students had no problems organising themselves into groups as practised in the introductory session. Once the rubric

of the task was given, I reminded the students to complete the task by implementing the steps involved in collaborative work in writing and adhere to the following time frame:

Step 1 of collaborative work – 10 minutes

Step 2 of collaborative work – 40 minutes

Step 3 of collaborative work – 10 minutes

Step 4 of collaborative work – 20 minutes

However, I noticed that the students took a while to warm up to the task. Not all groups started off their discussions immediately. Some groups appeared quite passive as members waited for others to initiate the discussion. I had to walk around and encourage students to generate ideas for their essay, at times providing assistance to help shape the discussion. Students gradually picked up momentum and managed to implement the steps involved in collaborative work in writing as observed in the modelling session. However, students did not manage to keep to the time frame allocated as they took more time to complete the steps than desired. I needed another follow-up lesson for students to complete all the four steps involved in collaborative work in writing. Nevertheless, I did not consider the session a failure as it was the first practice session for the whole class. At least students understood what was to be expected from them and there would be further practice sessions to help them internalise the steps.

In the second practice session (Lesson Plan 5, Appendix E), I reminded students to keep to the time frame once they had organised themselves into groups. This time, students were more at ease collaborating with each other. They were seen initiating discussions for ideas. I was not called upon to provide assistance to start off the discussion. However, I was consulted by some groups about whether their ideas were relevant to the writing task and during sharing and editing of essays. I obliged as it was important to help boost students' confidence at this stage so that they know what to do in

future sessions. Besides, there was improvement as some groups managed to keep to the time frame. For those who did not, they compensated by spending less time in redrafting their essays. Nevertheless, at the end of the session, all groups handed in their essays, an improvement in itself compared to the first practice session where a follow-up lesson was needed for students to complete all the four steps involved in collaborative work in writing.

In the third practice session (Lesson Plan 6, Appendix F), students knew what they were supposed to do. They organised themselves into groups as quickly as possible. Once again, I reiterated the time frame to ensure students follow the allocated time for each step. Upon receiving the rubric of the essay, the students began discussing and brainstorming ideas for the essay. They took turns to ask and answer questions to generate ideas. At the same time, students took down notes. Ten minutes later, they set about writing their first draft. Forty minutes later, the students completed their drafts and proceeded to share their drafts among group members. I observed that students indicated areas for improvement by underlining or circling on their friends' essays. If there was a spelling error, the students would underline or circle the word and tell her peer. Students were also seen discussing among one another as they edited their group members' essays. After ten minutes, subjects redrafted their essays after taking note of the suggestions provided by their group members. At the end of the third practice session, all students handed in their essays. Students demonstrated further improvement in this session as everyone kept to the time frame and I was not called upon for assistance, suggesting that they were confident in what they were doing.

In the fourth practice session (Lesson Plan 7, Appendix G), I observed that students carried out the steps involved in collaborative work in writing according to the stipulated time frame. Students exhibited similar behaviour as noted in the third practice session. I

took the opportunity to praise the students for their commitment and enthusiasm in acquiring the skills to improve their writing.

On the whole, the four practice sessions were helpful in training students to keep track of their time. The 80-minute time frame was necessary because “too little time would not allow the necessary amount of interaction while too much might result in some students losing focus and getting distracted” (Chitravelu et al., 1995:292). Sufficient practice sessions would therefore ensure that all steps involved in collaborative work would be duly completed by students. I did not want the lack of training or inadequacy of intervention to interfere with the results of the post-test as this might disrupt the validity and reliability of the study. In addition, students discussed in English during the practice sessions. It is unlikely that this could have an adverse effect on the quality of their discussions. I have conditioned the students to only speak English during their English language lessons from the beginning of the year. As such, students were able to communicate fluently and meaningfully in the target language, even though sometimes the language spoken may not entirely be accurate and sometimes communication were punctuated with long and short pauses. I hoped that the steps in collaborative work can be internalised by the students so that they could monitor and regulate their own writing in the future.

3.4.3 Observation

The assisting teacher and I observed the students during the post-test. We moved around the class to observe all the groups. Observation forms were used to check the extent to which students followed the steps involved in collaborative work. The observation was recorded in observation forms (Appendix J) with the following items:

1. Requesting explanations / information / examples

2. Giving explanations / information / examples
3. Asking others to contribute
4. Checking understanding of others
5. Requesting assistance while producing a rough draft
6. Providing constructive feedback
7. Indicating approval / disapproval
8. Keeping the group on task

Notes on students' behaviour, body language and verbal exchanges were also taken.

3.4.4 Post-Test

After the intervention sessions, I conducted a post-test (Lesson Plan 8, Appendix H). During the post-test, students were required to write an essay each on how to reduce air pollution in conjunction with Earth Day, using the steps involved in collaborative work. The task given was similar to the one given in the pre-test. The rubric read thus: "The city you live in is facing serious environmental problems as a result of air pollution. You have been asked to write an essay on how to reduce air pollution in your city in conjunction with Earth Day". Students were required to produce their final drafts according to the following time frame as mentioned in 3.4.2.

Their essays were evaluated and constituted the second baseline. The essays were assessed based on the marking criteria designed by the Malaysian Examinations Syndicate (Appendix I), similar to the one used for the grading of the pre-test. The two baselines were then compared so as to determine whether or not collaborative work had been effective. Analyses of the graded essays were conducted based on the four categories of content, language, vocabulary and mechanics. Comparisons were made of the pre-test and

post-test essays in terms of content and then language, and so on. The results are presented in the following chapter.

3.4.5 Questionnaire

Finally, students completed questionnaires (Appendix L) and analyses of the questionnaires might reveal students' perceptions which were not visible in their essays.

The questions are as follow:

Question 1: Do you like working in a group?

Question 2: Do you find group work to be useful?

Question 3: Do you find it easier to work in a group?

Question 4: The training you received for working in a group was not enough / enough / too much.

Question 5: Do you find comments from your friends to be useful?

Question 6: Do your friends find your comments to be useful?

Question 7: Has collaborative work helped in producing ideas for your essay?

Question 8: Has collaborative work helped in improving your language?

Question 9: Has collaborative work helped in improving your vocabulary?

Question 10: Has collaborative work helped in improving your use of punctuation marks?

Question 11: Has collaborative work helped in improving your paragraphing?

Question 12: Has collaborative work helped in improving your spelling?

Question 13: Do you think group work has helped you in your writing? Why?

Questions 1, 2 and 3 paid particular attention to subjects' opinions on collaborative work, which were not detected in their essays. Subjects were asked whether they liked working in a group, whether they found group work useful and whether they found it easier to write in a group. Question 4 was connected to the intervention phase, in which

subjects were quizzed whether or not the training they received was adequate and useful. Questions 5 and 6 applied to the steps involved in collaborative work. These two questions attempted to extract subjects' perceptions on whether they found their friends' comments to be useful and whether their friends found their comments to be useful. Questions 7, 8 and 9 sought to obtain subjects' thoughts on collaborative work in producing ideas for their essay, in improving their language and in improving their vocabulary respectively. Questions 10, 11 and 12 are related to Step 3 of collaborative work in writing in which subjects shared and edited their essays among group members. The categories that they had to pay attention to while editing were punctuation, paragraphing and spelling and these three questions solicited subjects' opinions on collaborative work in improving these three categories. Finally, I included one open-ended question (Question 13) so that students could express their views openly. This one open-ended question was utilised to avoid the danger of students providing the 'right' answers to the close-ended questions and distort the evaluation. Students were instructed to provide answers with honesty. An open question might reveal things the researcher did not know were even there to ask about (Wray, Trott & Bloomer, 1998). The answers to the questionnaires constituted the final data. Data from the questionnaires would shed light on subjects' opinions on collaborative work such as the advantages and difficulties that they faced in essay writing, benefits and challenges in collaborative work and their writing preference. Frequency counts were made of the questionnaire and results are presented in the form of tables in the following chapter.

3.5 Conclusion

This study adopts the concept of triangulation which favours the use of more than one method so as to enhance the validity and reliability of the findings. Therefore, this

study engaged both qualitative and quantitative methods of obtaining data on the effectiveness of collaboration in teaching and learning writing. Observation, which constitutes a qualitative method, was used to obtain data on the extent to which students followed the steps involved in collaborative work. The assisting teacher and I wrote down our observation in an observation form. The quantitative methods used to obtain data were a pre-test, a post-test and a questionnaire. In the pre-test, subjects were required to compose an essay individually and their essays constituted the first baseline. Then, subjects were introduced to the steps involved in collaborative work in writing and were given the opportunity to practise the steps in the intervention sessions. After that, the post-test was carried out in which subjects compose essays based on the steps in collaborative work. Essays from the post-test constituted a second baseline. Essays from the two baselines were evaluated and quantified based on a marking scheme. Subjects' responses to the questionnaire were also quantified and evaluated. It was hoped analyses of the observation would unveil the extent to which subjects followed the steps involved in collaborative work. Analyses of the pre-test and post-test essays would reveal the extent collaborative work had benefitted subjects' writing. Analyses of the questionnaire would shed light on subjects' views on collaborative work, which were not visible in their essays. An integration of methods may provide a better comprehension of collaborative work in writing.