

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The chapter describes the data collection approach used in the study. The research design, research setting, background of the participants, written consent from the participants, and teaching instructors are described in detail to provide essential information. This chapter also outlines the research instruments, instructional procedures and research procedures. The last section justifies the instruments used in data collection and provides a framework of data analysis.

Research Design

The researcher decided to use a qualitative approach in this study due to three reasons. First, the approach enables her to obtain a closer perspective and deeper understanding about the participants' experiences. Merriam (1998) states that "the investigator is the primary instrument for gathering and analysing data and as such can respond to the situation by maximising opportunities for collecting and producing meaningful information" (p.20). Therefore, the researcher decided to use a qualitative approach to gain in-depth information useful for her study.

Second, a qualitative approach allows the researcher to be physically present in the setting. She attended the discussions but contributed minimally because she wanted

the participants to perform the task independently. She did not want to be constantly guiding them because it would reduce their collaboration. She also adopted the stance of a participant observer during the study. Creswell (2009) described the stance as allowing “the researcher to record information as it occurred” (p. 179). The researcher wanted to observe firsthand the significant episodes which occurred so that she could take down accurate notes on them.

Third, a qualitative approach places emphasis on the process rather than the outcomes (Bogdan & Biklen, 1992; Merriam, 1998). This is vital for the researcher’s study as the process which the participants undergo reflect the reality of collaborative writing. She is also interested to discover the experiences they have in the course of their collaboration.

Case Study

Best and Kahn (1998) say that “ethnographic, case study, phenomenological, constructivist and participant observational” are forms of qualitative method (p. 239). The researcher chose case study as the research method based on three rationale. First, Cumming (2001) observes that case studies are generally used in published L2 writing research. Since this study is in the area of L2 writing, the researcher decided to use case study to obtain useful data. This is supported by Stake (1995) who explains that researchers can collect in-depth information from case studies because they are bounded by time and activity and allow a myriad of procedures to be used.

The second rationale is a case study helps the researcher to discover detailed and authentic information. Best and Kahn (1998) state that a “single case emphasises analysis in depth” (p. 249). McMillan and Schumacher (2006) explain that a case study deepens understanding of a phenomenon despite the number of sites or informants involved in a study. In addition, Merriam (1998) posits that the characteristics of case study are intensive, having a holistic description and pertinent in the analysis of a single course or bonded system.

Third, a variety of data collection methods could be used in case study. Best and Kahn (1998) describe the methods as, namely, observation, interviews, questionnaires, opinionnaires, psychological tests, inventories and written recorded data. The researcher used observations, interviews and diary entries in this study to derive important information and to triangulate the findings.

Despite the advantages of the case study approach, the researcher had to exercise some caution. Best and Kahn (1998) provide three precautions which are familiarising one with the theoretical knowledge of the field of inquiry in order to separate significant variables from irrelevant ones, the possibility of having subjective bias and making wrong connections between effects with factors. Therefore, the researcher exercised much care in using case study carefully and not to be influenced by her preconceived views while conducting this study.

The Setting

A public institution of higher learning in Malaysia, College A, was chosen as the site of the study. The specific setting and the participants of the research would be anonymous to fulfil the human ethics requirements of maintaining confidentiality. However, relevant details about the setting are provided.

College A offers eight degree programmes, 39 advanced diploma programmes, 46 diploma programmes, 22 certificate programmes, *Sijil Tinggi Pelajaran Malaysia* (Malaysian Higher School Certificate) programme and 'A' Level programmes in business, science, engineering, social science and humanities. The enrolment comprised local students who have completed their Form Five.

The medium of instruction used in College A is English. Therefore, English classes are provided to improve the students' proficiency. English courses and other technical courses form the programme structures.

College A was chosen as the study setting because collaborative writing was commonly used in the college. Therefore, the researcher is interested in gauging its effectiveness. The findings would also help the college instructors to understand their students' collaborative writing experience which, in turn, helps them to refine the use of collaborative work.

English Courses Offered at College A

The college offers various English proficiency courses to improve the students' English competence for social and academic needs. The college has sanctioned a mandatory pass in English I (XYZ1111) and English II (XYZ2222) as part of the requirement to graduate. Each course carries 3 credits with 3 contact hours per week for a duration of 14 weeks which is equivalent to one semester. The original names of the courses were changed in this study to maintain confidentiality. However, the skills described in the courses approximated the original syllabuses.

English I is a general English proficiency course. The course emphasis is the basic skills of writing, listening, reading and speaking. The participants had passed their English I test before proceeding to English II.

The participants were attending English II classes during the duration of this study. English II is an English for Specific Purposes course. It focuses on workplace communication with emphasis on writing, listening, reading and speaking skills.

Listening, speaking, writing and reading skills required at the workplace are given much importance in English II. The course covers note-making during briefings and oral presentations, making oral presentations, handling business telephone calls, writing essays, writing business letters such as letters of enquiry, complaint and job application and producing long reports; memoranda; instructions and short reports.

The course assessment is coursework (40%) and final examination (60%). Coursework comprises a written long report (20%) and an oral presentation of it (20%). The long report is written as a group but presented individually. The students have to collaborate outside their class hours to perform the writing task without any supervision from their instructor.

The final examination consists of three sections. Students have a choice in writing one of the three essay topics in Section A. Similarly, in Section B, students have the option of writing either a letter or a memorandum or a short report or a set of instructions. Finally, students have to attempt a reading comprehension and a cloze passage in Section C.

Teaching Instructors

English II (XYZ2222) was taught by one full-time instructor and one part-time instructor when data was collected for this study. The full-time instructor taught morning and afternoon classes, while the part-time instructor taught evening and night classes. A teaching manual which was prepared by a course committee was used by all instructors teaching the course as a form of standardisation. The course coordinator liaised with the instructors periodically to ensure uniformity in teaching and assessment. The question paper for the final examination was set by the full-time instructor.

The weekend before the class commenced, the course coordinator briefed the instructors on general guidelines pertaining to student attendance, course plan, course

teaching material and course assessments to ensure standardisation. The instructors had lessons twice a week for each class. Each lesson was for one and a half-hour. All instructors had to submit their students' coursework marks in week 13 of the semester. The coordinator then moderated the marks. If the grading was considered too strict or too lenient, the instructor would be asked to re-evaluate the scores.

Instructional Procedures

Instructors of English II (XYZ2222) provided teaching input for 14 weeks. One of the items taught was the writing of a long report. The areas covered were, namely, purposes of writing a long report, different types of long report, format of a long report, data collection from various sources (questionnaires, interviews and observations), stages of writing a long report and using the Harvard Referencing System.

Students involved in the study were required to fill out a biodata form (see Appendix 1). The form was used to record the participants' names, course, year of study, gender, race, past English results and their opinions on collaborative writing. The information would help to facilitate the observation process of the students' collaborative writing sessions.

Target Group

The target group was students taking the English II (XYZ2222) course. This course was conducted in the second semester of the second year of the diploma in science programme. During the semester the study was conducted, there were

approximately 250 students taking the course. Based on the students' registration list in year one of the computer science programme, an appointed course coordinator divided the students into 10 classes.

Selection of Participants

The researcher selected twelve students from a full-time instructor's class as participants in this study. They were selected due to a few reasons. First, they were willing to be observed during their collaborative writing. They consented in becoming participants after the researcher's explanation of the intended study in class. Second, the time decided by the participants for their collaborative writing was suitable for the researcher. She was free to observe them during their discussions.

Three of the participants studied in national schools while nine of them studied in national-type schools. National schools use Malay as the medium of instruction while national-type schools use Chinese and Malay as the medium of instruction. Eight of the participants had gone through 11 years of English classes while four had 12 years of English classes in their primary and secondary schools.

All of the participants had mixed results for English I (XYZ1111) test. The assessment was based on their coursework (40%) and final examination (60%). The assessment comprised reading, grammar, speaking and writing tasks. The participants' results ranged from grades A to C (see Table 3.1). One of them scored a grade A, four received grade B and seven obtained grade C. The participants with grade A were

categorised as possessing high proficiency, grade B as medium proficiency and grade C as low proficiency in English.

Table 3.1

Participants' Results for English I Test (Groups 1 and 2)

Grades	Level of English Proficiency	Number of Participants
A	High	1
B	Medium	4
C	Low	7

Brief Description of the Case Study Groups

The participants of the study are predominantly females of Chinese ethnicity. They were all diploma students and their age ranged from 20 to 25. All of them did not have any experience of writing a long report in a group. Information on the participants' background and opinions on collaborative writing in Tables 3.2 and 3.3 was elicited from the biodata form which they had filled in.

Table 3.2 shows that Group 1 consisted of all female participants. They had mixed results for their English I test. Loh scored an A grade; Ooi, Wai and Tang obtained B grade while Soong and Phua had C grade for the test. All of the participants had positive views on collaborative writing.

Table 3.2

Background Information about Group 1

Name	Course and Year of Study	Gender	Grade for English I Test	Views on Collaborative Writing
Ooi	Diploma in Computer Science, Year 2	Female	B	Positive - generating more ideas and having better quality work
Loh	Diploma in Computer Science, Year 2	Female	A	Positive - sharing ideas and opinions
Soong	Diploma in Computer Science, Year 2	Female	C	Positive - sharing information and getting more information in a short period
Wai	Diploma in Computer Science, Year 2	Female	B	Positive - sharing opinions and correcting mistakes
Tang	Diploma in Computer Science, Year 2	Female	B	Positive - having various opinions
Phua	Diploma in Computer Science, Year 2	Female	C	Positive - having many ideas

Note. Grade A - high proficient students, Grade B - medium proficient students, Grade C - low proficient students.

It can be observed from Table 3.3 that Group 2 consisted of 5 females and one male. The females are Soh, Corrine, Fun, Kok and Yin while James is the only male. All of them obtained grade C for their English I test except for Corrine who scored a grade B. Generally, the participants had positive views on collaborative writing except for Corrine who had mixed views on it.

Table 3.3

Background Information about Group 2

Name	Course and Year of Study	Gender	Grade for English I Test	Views on Collaborative Writing
Soh	Diploma in Computer Science, Year 2	Female	C	Positive - sharing different ideas and opinions
James	Diploma in Computer Science, Year 2	Male	C	Positive - sharing of information and opinions
Fun	Diploma in Computer Science, Year 2	Female	C	Positive, good ideas during discussions
Kok	Diploma in Computer Science, Year 2	Female	C	Positive - exchanging of opinions and learning new information
Yin	Diploma in Computer Science, Year 2	Female	C	Positive - sharing of opinions and experience; increasing understanding of task
Corrine	Diploma in Computer Science, Year 2	Female	B	Positive - obtaining multiple solutions and opinions; provide interesting content Negative - hard to interact in discussions, conflict may occur

Note. Grade A - high proficient students, Grade B - medium proficient students, Grade C - low proficient students.

Informed Consent and Confidentiality Issue

The researcher obtained written consent from the participants before carrying out the study (Appendix 2). This was to ensure that she followed the ethics of a qualitative researcher and the participants were not coerced into becoming participants. The participants signed the forms to show their agreement in participating in the study.

The participants were assured of strict confidentiality of their identities. Their names were changed in the study to retain confidentiality. In addition, they were informed of the way the data collected would be used which was for the sole purpose of the study and publications which might arise from the research.

Collaborator for Study

The researcher had a collaborator working with her for inter-coder agreement and to establish inter-coder reliability in the study. The rationale for choosing the collaborator and information on the collaborator's background are provided in this section.

The collaborator's pseudonym is Norah. She is 51 years old and is a full-time English instructor in College A. She received her Bachelor of Arts with Honours from the University of Birmingham. She was a government schoolteacher for 19 years prior to joining College A.

Norah is currently a part-time student in a Master in Linguistics programme in a local institution. She has been teaching English courses in College A for seven years. She enjoys teaching very much and constantly shares her experience with her colleagues in order to improve her practice.

The first rationale for selecting Norah as a collaborator was due to her vast experience in teaching. She has also used collaborative writing frequently in her classroom. Her insights on student collaboration would help in the analysis of data.

In addition, Norah was chosen as a collaborator because of her availability to watch the participants' video recordings with the researcher. She agreed to spend a few hours viewing the video recordings of the participants' collaborative writing in order to observe the sessions. Then she discussed her findings from the observations with the researcher. Furthermore, she was available for further discussions regarding significant findings obtained from the interviews and diary entries with the researcher.

Another rationale for choosing Norah as a collaborator was due to her deep interest in being involved in this study. She felt that the experience would be beneficial to her when she conducted her own study in the final year of her postgraduate studies.

Research Procedures

Pilot Study

A pilot study was conducted with first year Diploma in Financial Accounting

students at College A to overcome potential problems in the study. The aims of the pilot study were to discover the time needed for collaboration, check students' ability to collaborate independently, eliminate ambiguities in the collaborative writing task, verify the usefulness of the research instruments and check the suitability of the writing task. Three groups of students with five members in each group were observed. Their writing task was to write a long report as a group (see Appendix 3).

While observing the students' collaborative writing, the researcher took notes in her double entry journal. After carrying out the pilot study, changes were made to the plan of the actual study. They were obtaining students' biodata, forming of groups, guidance in collaboration, time allocation of task, appropriate period of observation, and guidance in writing diary entries.

Obtaining Students' Biodata

The researcher realised the importance of obtaining information such as the students' names, English results and attitude towards collaborative writing. There were two advantages of having the information. First, the researcher could record down her notes effectively when she knew the students' names. In her pilot study, she was forced to interrupt the discussions numerous times because she did not know the students' names. Second, by knowing the students' English results, she could make comparisons of the contributions of students from the high, medium and low proficiency groups effectively. It would also help her to know if the groups formed comprised students of different proficiencies.

Forming of Groups

The researcher decided to allow the students to form their own groups. This decision was made due to the negative behaviour of groups formed by the researcher in the pilot study. The students were impatient, domineering and spoke sarcastically with one another. As a result, there were unnecessary arguments and intellectualising taking place. According to Corey and Corey (1994), one of the signs of mistrust is the “act of intellectualising” in a discussion (p. 78). When the students were interviewed, they revealed their unhappiness of being placed in a group with students they could not get along with.

Guidance in Collaboration

The researcher noticed the students’ difficulty in carrying out their collaborative writing. They were uncertain of the stages involved in producing a long report despite learning them in their lessons. Therefore, the researcher decided to provide a schedule for the participants to follow in the actual study (see Appendix 4).

Time Allocation of Task

The students in the pilot study complained that they could not write a long report in seven weeks. They needed more time to do referencing and to plan their writing. Two groups actually requested for an extension of the deadline before they could submit their work. Therefore, the researcher decided to increase the time for the participants to produce the long report to ten weeks in the actual study.

Appropriate Period of Observation

The duration of the writing task in the pilot study was from weeks 5 to 12 of the semester. The researcher did not receive positive responses from the students because they could not concentrate on their discussion due to their anxiety over their college examination. Some of the students had even stopped attending lessons in order to make early preparations for the examination. Therefore, the researcher decided to start her observation in week 1 of the semester and end it by week 10 in her actual study so that the students could fully concentrate on the writing task.

Guidance in Writing Diary Entries

The researcher observed that the students in the pilot study did not know how to write their diary entries. More than half of them wrote only in point form or a few short sentences as their entries. Consequently, the researcher could not understand the content of their writing but had to conduct focus interviews to obtain further information. Thus, in the actual study, guidance was provided to the participants when writing their diary entries. It was an adaptation of Nunan's (1988) guidelines in producing detailed and useful entries (see Appendix 5). They helped the students to organise their writing by focussing on the important areas in the study.

Actual Study

There were two stages in the research procedures. Both stages took place from weeks 1 until 10 of the semester. Stage one was providing an explanation of the study to the participants while stage two was the research proper.

At stage one, the researcher provided detailed information regarding the study to the participants. They were notified that their collaborative writing sessions would be video-recorded. Furthermore, they were required to reflect on their experience during the sessions and describe them through the interviews and diary entries. Information sheets to obtain the participants' biodata and consent forms were also distributed to the participants and were filled in.

Stage two entails the participants' collaborative writing sessions. The participants were taught how to write a long report by their instructor and they were required to write a long report as a group (see Appendix 6). The participants self-selected their group members for the writing task.

Understanding that writing a long report might be challenging due to the rigorous process involved, a weekly schedule consisting of sub-tasks was provided for the groups to follow. The schedule guided the participants from weeks 1 until 10 of the semester (see Appendix 4). The schedule was adapted from Kwah (2005) who used the schedule to guide her students while writing their research papers in her study. The reason for using the schedule was due to the difficulty the students faced in the pilot study (see page 68). The researcher made minor modifications by adding sub-tasks such as information-sharing after referencing, preparation of a mind-map before writing and detailed steps in the writing process into the original schedule so that the collaborative process is made clear to the students.

The schedule was planned for duration of 10 weeks. The three tasks carried out in week one were appointment of group leader, selection of topic and division of work in referencing on the topic. After the participants had formed their own groups, a leader was appointed for each group. Then they brainstormed in finding a suitable topic for their long report. When they managed to reach consensus on their topic, they proceeded with a division of their reference work among the group members. The work involved searching for relevant information from articles, books, journals, and materials from the Internet.

Then preparation of questionnaire, interviews and observation sessions, information-sharing after referencing and filtering of information were performed in weeks two and three. The participants chose the research methods to collect their data. They also presented the information obtained from their referencing. In addition, they helped one another to comprehend the knowledge and simultaneously, filtered the information to be used for their writing.

Later, the participants analysed their collected data, shared information with their group members, filtered and integrated information to be used for their topic in weeks four, five and six. Similar with weeks two and three, the participants continued to share new information obtained from their readings and selected relevant information to be used.

In week seven, the participants again shared information they found, filtered it and summarised it in the form of a mind-map in order to start writing their long report. Only key words and phrases related to the topic were used for the mind-map. After the mind-map was completed, the participants used it as a reference while writing their first draft. The draft was then edited and proofread.

The participants continued to research on their topic in weeks eight, nine and ten so that they had new information to discuss. The new information was included in their writing if it was found to be relevant. The participants also made changes to their second, third and fourth drafts of the long report after editing and proofreading them. The final draft which was the fifth draft of the long report was submitted in week 11.

Instruments

Data collection involved the use of video recordings, observations, student interviews and student diary entries in this study (see Figure 3.1).

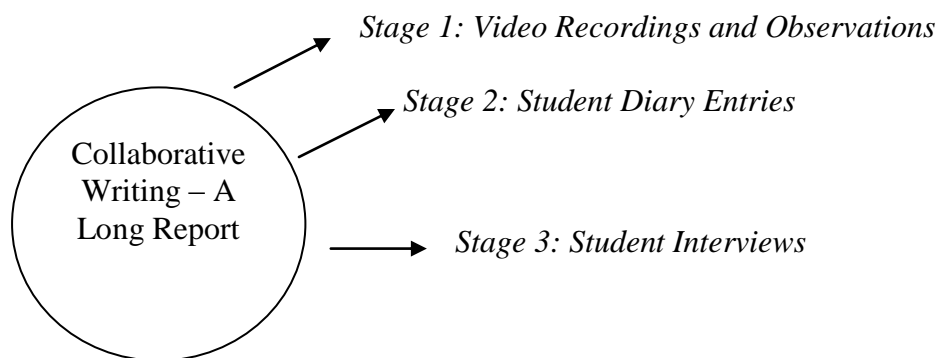


Figure 3.1 Instruments Used in Data Collection

The research methods also provided triangulation of data together with the students' written long reports to ensure reliability and validity in the study. A summary of the relationship between the research questions with the source of data, research design and areas to look at in the study are provided in Appendix 7. The following provides a detailed description of the data sources.

Video Recordings

Video recordings were used in this study due to a few reasons. First, Wragg (1994) states “the strengths of video recordings as being good visual and sound record which can be replayed several times and no pressure to make instant decisions” (p. 17). The recordings made it possible for the researcher to re-view certain episodes during the students' collaboration to find out more information.

Second, it is an unobtrusive way to collect data (Bogdan & Biklen, 1992; Creswell, 2009; Merriam, 1998). The participants were not conscious of the presence of the video camera because it was placed at an angle that was not visible to them. Thus, their collaboration was not negatively affected.

However, video recordings may have negative effects, too. Cohen, Manion and Morrison (2000) describe video recording as the “connotation of surveillance” (p. 281). This view is supported by Bogdan and Biklen (1992); Creswell (2009) and Merriam (1998) who feel that the method can disrupt participants' responses. Students who are inhibited and self conscious may not behave naturally in their collaboration.

Therefore, prior to the data collection, the researcher familiarised the participants with the presence of a video camera during their discussions. The participants were video-recorded as they performed several speaking tasks such as ice-breaking sessions, mini-debates and short speeches. Eventually, when they were comfortable with the setting, they were video-recorded as they carried out their collaborative writing.

Observations

Lafland and Lafland (1984) explain observations as intensive viewings whereby the actions of looking and listening; watching and asking; recording in the forms of video or audio and note-making; listening and asking are interweaved. Similarly, Creswell (2009) describes observations as having the researcher recording field notes and activities of participants by using either an unstructured or semi-structured way (using prior questions in areas of interest). Likewise, in this study, the researcher observed the participants by video-recording them and recorded notes on them.

The data for each case study group was collected once a week with each session lasting one hour. The action was carried out for 10 weeks. A checklist was used by the researcher to help her follow and remember the episodes clearly during the observations (see Appendix 8). The checklist also allowed her to make field notes in the fourth column under the heading “Comments”. The checklist was also used by the collaborator to conduct observations while viewing the video recordings.

Student Diary Entries

Another method of data collection used was diary entries written by the participants after their collaboration. They were non-introspective diary entries which were written by language learners (Matsumoto, 1989; Bailey, 1991). The participants were instructed to reflect on their experiences and describe them in their writing. This was to ensure that they could remember their encounters vividly and record them clearly. In addition, Lee (2008) supports the use of reflection because learners can actively construct knowledge while personalising their learning process through the writing of their reflections.

Findings from the pilot study revealed the difficulty students faced in writing diary entries (see page 69). Therefore, guidance which was adapted from Nunan's (1988) techniques in writing diary entries was provided (see Appendix 5). The participants had to complete the sentences, "In this session, I learned ...", "The session was useful due to ...", "The session was not useful because ...", "In this session, the mistake I made is ...", "My difficulty in the session is ...", "The experience was similar to working alone because ...", "The benefits are ...", "The experience was different from working alone because ..." and "The benefits are ..." from weeks one to nine of their collaborative writing. By completing these sentences, the participants were able to focus on pertinent issues and to express themselves clearly.

Finally in week 10, the participants reflected on their whole experience in collaborative writing. Then they provided an overview of their opinions on the collaboration process.

Student Interviews

Bogdan and Biklen (1998) state that an interview is a purposeful conversation to get information and to view a matter from the perspective of an interviewee. Other advantages of using interviews are gaining in-depth information on participants' experiences, views, feelings, attitudes and preferences (Patton, 2002) and the ability to obtain complete information to probing questions (Burns, 2000). Similarly, interviews were used in this study to obtain authentic data from the participants so that the researcher could attempt to understand their experiences accurately.

There were 12 one-to-one and semi-structured interviews conducted for the two case study groups after every collaborative writing session using open-ended questions (see Appendix 9). The researcher interviewed the participants after they had written their diary entries. She would probe further on particular matters of interest written in their diary entries. Each informant was interviewed in the recording room while the rest waited for their turns outside the room. The interviewee was separated from other group members to allow them complete privacy and confidentiality. The length of the interviews was between 30 minutes to one hour per session.

Individual interviews were carried out due to two reasons. First, it was to ensure that the participants felt comfortable when they were interviewed. During the interview, they had to describe how the collaboration affected them, the writing task and comment on their group member's behaviour. They would not want their friends to overhear their comments about them during the interviews.

In addition, by using individual interviews, the researcher could focus on the participants personally. This allowed her to concentrate on them as individuals and ask specific questions regarding their unique behaviour during the collaboration. Furthermore, she could probe and ask questions which could increase her understanding on certain episodes during their discussions.

Framework of Data Analysis

Qualitative data was obtained from this study through interviews, diary entries, observations, video recordings and spoken transcripts. In order to establish trustworthiness of collected evidence, triangulation of multiple sources of evidence was carried out. The collected data was analysed thoroughly and an attempt to seek out any triangulation which existed among the data was carried out. An explanation on the analysis of qualitative data is presented in the following section.

Analysis of Video Recordings and Observations

All of the video recordings of the collaborative sessions for each case study group were transcribed verbatim. Then the spoken transcripts were analysed and coded.

A standard transcription convention was used for all the transcripts. Hubbard and Power (2003) state that three common markers used by teachers are ellipsis dots to denote pauses, brackets to indicate overlapping speech and # or /?/ to denote incomprehensible words (p. 80 and 81). The researcher decided to include these common markers with other markers in the transcription. The key transcription used in this study is shown in Table 3.4.

Table 3.4

Key Transcription Used in Spoken Transcripts

Markers	Meanings
1	Number of turn in speaking
...	Noticeable pause
(laugh)	Action produced while speaking
[Overlapping speech
/?/	Indicates transcription impossible
Italicised Word	Particles
Capital Letters	L1 used
(Word in Capital Letters)	Translation of L1 used
Italicised Word in Capital Letters	National language used
(Italicised Word in Capital Letters)	Translation of national language used

Transcripts of the students' discussions and findings obtained from the checklists simplified the task of analysing and compiling useful data for the study. Information on the process students undergo when writing collaboratively with high, medium and low proficiency peers pertaining to areas such as (a) group focus category, (b) task focus category, (c) sub-code category, (d) content, format and language used, (e) positive

contexts for collaboration, (f) neutral contexts and (g) negative contexts for collaboration were categorised according to their themes.

Changes to Checklist for Observations and Video Recording Analysis

The checklist that was used in observations and to analyse the video recordings (see Appendix 8) was slightly changed after its preliminary use by the researcher and the collaborator. Consequently, a new checklist was produced (see Appendix 10). Certain items were changed due to the collaborator's confusion while using it.

The first item was Overall Impression which was placed with Content, Language and Format (see item 2 under week 1 to 6 and item 3 under week 7 to 10, Appendix 8). Norah found the area of Overall Impression difficult to gauge when observing the collaborative writing. Therefore, she sought clarification from the researcher. However, both of them were not confident that they shared similar understanding of it. Consequently, they decided to remove Overall Impression from the checklist.

The second item changed was neutral contexts which was placed with positive and negative contexts (see item 3 under week 1 to 6 and item 4 placed under week 7 to 10, Appendix 8). Norah and the researcher faced difficulties in identifying neutral contexts in the collaborative sessions. Finally, both of them decided to remove neutral contexts from the checklist since the other descriptors could be used effectively to describe the atmosphere of the collaborative writing sessions. After making the two

changes, the new checklist was used to observe all of the students' collaborative writing sessions successfully (see Appendix 10).

Coding System and Unit of Analysis

The researcher analysed all the spoken transcripts thoroughly. Emerging categories of information from the discussions were produced. In the beginning, the students' utterances were coded using group-focused, task-focused and sub-code categories. The sub-code categories consisted of procedure, organisation, acknowledging, giving ideas, expanding, seeking opinion, seeking clarification, seeking confirmation, explaining, justifying, agreement and monitoring.

However, it was observed that analysing the utterances was complicated and it did not yield much result. The researcher failed to have a deep understanding of the collaboration by focussing only on the categories. Consequently, she decided to focus on the analysis and interpretation of incidents or episodes which occurred during the discussions. The episodes were regarded as units of analysis. An episode comprised utterances of participants on a specific topic of discussion. A change of focus in discussion indicated the beginning of a new episode.

Critical Incidents

Critical incidents were observed in this study, too. According to Wragg (1994) "critical events are not spectacular but are simply things that happen that seem to the observer to be of more interest than other events occurring at the same time and

therefore worth documenting in greater detail, usually because they tell a small but significant part of a larger story” (p. 70). In addition, critical incidents are described by Woods (1993) as “highly charged moments and episodes that have enormous consequences for personal change and development” (p. 1). Therefore, the researcher decided to use critical incidents in this study to observe significant situations which occurred in the course of collaboration.

The researcher identified two types of critical incidents: positive and negative incidents in the collaboration process. The incidents were analysed in detail. Wh-questions such as Who?, What?, When?, Why? and How? were used to understand the episodes accurately and to increase theoretical sensitivity (Strauss and Corbin, 1990). In this study, consistency and variation across the two case study groups in terms of significant incidents were obtained by using the constant comparative method. This was carried out by comparing positive and negative incidents in the collaboration process from both the groups.

Analysis of Interviews

All of the interview sessions were audio-taped using a MP3 player. The conversations in the interviews were transcribed verbatim. The written transcripts helped to simplify the task of analysing and compiling the information. The transcriptions of these interviews were checked twice by the researcher for accuracy.

An analysis of the content in the interview transcripts was carried out. The task of analysing the transcripts was based on the interview questions (Appendix 9) which focused on (a) participants' opinions on influence of collaboration on writing process, (b) influence of collaboration on written work and (c) participants' opinions on barriers and support for collaboration. Data coding was carried out according to the common areas listed out from (a) to (c). Theme development was carried out, too. Finally, the findings were compiled and tabulated according to their themes.

Analysis of Diary Entries

The participants wrote diary entries after each collaborative session in order to reflect on their experiences. The diary entries were read thoroughly to analyse the contents. The analysis of the contents was based on the thematic information such as (a) participants' opinions on influence of collaboration on writing process, (b) influence of collaboration on written work and (c) participants' opinions on barriers and support for collaboration

Data coding was carried out according to the common areas listed out from (a) to (c). Theme development was observed, too. Finally, the findings were compiled and tabulated according to their themes and episodes.

Analysis of Written Long Reports

The two long reports written by Groups 1 and 2 were graded by three instructors. The grading was carried out using an adapted version of scoring rubric for Intensive

English Programme at Georgia State University (see Appendix 11). The researcher made changes to the scoring rubric by merging the format criterion with the organisation criterion, adjusting the allocation of marks for the criteria to suit the marks to be awarded for the long report and making the descriptors clearer in meaning to the instructors. The criteria used for the marking of long reports were Format and Organisation (5 marks), Content (20 marks) and Language (25 marks). The total mark awarded was 50 marks.

The three instructors discussed their marks with one another after their individual marking. They also provided their rationale for the individual marks given. Finally, they had to reach consensus on the final marks to be awarded for the long reports.

The content of the writing pieces was analysed by the researcher. The main focus was seeking out the relationship between the written products with the findings from other sources such as interviews, diary entries, spoken transcripts and observations.

Triangulation

Triangulation is a very important aspect in this study. Triangulation is defined by Burns (2000) as the “use of two or more methods of data collection in the study of some aspect of human behaviour” (p. 419). The data from the video recordings were triangulated with the data collected from the interviews, diary entries and the written texts in this study. Hence, similar or different findings from the various sources of data collection could be determined.

Inter-Rater Reliability

To establish inter-rater reliability, the collaborator and the researcher observed all the video-recordings together. A checklist was used to aid them in recording their observations (Appendix 10). The video-recordings were re-played to get an accurate interpretation of the episodes. When there were inconsistencies in the interpretations, the researcher and the collaborator provided rationale for their individual decisions and discussed until they reached consensus. They also discussed the interpretation of findings obtained from the interviews and diary entries and attempted to reach an agreement whenever there were differences of opinions on the interpretations.

In addition, the participants' written drafts were rated independently by three instructors using a common set of scoring rubric (see Appendix 11). Two instructors and the researcher carried out the marking individually and the marks were then compared and discussed. There were not many major discrepancies in the marks. The only inconsistency was in the marks awarded for language. One of the raters was slightly stricter than the other two raters. Her marks for language were lower by two and three points for both groups. Finally, the raters had to reach consensus on the final marks to be awarded for the long reports.

Conclusion

This chapter describes the qualitative approach used, the setting, the participants and collaborator, research instruments, data collection procedures and the analysis of qualitative data. The different forms of data provided a means for triangulation to check

the validity of the findings. Inter-rater reliability was also carried out to obtain acceptable grading. The findings of the study are presented in the following chapter.