FEEDBACK AND REVISION: A PROTOCOL ANALYSIS

Margaret Rajoo

A thesis submitted for the degree of Doctor of Philosophy at the University of Otago, Dunedin, New Zealand

October 2009
Dedication

To my husband, for his love and support,

and

my charming sons, who fill me with joy
Abstract

Written feedback is a widespread practice and has garnered considerable positive and negative attention. The responses that teachers provide on students’ writing are essential to encourage and develop students’ writing. However, an in-depth understanding of the thought processes of student writers as they attend to written feedback is lacking in the literature. The purpose of this study was to investigate the thought processes and reactions of student writers towards written teacher feedback. Using a case study methodology, verbal protocols of eight postgraduate students were recorded as they attended to teacher feedback on their essays. Written texts, written teacher comments, and a questionnaire survey supplemented the data.

The findings from this study indicate that the participants attended to written feedback recursively. Second, the act of thinking aloud led to noticing the disparities highlighted in the feedback. Finally the results suggest that students’ engagement with written teacher feedback is a social activity that encompasses a complex and dynamic interpersonal process between student writers and their feedback provider.

This study concludes by raising several implications for teaching and learning. It suggests that it is important for teachers to be aware of the impact of feedback. Additionally, this study proposes that the think-aloud technique is useful as an implement in teaching writing, being a means of helping students reflect on feedback and develop their writing. Finally, it points out that both cognitive and sociocultural approaches to think-aloud data offer insights into the thought processes of writers.
Acknowledgements

I am indebted to my husband for being my rock and for never letting me settle for just a dream. Without his support, encouragement and belief in me, I could never have embarked on my PhD journey. I am thankful for the countless hours he put in by providing me with his critical comments and feedback on all my drafts. Working with him has taught me what caring and true love is all about. I am also indebted to my sons, Jonathan and Jeremiah who endured my hours lost in concentration and for providing me with a reason to finish this dissertation. Thank you for all the happy moments that inspired me towards my goal.

My dissertation committee made a unique contribution to this study and to my personal development as an independent researcher.

First of all, I owe my highest gratitude to Anne Feryok who has worked with me as a true mentor and collaborator. My appreciation goes to her for urging me to believe in myself and to constantly pushing me forwards. I particularly appreciate her insightful comments, meticulous reading of my drafts and promptness in providing constructive feedback to drafts, her patience, kindliness and keeping me within the sights of my goal. Thank you for your guidance, invaluable advice and unfailing support. Most importantly Anne, thank you for being constantly available as a friend and for walking with me in the last leg of my study. It has been a wonderful experience to work with you.

I would also like to thank Moyra Sweetnam Evans for her firm support and encouragement. I am grateful to her for her patience and guidance and for all the intellectual probing that got me thinking.
I am grateful to Thelma Fisher for generously giving of her time and expertise and her support in times of need and going the extra mile. I would also like to thank Emily for helping me with the endless hours spent formatting. Special thanks go to Sally, Elizabeth and Ryoko who buoyed me up with their unwavering support and words of encouragement.

My appreciation and gratitude go to the University of Otago for having given me a scholarship to complete this study. I would also like to thank the administrative staff members of the English Department, especially Liz Lammers and Irene Sutton for all the administrative assistance and camaraderie throughout my time as a PhD student. I would also like to express my sincere appreciation to all those participants who took part in my research, without whom this research would not have been possible.
CHAPTER SIX CONCLUSION ....................................................................................... 182
6.4 Theoretical implications .......................................................................................... 190
6.3 Pedagogical implications ......................................................................................... 188
6.2 Limitations of the study ........................................................................................... 184
6.1 Research questions .................................................................................................. 182
6.0 Overview of chapter ................................................................................................ 182
4.8 Case study seven: Sham .......................................................................................... 132
4.8.1 Overview .................................................................................................................. 132
4.8.2 Sham’s think-aloud processes ................................................................................. 132
4.8.3 Sham’s preferences and reaction towards teacher feedback ................................. 139
4.9 Case study eight: Jean ............................................................................................. 139
4.9.1 Overview .................................................................................................................. 139
4.9.2 Jeans’ think-aloud processes ................................................................................. 140
4.9.3 Jean’s perceptions and reactions towards teacher feedback ................................. 146
4.10 Summary .................................................................................................................. 146

CHAPTER FIVE DISCUSSION ....................................................................................... 147
5.0 Overview of Chapter ............................................................................................... 147
5.1 Students’ stated preferences for teacher feedback ................................................... 151
5.1.2 Receptiveness ........................................................................................................... 153
5.1.3 Additional feedback support .................................................................................... 154
5.2 Students’ responses toward teacher feedback ......................................................... 155
5.2.1 Recursion ................................................................................................................. 155
5.2.1.1 Evaluation ............................................................................................................ 157
5.2.1.2 Reformulation of language and ideas and revision .............................................. 158
5.2.1.3 Monitoring and regulation .................................................................................. 160
5.2.2 Relationship between think-aloud and noticing ................................................... 163
5.2.3 Feedback as a social activity ................................................................................... 168
5.2.3.1 Dialogical activity ................................................................................................ 169
5.2.3.2 Feedback as a tool for externalization and internalization ................................. 171
5.2.4 Summary ................................................................................................................. 173
5.3 Reactivity .................................................................................................................... 174
5.3.1 Reactivity from the cognitive and sociocultural perspectives ................................. 175
5.3.1.1 Metalinguistic verbalizations .............................................................................. 176
5.3.1.2 Social orientation ............................................................................................... 177
5.3.1.3 Selectivity of information ................................................................................... 178
5.3.1.4 Launching pad ..................................................................................................... 179
5.4 Summary .................................................................................................................... 180

CHAPTER SIX CONCLUSION ....................................................................................... 182
6.0 Overview of chapter ............................................................................................... 182
6.1 Research questions ................................................................................................. 182
6.2 Limitations of the study .......................................................................................... 184
6.2.1 Methodology .......................................................................................................... 184
6.2.1.1 Volunteering ....................................................................................................... 184
6.2.1.2 Thinking aloud .................................................................................................... 185
6.2.1.3 Questionnaire ...................................................................................................... 186
6.2.2 Interpretation of data ............................................................................................... 187
6.2.3 Selection of participants .......................................................................................... 187
6.3 Pedagogical implications .......................................................................................... 188
6.4 Theoretical implications ........................................................................................... 190
6.4.1 Model of thought processes on feedback ............................................................... 190
6.4.2 Recursion in feedback ............................................................................................ 191
6.4.3 Feedback as an intervention platform ............................................................... 192
6.4.4 Think-aloud as dialogical activity ................................................................. 192
6.5 Future research ................................................................................................. 194
6.6 Conclusion .......................................................................................................... 195
REFERENCES ............................................................................................................. 197
APPENDICES ............................................................................................................... 208
APPENDIX A: FEEDBACK ON WRITING ................................................................. 209
APPENDIX B: CONSENT FORM FOR PARTICIPANTS ............................................ 211
APPENDIX C: QUESTIONNAIRE ON FEEDBACK .................................................... 212
APPENDIX D: INSTRUCTIONS AND PRACTICE TASKS ...................................... 217
APPENDIX E: .............................................................................................................. 219
SAMPLE OF A STUDENT’S FIRST DRAFT ............................................................. 219
APPENDIX F: .............................................................................................................. 225
SAMPLE OF A STUDENT’S POST FEEDBACK DRAFT .......................................... 225
APPENDIX G: .............................................................................................................. 229
TRANSCRIPTION OF A STUDENT’S VERBAL PROTOCOLS ............................... 229
APPENDIX H: SAMPLE OF TRANSCRIPTION ....................................................... 240
APPENDIX I: A SAMPLE OF SEGMENTS CODED/MAPPED MANUALLY ........... 241
APPENDIX J: FREE NODES ..................................................................................... 242
APPENDIX K: SAMPLE OF SEGMENTS OF HIGHLIGHTED ................................ 243
OR CODED PROTOCOLS WITH CODING STRIPS .............................................. 243
APPENDIX L: TREE NODES .................................................................................... 244
APPENDIX M: SELECTIVE CODING ..................................................................... 245
List of Tables

Table 1: Think-aloud protocol codes.......................................................................................... 85

Table 2: Patterns of responses to feedback items...................................................................... 89

Table 3: Students' stated preferences for teacher feedback.......................................................... 90
List of Figures

Figure 1: Angel’s thought processes (Pattern 1) ................................................................. 94
Figure 2: Angel’s thought processes (Pattern 2) ................................................................. 95
Figure 3: Ben’s thought processes (Pattern 1) ................................................................. 100
Figure 4: Ben’s thought processes (Pattern 2) ................................................................. 102
Figure 5: Cindy’s thought processes (Pattern 1) .............................................................. 106
Figure 6: Cindy’s thought processes (Pattern 2) .............................................................. 107
Figure 7: Cindy’s thought processes (Pattern 4) .............................................................. 110
Figure 8: Kelly’s thought processes (Pattern 1) .............................................................. 113
Figure 9: Kelly’s thought processes (Pattern 2) .............................................................. 116
Figure 10: Kelly’s thought processes (Pattern 4) ............................................................. 118
Figure 11: Roxy’s thought processes (Pattern 1) ............................................................. 121
Figure 12: Roxy’s thought processes (Pattern 3) ............................................................. 122
Figure 13: Roxy’s thought processes (Pattern 5) ............................................................. 123
Figure 14: Lena’s thought processes (Pattern 2) ............................................................. 125
Figure 15: Lena’s thought processes (Pattern 1) ............................................................. 128
Figure 16: Lena’s thought processes (Pattern 3) ............................................................. 130
Figure 17: Sham’s thought processes (Pattern 1) ............................................................ 133
Figure 18: Sham’s thought processes (Global planning) ................................................ 136
Figure 19: Sham’s thought processes (Pattern 2) ............................................................ 138
Figure 20: Jean’s thought processes (Pattern 2) ............................................................. 140
Figure 21: Jean’s thought processes (Pattern 1) ............................................................. 142
Figure 22: Jean’s thought processes (Summary) ............................................................. 144
Figure 23: Model of thought processes on feedback ....................................................... 148
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFL</td>
<td>English as a Foreign Language</td>
</tr>
<tr>
<td>ESL</td>
<td>English as a Second Language</td>
</tr>
<tr>
<td>FL</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>KT</td>
<td>Knowledge Telling</td>
</tr>
<tr>
<td>KTF</td>
<td>Knowledge Transforming</td>
</tr>
<tr>
<td>L1</td>
<td>First Language</td>
</tr>
<tr>
<td>L2</td>
<td>Second Language</td>
</tr>
<tr>
<td>LTM</td>
<td>Long Term Memory</td>
</tr>
<tr>
<td>LT-WM</td>
<td>Long-Term Working Memory</td>
</tr>
<tr>
<td>MA</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>SCT</td>
<td>Sociocultural Theory</td>
</tr>
<tr>
<td>ST-WM</td>
<td>Short-Term Working Memory</td>
</tr>
<tr>
<td>TESL</td>
<td>Teaching of English as a Second Language</td>
</tr>
<tr>
<td>WM</td>
<td>Working Memory</td>
</tr>
</tbody>
</table>
CHAPTER ONE
INTRODUCTION

This introductory chapter presents the background to the present study. It also sets out the research problem and outlines the research questions that the thesis addresses. It gives a justification for the research and indicates the contribution the thesis makes to the field of writing.

1.0 Scope of the study

This study is an investigation of the thought processes of English as a Second Language (ESL) student writers as they attended to written teacher feedback on their writing in a postgraduate level Research and Practice in Composition Theory course. It also sets out to ascertain if engagement with teacher feedback led to its implementation in subsequent revision. To address these questions, students’ verbal protocols were collected as the main source of data. This was complemented by data procured from questionnaires and students’ first written drafts and their second revised drafts.

1.1 Statement of the problem

Research in the field of second language (L2) writing has seen a marked development in the last two decades, although its foundation lies in first language (L1) writing research. However, one area of writing development still in its infancy is that of teacher feedback on student writing and the extent of its contribution towards the development of language skills. Beginning with the seminal work of L1 researchers such as Perl (1979) and Sommers (1982), and continuing through to the present with Elbow (1993), teacher feedback has been identified as one of the most important factors affecting the writing performance of writers (Coffin, Curray, Goodman, Hewings, Lilis, & Swan, 2003; Zinn,
This L1 research has provided for L2 research on feedback on writing. L2 researchers such Hyland and Hyland (2006a) and Kroll (2001) have identified that the main aims of teacher feedback are to help students anticipate audience needs and to help students learn and develop their writing skills in the process of writing (Sommers, 1982). Reflecting this strand of thought are Ferris and Hedgcock (2005) with their belief that, amidst the developing approaches to writing, the single element that has remained constant in writing research is the teacher’s response to student writing. Although researchers and academics fail to agree on the best approach to adopt in giving feedback, virtually all acknowledge that feedback is vital to teaching writing (Ferris & Hedgcock, 2005).

Feedback research in the past has generally focused on teachers, particularly the strategies they use in giving feedback, their perceptions of students’ needs and the impact of their feedback on students’ writing (Ferris, 1997; Hyland & Hyland, 2001; Stern & Solomon, 2006). There is a paucity of literature on what ESL students do when they engage with teacher feedback and how they respond to teacher feedback. This study thus aims to contribute to the existing research on feedback by investigating the varied ways in which students respond to teacher feedback, focusing particularly on students’ thought processes as they attend to teacher feedback. It does this within the context of a writing class, as this where most of the previous research on L2 writing has been conducted.

1.2 Feedback research

Responding to students’ writing is an important task in the process of teaching writing. Considerable research exists on ways of giving effective feedback and provides valuable insights into aspects of teacher commentary on student writing. Some L2 studies show that teacher commentary is not particularly effective or helpful for students in their subsequent writings (Kepner, 1991; Rob, Ross, & Shortreed, 1986; Semke, 1984; Truscott, 1996,
However, several studies have shown contrary findings ascertaining the effectiveness of feedback. In these studies feedback is seen to be an essential component in students’ writing as it motivates and encourages students to revise and improve their drafts in ESL and English as a Foreign Language (EFL) and, consequently, to develop second language writing abilities (Cohen & Cavalcanti, 1990; Ferris, 1995, 1997; Ferris & Roberts, 2001; Goldstein, 2004; Hyland, 1998).

Previous studies have explored various aspects of feedback and its effectiveness in L2 writing, aspects such as explicit versus implicit feedback (Ferris & Robert, 2001), positive versus negative feedback (Hyland & Hyland, 2001) and form versus content feedback (Ferris, 1999; Hyland, 2003; Truscott, 1996; 1999; 2007). Yet other studies on feedback and revision cover such matters as students’ preferences and their reactions to teacher feedback (Cohen, 1987; Dheram, 1995; Hedgcock & Lefkowitz, 1994, 1996; Leki, 1991), the focus of teacher feedback (Cohen & Cavalcanti, 1990; Fathman & Whalley, 1990), the effects of written feedback on revisions (Chaudron, 1984; Truscott, 1996), and the types of responses to student writing (Goldstein & Conrad, 1990; Patthey-Chavez & Ferris, 1997).

Although research on L2 writing has given insights into the effectiveness of teachers’ written comments, it does not account for how feedback is perceived or interpreted by students (Goldstein, 2004; Leki, 1990; Reid, 1994). What do students do when they attend to teacher feedback? Do students make use of teacher feedback in their subsequent writing? Although research has shown that feedback may not be as effective as many might hope, particularly as miscommunication about feedback may occur between students and teachers (Cohen, 1987; Heyden, 2004; Perpignan, 2003), it is still generally considered a valuable tool for the development of writing. Since feedback on students’ writing assists them to understand their progress in writing and how they might further develop their
writing (Ryan, 1997), it is an important and timely intervention that supports and encourages writers to achieve their objective. Student writers perceive feedback to be useful when it engages them and addresses their individual needs (Hyland & Hyland, 2006b). It has an enormous impact on students’ development in writing as it is a means by which teachers respond to support and encourage writers. Thus, giving feedback tailored to individual student needs and personality is vital for feedback to be effective as tailored feedback enables students to understand teacher feedback and use it as the main instrument to negotiate meaning with a student and improve their writing skills.

L1 empirical research, however, seldom addresses how students understand teacher feedback. Effective communication between students and teachers is essential for feedback to be effective as it offers an opportunity for both the teachers and students to work together towards the development of students’ writing abilities. Brannon and Knoblauch (1982) suggest that for a student to take control over a text, dialogue or negotiation sessions between teacher and student should be organized so a text can be revised reflecting the intentions of the student. This is one way to ensure that students communicate with their teachers to enhance their development as good writers (Fife & O’Neill, 2001).

There are, however, several studies that focus on the impact of teacher written feedback on student writing in the ESL context (Conrad & Goldstein, 1999; Hyland, 1998). All these studies generally present students’ attitudes toward teacher feedback, students’ perceptions of teacher feedback and their preferences for teacher-written commentaries. A common thread that runs through these studies is their process of observing how students respond to teacher feedback by means of surveys, questionnaires, quasi-experimental studies and self-report data (Conrad & Goldstein, 1999). However, these studies do not explain or capture
the thought processes that students engage in when they attend to feedback, nor do they consider how the students respond to teacher feedback. Thus, there is a need for research that provides an account of how writers attend and respond to the feedback when they are engaged with written teacher feedback.

ESL studies on the effectiveness of teacher commentaries on student writing and how effectively teacher feedback is utilized by ESL writers are few, and then there are contradictory findings. For example, in a survey of 155 students, Ferris (1995) found that the students appreciated the positive comments and teacher’s written comments and found them helpful in improving their writing. In contrast, Hyland and Hyland (2001) in their study had two teachers who used mitigating techniques in their written commentaries on six students’ writing. The researchers found that the six students failed to find the written commentaries either clear in their intentions or helpful for improving their writing. Hyland and Hyland (2001) concluded that the use of mitigating comments affected the effectiveness of feedback given on students’ writing. Their conclusion is rather challenging, for other issues such as explicitness of teachers’ comments, discussion on feedback and the negotiation between teachers and students on feedback could have resulted in miscommunication between teacher and students.

For the purpose of this study, teacher feedback encompasses marking comments and written comments the lecturer makes on students’ writing. The main method used in this study was protocol analysis to investigate the thought processes of ESL writers as they attended to and responded to teacher feedback and negotiated with the lecturer on the feedback given.
1.3 Protocol analysis

Protocol analysis provides a useful tool to analyze writers’ thought processes as they attend to written teacher feedback. Protocols are records of verbalizations while attending to a task (Ericsson & Simon, 1980), which are seen as capturing the thought processes of writers attending to their tasks (Hayes & Flower, 1980). Think-aloud protocols afford the most direct evidence of how writers organize their thoughts (Bracewell & Breuleux, 1994) and provide opportunities to observe the changes that occur in cognitive activities (Breetvelt, van den Bergh, & Rijlaarsdam, 1996). In this study, writers simultaneously thought aloud as they engaged with teacher feedback; these verbal protocols were recorded and then transcribed. The transcriptions of the verbal protocols enabled the researcher to observe the cognitive and metacognitive processes that the writers used as they attended to feedback and developed their thoughts about their writing. The protocol transcriptions, written drafts and a questionnaire survey provided the data used for analysis.

1.4 Purpose of the study

Past studies on writing have provided a glimpse of the cognitive processes used when writers attend to the various stages of writing. These include consideration of an audience, the contextual factors, the recursive nature of planning, the generation of ideas and revision. However, there has been little research on L2 students’ thought processes as they attend to feedback: their reactions to teacher feedback, their understanding of, and response to, teacher feedback and their use of teacher feedback in subsequent revisions. This study, thus, attempts to investigate this area of inquiry into teacher feedback that has been overlooked; it is concerned with how teacher feedback fits into the process of developing writing skills by examining how ESL students respond to teacher written feedback and how they utilize the feedback given in their writing. The examination is done via verbal protocols, written drafts and questionnaires as a means of discerning how feedback
scaffolds students’ development in their writing. Understanding how students react, interpret and incorporate teacher feedback in their writing will help better appreciate the writing process and possibly help teachers in responding more effectively and positively, and thus enhance students’ writing.

Previous studies generally focused on feedback in relation to the holistic improvement of students’ writing quality. This study however, is unique because it investigates the whole process of generating and receiving feedback, from its inception to its implementation in revisions in students’ L2, by recording their thought processes and their intentions throughout their journey of attending to feedback.

This study utilizes the think-aloud protocols, questionnaire and written drafts to specifically address the following questions:

1. What are students’ stated preferences for teacher feedback?
2. Do students attend to teacher feedback? If so, how?
3. Do students make use of teacher feedback? If so, how?

1.5 Outline of the chapters

The thesis is organized into six chapters. This chapter has provided the introduction which gives an overview of the research and the purpose of this study. It highlights the research problem in this area of study and describes the gap which this study aims to bridge.

Chapter Two reviews the literature pertaining to the subject of the research study. This includes literature relevant to writing, the cognitive models of writing, and the role of feedback in the writing process, types of feedback and students’ preferences and their reactions to teacher feedback are reviewed.
Chapter Three describes the methodology of this study, including the design, instrumentation, sampling and procedures adopted for data collection. It discusses the strengths of the approach adopted in this study and describes the setting of the study and participants. This chapter also addresses some theoretical and methodological problem issues and how these were resolved in this study. It also provides a description of how data was coded, analyzed and interpreted.

Chapter Four focuses on the findings of the eight case studies. Data collected for the findings were in the form of verbal protocols, questionnaire survey and the participants’ first drafts and second revised drafts. This chapter gives a detailed account of the various thought processes that each of the participants went through as they attended to teacher feedback. It also gives some insights into the participants’ cognitive thought process as they engaged with written teacher comments.

Chapter Five discusses the findings with reference to the literature reviewed in Chapter Two and the various ways in which the students in this study responded to teacher feedback. It underpins the significance of the think-aloud method used in conjunction with teacher feedback in the development of students’ writing.

Chapter Six concludes the thesis. It summarizes the research findings and identifies the limitations of the study, draws conclusions from the findings, and indicates the implications that can be drawn from the findings, from both the pedagogical and theoretical aspects. Finally, suggestions for further research in this area are presented.
CHAPTER TWO
LITERATURE REVIEW

2.0 Overview of chapter

In this chapter I review the cognitive models of writing which provide insights into how writing is shaped. Following this, I discuss the functions of feedback in the writing process as feedback plays a crucial role in subsequent deliberations on writing. Finally, I provide an overview of the relevant research on feedback in L2 writing and argue that looking at writing through speech, in the form of verbal protocols, will provide a new understanding of the writing process and feedback practices.

2.1 Cognitive models of writing

Since the 1970’s L1 and L2 writing research has shifted from focusing on written products to the thinking processes of the writer. This shift in orientation has led to the development of cognitive models of composing processes such as those established by Hayes and Flower (1980), Bereiter and Scardamalia (1987), and Hayes (1996).

Cognitive process theories aim to provide an understanding of how writing is learned and developed. The cognitive approach examines the relationship between how writers think and the activities in which they engage throughout the process of writing. The theoretical underpinning of the cognitive process models is that writing is recursive. In other words, a writer visits and revisits each stage of writing in no ordered sequence. In the following section, I discuss three models as a means of explaining the cognitive processes in writing and argue that, while these models provide an understanding of the cognitive processes in writing, they do not take into account the influences of feedback on the writing process.
2.1.1 Hayes and Flower’s (1980) Model

It is widely held (for example, see Levy, 1997; Scardamalia and Bereiter, 1986) that the most influential cognitive model of process writing, and one that still influences other models of writing, is the one proposed by Hayes and Flower in 1980. Hayes and Flower (1980) viewed writing as goal-directed cognitive activity that encompasses three main interacting components that relate to the process of writing. The first component is the task environment that consists of the writing assignment which includes the topic, audience, the writer’s motivation and the texts produced by the writer. The second component is the writer’s long term memory (LTM) which includes the writer’s knowledge about various topics, type of audiences and writing plans that are stored in his memory. The third element is the writing process which involves the sub-processes of planning, including generating and organizing ideas, as well as setting goals; translating, which includes generating written text from internal representations; and reviewing, which includes reading, evaluating and revising. The present study focuses on this third element, when participants are planning, translating and revising as a result of externalizing their thoughts with assistance from teacher feedback.

In planning, the sub-processes of generating, organizing and goal setting take place. In this phase a writing plan is envisaged. Relevant information pertaining to the task is retrieved from LTM which is then used to generate ideas in relation to the task at hand, establish goals and develop the text according to the plan.

The translation phase involves the process of accurately putting ideas generated as mental representations into words on paper as established by the plan. In short, the text is developed. Finally, in the reviewing stage, evaluation and revision take on the major role of “quality control” of the task in execution. Revision in this model is considered as
occurring recursively throughout the writing process. In this phase, writers engage in reading and editing as they examine the written text to ensure that the writing goals, mainly the accuracy of sentences and clarity of the text are met. This process is also applicable to unwritten thoughts or statements that may be added to improve the quality of writing (Flower & Hayes, 1981a). Thus the reviewing process often triggers new cycles of planning and translating, which characterizes the recursiveness of the writing process.

These three stages of writing are controlled by a monitor. The monitor acts as a “writing strategist” with the main role of deciding when a writer moves from one stage of writing to another (Hayes & Flower, 1980). The function of the monitor is to ensure that a recursive process prevails within each of the three stages, allowing the writer to move from one stage of writing to another several times, before producing a satisfactory text.

Although the Hayes and Flower (1980) model laid a significant foundation for all other cognitive models of writing, the model has its limitations. One weakness relates to the planning process. This model does not distinguish text generation from idea generation; rather it groups them together as one and the same component in the planning process. It is now believed that text generation should be an element of the translating process (Berninger & Swanson, 1994) as ideas need to be translated into words. The Hayes and Flower (1980) model does not specify the components that are entailed in the process of translating.

Another weakness with this model is that it presupposes that writing processes are the same for both skilled and unskilled writers. Additionally this model does not explain any differences that may exist between skilled and unskilled writers. This model caters only for the cognitive processes of expert writers and does not address the cognitive processes of
novice writers (Berninger, Yates, Cartwright, Rutberg, Remy & Abbot, 1992). It is unclear in this model how unskilled writers develop their writing skills, or whether they go through the same writing stages as skilled writers do.

2.1.2 Bereiter and Scardamalia’s Developmental Model (1987)

Like Hayes and Flower, Bereiter and Scardamalia (1987) viewed writing as a problem solving process which involves interactions between knowledge and the writing process. However, Bereiter and Scardamalia proposed a model of writing that catered for both skilled and unskilled writers. They used two contrasting approaches of the mental processes that develop during writing: the Knowledge Telling (KT) for novice writers and the Knowledge Transforming (KTF) for skilled writers.

The KT reflects the strategies of emerging, novice and less skilled writers where information relevant to the topic is generated and retrieved from the LTM. This approach calls for writers to simply complete the tasks given and does not entail any complex problem-solving activities. In this model, writers retrieve content from their memory and translate the content into sentences. In other words, it allows writers to write what they are familiar with on a topic (Applebee, 2000). It is a basic process where novice writers tell what they know, paying little attention to goal setting, planning, needs of the audience, organization of text, problem solving or revising. An apparent aspect in this approach is that text is generated as ideas come to mind and the topics are simple. The approach highlights the main problem for writers as not having enough content to generate.

The KT approach is made up of three main components: mental representations of the assignment, types of knowledge and the writing process. The mental representation of the
assignment enables a writer to identify what information should be retrieved from memory or other sources with regards to both content and genre.

The second component contains two types of knowledge in the LTM both of which are essential for writing: content knowledge and discourse knowledge. The content knowledge concerns everything a writer knows about a topic and is the knowledge that enables a writer to expand on the topic. Discourse knowledge, on the other hand, comprises mainly linguistic knowledge, information about such matters as syntactic and lexical knowledge of writing and genre knowledge such as knowledge of narrative and expository structures.

The third component comprises seven operations. Through various memory probes, contents and type of text for a particular topic are retrieved from both Content Knowledge and Discourse Knowledge. If the retrieved knowledge is appropriate for the topic and type of writing, it is then transferred into writing.

What is lacking in this approach is evidence of the writer monitoring and evaluating content and/or rhetorical issues as the writing unfolds. In addition, any interaction between the writer and the reader is not evident in this model.

Bereiter and Scardamalia’s second approach is the KTF model which is different to the KT approach in that it has an additional problem-solving component which is mainly used by adult and expert writers (Alamargot & Chanquoy, 2001). In contrast to the KT approach, in KTF writers may set goals, plan, organize and engage in a variety of problem-solving activities to accomplish their tasks. This approach accounts for the transformation of knowledge that takes place as a result of reflective thinking in the writing process. This means knowledge is taken directly from Content Knowledge and Discourse Knowledge.
and is then transformed or adapted when writers elaborate on this knowledge by taking into consideration the rhetorical and content limitations of the task at hand (Alamargot & Chanquoy, 2001). This is made possible because the KTF is equipped with a problem-solving process, a process that comprises content space where problems of beliefs and knowledge are worked out, and rhetorical space where problems of achieving goals are dealt with. The connection between the two problem spaces allows output from one space to act as input to the other. Bereiter and Scardamalia (1987) argue that this kind of interaction between the problem spaces is the foundation for reflective thinking, the process of writers continuously formulating and solving problems in a two-way interaction between knowledge and text.

These two approaches may be considered as two different strategies in the same field (Alamargot & Chanquoy, 2001) that develop gradually from KT to KTF (Bereiter, Burtis, & Scardamalia, 1988). Bereiter and Scardamalia (1987) found that novice writers who had access to the KT only usually revised at the local level, while expert writers who had access to both the KT and the complex KTF revised globally, thus transforming information.

However, these models too have their limitations. In essence, it should be borne in mind that although both of these approaches conceptualized by Bereiter and Scardamalia (1987) outline in detail how content is organized by writers as the writing process unfolds, it is not clear how the linguistic translation process takes place, nor how ideas are translated into writing. Another limitation with these approaches is that the output from these approaches is cognitive in nature, and the role of writing contexts such as social factors that influence writing is ignored (Flower, 1994). Finally, the matter of how writers actually develop and progress from the KT to the KTF in the process of writing is not addressed.
2.1.3 Hayes’s (1996) Model

With the emergence of more writing research, Hayes (1996) developed a new framework that allowed for the interpretation of a wider range of writing activities. As Hayes (1996) indicates, writing depends on a combination of cognitive, affective, social, and physical conditions. Hayes’s (1996) model, which is a revised version of the Hayes and Flower (1980) model, incorporates several additional components. The new model is made up of two main domains: the environment which includes the task and the physical setting, and the individual.

The first component in this model is the task environment and the physical environment. The task environment, which has been expanded to include the social environment, constitutes the audience and collaborators who determine what, how and for whom the writer writes, as genres and cultures come into play as writing develops.

The physical environment is made up of the text produced as the writer reads and rereads and gets cues to proceed. The other element is the composing medium such as paper and pen, computers or dictating machines which plays a central role in determining how well a writer writes and what care is given to the progression of a piece of writing.

The individual component is made up of the writer’s cognitive processes, motivation, affect and memory scheme. The cognitive processes have three main functions: text interpretation, which enables a writer to read or listen and to transcribe the information into visual graphics; reflection, which enables a writer to transform knowledge such as elaboration of content or inference from texts; and text production – which could take the form of written or spoken language – which is the transcribed product resulting from interpreting and reflecting on a text.
The motivation and affect component encompasses a writer’s goals, their predispositions, beliefs and attitudes and the choice of methods or strategies adopted to achieve their goals. Motivation determines the course of action taken by the writer (Hayes, 1996) to achieve a particular goal in an error-free manner. The affective element in this component verifies how the writer responds positively or negatively to writing as a result of the task or assignment at hand.

The third component, the LTM, is made up of genre knowledge which allows a writer to be aware of the type of text that will be written; linguistic knowledge required for effective language use; audience knowledge which allows a writer to be aware of to whom the text is targeted; topic knowledge which enables a writer to determine the content that makes up the text; and a task schema which guides a writer to the final completion of the text.

These three components are interlinked with one another and are all bound to the fourth component, the working memory (WM) that contributes to all cognitive activities in writing. The WM is governed by a central executive controlling with three other memories: phonological memory which stores information that is phonologically coded; the visual/spatial sketchpad which stores information that is visually or spatially coded; and the semantic memory which stores information related to text generation. By virtue of its central position in this model, the WM is accessible to all the cognitive process.

Hayes’ (1996) model differs from that of Hayes and Flower (1980) in that the old model has been expanded to be more reflective of current cognitive research into memory. The Hayes model places more emphasis on the central role of the WM and the importance of motivation in writing, and it includes an addition of visual-spatial tasks to interpret spatial information and writing mediums.
In summary, all three of the models developed by Hayes and Flower (1980), Bereiter and Scardamalia (1987) and Hayes (1996) are made up of three major processes: planning, translating and reviewing. According to Alamargot and Chanquoy (2001), these models have corresponding features of verbal production “and are built up in the form of a global architecture and are aimed at describing the course of writing (or speaking) as a whole” (p.21). In these models, writing and speaking are perceived to be made up of several processes and the information generated is subjected to a control mechanism and then evaluated.

The cognitive process model introduced by Hayes and Flower (1980), the KT and the KTF models established by Bereiter and Scardamalia (1987) to cater for both skilled and unskilled writers, and the Hayes (1996) model with the WM component incorporated, all give insights into the cognitive processes of revising in the process of writing. However, there is no provision in any of these models for determining the role of feedback in the writing process. This study, therefore, investigates feedback, specifically how feedback as input contributes to recursiveness in the process of writing, and by doing so makes a further contribution to the current understanding of the writing process. Since feedback is often provided by teachers, and because different approaches to teaching writing may affect how and why feedback is provided, the next section will consider how writing is taught.

## 2.2 Teaching writing as a product or process

The product and process approaches have “dominated much of the teaching of writing that happens in the EFL classroom” (Badger & White, 2000, p.153). Writing can be understood by looking at the two aspects: the written product and the processes involved in writing. In this section, I will first discuss the product approach and what it entails. Next, I will
discuss the process approach, highlight the positive aspects of the process approach to writing compared with the product approach, and then discuss how feedback can be used to intervene during this process.

The product approach in writing focuses on the written product itself, without taking into account the means by which the end product has been attained. This approach to teaching writing is largely concerned with the forms of written products that students write and so typically deals with word-to-sentence level writing and paragraph level organization (Williams, 2003; Young, 1978). In a classroom, teachers assign papers, grade them, and then hand them back to the students. They attend to the product – its clarity, originality, and correctness – but do not attend to the writing process itself (Ferris & Hedgcock, 2005; Harmer, 2001; Williams, 2003). The main focus of this approach is on the correctness of the written form, which emphasizes grammar (Casanave, 2004; Silva, 1990). In the product approach writers’ independent thinking is limited as they are not given opportunity in the classroom to revisit their writing, to add new ideas or information, delete existing information or revise the language used in earlier drafts.

The focus of research has shifted from product to process writing as this “offers an understanding of writing as a complex, recursive, creative, explanatory and generative process, wherein ideas are discovered and meaning made, a process similar to its general outlines for L1 and L2 writers” (Silva & Leki, 2004, p.6). Taylor (1981) defines process writing as a creative discovery procedure while Soven (1999), who also sees writing as a process, depicts it as the act of “reconsidering the larger elements of an essay, its content, development and organization” (p.16).
However, the conceptualization of process writing has undergone development from the work of these early researchers. For many years, writing was considered to be a linear process. The emphasis of the product approach was mostly on the final written product rather than on viewing what writers do while writing. Writing, whether it is done inside or outside the classroom, is a complex process which entails a writer going through many stages/phases to produce a piece of written text, stages such as prewriting, planning, drafting, revising, editing and publishing. Writers are assumed to move linearly between each of these stages of writing: prewriting is when ideas are formulated and generated; planning is where the writer designs the structure and content of the text; drafting is where ideas are put on paper and structured/composed, and where ideas are also clarified and improved; editing is where the written text is fine tuned; and publishing involves producing a revised text. Some of these stages take place on paper and some take place in a writer’s mind; notably a great deal of writing involves thinking through one’s ideas.

With the seminal work Flower and Hayes (1980a, 1980b, 1981b) and Bereiter and Scardamalia (1987), writing has come to be viewed as not simply a linear process but as a recursive process that involves planning, composing, and revising. Writers do not move neatly and sequentially through each step of the process. A writer can be engaged in more than one process at the same time. For example, a writer could be planning and at the same time revising what has been written. The writer could also discover new ideas while writing and thus may continue planning as revision takes place.

The process of writing thus needs to be considered to be recursive, in recognition of the fact that writers move back and forth between the stages of the writing process. Writers go through various cognitive processes to achieve their goals. In the midst of moving from one writing stage to another, writers may take into consideration the feedback given to
them as they advance and then return to different stages of writing, considering, reconsidering, and revising their work until they are satisfied with it. The next section will discuss this.

2.2.1 Feedback in the writing process

Feedback has long been regarded as essential for the development of L2 writing skills (Hyland & Hyland, 2006a). It is a type of formative evaluation given to writers to help them to be aware of what they write in a useful and meaningful context and evaluate their own progression in writing towards achieving their goals. Feedback not only helps writers to learn to repair the errors, it also helps them to write (Flower & Hayes, 1981a) through the various drafts to the final completion of a text (Keh, 1990). Comments on their writing help student writers to understand how well they are writing and how they might develop their writing (Ryan, 1997). Hence, feedback acts as intervention and gives support and encouragement to writers to achieve their writing goals (Grabe & Kaplan, 1996). The ever growing body of research on feedback is an indication that feedback is important in the process of writing and in the development of students as writers.

Feedback is defined by Grabe and Kaplan (1996) as a means by which readers respond to writers about their writing and see it to completion. It is the catalyst that “pushes the writer through the various drafts and on to the eventual end product” (Keh, 1990, p.294). Feedback in any form, whether it be peer review, oral conferences or written comments, is formative information given to writers to help them write in a useful and meaningful context. It is a way to help writers develop better writing strategies and is a prerequisite for writers to evaluate their progression towards the goals they are trying to achieve.
Therefore, responding to students’ texts has always been central when writing is taught as a process (Fitzgerald, 1987; Murray, 1978; Scardamalia & Bereiter, 1986). Teachers spend a considerable amount of time and energy reading and responding to their students’ texts to help them produce writing worth reading by peers. Teachers, more often than not, act as the first, the last, or the only reader of students’ written texts. The teacher’s response then, represents one of the most crucial forms of feedback as it serves as one of the most direct of the sources that affect students’ writing performance (Ziv, 1984).

Teaching writing as a process (see section 2.2) provides student writers with opportunities to re-craft and develop written products. First, writers become aware of the recursive nature of writing, alerting writers to go back and forth repeatedly in their thoughts or writing during the composing process. Second, it allows the teacher to intervene and confer with the student writer as a text is developed and organized (Susser, 1994). Third, it is during this process that teacher feedback gives a writer the opportunity to consider how his/her writing affects an audience.

Feedback in process writing is a key component of the writing cycle. Previous research has documented the importance of feedback in the writing process. Kroll (2001) describes feedback as one of two components essential to any writing course; the other is the nature of the assignments given to students. Hence, the significance of teachers as feedback providers to writers is manifold and culminates in the emergence of writers and their development in the writing process. It is useful therefore, to consider what kinds of feedback teachers provide.
2.3 Types of feedback

Feedback is an important component in the ESL writing environment. There are various
types of feedback that are adopted by writing teachers in order to advance the development
of writing among student writers, for example there is peer feedback, verbal feedback in
the form writing/individual conferences, and written feedback provided by the teacher.
This section will give a general overview of the various types of feedback. However, it
must be noted that the main focus of the present study is on teacher written feedback.

2.3.1 Peer feedback

The main significance of peer feedback is to receive multiple perspectives from a wide
audience (Cho, Schunn, & Charney, 2006; Sheppard, 1992). Students typically provide
oral or written feedback to their peers on their writing, and those who receive such
feedback revise their writing based on it. The implementation of a peer feedback process is
complex (Villamil & De Guerrero, 1996) and time-consuming and thus may deter writing
teachers from using it in their classrooms. Student socio-cultural factors such as having
different cultural and linguistic backgrounds, their understanding of peer review, and also
their expectations may hinder the success of peer feedback. Thus, attempts at
implementing peer feedback in writing classrooms may not be effective.

The main concerns about peer feedback are whether students are comfortable providing
comments on their peers’ writing and whether students value peer feedback and make use
of it in their revisions (Ferris, 1995; Hedgecock & Lefkowitz, 1992; Leki, 1991). The
majority of studies examining peer review in the ESL writing environment have shown
that students consistently value peer feedback far less than they do other forms of feedback
(Leki, 1991; Saito, 1994; Zhang, 1995).
In a small-scale comparison study, Paulus (1999) examined the effects of peer and teacher feedback on the writing of eleven undergraduate international students. The students received both written and oral feedback from their peers on their first drafts and only teacher written comments on their second drafts. The participants were then asked to think aloud as they revised their texts based on both the peer and teacher feedback. It was found that students made use of both peer and teacher feedback to make substantial revisions to their work and so made their texts more comprehensible to their readers. Though peer feedback and teacher feedback contributed to students’ revisions in writing, it was found that teacher feedback was more influential in students producing changes and was given more priority than peer feedback by students. In her survey, Leki (1991) found that the students in her study considered the instructor to be the most helpful source, and preferred teacher feedback to peer feedback. Results from her survey indicate that her students judged peer feedback as less useful than teacher feedback. In determining students’ preferences between teacher feedback and peer feedback, Zhang (1995) reported that students in a majority of L2 studies chose the teacher as the person most trusted as capable of giving feedback because they doubted the students’ ability to give constructive feedback to their peers. This finding is echoed by Sengupta (1998) who found that students in his study were of the opinion that it was the teacher’s duty to give feedback, and they considered teacher feedback to be significant in their writing. He reported that the students in his study perceived the teacher as the authority, and an expert in the field and more knowledgeable than their peers.

In a study on the effectiveness of peer feedback, Nilson (2003) found that peer feedback did not prove to be better than teacher feedback in contributing to the effective development of students’ writing. The weakness of peer feedback, according to Nilson (2003), is partially due to the failure to provide students with guidance on how to produce
feedback, guidance that helps them to keep focused on texts instead of producing emotively-laden evaluations of their peers’ writing.

On the positive side, other studies done on the impact of peer feedback (Caulk, 1994; Chaudron, 1984; Hedgcock & Lefkowitz, 1992) suggest positive reactions to peer feedback, and indications that students do benefit from feedback after sharing their written work (Graves, 1983). Caulk (1994) found that peer feedback was relatively specific, whereas teacher feedback was found to be rather general. The response sessions among peers give students the opportunity to receive feedback on their writing and at the same time to identify the different types of writing strategies their peers use to develop their writing. This sharing among peers provides, then, a means for the teacher to elicit suggestions from other students on communicative strategies in writing.

Positive response towards peer feedback was also ascertained by Hedgcock and Lefkowitz (1992). They found that students who received only peer feedback, compared to those who received only teacher feedback, had higher overall scores. Significant findings from their study were that there were more revisions on form as a result of teacher feedback while peer feedback resulted in more revisions on content, organization and vocabulary.

Many advantages of peer review have been heralded as effective for ESL writing instruction, advantages such as giving writers an audience for their work (Caulk, 1994; Keh, 1990), helping writers to read critically and to analyse (Chaudron, 1984; Keh, 1990), and encouraging students to focus on developing ideas (Mendonca & Johnson, 1994). Peer response provides a tremendous learning opportunity for students by helping them with the development of ideas, and instilling the confidence to share their views among students (Chaudron, 1984; Curtis, 2001). It also allows opportunity for them to view and evaluate
their writing more objectively (Cheng & Warren, 1996) and provides students with a means by which to evaluate their drafts manifold times (Nilson, 2003). Hence, peer feedback is often incorporated in writing programmes (Hyland & Hyland, 2006a) because it is considered valuable for the development of the process of writing when used in combination with other methods of feedback.

### 2.3.2 Individual conferences

Individual conferences are another technique used by writing practitioners that promotes interaction with writing teachers and students. Talking to students one-to-one can help teachers support and encourage students to reflect on their writing as they continue to develop as writers. Studies on writing conferences (Goldstein & Conrad, 1990; Patthey-Chavez & Ferris, 1997; Williams, 2002, 2004) have revealed that this type of interaction may be effective for students who have difficulty communicating their opinions in a large group. Writing conferences offer opportunities for students to clarify teachers’ written comments on their texts (Puhr & Workman, 1992; Zamel, 1985) and at the same time to solicit ideas and suggestions to improve the quality of their writing. Xu (1989) argues that conferences with teachers can reduce students’ anxiety and help them find solutions to their problems as means of enhancing their writing. It is in these face-to-face situations that students can express their ideas and concerns and at the same time seek clarification of teachers’ earlier comments which they may have failed to understand. Teachers, for their part, may become more aware of individual student needs by listening to what students have to say and to how they say it.

To examine revisions based on teacher commentaries, Sweeney (1999) studied four drafts of essays of two classes of college students. One class was given written deductive feedback on the first two essays, and both deductive feedback and oral feedback on the
next two. Deductive in this study refers to the general feedback that was given on their writing first followed by specific feedback. The other class was given written inductive feedback on the first two essays followed by both inductive and oral feedback on the subsequent essays. Inductive feedback in this study refers to feedback that required students to take responsibility to discover changes needed in their writing by analyzing and scrutinizing their writing (Sweeney, 1999). It was concluded by the researcher that the deductive group revised better than the inductive group in the first two drafts, as a result of the directives given by the teacher. However, with oral conferences the inductive group did a lot more revisions than the deductive group in their third and fourth drafts and scored higher than their counterparts. It seems, therefore, that when students understand the teachers’ intentions and negotiate meanings through oral conferences, feedback can be used effectively to develop students’ writing.

However, the drawback is the time constraints on the writing teacher who may have a large number of students. Full attention to each every student may not be viable and it is left to the teacher’s discretion as to which student gets oral feedback and how many conferences can be scheduled for each student. Also, learners’ own social and cultural circumstances can be a hindrance to their full participation in the writing conferences. In some cultures the teacher represents authority and has full autonomy and, in such cases, students refrain from asking questions or making comments, passively accepting whatever is said in one-to-one conferences (Goldstein & Conrad, 1990). Only when students take an active part in writing conferences does oral feedback become effective; as students negotiate meanings so that successful revisions are made to their written drafts (Williams, 2004). Crucial factors such as time, planning, types of writing tasks, the complexity of interactions between teachers and students and the environment also need to be considered for effective conferencing to take place and the enhancement of the teaching and learning process. Due
to these contextual constraints, particularly the number of students one teacher has to deal with, written comments are likely to remain the most common and practical form of response to student writing.

### 2.3.3 Written feedback

Although written comments are widely used for responding to student writing, there is a paucity of studies on written feedback (Ferris, Pezone, Tade, & Tinti, 1997; Goldstein, 2005; Sommers, 1982). In a typical situation, students hand in their drafts to the teacher who reads them and provides written comments on their writing. Students are then expected to revise their texts based on the teacher’s written comments. The disadvantage of written commentaries is that they fail to ascertain whether students understand the feedback that is given to them. Some L1 studies reveal that written comments are not an effective means of communication between students and teacher (Brannon & Knoblauch, 1982; Faigley & Witte, 1981; Hillocks, 1986; Ziv, 1984). Studies on L2 research on the other hand, portray a different aspect of the role of written comments. While most of the feedback studies point to positive influences of feedback (Ferris, 1995; Hedgcock & Lefkowitz, 1994; Hyland, 1990; Kepner, 1991; Leki, 1991; Radecki & Swales, 1988), others strongly argue that teacher feedback does not help ESL learners (Truscott, 1996, 1999). Nevertheless, it is widely held that written comments have the potential to motivate students to revise their drafts (Leki, 1991; Saito, 1994; Zhang, 1995) and improve their writing (Fathman & Whalley, 1990; Ferris, 1995; Ferris, et al. 1997; Goldstein & Conrad, 1990). Research in L2 writing has been carried out on various aspects of feedback, among them the impact of teacher feedback (Cohen & Cavalcanti, 1990; Fathman & Whalley, 1990; Ferris, 1997; Goldstein, 2005) and students’ preferences and their reactions to teacher feedback (Chaudron, 1984; Cohen, 1987; Dheram, 1995; Ferris, 1995; Hedgcock
& Lefkowitz, 1994; Leki, 1991; Radecki & Swales, 1988; Truscott, 1996; 1999). In the following section I will discuss these aspects of feedback.

### 2.3.3.1 Impact of teacher feedback on writing

There has been much research on whether teachers should focus on form or content when providing feedback on student writing. It is debatable whether writing teachers should give attention to form before content, content then form, whether they should emphasize both form and content simultaneously, or whether students should be given any type of feedback at all.

Studies on feedback have shown that students can improve and develop their writing in various aspects, especially the accuracy of language. Most writing teachers would argue that accuracy of language is vital for a good piece of writing and would agree that grammar correction is necessary in a writing class (Chandler, 2003; Ferris, 1999). However, several studies on grammar correction in L2 writing have revealed negative effects of grammar correction feedback on students’ abilities to write effectively (Kepner, 1991; Krashen, 1994; Semke, 1984; Sheppard, 1992; Truscott, 1996, 1999).

Semke (1984) carried out a study on 141 first year students taking German over a period of ten weeks and found that error correction did not promote writing accuracy. The students were divided into four groups. Group one received written feedback on content only and no errors were identified; group two had all their errors identified and were given the correct forms; group three had positive feedback on content and corrections on errors; group four had only their errors coded and had to do their own corrections. The findings of Semke’s study indicated significant differences in accuracy among the four treatment groups. Group one, which received content focused written feedback, became more fluent
than the other three groups. The groups that had to self-correct their errors, received error-
corrections or content-based comments did not show any significant improvement in their
writing by the end of the course. Results of this study suggest that error correction does not
improve students’ written competence.

A similar study that focused on content and form was done by Kepner (1991). Kepner
(1991) conducted a study on sixty students who were taking Spanish as a foreign language
course for a semester in order to identify types of written feedback that might be related to
students’ achievement in L2 courses. Students were grouped according to high or low level
verbal ability groups and then were randomly assigned to written feedback groups to
receive either error corrections on forms or message-related feedback on content by the
researcher. Message-related feedback in this study took on the whole- language approach
and the researcher responded communicatively in Spanish to the student writers. Four
criteria were encompassed in this approach: the student’s name was used; a summary of
the main point was given; the student's reaction and evaluation on effective
communication of feedback was gauged; and suggestions for improving the assignment in
future entries were made. The students were assigned eight journal entries with a minimum
of 200 words fortnightly. Journals were collected and supplied with appropriate written
feedback subsequent to each assignment. The results of Kepner’s study indicated that there
was no significant difference in the accurate use of structures between groups receiving
feedback on form and content. However, the group that received message-related feedback
improved on higher level propositions.

Finally, Sheppard’s (1992) study on twenty-six college freshmen who received thirty-five
hours of instruction in an English course over a period of ten weeks, revealed the
effectiveness of content feedback as opposed to form feedback based on one draft.
Students were divided into two treatment groups. The first group received feedback on errors both in written form and oral conferences, while the second group received only content feedback. Both groups were given two writing topics and were required to write one draft only for each of the two essays. Results of the study indicated that there was no significant difference between the two groups in the area of language accuracy. However, the researcher found that the second group did better at the sentence level compared to the first group, indicating that feedback on form does little to improve students’ ability to write accurately and that too much overt attention to form may cause students to avoid certain structures in language. Students who received feedback on content, on the other hand, revised, using more complex sentences that enriched the content of their writing.

The focus of teacher feedback given to students could vary due to many factors. The socio-cultural background of students and teachers potentially play a role in feedback. These factors could contribute both to what teachers perceive as important enough to comment upon and what writing problems they believe should be left to students’ own initiative to work out.

Truscott (1996, 1999) claimed that feedback on grammar correction is ineffective and harmful and should therefore be abandoned. Truscott’s assertion that there is no convincing research evidence that error correction ever helps student writers to improve the accuracy of their writing was solely based on his analysis of L2 studies done by Kepner (1991), Semke (1984) and Sheppard (1992) discussed above. Truscott did not carry out any study of his own in ESL writing environments to support his stand. It is also worth mentioning that there are different variables in the afore-mentioned three studies that contribute to questioning Truscott’s claim against grammar in terms of size of samples,
types of writing assignments, length of study, the different L2 environments such as ESL and foreign language (FL) classrooms and the types of feedback provided to students.

There are also other criticisms of Truscott. Chandler (2003) states that Truscott failed to consider that reported differences needed to be supported with statistically significant evidence. Ferris (1999, 2004) argues that Truscott’s arguments were hasty in light of the mounting research that confirms that feedback does indeed help student writers in their writing, as long as the feedback provided is selective and unambiguous. Ferris contends that studies in L2 acquisition suggest that errors must be made prominent to enable students to develop their linguistic competence, and that there is sufficient evidence that support teacher feedback in error corrections. Ferris (1999) maintains that teachers should continue to provide feedback because students believe in the value that feedback holds for them.

Numerous studies have supported Ferris’s view and indicated that written teacher comments have a positive impact on the quality of writing (Ferris, 1995; Hedgcock & Lefkowitz, 1994; Hyland, 1990; Kepner, 1991; Leki, 1991; Radecki & Swales, 1988). However, there is little research that has closely examined the effects of different types of written comments teachers make on student writing (Ferris, 1997; Goldstein, 2005).

Among the studies that have examined the type of feedback on students’ writing, one theme was on the effects of form versus content feedback. Fathman and Whalley (1990) carried out a study on the effects of form versus content feedback on student writing. They studied seventy-two intermediate ESL college students. The students were divided into one of four groups: no feedback, form feedback, content feedback and content and form
Students’ compositions were marked and returned a few days later, with each student receiving one of the four types of feedback. The results indicated that the accuracy of writing improved with teacher feedback. However, it was also noted that students scored higher than their original essay on grammar and content on their rewrites when there was no feedback from the teacher. Fathman and Whalley (1990) suggested that rewriting in itself is beneficial and teacher feedback is not always necessary to ensure a better rewrite of a text. They concluded that feedback on form and content, irrespective of how it was given, was positively accepted by students.

In the same vein, Ferris (1977) examined the effectiveness of written feedback within the ESL writing context. She set out to determine the relationship between teachers’ feedback and students’ revisions. She classified comments made by teachers according to length, functional type, use of hedging and text type. Revisions made by students were categorized as either minimal or extensive, and according to whether the revisions had any effect on the text as a whole. It was found that seventy-three percentage of grammar-focused teacher comments, both marginal and as end notes, led to successful revisions. Thus, it can be assumed that grammar focused teacher feedback does get positive reactions and is taken into consideration by students when they revise their drafts.

Another study to determine the effects of different types of grammar feedback was carried out by Ferris and Robert (2001). They investigated seventy-two university ESL students of various writing abilities. The students were divided into three treatment groups: a no feedback group, a coded feedback group where the errors were coded, and a no code
feedback group where the errors were underlined only. Students were asked to self-correct a two-draft composition. Results showed that there were no marked differences between the coded and non-coded groups on error corrections, but there was significant improvement on their second drafts in relation to the no feedback group, indicating that teacher feedback is effective and students do attend to teacher feedback. It may be deduced from this study that feedback need not be explicit on form as students can effectively self correct errors on form.

In the studies discussed (Fathman & Whalley, 1990; Ferris, 1997; Ferris & Robert, 2001), the types of feedback were varied. The results of the studies indicate that feedback does seem to have an impact on students’ writing, contributing to the overall improvement of their writing. However, the effectiveness of student writing was not dependent on teacher’s written comments but, rather, on the type of feedback that was given.

When giving consideration to the type of feedback that would be beneficial for students to write effectively, other factors such as students’ linguistic abilities, their needs and their preferences have also to be taken into account. As previous studies suggest, other types of feedback such as peer feedback and student teacher writing conferences used in conjunction with teacher written comments have been shown to promote the development and improvement of student writing. The next section will look into student preferences and student reactions to teacher written feedback.

2.3.3.2 Students’ preferences and their reactions to teacher feedback

Expectations of student writers, and their preferences for and reactions to feedback have been, and still are, of much interest to writing researchers. A considerable amount of literature has been published on student preferences and student reactions to feedback.
Studies such as those carried out by Cohen, (1987); Radecki & Swales, (1988); Leki, (1991); Hedgcock & Lefkowitz, (1994); Enginarlar (1993); Dheram, (1995); Ferris, (1995) and Hyland (2003) reveal that student writers appreciate feedback as a means of improving their writing. However, only the studies most relevant to my own study are discussed below.

In examining the reactions and preferences of student writers on teacher feedback, Cohen (1987) surveyed 217 university students’ writing in their L1 and L2. Students were chosen from various language classes and different levels in order to examine the variations in teacher comments on the different languages and levels. Cohen found that the students mentally noted less than half of the teacher feedback, and less than ten percent of the teacher feedback was actually taken into account and incorporated in their subsequent drafts. The students in Cohen’s study indicated that they preferred written comments in the form of single words, short phrases and complete sentences. Vague and indirect comments such as “confusing” and “not clear” were found to be unhelpful in ensuring effective revisions by the students in the study.

Enginarlar (1993) examined forty-seven ESL students’ views on their preferences for feedback on their written compositions. Enginarlar found that students reacted positively to errors that were coded. In other words, when students’ errors in their writing were marked or identified with a system of symbols or signs that were understood by the students, the students viewed such errors as shared responsibility between them and the teachers, and this led to more revisions by students. Teacher feedback not only plays an important role in students’ improvement of textual quality and writing proficiency, but helps students to judge for themselves how well they are progressing in their writing. Enginarlar concluded
that students were concerned with accuracy and wanted to know what their errors were, so they consider feedback on errors to be effective.

However, it must be taken into account that ESL and FL environments differ, and these types of learners have different types of language exposure given that ESL and FL writing contexts differ in objectives (Hedgcock & Lefkowitz, 1994). According to the researchers, it is vital that ESL learners acquire composition skills to continue their education, whereas for the FL learners writing often merely serves as a practice for language. As was confirmed in their survey data, significant differences emerged between the perceptions of ESL and FL students regarding form feedback and content feedback. The ESL students revealed their preferences for both content feedback, such as organization and development of ideas, and form feedback. The FL students favored feedback on form addressing issues related to grammatical, lexical and mechanical errors such as punctuation.

In another study on ESL students, Hyland (2003) used a number of strategies to explore how students made use of teacher feedback on form in their writing texts. Her study was on six ESL university students, comprising three undergraduate students and three postgraduate students who were enrolled in a fourteen-week full time English proficiency course, and two writing teachers. She collected data on teachers’ think-aloud protocols while giving feedback, teachers’ written commentaries and interviews, students’ writing drafts and retrospective interviews with students. The results of the study indicated that most of the students valued teacher feedback and used it in the revisions of their drafts. It was also found that the students were aware that, though they did not immediately benefit from focused feedback, it would, however, help them in future writing. The reason for this is that feedback helped them in their awareness of the errors they made and consequently helped them improve their writing. Though this study emphasized how ESL students
respond to feedback on form, students in this study also indicated that they would have welcomed feedback on the content of their writing as well.

2.3.3.3 Misunderstanding feedback

Despite the positive reactions to teacher feedback on students’ writing, not all student writers appreciate and attend to teachers’ feedback. One of the reasons cited is that teachers and student writers are not well informed as to the functions and expectations of feedback. Students may not know how to revise based on the feedback given. On the other hand, teachers may not be aware of whether or not the students understand the feedback given to them. This, then, could lead to students’ misunderstanding of teachers’ comments/feedback or to the mismatch of intentions between students and teachers.

In a case study of revision with three L2 first-year university students in a writing course, Heyden (2004) found that feedback seemed to have little or no effect on students’ revision because they did not understand the content of teacher feedback. The students met with their writing teacher twice a week for fifteen weeks. The researcher observed and took notes during class sessions, and had forty-five minute weekly individual interviews with the students for fourteen weeks. It was found that there were conflicting views between the teacher and the students on the written responses. Students perceived the teacher as an evaluator only, one who was critical and provided no help towards developing their writing. The teacher, on the other hand, wanted the students to play an active role by taking charge of their writing and revising their writing based on his comments. Although there were frequent interactions between the teacher and the students, students in this study did not understand the teacher’s intentions when written comments were given on their drafts and thus they were unable to comprehend the teacher’s feedback. As a result, there was no significant improvement in the students’ writing. The teacher was of the opinion that the
students did not value his feedback. There was little or no effort from the teacher to identify the lack of improvement in students’ writing and thus he was unaware of students’ perceptions and responses towards his feedback. The teacher used non-directive comments on students’ papers with the intention of enabling the students to take their own initiative in making decisions on their revisions. But the students wanted explicit feedback like “what to do” with their drafts as they were not sure what was expected of them. There was little or no channel for students to convey what they felt and wanted, so a resultant breakdown of communication between the teacher and the students.

In another study, Belanger and Allingham (2004) investigated the processes secondary school students use to respond to teachers’ written comments on their writing. The researchers made use of observations, questionnaires, teacher written feedback, interviews and students’ retrospective think-aloud protocols. They interviewed fifty-three students and another one hundred and nineteen students were given questionnaires that asked about their feelings and their understanding of specific comments made by their teachers. Students were asked to think aloud and were observed while they read their teachers’ comments. Belanger and Allingham’s (2004) study found that students were more interested in the grades they were given for their writing than in the comments about their writing. However, students were found to be more receptive towards comments that they understood, than they were by excessive technical explanations that discouraged them. The findings suggested that the students sometimes failed to understand the comments that were given by the teacher. Students in this study were inclined to look for specific, focused, individual comments on their strengths and weaknesses. Praise, personalized and positive comments by the teachers were very well received by these students, as opposed to criticisms about their writing.
In another study examining the role of feedback in students’ compositions, Cohen and Cavalcanti (1990) used teacher think-aloud protocols while providing feedback to students’ compositions along with teacher questionnaires, students’ concurrent verbal protocols on their reactions to teacher feedback, student check-lists and student questionnaires. The participants in this study were three teachers and nine students from an EFL institute and an EFL university. Each teacher selected three students representing high, intermediate and low achievers in EFL and Portuguese L1 writing. The EFL institute students wrote their compositions in class while the other group wrote their essays out of class. All three teachers thought aloud while giving feedback to the students’ compositions and completed a teacher questionnaire. The students were asked to react by doing a think-aloud protocol session as they read their teacher feedback. Following this, all nine students filled out a questionnaire and were interviewed about their reactions and responses to teacher feedback. However, only the three L1 students had interviews with the teacher. This was because interviews with the EFL university students could not be carried out due to a university strike, and at the EFL institute oral conferences with the teachers were not part of the course.

Results from this study indicate that, although there were parallel findings in the way feedback affects students writing in EFL and L1, a marked discrepancy existed in the way students viewed the feedback. L1 students were found to be more vocal and tended to disagree more with the teachers’ feedback than the EFL students due to their language proficiency. The researchers also found a mismatch between students and teachers’ intentions as a result of students misunderstanding teacher’s comments on their writing. They also reported that teachers in the study appeared to have motivated students to improve their writing as the students did take their teachers’ comments into consideration.
when they revised. Cohen and Cavalcanti (1990) concluded that generally the students were receptive towards teacher feedback because it was beneficial to them.

The misreading of feedback may negate teacher feedback. Studies suggest that students sometimes ignore or misunderstand teacher feedback. When attending to teacher feedback, students may misunderstand (Cohen & Cavalcanti, 1990; Conrad & Goldstein, 1999; Ferris, 1995; Hyland, 1998) teachers’ comments, or choose to ignore them, simply because they are unable to find solutions to the problems. However, research, according to Straub (1997), reveals “what teachers have long suspected, hoped, or assumed: that students read and make use of teacher comments and that well-designed teacher comments can help students develop as writers” (p.91). The studies discussed above (Heyden, 2004, Belanger & Allingham, 2004; Cohen & Cavalcanti, 1990) revealed that ESL students appreciate and do attend to teacher feedback.

One study that does aim at ensuring feedback is effective for students is by Aljaafreh and Lantolf (1994). Drawing on Vygotskian sociocultural theory, they examined the effect of error correction and feedback within the zone of proximal development on L2 learning on three ESL adult learners. The researchers analyzed the interactions between the students and the tutor focusing on four recurrent grammatical problems in the learners’ essays: articles, tense marking, use of prepositions and modal verbs. At the beginning of each interactive session the student was asked to read the essay to identify problems or errors. Following this, the tutor and the student would read through the essay sentence by sentence and if either of them came across any problem they would stop to discuss it. The analyses of these interactions revealed that there was a change in students’ grammatical competence as they moved away from being dependent on the tutor to noticing and correcting errors in their writing on their own. The feedback provided during these dialogic negotiations was
essential for L2 learning as the tutor was constantly trying to identify the learners’ zone of proximal development to provide the necessary assistance. As Aljaafreh and Lantolf (1994) claim, “this process can be accomplished only through the collaborative interaction of the expert and the novice” (p.468). In essence, this study shows how scaffolding in the form of teacher feedback could help students in their writing and prevent students from misunderstanding teacher feedback. Thus, teachers and students have to be informed about the roles and functions of feedback for effective teaching and learning to take place.

2.4 Conclusion

There seem to be gaps in the literature on feedback and revision. Although there are numerous studies on peer response to ESL student revision, there is a paucity of research on teacher feedback and its effect on revision (Ferris, 1997), and also on students’ reactions to and perceptions of teacher feedback (Goldstein, 2001). While there are a considerable number of studies that focus on the product (written texts and feedback), relatively few studies focus on the process by determining what writers actually consider when attending to teacher feedback. To date, literature on how ESL writers attend to feedback while revising is scarce. To gain a clearer understanding of the sequence of thoughts that takes place in the minds of the writers as they respond to written feedback, one has to look expressly at the thought processes that writers go through as they deal with the feedback given to them on their writing. This study investigates these thought processes. A technique called the think-aloud method is used to probe the cognitive processes involved while writers attend to feedback. The next section provides a detailed description of the think-aloud method.
2.5 Verbal protocols

This study examined what ESL writers did in terms of their thought process when they attended to teacher written feedback. To understand what writers do while attending to feedback, one has to go to the source, that is the working of the mind. A technique known as the think-aloud method was used to examine the thought processes of writers as they attend to teacher feedback. This method has been widely used in the fields of psychology and cognitive science which seem to have provided the bulk of findings on protocol research. Among the most important contributions of this method in feedback studies is the finding that writing is a recursive process in the sense that writers go back and forth considering feedback while revising or rewriting their texts.

The think-aloud method utilizes verbal protocols to capture the cognitive processes of participants as they execute a task. Think-aloud protocols or verbal protocols are records of verbalizations when participants are engaged in a task. Data collected by means of verbal protocols “probably provides the most direct insights into learner thought processes” (Wigglesworth, 2005, p. 99). The verbal protocol method requires participants to talk or think aloud their thought processes either while performing a task (concurrent verbalizations/protocols) or after completing their tasks (retrospective verbalizations/protocols), thus providing a means for the researcher to observe how participants interact with a particular task at hand. In the words of Flower and Hayes (1980a), these protocols offer a “description of activities, ordered in time, which a subject engages in while performing a task” (p.4). As think-aloud protocols can provide a rich amount of data that reflects a subject’s mental processes (Smagorinsky, 1989), they are of value because they give an opportunity to determine how writers think, what they look for, how they expect to realize a task and what factors they find useful or confusing. In short, they focus on the strategies that writers use to overcome writing problems.
The theoretical underpinning of the think-aloud protocols is largely rooted in the works of Ericsson and Simon (1984, 1993) who defined and validated the standards and conditions under which verbal protocols should be collected. Their theory is based on the constructs of short-term working memory (ST-WM) and long-term working memory (LT-WM) in human cognition which processes information. Information is stored in these two “stores” with varying accessibility and storage capabilities. In the ST-WM, information is processed rapidly and stored for a short term only, and if information is not retrieved immediately it will be lost (Branch, 2001). As information in the ST-WM can be processed and stored rapidly, cognitive processes are not interrupted while verbalizing aloud on the task at hand and retrieving information from ST-WM simultaneously. Information in the ST-WM can be accessed quickly and the contents reported (Pressley & Afflerbach, 1995); it is into this ST-WM that verbal reports tap into.

The LT-WM stores a large amount of information in a larger storage space for long periods of time and information can be retrieved from LT-WM efficiently (Ericsson & Delaney, 1999; Ericsson & Kintsch, 1995). This implies that writers can shift from their ST-WM and take advantage of the resources available in their LT-WM.

The functions of these memories are, then, the keys in the information processing model of Ericsson and Simon (1984, 1993) which provides the theoretical framework for think-aloud protocols. In this model the cognitive process that a writer goes through to solve a writing problem is captured as the writer engages in verbalizing while at the same time attending to the task at hand.

Verbal protocols have been used effectively in the areas of psychology, education and cognitive science to investigate cognitive processes. Research shows that think-aloud
methods have been used extensively to uncover the intricacies of the human mind of the cognitive process that writers go through (Ericsson & Simon, 1993; Leow & Morgan-Short, 2004; Pressley & Afflerbach, 1995). Thus the aim of this study is to gain insights into the cognitive processes of ESL writers when they attend to feedback. Researchers such as Hayes and Flower (1983), Ransdell (1995) and Roca de Larios, Murphy and Manchon (1999), for example, made use of verbal protocol analysis in the field of writing while Whitney and Budd (1996) used verbal protocol analysis to look at comprehension. In the area of feedback on writing, Cohen (1987), Cohen and Cavalcanti (1990) and Hyland (1998; 2000; 2003) found verbal protocols to be highly beneficial as they led to the discovery of what constituted the effectiveness of feedback and of L2 writers’ reactions towards feedback in their revision processes. In examining the impact of teacher-written feedback on individual writers Hyland (1998), for example, had teachers think-aloud as they gave written feedback on students’ essays in order to understand the rationale for the teachers’ comments and their intended meanings.

Although the think-aloud method may seem to be a difficult technique to implement, it offers a rich source of insights into writing and the thought process. However, all verbal reports are not the same. Different methods can be used to collect verbal reports. The protocols can be classified as either introspective (concurrent or retrospective) and metalinguistic or non-metalinguistic (Ericsson & Simon, 1993). In metalinguistic verbalizations, if learners are asked for particular information, or asked for clarifications, learners will provide a metacognitive report, explaining, clarifying and reasoning as to the process they go through. In non-metalinguistic verbalizations on the other hand, learners are engaged in completing a task and talk-aloud about whatever is going on their minds without any explanations. Metalinguistic verbalization is characterized as self-observation while non-metalinguistic verbalization is viewed as self-revelation (Cohen, 2000).
following section, only concurrent non-metalinguistic protocols are discussed as only this type of verbal protocol has been used as a methodological instrument to study the thought processes of writers as they engage with teacher feedback.

2.5.1 Concurrent protocols

The main method of collecting think-aloud protocols in this study is the concurrent, non-metalinguistic method. In this method, introspective verbalization is gathered as participants are performing a task. It has been recommended that introspective, non-metalinguistic verbalizations should be collected to obtain a true reflection of learner’s processes (Cohen, 2000; Ericsson & Simon, 1993).

As concurrent verbalizations are focused on the decisions that writers make while engaged in a task (Kussela & Paul, 2000), writers should be able to provide information by directly verbalizing their heeded thoughts that are in progress without leaving out any single strand of thought, emotion or behavior (Robinson, 2001), as there should be a simultaneous occurrence of processing of thoughts and verbalization of thoughts. Hence, in making decisions, participants ought to thus be able to reveal elements such as the planning, monitoring, reviewing and setting of goals that they are taking into consideration while engaged in their problem solving activity. At the same instance, participants’ emotive outbursts and frustrations will be voiced aloud in the process of making a decision with regard to their writing. This, then, would be the main aspect of the concurrent verbalizations of thought processes of interest to a researcher, because concurrent verbalizations provide an enhancement of the behavioral patterns of a participant in the process of performing a task while verbalizing, in comparison to the same participant completing the task silently (Ericsson & Simon, 1993). At the same time, concurrent verbal
reports such as think-aloud protocols are also trustworthy evidence for determining when something has been consciously perceived or noticed (Schmidt, 2001).

Despite the wide use of verbal protocols in the areas of cognitive processing research during the last two decades, the think-aloud method is not free from criticism. Verbalization of thought processes has been thought to impair the natural order of thought occurrences (Wilson & Schooler, 1991) and this raises the issue of reactivity in the concurrent protocol method.

### 2.5.2 Reactivity

A serious criticism leveled at concurrent verbal protocols is the issue of reactivity. Reactivity refers to the disruption that may be caused to writers’ cognitive process when writers are faced with the dual task of writing and verbalizing their thoughts at the same time. A number of researchers such as Janssen, van Waes, and van den Bergh (1996), Jourdenais, (2001), Russo, Johnson, and Stephens (1989), Smagorinsky (2001) and Stratman and Hamp-Lyons (1994) have been critical of the concurrent protocol method. They argue that think-aloud protocols can cause reactivity that sets in while executing writing tasks and thus thinking aloud may eventually affect one’s learning outcome. In the same vein Leow & Morgan-Short (2004) argue that participants’ internal processes may vary from what they would have been had they not verbalized their thought processes. On the one hand, participants may be able to write well and at the same time verbalize their thoughts or, at the other extreme, participants may do either one of the tasks and neglect the other because of overload in thinking, writing and voicing their thoughts simultaneously (Russo, Johnson, & Stephens, 1989). The more problem solving activities a writer engages in, the more likely is a writer to be overloaded cognitively due to the
limitations of the working memory (Manchon, Murphy, & Roca de Larios, 2005). This overload, in turn, prolongs the process of executing a task.

However, it must be noted that despite the criticism that a writer takes a longer time to complete the dual task of performing a task and commenting on their thinking processes, there is little evidence to prove that the writers’ internal processes are altered in any way (Ericsson & Simon, 1993; Smagorinsky, 1989). Ericsson and Simon (1984, 1993) reviewed studies on think-aloud groups and groups performing tasks silently and found that there was no significant evidence to show that the accuracy of task performance was affected in any way for the think-aloud group. They concluded that verbal reports do not in any way affect the internal processing of writers when engaged in problem-solving tasks. Thus it can be assumed that think-aloud protocols enable participants to verbalize without any changes to their thought processes.

2.5.2.1 Reactivity in cognition

In the criticism about the issue of reactivity in verbal protocols, namely that the actual cognitive processes may be changed as a result of verbalizing, research shows contradictory results. While some studies show evidence that thinking aloud does not lead to changes in the cognitive process as reflected in the accuracy of responses (Ericsson & Simon, 1993), others show the presence of reactivity in verbal protocols.

In a pilot study, Stratman and Hamp-Lyons (1994) experimented with twelve subjects who were required to revise two different flawed texts in two different conditions to ascertain reactivity in the areas of error detection, content and structural changes. With the first text, six of the participants were asked to think-aloud while revising and the other six were asked to revise silently. Eight weeks later, the same participants were given the second text
to revise but with reversed conditions of thinking aloud and revising silently. The researchers failed to find any significant differences in the texts revised by the groups and suggested that there was no alteration whatsoever in the thought processes of the participants involved in the think-aloud condition.

Yet another study refuting reactivity in the think-aloud method is the study carried out by Ransdell (1995). Thirty-eight students were requested to write on the computer for twelve minutes under three different conditions: concurrent think-aloud condition, silent condition and a retrospective situation while listening to an audio-taped replay of their original composing activity. On measuring words and clauses composed per minute, Ransdell concluded that although there was a slight variation in the rate of composing, there was however, no reactivity present in the thought processes of any of the participants.

In an attempt to invalidate the assumption that reactivity affects think-aloud protocols, Levy and Ransdell (1995) had ten undergraduates write several forty-minute compositions over a period of twelve weeks. In the first instance, the participants were required to compose silently. After an interval of four weeks the students were trained in concurrent verbal protocols, after which they had to use the think-aloud method in their writing. In their analysis of the sub-processes of writing while the students were writing and verbalizing, Levy and Ransdell (1995) failed to establish any significant reactivity in either the silent or the think-aloud conditions.

Empirical studies clearly suggest that even though think-aloud protocol is time consuming, the verbalizing involved does not affect the thought processes that writers go through while engaged in the task of writing. However, there may be some concerns that this may not be the same for participants whose native language may not be English.
2.5.2.2 Reactivity in second language context

Although traditionally verbal protocols have been employed in SLA research to study learning strategies (Davis & Bistodeau, 1993; Warren, 1996), protocols have also been used to investigate the role of attention and awareness in the acquisition of an L2 (Sanz, Lin, Lado, Bowden, & Stafford, 2009). To date only a handful of studies have been published that look at the effects of thinking aloud while executing a task (Bowles, 2008; Bowles & Leow, 2005; Leow & Morgan-Short, 2004; Sachs & Polio, 2007; Sanz, et al., 2009). Even so, the results of these studies are contradictory.

In a study to address reactivity in an L2 context, Leow & Morgan-Short (2004) investigated the effects of thinking aloud while reading an L2 text on subjects’ comprehension, intake, and controlled written production. The participants were first-year Spanish language program college students. The students were divided into two groups: the silent group with thirty-nine students and the think-aloud group with thirty-eight students who were asked to verbalize in their L1. The students within each group were randomly put into either an enhanced reading group or an un-enhanced reading group and the focus was on the targeted form - the Spanish impersonal imperative.

Prior to the actual evaluation, three tasks were administered. Students from both groups were each given a short article to read and were tested on their comprehension, intake, and controlled written production of the targeted form. The results were statistically compared on completion of the tasks and the researchers found no significant differences between the think-aloud and the silent groups. They found no reactivity in students’ thinking aloud on any of the tasks. The researchers stated that the results obtained support the validity of using concurrent protocols of the L2 learners’ mental processes in the collection of data. However, although the participants were instructed to verbalize whatever came to their
minds without giving any explanations or justifications, the researchers did not report if the think-aloud protocols the participants produced actually corresponded to these instructions. The researchers seem to have assumed that all the participants responded to the instructions in the same way as there was no description of the type of responses produced or the degree to which the participants followed the instructions. However, the researchers acknowledged that more studies on the issue of reactivity needed to be carried out to further support the findings of this study.

Expanding on the work of Leow and Morgan-Short (2004), Bowles and Leow (2005) investigated the issue of reactivity on metalinguistic and non-metalinguistic verbal protocols with advanced learners of Spanish. The participants were forty-five fifth-semester Spanish course students. Participants were randomly allocated into three groups: silent (n=17); metalinguistic think-aloud (n=10), and non-metalinguistic think-aloud (n=18). The targeted linguistic structure for all these groups was the pluperfect subjunctive in Spanish.

Participants were tested on comprehension of their L2 (Spanish) text, a fill-in-the-blank production task of the targeted structure in familiar context and a second fill-in-the-blank production task of the targeted structure in unfamiliar context. The first written text was a pretest which was administered two weeks before the actual experiment. The control group did their comprehension test and writing assignment silently. The verbalization groups were encouraged to think-aloud in their L1. The non-metalinguistic group was asked to simultaneously perform their task and think-aloud their thoughts. Participants in the metalinguistic group, on the other hand, were not only asked to complete their tasks and voice out aloud their thoughts, but also to explain and clarify their choice of responses.
The results were statistically compared and the researchers found no significant effects on the comprehension or text production from the verbalization groups when compared to the control group. Though both the verbalization groups significantly took a longer time to complete their tasks, the non-metalinguistic group performed significantly better than the metalinguistic group on the text comprehension test, but neither of the think-aloud groups’ performance was significantly different from that of the control group. The results show that, apart from latency effects (time on task), there was no evidence of reactivity when all the three groups were compared. The researchers concluded that reactivity is not an issue in verbal protocols in an L2 context. There were two important limitations in this study. One was the low reliability of the comprehension test and the other was that the task could be completed without students processing the key grammatical form.

Another study that investigated the reactivity of verbal reports on an L2 problem-solving task is Bowles’ (2008) study. 194 first semester Spanish students were randomly divided into six experimental groups with a combination of metalinguistic, non-metalinguistic and silent conditions, and explicit or implicit feedback type. All the participants were required to play Pacman using the verb gustar (to like). All participants were given both implicit and explicit feedback about their target structure regarding whether they were correct or incorrect. As the participants worked through the mazes, they were required to think-aloud according to the verbalization conditions they were assigned to. The metalinguistic group was supposed to provide justification for the paths they chose to follow in the maze. Results of Bowles’ (2008) study showed that although the metalinguistic group took a longer time to complete their task and their metalinguistic verbalizations seemed to have hindered item learning, simply thinking aloud (non- metalinguistic) did not change the basic underlying processes that the study aimed to investigate, namely learning gustar while finding solutions to get out of the maze. The author concluded that verbalizations
during text processing did not affect the metalinguistic learners’ performance significantly when compared to the control group. Although there was no interaction found between verbalizations and feedback, it was reported that learners who thought aloud took a longer time on their task when compared to those who did not. However, it should be noted that the researcher did not provide values for the production scores to confirm that the lack of interaction was a result of low power.

All three of these studies (Bowles, 2008; Bowles & Leow, 2005; Leow & Morgan, 2004) explored the issue of reactivity that could have arisen with the concurrent think-alouds. However, they report that metalinguistic or non-metalinguistic verbalizations during the task did not affect learners’ performance except that groups involved in verbalizations took a longer time in completing tasks than the silent groups. The results of these three studies are contradicted by the following two studies.

Perhaps the only study that has investigated reactivity of think-aloud protocols using L2 writing tasks is Sachs and Polio’s (2007) study. They incorporated think-protocols in their study to investigate the effects of reformulation versus error correction on awareness of and L2 grammatical accuracy in advanced ESL learners. Fifteen ESL high-intermediate learners participated in a repeated measures comparison study (error correction, reformulation, and reformulation and think-aloud). The students were given their reformulated versions to compare with their original writing for fifteen minutes and to take notes if they wanted. The next day students were given a clean sheet of paper and were asked to revise their stories for twenty minutes without any access to their notes or the reformulated versions of their writings. The results indicated that the reformulation group working silently significantly outperformed the think-aloud group. Sachs and Polio’s (2007) study reported a higher level of awareness in the think-aloud group which related to
higher accuracy, and that the written feedback contributed to improved accuracy in the
students’ writing. However, the researchers also found the verbal protocols to be reactive
as a methodological tool as thinking aloud may have negatively affected students’ overall
performance due to their lack of language proficiency.

Another study that shows evidence of reactivity in think-aloud protocols is one undertaken
by Sanz, et al. (2009). They carried out two experimental studies on reactivity as a result of
verbalizations on the development of a non-primary language (Latin). Participants were
required to complete their language task in a non-primary language while verbalizing in
their L1. The researchers compared pretest and posttest accuracy, and latency of a think-
aloud group and a silent group on three different tests. Their first study was with twenty-
four college students who were assigned either to a think-aloud group or a silent group.
The participants received a computerized treatment that included a grammar lesson,
practice and feedback. The results of the study indicate that although verbalizations did not
affect participants’ task performance in accuracy, verbalizing slowed down their posttest
performance.

In their second study, there were twenty-four participants. This differed from the first study
in that no grammar instruction was given. The researchers found that using concurrent
verbalizations as a methodological tool caused reactivity to set it, and that thinking-aloud
contributed to reactivity as verbalizing may have actually enhanced students’ language
development. By combining the results of both studies, the researchers concluded that
verbal protocols are reactive as “requiring learners to perform think-aloud protocols has the
potential to alter the very process they are meant to reflect” (Sanz, et al., 2009, p.63).
With only five empirical studies, and two of them identifying evidence of reactivity, researchers cannot assume that verbal protocols are non-reactive. It has been suggested that think-aloud protocols need to be used with caution (Sachs and Polio, 2007). However, given that there is paucity of empirical research in this area, further research needs to be undertaken to validate the presence and significance of reactivity in verbalizations especially since it is still the primary means of examining cognitive processes which otherwise could only be investigated indirectly.

This suggests another approach to think-alouds and the issue of reactivity. The studies cited so far have all assumed that think-alouds can provide direct access to cognitive processes that are essentially individual, with reactivity seen as potentially problematic because it might alter the process and thus compromise direct access. There is an assumption that cognition is a process to which an individual can, in principle, have direct access. However, there is another approach. Perhaps cognition is not entirely individual or directly accessible.

2.5.2.3 Reactivity from the sociocultural perspective

Sociocultural theory (SCT) challenges the assumptions of cognition on the information-processing model. Smagorinsky (1998, 2001), for example, argues that verbal reports are not just mere representations of the thought processes of the individual minds but are socially constructed. Thus, one cannot view cognition as an individual phenomenon and “this raises the question as to whether it is, in fact, possible to isolate cognition from its social environment (Sasaki, 2003, p. 5).

Smagorinsky (1998, 2001) suggests viewing think-alouds from the cultural-historical activity theory - a more recent branch of SCT (Lantolf & Thorne, 2006). Built on the work
of Vygotsky (1978), SCT views learning as a process of increasing participation (Pavlenko & Lantolf, 2000). It views cognition as socially constituted and distributed. SCT proposes that cognitive development is fundamentally socially mediated, with language as the primary means of mediation. Hence, a verbal protocol “is not simply a matter of memory retrieval, but a process through which thinking reaches a new level of articulation” (Smagorinsky, 1998, p.172-73). According to Smagorinsky (2001), protocols are instrumental in producing meaning as thoughts are rearticulated through speech. This leads to development and learning because verbal protocols “are a process of comprehending and reshaping experience – they are part of what constitutes development and learning” (Swain, 2006, p. 97).

2.6 Summary

This review of the literature began by considering several cognitive models of writing from the L1 literature that have influenced research in both L1 and L2 writing. It briefly compared product and process approaches and then focused on the role of feedback in process approaches. A range of research issues on feedback in the L1 provided a background to research on feedback in the L2. This led to an investigation of one method for researching feedback: verbal protocols. The different types were described and issues that have been raised were discussed, particularly reactivity. Because reactivity has been approached from different perspectives potentially relevant to this study, its role in cognitive approaches, second language contexts, and sociocultural perspectives were considered.

It is important to underline that although both cognitive and sociocultural theories vary in their perspectives, they are both concerned with learning. Both offer insights into how writers attend to feedback as they learn to write, and therefore both are considered in this
study. That is, rather than assuming the think-aloud offers direct access to cognitive processes of the individual, this study is open to the possibility that while thinking aloud reactivity may have set in, but that this might have a positive effect as suggests. By thinking aloud while responding to feedback the writers may be engaged in a process that is essentially social, and may be contributing to cognitive change. The next chapter discusses the research paradigm and the methodology of the study.
CHAPTER THREE
METHODODOLOGY

3.0 Overview of chapter
This study aims to analyze feedback on the writing process by interpreting and making inferences about ESL writers’ actions and meanings. In order to do this, an interpretive qualitative approach was chosen for this study. In this chapter, I first discuss the strengths of the qualitative approach and argue that this is the most suitable method by which to gain an in-depth understanding of the cognitive processes that occur when writers attend to feedback. Following this, I discuss the research design and data collection method used for this study. I then explain why the case study was an appropriate tool to use. Next, I discuss the sources of the data that was collected for this study which included written texts, questionnaires and think-aloud protocols. Finally, this chapter concludes with a discussion on how the data was analyzed.

3.1 Approach
Educational research employs both quantitative and qualitative methods and, at times, a hybrid of both. The factors that determine which of these approaches is used include the aims of the study and numerical values of data (Best & Kahn, 1998). In qualitative research the researcher relies on the views of the participants and collects data largely consisting of words. These words are then described and analyzed (Creswell, 2008). Naturalistic inquiry and constructivism are the theoretical underpinnings of the qualitative method. Its objective is to achieve a holistic understanding of the phenomena that is being researched. In the quantitative approach on the other hand, the researcher collects numeric data and analyzes this data using statistical procedures (Creswell, 2008; Nunan, 2005). The
basis of quantitative research is the fact that the phenomena being investigated can be classified as numerical variables and explained in numerical terms.

Qualitative research has many strengths. Firstly, one strength of qualitative research is that it allows a researcher to study events that unfold in a natural setting. In the naturalistic environment, the researcher tries to understand, infer and interpret meanings of actions. The interpretive approach of qualitative studies taps into the “voices” of the participants, thus providing rich data. These voices can be the participants’ responses or actions which form the focus of a study (Erickson, 1986). Because this study aims to gain insights into the cognitive processes that are present as writers attend to feedback in their writing environment, the qualitative method seems suitable.

Secondly, qualitative research is used for researching the “what” and “why” of certain occurrences. It can be used to explore why a particular event occurs. Thus, the qualitative approach is the best to utilize in this type of research when there is little known about a particular phenomenon (Hoepfl, 1997). As there is little known about the cognitive processes that are evoked when writers contemplate teacher feedback, it is anticipated that by adopting the qualitative approach in the present study it may provide clarification and even an in-depth understanding of the events and social behavior (Ritchie & Spencer, 2002) that writers engage in when they respond to feedback.

Thirdly, the strength of qualitative research lies in its ability to give a complex textual description of a phenomenon that is the subject of research. The qualitative approach enables an in-depth exploration of phenomena in progress, resulting in precise detailed descriptions which will enable the reader to grasp and understand the exact context in which the various phenomena of interest occur (Myers, 2000). This is possible because, in
qualitative research, the researcher assumes the role of a detective and searches for information about human behavior, understandings, beliefs, opinions, emotions and social and cultural factors that affect participants in a study. This approach therefore, enables the researcher to give a thorough account of the phenomena that are being investigated.

The main aim of the present study is to provide a detailed description of the thought processes of ESL student writers as they engage with teacher feedback, how they attend and respond to that feedback and also to ascertain if the students revise their drafts based on the written commentaries. To achieve this goal, I adopted the interpretive qualitative approach as it emphasizes the importance of context, process, and meaning. As qualitative methods are effective for investigating a particular area of inquiry (Strauss & Corbin, 1998), this method was thought useful as a means of exploring the complex details about the thought processes, feelings and reactions of ESL student writers as they responded and attended to feedback. To date there has been little research carried out on the thought processes of student writers as they attend and respond to teacher feedback, and on how students make use of teacher written comments on their revisions. As this study relies heavily on the cognitive processes and views of the participants, it is these “voices” which will be used to make inferences of participants’ actions in a particular setting (Davis, 1995); an interpretive qualitative approach therefore seemed to be the approach best suited to the present study.

3.2 Case studies

Studies on feedback have mostly relied on the case study for the purpose of in-depth analysis; the case studies have used multiple forms of data such as observations, verbal protocols, interviews, questionnaires, written drafts and assessments. I chose a qualitative case study here, principally for the purpose of gaining a deeper understanding of student
writers’ thought processes and their links to written teacher commentaries. Case studies provide holistic descriptions of events, (Merriam, 2001) programs or activities of individuals (Stake, 1995) in language learning or in particular situations. The strength of case studies lies in the fact that they provide opportunity for a clear exhibition of how individuals work in particular contexts or situations (K. Hyland, 2003). The case study allows for a thorough investigation of activities, events, processes or individuals (Creswell, 1998). Besides this, as case studies provide opportunities for detailed interpretations based on qualitative data collection methods such as observations, verbal reports, documentation and unstructured interviews (Eisenhardt, 1989; K. Hyland, 2003), the present study will use the case study method.

However, case studies have their limitations. One negative aspect of case study research is that it often limits the making of generalizations as it involves only small samples. The findings of case studies are therefore not applicable to a larger population (Krapels, 1990; Mackey & Gass, 2005). Supporting this point of view are Cohen, Manion and Morrison (2007) who argue that the very richness of case study data is open to researcher bias as data is not easily cross-checked. However, refuting these claims are Hammersley and Gomm (2000) who argue that “the aim of case study research should be to capture cases in their uniqueness, rather than to use them as a basis for wider generalization or for theoretical inference of some kind” (p.3).

In support of case study research, Silva (1989) analyzed twenty-two case studies on second language writing process research and found that there was a distinct improvement in reporting subject and task variables, analyses of data and in the presentation of data. His findings also indicated that, while researchers were rather careful about generalizing the
findings of their case studies, each of the studies had nevertheless contributed to the growing body of second language writing research.

The present study aims to gain an in-depth understanding of cognitive processes, so data collection for this study will rely on ESL writers’ verbal protocols as they attend to feedback. As the research is mainly focused on the meanings and actions of the participants in the process of writing, the case study is deemed the most appropriate tool for the present study.

3.3 Adequacy

The adequacy of qualitative research can be appraised by several criteria. Some concerns of qualitative research include issues of credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985).

3.3.1 Credibility

Credibility in qualitative research seeks for a link between participants’ actions and how a researcher constructs and presents the meanings of these actions accurately (Mertens, 2005). Credibility also requires the researcher to ensure that the participants in a study are correctly identified and described. For credibility the researcher has to show that the findings and interpretations made in a particular study are valid (Mackey & Gass, 2005). An in-depth, detailed description of the processes and interactions entailed in data gathering would allow for credibility. The researcher also needs to state explicitly the theoretical boundaries that are applicable to the setting and population of a particular study. According to Lincoln and Guba (1985) and Mertens (2005), a study can be deemed to be credible that this is so if evidences can be shown by means of strategies such as prolonged and substantial engagement in the field, persistent observation, peer debriefing, negative
The present study is credible. Firstly it is credible because of my prolonged and substantial engagement in the field of Teaching English as a Second Language (TESL) program. I have lived in Malaysia for over forty years and have been teaching TESL program students for thirteen years at the university which was the site of my study. Given such experience, I am familiar with the setting in which the data was collected.

Secondly, triangulation contributes towards the credibility of this study. Triangulation is “checking information that has been collected from different sources or methods for consistency of evidence across sources of data” (Mertens, 2005, p. 255). In the present study, data was collected from multiple participants. Secondly, data triangulation using different sources of data such as verbal protocols, a questionnaire and written texts was used to ensure credibility. Member checking was also carried out to ensure credibility. The participants were provided with copies of their verbal transcriptions to check with their original verbal recordings for any inconsistencies that may have occurred during transcribing. Hence, this study is credible because of triangulation.

3.3.2 Transferability

A second criterion that is sometimes used to question qualitative studies is transferability. Guba and Lincoln (1989) define transferability as the extent to which results of a study can be generalized to other situations. There are some concerns associated with transferability such as how the findings of a particular study could be applied or replicated in other settings. One way to overcome this concern is to use multiple data-gathering methods or multiple cases in studies to enable replications in different situations (Marshall &
Rossman, 2006). In addition to this, by providing a “thick description” (Davis, 1995) or a detailed report on the findings or interpretations of a particular research situation and research samples, other researchers may be able to decide for themselves the extent to which the findings of a particular study can be transferred to their own contexts and situations of research (Davis, 1995). A detailed description increases the chances of transferability in qualitative research. However, it must be noted that it is up to the reader to judge if the data is rich enough to make any comparisons.

Many of the universities in Malaysia that use English as the medium of instruction have the same educational system and use the same curriculum. As Cohen, Manion and Morrison (2007) suggest, transferability is feasible when there are similar characteristics present in a particular situation. With detailed and sufficient account of the findings presented, other researchers will be able to compare their own research settings and be able to decide for themselves if the findings of the present study would be applicable to their own research (Lincoln & Guba, 1985; Mackey & Gass, 2005).

3.3.3 Dependability

A third criterion of major concern in qualitative research is its dependability. Dependability refers to the degree of reliability and consistency of the data and therefore interpretation of the results in a study. For dependability to be present, a qualitative researcher is expected to explain the research situation and research participants. Research findings inherently depend heavily on the inferences drawn from the words and actions of the research participants. To help build the dependability of the research, a researcher needs to keep records of all data collected, such as recordings and documents from which inferences were drawn. In other words, a researcher needs to keep a step-by-step progress account of the research process (Yin, 2003). Doing this allows other researchers working
in similar fields to assess if the inferences that were drawn from the results are consistent with the data collected. It cannot be expected that other researchers will necessarily arrive at the same results as the original researcher, but if they differ, they could determine if the results obtained are at least consistent and dependable based on the data collected (Merriam, 2002). To enhance the construct of dependability in the present study, data collected from the various sources is available to other researchers, on request, for examination in order to establish the consistency of both the process and the product of the present research (Lincoln & Guba, 1985). Besides this, computer assisted qualitative data analysis software called NVivo 7 was used to manage the data. This software allows for all records, including emerging ideas, to be recorded electronically. This software is explained in detail in section 3.10.1. To further ensure dependability, a second coding of the verbal protocols was done by another, independent rater to check for consistency and inter-rater dependability of the codes.

3.3.4 Confirmability

The final criterion of concern in qualitative research is confirmability. Confirmability involves the confirmation that the findings of a particular data are relevant to the study conducted. This concern can be overcome if a researcher is able to provide a detailed and explicit account of the data collected so that it could be “ tracked to its source” (Mertens, 2005, p.257). Edge and Richards (1988) summarized the provision of such an account as “the honest presentation of data” (p.351). This would enable other researchers to judge for themselves and to “confirm, modify or reject” (Mackey & Gass, 2005, p.180) the interpretations and inferences that are made. To ensure confirmability in the present study, the researcher has provided a detailed report of how data was collected from the various sources, a synthesis of findings and conclusions and information on how the research instruments were developed (Lincoln & Guba, 1985).
In summary, in the present study an interpretative qualitative approach was adopted. An interpretive approach gives primary consideration to the understanding of actions and human behavior (Cohen & Manion 1996) that occur in a study. The task then rests with the researcher to understand and interpret the meanings of the actions of participants under study (Creswell, 2008; Ellis & Barkhuizen, 2005; Merriam 2002) where the analysis is always subjective (Creswell, 2008; Merriam, 2002). It should be recalled here that this study required an in-depth analysis of data. Thus, a case study approach was adopted to ensure that the researcher was able to provide a ‘thick’ description of the phenomena being investigated, namely the identification of student writers’ cognitive processes as they attended to written teacher feedback.

3.4 Research questions

This study focused on the thought processes of ESL student writers as they attended to teacher feedback. Utilizing think-aloud protocols, written texts and a questionnaire survey, this study aimed to investigate the following:

1. What are students’ stated preferences for teacher feedback?
2. Do students attend to teacher feedback? If so, how?
3. Do students make use of teacher feedback? If so, how?

3.5 Setting

This study was carried out at a Malaysian public university where the participants were enrolled in the Masters of Arts (MA) program for a period of three years. The participants, whose second language was English were from various ethnic communities and were native speakers of Malay, Chinese and Tamil. All the participants were either pre-service or in-service teachers. They are from a multicultural background and all of them are multilingual, speaking at least three languages. In addition to their L1 which they speak at
home, they were taught at least two other languages in schools. Bahasa Malaysia, the national language of Malaysia, was taught and used as the medium of instruction while English was taught as an L2 throughout their primary and secondary education. The participants were asked to self identify their backgrounds and their L1. This did not seem to be an issue with the participants as no one raised any questions pertaining to the issue of L1 and L2. However, this could bring a different perspective in different situations.

The participants were given a briefing on the nature of the study, what was required and expected of them, as well as the extent of their commitment to the study. It was also brought to their attention that the study would be conducted in English which was their L2. My relationship with them was purely that of researcher as I had no previous connections with any of them.

3.6 Participants

3.6.1 Selection of participants

As the main intention of this study is to explore and undertake an in-depth investigation of the cognitive processes of ESL writers while attending to the dual tasks of writing and thinking aloud simultaneously, a purposeful sampling of participants was adopted and these students were the source of data used to understand the phenomenon that was being investigated (Creswell, 2008; Patton, 1990). The main criterion for the selection of participants was based on how well they were able to think aloud while simultaneously executing another task. As the dual tasks of writing and talking aloud simultaneously require practice, participants of the present study were given training in attending to a task and thinking aloud simultaneously.
At the time of recruitment for the study, the participants were postgraduates students enrolled in the MA program doing a course in Research and Practice in Composition Theory. Participants had been taught ESL in formal classrooms since they first began schooling at the age of seven. As the participants were all either pre-service or in-service teachers of English admitted to an MA program conducted in English which was important since they would be thinking aloud it, the participants in this study were assumed to be fluent in their L2. I visited this particular class and explained my research project and invited the students to participate in the study. Volunteers for this study were selected based on their willingness and ability to perform the dual tasks of thinking aloud and attending to another task simultaneously. From a pool of thirty-five students, twenty-eight students initially volunteered to participate. After the training session and on becoming aware of what was really entailed in the study, seven of these students dropped out. Then, after examining the verbal protocols from the training session of the remaining twenty-one participants, the researcher selected just fifteen of the students to take part in the actual study. The final selection was based on the amount and richness of verbal data collected from each of the participants, and also their willingness to participate in the study after having gone through the training sessions that involved executing two tasks concurrently. Of the final fifteen participants, the data from only eight of the participating students were actually used as there were incomplete sets of data for the remainder. Some participants handed in only one draft of their written essays while others failed to hand in their recorded verbalizations altogether. Also, some verbalizations were not clearly recorded so the researcher was not able to transcribe them at all. Background information on the eight participants is given and pseudonyms are used to ensure confidentiality of the participants.
3.6.2 Details of participants

Overview profile of participants

Biographical information of each of the participant is based on their self-reported information collected through the questionnaire including information on their language proficiency. As the focus of this study was not on students’ thought processes and reactions to teacher feedback in relation to their language backgrounds, this information is used only as background information for students’ profiles.

Angel

Angel was a twenty-six year old female student of Malaysian Indian origin. Her first language was Singhalese but she considered herself to be a native speaker of English and an excellent writer in English. At the time of the study she had already completed her Bachelor of Education (TESL) and was enrolled as a full time student in the MA program and in her second year of study, majoring in Applied Linguistics. Prior to her enrolment in the MA program, she had been teaching English at a private international school for two years and at the time of her participation in the research was hoping to continue teaching on completion of her studies.

Ben

Ben was a male student in his early thirties. He was an engineer by profession. He had completed his undergraduate degree in the field of engineering and worked as an engineer for nine years before switching, three years before this study was undertaken, to a career in teaching. At the time of the study he was teaching at a secondary school and pursuing his MA on a part-time basis, majoring in Applied Linguistics. His first language was Tamil and he rated himself as a good writer in English.
Cindy

Cindy was in her late thirties and was an educator by profession. At the time of this research she was employed as a principal of a Chinese primary school in Malaysia. She had completed her undergraduate degree in general education and was enrolled in the MA program as a part time student majoring in Applied Linguistics. Cindy was Chinese and a native speaker of Mandarin; she rated herself as just adequate in English.

Kelly

Kelly was a Chinese female student in her mid-twenties. Her native language was Mandarin although she considered herself a native speaker of English. She had graduated with a Bachelor of Education (TESL), had been teaching for the past four years and at the time of the study was employed as a part time teacher of English at an international primary school. Kelly was enrolled as a full time student and undertaking her second year of studies in the MA program, majoring in English. She rated herself as good in English.

Roxy

Roxy was a mature, Indian Muslim student in her forties. She had graduated with a Bachelor of Commerce and was an Executive Officer in an international oil company. She had been working in the industrial sector for more than twenty years. Roxy’s first language was Bahasa Malaysia and she considered English as her second language. Although she had been exposed to the English language for most of her life, she considered herself to be just adequate as a writer in English. Roxy was a final year, part time student enrolled in the MA program, majoring in Applied Linguistics when this research was undertaken.
Lena
Lena was a Chinese student in her early twenties. She had already graduated with a Bachelor of Education (TESL) and had been teaching English in a primary school for three years immediately prior to pursuing her studies further. At the time of this study she was enrolled as a full time student and was undertaking her second year of studies in the MA program, majoring in Applied Linguistics. Her first language was Bahasa Malaysia and she considered English as her second language. She rated herself to be just adequate as a writer of English.

Sham
Sham was a thirty-two year old female student. She was Indian and a native speaker of Tamil. She completed her Bachelor of Education (TESL) eight years ago and had been employed as an English school teacher in a secondary school since then. At the time of this research Sham was a final year, part time student enrolled in the MA program, majoring in English for Specific Purposes. English was her second language and she considered herself to be an excellent writer in English.

Jean
Jean was a Chinese female student in her early twenties. She was a native speaker of Mandarin, and English was her second language. Jean had graduated with a Bachelor of Education (TESL) and considered herself to be an adequate writer in English. She was a full time student and in her second year of the MA program at the time of the study. Jean was majoring in Applied Linguistics.
3.7 Data collection

3.7.1 Ethical consideration

The ethical procedures of both the home and research sites were followed. Before collecting data, each of the participants was informed of the aims of this study and was given an information sheet (Appendix A). This sheet provided a clear description of the tasks that participants had to do, and contained information about their involvement in the study. It informed the participants that their participation was purely voluntary and they had the right to withdraw from the study without any negative impacts. The participants were asked to sign a consent form (Appendix B) prior to any form of data collection. In line with Bogden and Bilken’s (2003) guidelines on ethical approaches in research where study subjects’ identities should be protected to avoid the risk of embarrassment or harm, participants of this study were assured that their identities would be protected at all times and that anonymity would be maintained throughout the study. Pseudonyms were used in this study to safeguard participants’ confidentiality.

3.7.2 Pilot study

Prior to the actual study, a pilot questionnaire was administered to twenty students from the MA program at University Putra Malaysia. This pilot procedure was carried out prior to the study proper to uncover any problems and to address them before the actual study (Mackey & Gass, 2005). All twenty volunteers for the pilot study were ESL speakers who were doing a writing course at the university. At the time of administering the pilot questionnaire, the students had already completed two writing assignments and had been given written comments on their writing. The volunteers were asked to reflect on the written feedback given on their written drafts. Following this, they were given the questionnaire to respond about their preferences, feelings and perceptions about the feedback that had been given on their writing by the lecturer. The questionnaires were then
collected from the participants. It was found that there were some aspects of the questionnaire that the students found confusing – in particular the rubrics for some sections were vague. These were subsequently revised (Appendix C).

### 3.7.3 Questionnaire on feedback

A four-page questionnaire with a consent form was given to all the volunteers. Due to matters of practicality and the limitations of each type of question, both closed-ended and open-ended questions were used. While closed-ended questions would provide uniformity so that more clear information could be found on what is common to a range of students, open-ended questions were used to in an attempt to get “unexpected answers” (Brown, 2001, p.36). Although the closed-ended questions were expected to provide a general idea of students’ perceptions and reactions, details about students concerns would not be available. Thus, to overcome this, two open-ended questions were included at the end of the questionnaire to elicit in-depth responses.

For the present study, the questionnaire on feedback (Appendix C) is an adaptation of the instruments that were designed by Aljaafreh and Lantolf (1994), Cohen (1987, 1991) and Hedgcock and Lefkowitz (1994) in their studies on feedback on writing. The questionnaire consisted of three sections: background information, participants’ perceptions on writing and participants’ preferences for feedback.

The first section sought background information from participants to obtain demographic information on each participant’s area of study, year at the university as well as language background information pertaining to their native language and their proficiency in English. The following section was designed to obtain information on participants’ perceptions and feelings with regard to the feedback they received on the writing they did
for the purpose of this study. The final section aimed to obtain information on participants’ preferences on the types of feedback they would like to get on their writing. The two open ended-questions were to probe the general steps participants would take in addressing their doubts about the feedback given and any other additional perceptions on the types of feedback they would have preferred to receive.

3.8 Procedures

Prior to the actual study, I visited a postgraduate MA class doing a course in Research and Practice in Composition Theory. I explained the purpose of my visit gave them an overview of my research and explained what my research would entail from them as participants. I then invited them to join in my research study and emphasized that it was purely voluntary in nature and would have no bearing on the grades of their course if they chose to abstain from participating.

3.8.1 Writing prompt

The participants of this study were provided with an argumentative essay entitled: Success in education is influenced more by the student’s life and training as a child than by the quality and effectiveness of the educational program. Do you agree or disagree? The argumentative topic for the writing task is a replication from Raimes (1987) and argumentative topics are considered to be representative of typical academic assignments and that this is a topic that requires participants to be knowledgeable of the language and rhetorical rules when arguing (Manchon, Murphy, & Roca de Larios, 2005). In addition, it also provides an opportunity for writers to incorporate their own views, attitudes, beliefs and personal experience to strengthen their argument.
3.8.2 Essays

The lecturer who taught the Research and Practice in Composition Theory to the participants assisted the researcher in administering the writing task. All fifteen participants met the lecturer after class hours and were given the writing prompt to write an argumentative academic essay. Participants were requested to write on this topic at a time convenient to them. They were given a week to complete the task as it is the norm in Malaysian universities to give university students an extended period of time to complete assignments. Additionally, this lengthy time frame allowed participants to revise, reflect and also to compose in settings that they were most comfortable with (time and place). At the end of the week, the written drafts were collected and the lecturer provided written feedback on these initial drafts (see Appendix E for a sample of a student’s first draft).

Feedback comments were given on all the students’ essays. The lecturer provided both global and surface level feedback. Feedback was given in three main forms: referential pertaining to editorial, organizational and content issues; directive in the form of suggestions, questions and instructions; and expressive that referred to praise, criticisms and opinions. The comments on the drafts varied from corrections, circling of errors, underlining, comments in the margins, in-text comments, and finally end comments at the end of the essays.

3.8.3 Training

The training session is a matter of methodological concern in the think-aloud method. Think aloud protocols require that prior training be provided for research subjects. The training sessions provide an opportunity for the research subjects to practice on sample tasks and accustom themselves to thinking aloud. The researcher trained the participants to verbalize their thoughts rather than to interpret them (van Someren, Barnard, & Sandberg,
1994). Although there have been suggestions that these training sessions may have an influence on the outcome of studies that use them (Ericsson and Simon, 1984, 1993; Kormos, 1998), the training sessions here were in no way intended to familiarize the participants with writing strategies or to affect their written competence. Participants were given instructions and sample tasks (Appendix D) as a means of training them to think aloud and record their verbalizations as they attended to a task concurrently.

Prior to the actual data collection, participants were given training in carrying out a dual task involving verbalizing and performing another task in the language laboratory at the university. The participants were each given a cubicle equipped with recording facilities. The researcher modeled thinking aloud while performing a task simultaneously for the participants in this study with the first sample task (Appendix D) by trying to find a solution to a mathematical problem during the practice session. The participants were then given instructions and a copy of the practice tasks (Appendix D). Participants were then encouraged to think aloud and record their verbalizations as they attempted to find solutions for the rest of the practice tasks individually. This practice session was to allay participants’ fears and anxieties and to familiarize them with the dual tasks of thinking aloud and attending to another task at the same time. The researcher did not at any time refer to or orientate the participants to any writing strategies.

The recorded verbalizations of the participants obtained from the practice session were collected, transcribed and analyzed. It was found that of the twenty-one volunteers, only fifteen of them managed to verbalize clearly and had provided rich verbalizations that could be used for analysis. Thus, only fifteen of the volunteers were finally identified to take part in the actual study.
3.8.4 Verbal protocols

Before the first drafts were returned, the participants were advised on their next course of action. Once their first essays with written comments were returned to them the participants were asked to attend to the written comments at their own convenience and at a time and place of their own choosing. They were instructed to record their verbalizations about their feelings, reactions and whatever other thoughts came to their minds as they attended to the written feedback on their writing. The participants were instructed to hand in their recorded verbalizations in a sealed envelope to their lecturer and given to the researcher for analysis.

It would have been an ideal situation if I could have monitored the concurrent think-aloud sessions to ensure that verbal protocols produced by participants were indeed concurrent verbalizations. However, I had to make a compromise at the request of the participants. As the participants were under time pressure with their semester workload and had different classes, I was not able to get all the participants together at a time and day suitable to all of them. The alternative was for them to record their verbalizations at a time and place suitable to them. My decision seems to reflect Young’s (2005) observation that if participants have demonstrated their ability to verbalize continuously, they should be permitted to complete their task in privacy. In addition, the participants would not have produced anything beyond “the scope of their current knowledge and abilities” (Young, 2005, p.24).

Initially the study was designed to obtain two sets of protocol data from the participants. The first set of verbal protocols was to be recorded as the participants attended to written teacher feedback. The second set of verbal protocols was to be recorded as they revised their essays based on teacher feedback. However, after the first set of recorded
verbalizations, participants indicated their reluctance to continue with further participation in the project as they were constrained for time. To proceed with the study that was already halfway through, the researcher came up with an alternative which met with the participants’ approval. The participants were still required to revise their essays based on teacher feedback but they were not required to think aloud. They were given three weeks to revise their first drafts (see Appendix E for a sample of a student’s first draft with feedback). The participants were requested to hand in both their first drafts and their revised drafts (see Appendix F for a sample of a student’s post feedback draft) in sealed envelopes which were then collected by the lecturer and handed to the researcher for analysis. Thus, only one set of verbal protocols was available for analysis in this study.

3.8.5 Questionnaire

As soon as the participants handed their first drafts and their revised essays to their lecturer, they were given a questionnaire to respond to. They were asked to recall and reflect on the feedback given on their initial essays and use this information to complete the questionnaire. Participants took between thirty to forty-five minutes to complete the questionnaire which was then collected and given to the researcher.

3.9 Data preparation

3.9.1 Data management and reduction

Analysis of data involves the reduction of data from unmanageable details to manageable summaries (Babbie, 2007). To manage the enormous amount of data, a folder for each of the participants were created on WORD. Each folder was given a codename to maintain participant anonymity. Data collected from the revised written texts was typed into word documents for easy reading, and analysis of the questionnaire was also recorded in these folders. Next, document files for each of the case study participants were created in NVivo.
Transcriptions from the verbal protocols were typed into the NVivo software to facilitate coding.

During the process of coding, the enormous amount of data was reduced to manageable chunks. As Ellis and Barkhuizen (2005) say, reduction of data “makes it easier for the researcher to work with, and thus facilitates access to the conceptual themes and patterns in the data which are the target of analysis” (p. 261).

3.9.2 Written texts

The written texts were used in combination with the verbal protocols. As there were instances where the recorded verbalizations were incomprehensible, the written texts were used to identify these unintelligible utterances. Secondly, there were also occasions where verbalizations indicated that revisions were carried out in participants’ revised drafts but were not evident in the revised essays. Thus, the written texts were used to identify and verify changes that had been made in the second draft based on the feedback given to the participants.

3.9.3 Questionnaire

A descriptive analysis of the questionnaire was adopted in this study. The questionnaire used contained questions pertaining to participants’ backgrounds, their perceptions about feedback and their preferences for the types of feedback. The responses to the questionnaire were analyzed for an in-depth description of participants’ reactions and preferences towards feedback in light of the research questions on page 7 and documented into the case study folders.
3.9.4 Transcriptions

Data collected from verbal protocols consisted of only one set of audio recordings made when the participants first attended to the feedback that was given on the first draft of their essay. Each of the participants’ recordings was transcribed verbatim as a word document (see Appendix G for a sample of transcriptions) and then exported to NVivo. Two main strategies were used in the process of transcribing. As recommended by Strauss and Corbin (1990) a simultaneous process of transcribing and analyzing data was carried out to identify initial categories. Huberman and Miles (1998) also describe data analysis as a process that is continuous and simultaneous from data collection through writing. This meant that as the data was being transcribed it was already being considered in terms of possible codes (Appendix G/H). Then, segments were identified manually according to each piece of feedback that a participant attended to and the processes that followed which were then mapped out for easy identification (Appendix I). These categories were later refined and developed until data saturation set in (Creswell, 2008; Merriam, 2001); that is, the point where no new ideas or categories emerged from the data. Following this, the emerging categories or ideas were continuously compared and linked to other themes that had already been identified in the data in order to generate broader categories (Creswell, 2008).

Following the transcription, the participants were asked to check for any discrepancies in their verbal transcriptions. Each of the eight participants was given a copy of their transcriptions and recordings of their verbalizations. None of the participations provided any response.
3.10 Data analysis

3.10.1 NVivo

The transcriptions were analyzed using NVivo. NVivo is a Computer Assisted Qualitative Data Analysis Software. The software facilitated in the management of qualitative data and assisted with the identification of emerging patterns and themes. This program also enabled the researcher to “keep records of hunches, ideas, searches, analyses, and give access to data so that they can be examined and analysed” (Gibbs, 2002, p. 10). Although this program is a tool that is able to produce reports and summaries, the interpretation of the data and the unfolding of ideas still rested with the researcher. The main point in favor of the use of NVivo is that it reduced the handling of data by storing, grouping and retrieving data effectively.

3.10.2 Coding

Coding is a means by which a researcher is able to link meanings of words to linguistic and social situations (Ellis & Barkhuizen, 2005). Coding is the “attaching of labels to chunks of text” (Gibbs, 2002, p.11) when data is organized into themes and categories. The verbal protocol data was coded and analysed through constant comparison (Glasser and Strauss, 1967) until its completion (Cohen, Manion, & Morrison, 2007; Glaser & Strauss, 1967; Merriam, 2001).

3.10.2.1 Deductive and inductive coding

There are two orientations to coding: deductive and inductive (Ellis & Barkhuizen, 2005). Deductive coding refers to codes that are predefined or themes that are expected to be investigated in a study by the researcher. Deductive coding assists a researcher (van Lier, 1988) to focus on specific issues that are to be investigated in a study. Inductive coding, on
the other hand, hinges on the data that will be collected. Concepts, categories or themes will be derived from the data itself. Only by analysing the data will the researcher find and understand the phenomenon that is being investigated (Ellis & Barkhuizen, 2005). In the present study, I used inductive coding and derived the codes and themes from the verbal protocol data.

3.10.3 Coding procedures

Coding in this study was carried out by an iterative process as advocated by Myhill (2009). Another independent rater assisted in the coding process of the transcriptions. As a preliminary point, a set of transcripts of two participants were jointly coded by myself, and an independent rater. Following this initial coding, I developed a set of codes (p.85) for coding. The remaining six sets of transcriptions were coded separately by myself and the independent rater using the codes that had been created. At the conclusion of the coding process, I checked the codes with the independent rater and made the necessary adjustments. Three types of coding procedures were involved in the procedures for data analysis: open coding, axial coding and selective coding.

3.10.3.1 Open coding

Analysing data begins with open coding where identification of concepts or themes that emerge from raw data begins (Creswell, 2008; Ellis & Barkhuizen, 2005; Strauss & Corbin, 1990). During this process, numerous conceptual categories of the phenomena that are observed are identified and tentatively named or labelled to form a preliminary framework for analysis. For instance, words, phrases or events that seem similar are grouped into the same category that can be modified or replaced during the course of analysis as more information becomes available. In this study, relevant codes were created based on the words that the participants used in their verbalizations. During this stage,
numerous open codes, referred to as free nodes in NVivo, were created. Once a particular thought or behavior was assigned a code, other thoughts and actions were compared with it to see if they fell into the same category. At the initial stage, all free nodes were seen as theoretically important. Appendix J is an illustration of the free nodes that were created in the initial stage of coding. Each protocol was read carefully, scrutinized to identify the what and how of what is going on in the unfolding of the verbalizations, and each of these components was recorded as a separate free node or code. These codes were then reviewed by using the coding stripes for the segments coded or highlighting these segments (Appendix K). Initial coding was a slow and tedious process as coding was done line-by-line, and involved reading between the lines and identifying concepts and thinking about the possible actions and strategies of the writers that needed to be recorded as codes. However, although this detailed coding helped to give a clear picture of the patterns of what participants were saying, some of these free nodes were later discarded, collapsed or refined during later stages of coding. The final established codes were then grouped into what is called tree nodes or axial coding.

3.10.3.2 Axial coding

Once the major themes are identified, the next step in the coding process is axial coding or what is referred to as tree nodes in NVivo. The main aim of axial coding is to identify the core concepts in the study (Babbie, 2007). Axial coding is designed to express the ideas of a cluster of concepts that are focussed around a central idea (Strauss, 1987). In axial coding, the researcher searches for more analytical concepts and a reorganization of the data takes place. In this study, a particular set of strategies or actions were brought together to form a meaningful relationship. For example, actions that were coded as reading essay, reading feedback, rereading essay, rereading feedback, reviewing essay and reviewing feedback were brought together and clustered together under a central idea of response
strategies. Thus the categories that were developed in the open coding phase were re-examined to establish the relationship between these categories and to determine how these categories could be linked to one another (Creswell, 2008; Strauss & Corbin, 1998). Axial coding is actually putting the coding back together in a new way by developing new concepts (di Gregorio, 2003). Appendix L is an illustration of how tree nodes were created in NVivo by collapsing open codes into categories, concepts, themes or central ideas. Once axial coding was done, the third phase of coding was undertaken, namely selective coding.

3.10.3.3 Selective coding

The third phase in the coding process was selective coding which involves choosing the central category (Babbie, 2007), systematically relating other categories to the one selected, verifying these relationships and examining “how certain factors influence the phenomenon leading to the use of specific strategies with certain outcomes” (Creswell, 2008, p. 437). The modeller in NVivo was used to show the various connections and relationships between the different codes (Appendix M) and this became the essence of how grounded theory was applied in this study as is illustrated in the model (Figure 23). The researcher thus built a story on how these connections were interconnected (Babbie, 2007; Creswell, 2008) as illustrated in Figure 23 on page 146. The model was derived from the individual approaches of the students based on coding, and in light of the processes described in the think-alouds, culminating in a general model of students’ responses to feedback. However, it should be noted that coding was only done based on students’ thought processes. Coding was not based on feedback types as the focus of the study was on ESL student writers’ thought processes as they attended to teacher written feedback.
3.11 Summary

This chapter discussed the type of qualitative research that was undertaken in this study and reviewed the instruments that have been used in previous related studies. It then discussed the research design and the data collection methods used here. Following this, there was a discussion of the approach used in the analysis of data. The next chapter provides individual narrative accounts of the thought processes of the participants as they attended to feedback.
CHAPTER FOUR
FINDINGS

4.0 Overview of chapter

In Chapter Two I discussed the importance of feedback in the writing process by reviewing cognitive process models of writing. One of the early writing models was proposed by Flower and Hayes (1980) and this then influenced other significant writing models such as those developed by Bereiter and Scardamalia (1987) and Hayes (1996). Revising and reviewing are important components of these writing models. However, in these models of writing little attention is given to the role of feedback in revising and reviewing. The important role of feedback in these processes when text is re-generated was highlighted in Chapter 2. Feedback gives an opportunity for writers to redraft and develop their writing, and it acts as an intervention that enables feedback-givers to guide writers as they develop their writing (Susser 1994). In order to understand how writers attend to feedback, I argued that the think-aloud method is the most suitable one to use to gain insights into the writers’ cognitive processes. In this chapter, the findings of an examination of these cognitive processes of writers are presented in the form of case studies.

4.1 Introduction to cases

It should be recalled that participants in this study were asked to think aloud while attending to feedback. The verbal protocols were recorded, coded and analyzed. Codes were divided into four broad themes. The four broad themes are: response strategies, justification, positive response/reactions and negative response/reactions. Response strategies refer to the behavioral patterns of writers as they attend to feedback in their writing. They indicate how writers approach given feedback and how they maneuver as they proceed with writing with feedback as the catalyst. These behavioral strategies were
evident in their processes of attending to feedback as they reviewed their initial drafts in light of teacher feedback. Justification refers to the rationalization writers provide to validate their acceptance or rejection of teacher feedback. Positive responses show that writers affirm the feedback. This in turn tends to encourage them to accept the feedback and revise. Negative responses are of two types. Writers express their lack of understanding of the feedback given, or they show disagreement with the feedback either one of which then tends to lead to writers rejecting the teacher feedback. A coding scheme of the think-aloud verbal protocols is presented in Table 1 below.

**Table 1: Think-aloud protocol codes**

<table>
<thead>
<tr>
<th>THEMES</th>
<th>CODES</th>
<th>MEANINGS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Strategies</td>
<td>RFB</td>
<td>Reads feedback (exact words)</td>
<td>State your stand in the first paragraph. Provide a link to your paragraphs. [This is an exact quote of the teacher’s written feedback.]</td>
</tr>
<tr>
<td></td>
<td>RRFB</td>
<td>Rereads or reviews parts of whole/parts of feedback</td>
<td>Stand in the first paragraph. Links to paragraphs. [This repeats part of the think-aloud coded as RFB above.]</td>
</tr>
<tr>
<td></td>
<td>REFFB</td>
<td>Refers to feedback (not exact words)</td>
<td>Have to take a stand and link my paragraphs. [This refers to the think-aloud coded as RFB and RRFB. See above.]</td>
</tr>
<tr>
<td></td>
<td>RE</td>
<td>Reads parts of essay/sentences/sections</td>
<td>Therefore showing greater interest in improving early literacy among the preschoolers would help raise the overall quality of the student’s education. [This is an exact quote of the student’s written essay.]</td>
</tr>
<tr>
<td></td>
<td>RRE</td>
<td>Rereads or reviews parts of essay/sentences/sections</td>
<td>Improving early literacy among preschoolers would help raise the overall quality of students’ education. [This repeats part of think-aloud coded as RE. See above.]</td>
</tr>
<tr>
<td></td>
<td>REFE</td>
<td>Refers to parts of essay/sentences/sections. [Not exact words]</td>
<td>Early literacy would help in the quality of students’ education. [This refers to the think-aloud coded as RE and RRE. See above.]</td>
</tr>
</tbody>
</table>

85
<table>
<thead>
<tr>
<th>THEMES</th>
<th>CODES</th>
<th>MEANINGS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification</td>
<td>EE</td>
<td>Justifies by explaining the ideas in essay</td>
<td>In this paragraph I’m talking about hmm, the surrounding that we live in, that is also another factor whereby they excel in their education.</td>
</tr>
<tr>
<td></td>
<td>EI</td>
<td>Justifies by explaining or introducing new ideas.</td>
<td>What I mean here, nowadays, parents are very well-informed and this is different from what they know about it.</td>
</tr>
<tr>
<td></td>
<td>ES</td>
<td>Explains source of ideas/facts</td>
<td>Of course it’s my own idea, I assumed and I came up with it.</td>
</tr>
<tr>
<td></td>
<td>GR</td>
<td>Justifies by explaining or giving reasons for their writing</td>
<td>I am aware of that and I have no idea why I wrote so badly.</td>
</tr>
<tr>
<td>Positive Response</td>
<td>+U</td>
<td>Understands feedback positively</td>
<td>Because, by including hmm, heading and sub-heading, it would make my writing more readable and it will look more systematic.</td>
</tr>
<tr>
<td></td>
<td>ATFB</td>
<td>Accepts/acknowledges teacher feedback</td>
<td>I think I agree with that.</td>
</tr>
<tr>
<td></td>
<td>AA</td>
<td>Shows awareness of audience</td>
<td>Like always, throughout the paper, sir always reminds me to say what my stand is so the reader will not get lost.</td>
</tr>
<tr>
<td></td>
<td>APP</td>
<td>Shows appreciation</td>
<td>Thank you. Your feedback is important for me to improve my writing.</td>
</tr>
<tr>
<td></td>
<td>GI</td>
<td>Gives ideas</td>
<td>Perhaps I can say it is the income of the family?</td>
</tr>
<tr>
<td></td>
<td>IP</td>
<td>Indicates preference</td>
<td>It’s actually good to have these comments, but I prefer it to be in person, rather than just to be in written form, at least I would understand better when someone explains, it to me rather than me reading it.</td>
</tr>
<tr>
<td></td>
<td>MC</td>
<td>Makes corrections or changes</td>
<td>Is it the first reason or a first reason? I would say the first reason. Firstly, students who do not have or lack…</td>
</tr>
<tr>
<td></td>
<td>ML</td>
<td>Makes links/connections to previous knowledge</td>
<td>Yes, I know, I learned that in my Expository writing class.</td>
</tr>
<tr>
<td></td>
<td>PL</td>
<td>Plans for revision</td>
<td>I will do a mind map which is always important for me and easier for me. This is how I am going to do my second draft. When I start this paper, I am going to start with an abstract…</td>
</tr>
<tr>
<td>THEMES</td>
<td>CODES</td>
<td>MEANINGS</td>
<td>EXAMPLES</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
<td>---------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Positive</td>
<td>SC</td>
<td>Suggests making possible changes/corrections</td>
<td>It’s just to sort of you know well I think is like a too big a word perhaps I can use something else.</td>
</tr>
<tr>
<td>Response</td>
<td>SK</td>
<td>Shares knowledge/information</td>
<td>I would like to share something with you that I have just learned today, actually while I was watching ASTRO IQ today and there was this, this is a program about academic writing…</td>
</tr>
<tr>
<td>(contin.)</td>
<td>SR</td>
<td>Does self-reflection</td>
<td>I think this is beneficial. It helps me to think clearly.</td>
</tr>
<tr>
<td></td>
<td>SS</td>
<td>Seeks solutions/answers</td>
<td>Need to talk to him, have to, I will, I will take this with me and ask him how it’s suppose to be done.</td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>Plans /considers more research</td>
<td>I need to have more research on this.</td>
</tr>
<tr>
<td>Negative</td>
<td>U-</td>
<td>Shows lack of understanding of feedback</td>
<td>I really don’t understand why you said it is a good sentence.</td>
</tr>
<tr>
<td>Response</td>
<td>RTFB</td>
<td>Rejects teacher feedback</td>
<td>I’m sorry. I am not going to change it.</td>
</tr>
</tbody>
</table>

The scheme shows the specific codes associated with each of the four themes. It provides a brief description of what each code means and there is an excerpt from the think-alouds to illustrate each of them. Comments to clarify the examples are given in square brackets. The codes and the themes are used to answer research question two.

For each participant, approaches to feedback were identified. These approaches were developed by analyzing the think-aloud protocols where a sequence of more than one theme relating to a particular piece of feedback suggested that multiple mental operations were going on. The endpoint of this process of thinking aloud on a particular piece of feedback was identified as occurring when the participants made a decision about the revision or when they stopped attending to that piece of feedback and began attending to
another feedback item. The approaches, based on how the themes were used and whether their role in revision was actually announced, will be used to answer research question three.

In each case study I will first provide an overview of the participants’ approaches to feedback, with percentages provided for each type of pattern they followed for individual feedback items. Table 1 summarizes the different approaches of all participants. Table 2 illustrates the frequencies and types of patterns, that is, the types of engagement with feedback that each participant adopted when he/she attended to feedback. In addition to the number of feedback items that each participant attended to, Table 2 also displays the total number of feedback items that were given by the lecturer on each of the participants’ drafts.

The total for each pattern was determined by counting responses of each participant to individual feedback items. If a student spoke for three of four lines on one piece of feedback, this was counted as one engagement. For example, Angel responded to twenty-seven individual feedback items. Of these, for seven feedback items, Angel accepted and considered for revision; and for twenty feedback instances, she only indicated her acceptance or acknowledgement of feedback without indicating if these feedback items would be incorporated in her revisions. In this case study this means that Angel used pattern 1 seven times for 26% and pattern 2 twenty times for 74%.

Table 2 also draws attention to the overall number of feedback items that were given on each participant’s draft and the total number of feedback items that were left unattended in relation to the verbal protocols. However, this does not mean that the participants did not
attend to them at all. They could have engaged with these feedback items silently and not have verbalized their thoughts aloud.

Table 2: Patterns of responses to feedback items

<table>
<thead>
<tr>
<th>TYPES OF ENGAGEMENT WITH FEEDBACK</th>
<th>ANGEL</th>
<th>BEN</th>
<th>CINDY</th>
<th>KELLY</th>
<th>ROXY</th>
<th>LENA</th>
<th>SHAM</th>
<th>JEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pattern 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepts and considers feedback in revision</td>
<td>26%</td>
<td>9%</td>
<td>19%</td>
<td>35%</td>
<td>80%</td>
<td>33%</td>
<td>81%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>n=7</td>
<td>n=6</td>
<td>n=4</td>
<td>n=13</td>
<td>n=24</td>
<td>n=6</td>
<td>n=35</td>
<td>n=6</td>
</tr>
<tr>
<td><strong>Pattern 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acknowledges/accepts feedback</td>
<td>74%</td>
<td>81%</td>
<td>33%</td>
<td>46%</td>
<td>61%</td>
<td>19%</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=20</td>
<td>n=25</td>
<td>n=7</td>
<td>n=17</td>
<td>n=11</td>
<td>n=8</td>
<td>n=14</td>
<td></td>
</tr>
<tr>
<td><strong>Pattern 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejects feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3%</td>
<td></td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=1</td>
<td></td>
<td>n=1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pattern 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No indication of acceptance or rejection of feedback</td>
<td>48%</td>
<td></td>
<td>19%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=10</td>
<td></td>
<td>n=7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pattern 5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attention to positive comments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n=5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of feedback items</td>
<td>46</td>
<td>54</td>
<td>38</td>
<td>46</td>
<td>51</td>
<td>32</td>
<td>48</td>
<td>28</td>
</tr>
<tr>
<td>Total number of feedback items not attended to</td>
<td>19</td>
<td>23</td>
<td>17</td>
<td>09</td>
<td>21</td>
<td>14</td>
<td>05</td>
<td>08</td>
</tr>
</tbody>
</table>
Although this is not a quantitative study, a numerical indication of the different patterns used by the participants is provided as an overview. Percentages are calculated based on the frequency with which each participant attended to teacher feedback for each pattern they adopted. Frequency is based on how many times each participant reads or refers to a piece of feedback which is inferred from the verbalizations.

I will provide examples from the think-aloud processes each participant uses by briefly indicating how each participant began the think-aloud, that is, their initial comments upon seeing the feedback. I will then focus on the different patterns. The examination of each pattern will begin with a comparison of a part of the original and revised essay, followed by an extended explanation of the processes involved in thinking through the feedback provided. The example described in each of the case studies reveals the thought processes of the participants as they attended to feedback and shaped the organization and restructuring of their second drafts. A diagram illustrates each pattern. I will then briefly comment on the revised essay. Finally I will present the stated preferences of each of the participants to the teacher feedback they received which were collected via a survey questionnaire. Table 3 summarizes all of the participants’ stated preferences regarding both global feedback and comprehensive feedback as reported in the questionnaire. It also gives a quick insight into students’ preferences and their reactions to the teacher feedback and this is described in regard to each of the case studies.

Table 3: Students’ stated preferences for teacher feedback

<table>
<thead>
<tr>
<th>NAMES</th>
<th>ANGEL</th>
<th>BEN</th>
<th>CINDY</th>
<th>KELLY</th>
<th>ROXY</th>
<th>LENA</th>
<th>SHAM</th>
<th>JEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global feedback</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Comprehensive feedback</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

90
4.2 Case study one: Angel

4.2.1 Overview

Angel has two ways of dealing with teacher feedback. Firstly, Angel uses Pattern 1 to respond to teacher feedback indicating that 26% of the time she attended to feedback where she contemplates and considers teacher feedback to be significant for her revision. Secondly, although there is evidence that Angel acknowledges and attends to the feedback given, 74% of the time she uses Pattern 2 in which she does not indicate if the feedback given would be incorporated into her revision.

4.2.2 Angel’s think-alouds

When Angel first receives her lecturer’s feedback on her first draft, she seems to be rather apprehensive about all the written comments. This is evident when she says *but I do not know why every time when I get his feedback I get so nervous* (L.7). Angel then explores further into her thoughts to come up with plausible explanations for her anxiety suggesting that probably it is because of one of two reasons: *I am afraid that it is going to be full of criticism or am I afraid to realize that I have not written well* (L.9). Angel then wonders why she feels nervous because she has received similar feedback in the past, is quite familiar with the way the lecturer gives comments and knows how to respond to feedback: *I do not know why I feel so nervous and this is not the first time I am doing it, I have done it so many times* (L.11).

There are clear indications from Angel’s protocols and revised draft that she did her revisions taking the given feedback into consideration. One example of the seven times that Angel used this approach when attending to teacher feedback is given below. In the following think-aloud process, Angel first reads the teacher’s feedback aloud (RFB): *Provide a link into your argument. This paper has put forth an argument that...*(L.35) and
then reviews part of the same feedback (RRFB) by rereading the example the teacher had provided - *This paper has put forth an argument that...* (L.36).

Reviewing the example in the feedback appears to aid Angel in her understanding of how to proceed further with her writing. As a result of the feedback, she plans (PL) to provide a link, an intention evident in the protocol when she says, *I think, for this part of it I am just going to do what I did in my previous writing where I did signpost of what I am going to do* (L.37). There is the suggestion that she is familiar with the feedback, in that she can name the suggested link as a ‘signpost’. This will be discussed in more detail below. This then, leads her to plan what she aims to do in view of the feedback given.

*Probably I could just put an abstract* (L.38)

*I think I will do that and talk about what I am going to talk first* (L.39)

*so in this particular part, this section, I am going to talk about family upbringing as well the effectiveness of education programme that I believe that they need to work hand-in-hand in a child’s development* (L.40)

*and I am going to say in the first part of the paper, I am going to talk about family upbringing and education system, which means my introduction is family upbringing and education where I will give a brief explanation* (L.41)

This extract shows the steps Angel plans to take, along with the ideas she plans to explore. She notes that in the ‘body’ of her second draft, she will relate the two topics of family upbringing and education system. She then indicates this is the first section, and therefore, she needs to raise the more general topic of upbringing and education programs in her introduction. At this point she describes how she will signpost by saying *I will write probably three main factors that I need to discuss thoroughly* (L.42). This extract shows
how she is going to link her ideas from one paragraph to another and is apparent in the protocol above (L.38-42).

Central to this extract is how Angel’s think-aloud allows her to follow through her planning by making links and connections (ML) to past experiences and knowledge as a reminder to herself to help her organize her essay coherently. She talks about signposting, explicitly providing a more technical term for the word “link” in the teacher’s feedback. (Discussions with the teacher indicate that signposting had been discussed in class about a month prior to the writing of this essay.) She continues, *I have to remember signposting is very, very important* (L.49), indicating that linking paragraphs in her text is vital. This then prompts her to refer to her essay (REFE) to identify the three main ideas that support her stand in her writing: *Ok, three main factors. What are those factors?* (L.50).

Reviewing the main ideas that were already written in her first draft seems to have helped Angel plan and reorganize the structure of her essay in a more systematic way. This is apparent in the following think-aloud: *All right I am going to look at family upbringing, family background, social relationship and education system* (L.51), where she plans and revises how she will organize her argument by naming the three factors mentioned in L.42.

These plans are shown in revisions to her second draft. In the original draft, Angel had argued each factor separately. There was no clear link between the three factors to illustrate how these three factors in unison contributed to the strength of her argument. In Angel’s revised draft however, there is clear signposting from one argument to another which leads to a logical development of her text. Angel’s think-aloud processes are illustrated in Figure 1.
Angel begins by reading the feedback (RFB) which leads her to reread the same feedback. Rereading the feedback (RRFB) guides Angel to plan (PL) her writing for her second draft and to draw on previous knowledge by making links (ML) to her previous learning. This prompts Angel to refer to a section of her essay which leads her to do more planning.

This process, where Angel constantly moves from feedback to her text, shows that feedback may have acted as an intervention platform. Feedback given on Angel’s first draft operated as a catalyst for the revisions and changes that were made in her second draft. This can be seen in the following extract. In the original text Angel wrote, “My stand is that the success of the student’s life in his or her education is because of the family upbringing”. However, in the second draft she wrote, “In this paper, I put forth an argument that the success of the student’s life in their education is because of the family upbringing as well as the quality and effectiveness of the education program”. The underlined part of the sentence indicates the language that Angel has appropriated from her lecturer’s feedback and used to signpost her text. However, it should be noted that Angel did not simply mindlessly copy her lecturer’s words when she revised. Her think-aloud
protocols (L.38-L.42) on p. 9 reveal Angel’s repeated engagement with the notion of signposting which she incorporated in her revised draft. Thus, the extract from the revised text above, shows a change in Angel’s writing because of cognitive processes resulting from her engagement with feedback, processes which helped her to plan and make meaningful changes.

In some instances, although Angel seems to have attended to her feedback and acknowledged the feedback, there is no indication of revision via her protocols. However, revision is evident in her revised draft. This shows that the feedback did have an effect even though there was no explicit reference to it in the protocol. It is not clear if this means she did not report her revision plans, had not formulated them or if there is some other explanation. Of course, on the other hand, it may be that she attended to the feedback during revision. These processes are captured in Figure 2.

(REFFB-refers to feedback; REFE- refers to essay; +U- shows positive understanding; SR-self-reflects; GR-gives reasons)

**Figure 2: Angel's thought processes (Pattern 2)**

One extended example of the second approach that Angel adopted is depicted in the figure above. Angel first reviews the feedback (REFFB) that indicates just a grammatical error. Angel berates herself for a simple mistake, a behavior which shows that she is aware of the
nature of the error when she says, *How can I make such grammar mistake?* (L.93). Her understanding of the grammatical error is further revealed when she works out the correction to the error, and at the same time finds an explanation for the indicated error that culminates in her understanding (+U) of the feedback with the following protocol: *That for people? That is supposed to be used for things, not people* (L.94).

It is interesting to note how a mere indication of an error committed and the resulting understanding of the error promotes self-reflection (SR) in Angel; this is captured in the following rather dramatic protocols: *oh my god, silly, goodness, should kill myself alive* (L.95) suggesting self-deprecation on Angel’s part. Perhaps Angel feels that she could have avoided mere mechanical errors had she been more attentive while writing. Her disappointment in the occurrence of grammatical errors in her essay is further evident when she refers to her essay (REFE) and criticizes herself in this manner: *Such grammar mistakes!* (L.96).

Angel continues reviewing the same feedback (REFFB) and finds her own explanation for the punctuation marks produced by the lecturer when she says, *That explains why sir has dished out question marks and exclamation marks all over my paper* (L.97). To explain her failure to edit her work, Angel gives a possible reason (GR) that could have led her to overlook the grammatical errors in her essay:

*Gosh sir, I really didn’t realize* (L.99)
*Do not know whether I am typing faster or just did it unconsciously* (L.100)
*I do not know but I am so ashamed of myself for making such grammar mistakes* (L.101).
However, even though Angel has gone through the process of attending to feedback, there is no error correction in her protocols or any indication that error correction was going to be done when she revised her draft. But, it is clear in her revised draft that this feedback was taken into consideration in her revision. In her original text, Angel wrote: “Parents that earn well are highly educated are able to support their children in their education…” Angel revised this sentence in this way: “Naturally, parents who are highly educated earn well and are able to support their children’s education”. Angel has changed the whole sentence as well as keeping in mind the error indication that was given in the feedback. The word underlined in the first sentence is an indication of grammatical error, but when Angel revised, she not only corrected the error which had been pointed out, she also made changes to the whole sentence making further corrections and clarifying the meaning for the reader. Perhaps noticing the error prompted her to make the necessary changes in her revision even though they are not revealed in her think-aloud protocols.

When Angel moved recursively from feedback to her essay, her protocols (L.93-94, p.92) indicate that she understood the purpose of the error indication in her original text. This understanding led her to find the solution to fix the error, which then resulted in a change in her revised draft.

It is also evident that the lecturer’s comments on Angel’s first draft prompted Angel to think in depth about her writing. Her response towards the feedback as a whole indicates that she is taking teacher feedback into consideration when she voices aloud very explicitly what she intends to do in her second draft and she outlines her plans globally. Perhaps her past writing experiences helped her to plan in detail for her revision, as she now included a mind map as part of her essay planning. Her planning for revision included an abstract, followed by an introduction, where she intended to state her stand for the argument and
supporting points for her argument, and a conclusion. Angel’s uptake of feedback and her overall planning for her revision is evident in her revised draft.

4.2.3 Angels’ preferences for and reactions towards teacher feedback

In the questionnaire survey, Angel indicated great satisfaction with the feedback that she received, and that she read and gave thoughtful attention to all the feedback that was given on her writing. Although Angel indicated her preferences for comprehensive feedback on both global and surface level features, she paid little attention to the feedback on surface features such as spelling and punctuation, instead valuing the feedback on content and organization which she expressed were most helpful in her revision. Angel’s responses in the questionnaire survey indicated that she met with the lecturer to clarify some of the feedback that she was not clear about, and revised her essay using the feedback. In addition, she indicated that suggestions on improving her writing and encouragement from her feedback-giver are incentives for her to further improve and develop her writing.

4.3 Case study two: Ben

4.3.1 Overview

Ben deals with teacher feedback in two different ways. He uses Pattern 1 19% of the time where he indicates his acceptance of feedback and that it will be incorporated in his revision. He tries to understand the purpose of the feedback and find an explanation for it. He then finds a solution to the problem and attempts changes verbally before moving on to the next feedback item. Secondly, Ben does not always come up with changes immediately after engaging with feedback. On examining Ben’s attention to feedback, it is apparent that 81% of the time he uses Pattern 2. Ben reasons out the objective of the feedback given, and always finds an explanation for the feedback given before engaging with the next feedback item. This differs from the first pattern in that, although Ben acknowledges the feedback
given, he does not indicate what changes or revisions might be carried out in his revised text.

4.3.2 Ben’s think-alouds

Ben’s first reaction when he received his feedback is appreciation (APP) of his lecturer for taking time to give comments on his writing; this is clear in the following protocol: *I just would really like to thank you for all those comments* (L.7). And, in the same instance, he passes an evaluative judgment on the teacher (EJT) with these words: *you took the trouble to write* (L.8). Ben shows his appreciation further through his self-reflection (SR): *I think not only that it acts as a feedback to me, but in the long run actually it will also make me to write better and be a better writer* (L.9). Ben’s self-reflection indicates his positive reception of the teacher feedback as a way to improve his writing skills.

Ben’s think-aloud protocols indicate that when Ben engages with feedback, he makes an attempt to first understand the objective of the feedback. He follows this through by seeking an explanation and then finding a solution to fix the problem. This is signified through his verbalizing changes that he plans to make in his revised draft. I will now provide one extended example of the six instances where Ben used this approach. In Ben’s original essay he wrote his introductory sentence in this way: *If education is a life-long process, then where does the journey actually start?* However, with feedback acting as input for revision, Ben’s introductory line in his revised draft reads this way: *I agree to the notion that success in education is influenced more by the student’s life and training as a child than by the quality and effectiveness of the educational program,* thus clearly informing the reader on the type of argument that is to be expected in his essay. How Ben arrived at this solution is captured by his think-aloud processes that are represented in Figure 3.
In the above think-aloud process, Ben first reads aloud the teacher’s feedback (RFB): *Start by stating your stand, and then preview your main points* (L. 25). Ben then reads the introductory sentence of his essay (RE) on which the feedback was focused, familiarizing himself with what he originally wrote. *If education is a life-long process then where does the journey start?* (L. 29). Revisiting his first draft as a result of the feedback prompts Ben to take another look at his introduction and come up with an alternative approach to his introduction. The following excerpt shows that Ben understood (+U) the purpose of the feedback and also what needs to be done: *So instead of writing that, I should actually start off by saying my stand here actually* (L. 31). Ben then tries to find a solution to the problem noted in the feedback, to revise in accordance with the feedback, and with his new idea makes changes (MC) to his introduction in this manner: *I support or I agree that the student’s life and training as a child would create a better quality and effective education to the child itself* (L. 32-4), which appears as the revised version in his second draft. Ben then reviews part of the feedback (REFFB) by saying *so I should actually state my stand here* (L. 35) implying his understanding (+U) of the purpose of the feedback and the changes that were necessary to make as suggested by the teacher feedback.
This course of action by Ben, moving from feedback to text, laid the groundwork for Ben’s revision in his second draft. Teacher intervention in the form of feedback and Ben’s engagement with that feedback produced changes and developed his writing as is evident in his revised draft.

The second way in which Ben approaches teacher feedback is to seek an explanation for the feedback while identifying its purpose. However, unlike the previous approach where Ben clearly attempts to make changes verbally, in this approach there is no indication of Ben attempting any changes or revision that might be considered for inclusion in his second draft. In his initial draft for example, Ben wrote: *An area that is increasingly recognized as an essential part of getting children to do well in school is the introduction of early literacy.* In his revised draft Ben wrote: *A second factor that is increasingly recognized as an essential part of getting children to do well in their school education is to introduce them to early literacy.* Although Ben did not explicitly indicate in his think-aloud any changes or his intention to use feedback to make revisions, nevertheless, it is evident in Ben’s revised second draft that his engagement with teacher feedback did indeed result in changes in his writing. These processes are illustrated in Figure 4.
In this extended example of the process he was involved in, Ben reads aloud the teacher feedback (RFB): *A second factor that... this is a sign post* (L.201). In this instance the lecturer supplied the signposting phrase “*A second factor that*” as an example of a signpost that could be used at that point in the essay. Ben used the signpost given by his lecturer in his revised draft to signpost his paragraph. Reading teacher feedback seems to have prompted Ben to refer to the particular section of his essay (REFE) for which the feedback was intended, so as to acquaint himself with his original writing and at the same time to explain to himself what the content of his argument is all about: *Here I am talking about another factor that is early literacy* (L.202). While reviewing his essay he makes a connection with previous feedback by referring to it (REFFB) in this way: *But before this you also commented that I should be using signpost* (L.203). The indication is that Ben understands and is familiar with the term “signpost”; this matter will be discussed below.
Ben then proceeds with reading his essay (RE): *Another area that is increasingly recognized as an essential part of getting children to do well in school is the introduction of early literacy* (L.205-207). Reading the essay signifies to Ben the purpose of the feedback; he understands (+U) its significance and readily accepts the feedback (ATFB). This is captured in the following excerpt: *but instead of that I should have used signpost by saying the second factor that is increasingly recognized* (L.208). Ben’s acceptance of the feedback implies that he understood (+U) the importance of the teacher’s feedback on signposting, and is evident when he uses his own words to define why signposting is necessary in this way: *That would have been better whereby I can see the cohesiveness and coherence in writing whereby the flow will be seen* (L.210-11).

Even though Ben did not indicate that revisions based on the teacher’s feedback were going to be made in his second draft, revisions are in fact evident in Ben’s second draft. In his original draft, Ben wrote: *An area that is increasingly recognized as an essential part of getting children to do well in school is the introduction of early literacy*. There was no indication of any signposts to alert the reader to what can be expected to unfold in the text. In the revised version, on the other hand, changes were obvious. Ben wrote: *A second factor that is increasingly recognized as an essential part of getting children to do well in their school education is to introduce them to early literacy*. In his revision Ben has signposted his writing using his lecturer’s words, indicating that he has taken teacher feedback into consideration.

### 4.3.3 Ben’ preferences for and reactions towards teacher feedback

Ben reacted positively towards his lecturer’s feedback. He indicated via the questionnaire survey that he was very satisfied with the feedback given, and that he read over all the feedback giving thoughtful attention to all the corrections that his lecturer gave him. In the
questionnaire Ben also indicated that he prefers comprehensive feedback covering both
global and surface level issues, that he gave careful attention to both content and form
feedback, and found comments on both types of feedback very useful. Although Ben
signifies in his questionnaire responses that he would meet the lecturer directly if he had
any doubts about the feedback, this did not happen; he merely made mental notes and took
some points that he thought were useful when he received his feedback. It is also clear
through the questionnaire that Ben is very receptive towards receiving feedback on his
revised draft as a means by which to further improve his writing.

### 4.4 Case study three: Cindy

#### 4.4.1 Overview

Cindy approaches teacher feedback in three different ways. Firstly, 19% of the time Cindy
uses Pattern 1 when she attends to feedback. She accepts and engages with feedback in
depth, and shows or says the type of changes that she will make or consider making in her
revised draft. The second technique that Cindy adopts is Pattern 2 which makes up 33% of
her total attendance to feedback. In this pattern, although Cindy indicates that she engages
and accepts the feedback, she does not provide any information about the changes she
intends to make or incorporate into her revised draft. Unlike the first two patterns, the final
pattern which Cindy adopts is Pattern 4 that makes up 48% of her total attendance to
teacher feedback. In this pattern, although Cindy engages with feedback, she does not
indicate her acceptance or rejection of teacher feedback. Cindy’s revised draft shows
evidence of her incorporation of teacher feedback from all three patterns.

#### 4.4.2 Cindy’s think-aloud processes

When Cindy first received her feedback, she seems to have passed an evaluative judgment
(EJT) on her lecturer: *oh, Doctor, your handwriting is so neat, I can see that you really*
spent a lot time correcting and writing comments (L.4-6) and has shown appreciation (APP) for her lecturer’s positive comment in this manner: *the word that attracts me is that word good. Thank you so much for giving me the first dose of motivation* (L.10-11).

In the first pattern, Cindy accepts the teacher feedback and indicates the changes based on the feedback that she will incorporate in her revised draft. The following extracts bring out the differences in her writing before teacher feedback and after teacher feedback.

In her original essay Cindy wrote: *In conclusion, although I agree that success in education is influenced more by the students’ life and training as a child … I still hold on to the opinion that … student’s life and training as a child and quality and effectiveness of the educational program supplement and complement each other in the endeavor to attain success in education.* But with the intervention of teacher feedback, Cindy then concluded her revised draft in this way: *In this paper I support the view that success in education is influenced more by the student’s life and training as a child than by the quality and effectiveness of the educational programme.*

In the following think-aloud process, for example, Cindy reads aloud the teacher’s feedback (RFB) which calls for her to take a stand in her argument: *be firm with what you have decided* (L. 223). Cindy’s response seems to suggest that she understands (+U) the teacher feedback since she supplies specific ideas in approaching the feedback; this is evident in the following extract: *here maybe I’ll have to ask Dr. Meaning to say, if I agree, can I mention that educational program, the quality and effectiveness of the educational program also plays an important role in the success and education of the kid* (L.224-227). This then prompts her to read her essay (RE), *In conclusion, although generally I agree that success in education is…* (L.228-229). Reading a section of the essay prompts her to
make changes (MC) to her original essay, changes which are clear in the following extracts: *Maybe I should write, in conclusion, although I agree that success in education is influenced more by the student’s life and training as a child than by the quality and effectiveness of the educational programme* (L.231-234). This extract also shows Cindy’s acceptance of teacher feedback (ATF). Thus, the feedback helped Cindy make a change as well as helped her understand why she needed to make the change. These thought processes of Cindy’s are modeled in Figure 5.

![Figure 5: Cindy's thought processes (Pattern 1)](image)

(RFB-reads feedback; +U-shows positive understanding; RE-reads essay; MC-makes changes; ATFB-accepts teacher feedback)

**Figure 5: Cindy's thought processes (Pattern 1)**

In the above diagram, it can be seen that Cindy begins by reading the feedback (RFB) which appears to lead to understanding (+U) the aim of the feedback. This then prompts her to read a section of her essay (RE) for which the feedback was intended. Reading the essay appears to have stimulated Cindy in coming up with new ideas for changes to her essay, and also her acceptance of teacher feedback (ATFB).

The concern that was addressed in teacher feedback and mentioned in the above think-aloud was for Cindy to take on a firm stand in her decision (L.223). With teacher feedback as an intervening agent, Cindy’s revised conclusion shows her stand; in her conclusion she explicitly states the factor that contributes towards the success in education which reads as
follows: In this paper I support the view that success in education is influenced more by the student's life and training as a child than by the quality and effectiveness of the educational programme.

The second way in which Cindy approaches teacher feedback involves Cindy accepting teacher feedback but not incorporating it at all in her revised draft. However, Cindy may have made changes or corrections to her first draft in her mind which she may not have voiced out loud. Cindy’s responses that make up this approach are shown in Figure 6 below.

![Diagram](image)

(RFB- reads feedback; RE-reads essay; RRF-rereads feedback; RRE-rereads essay; REFFB-refers to feedback; GR-gives reason; ATFB-accepts teacher feedback)

**Figure 6: Cindy's thought processes (Pattern 2)**

In an extended example of this approach, Cindy begins by reading part of her lecturer’s feedback (RFB). *What is your justification for this claim? (L.176).* Wondering what she
wrote to warrant that particular question from her lecturer she asks: what did I write? (L.177). She then reads aloud that particular section of her essay (RE): For instance, there are many wealthy countries in the world, for example, Brunei. Unfortunately, these countries do not seem to be very progressive and advance scientifically. (L.178-179). Cindy then she rereads the feedback (RRFB): What is your justification for this claim? (L.180). Perhaps to familiarize herself with what she originally wrote, Cindy refers back to her essay (RRE): I still agree that a good educational program will enhance the student’s success in education. For instance, there are many wealthy countries in the world, for example, Brunei. Unfortunately, these countries do not seem to be very progressive and advance scientifically (L.181-185). Following the review of her essay, Cindy continued reading the rest of the feedback (RFB). This is a big claim. You must justify with some evidence (L.186). Reading the feedback appears to make her aware of what she failed to do in her original draft, so she justifies by giving reasons (GR) in this manner: Actually, when I was writing, I know that I had to really do some research. But really as I say again and again that it is not a lame excuse. I was really running short of time and I couldn’t do it (L.188-191). She shows her understanding (+U) and acceptance of the feedback (ATFB) in the following extract: Yes, I know, ‘these countries’ is very generalized. It’s over generalized. It is not specific at all and it has no literature to support it, to substantiate what I wrote (L.193-196).

It seems as if the teacher feedback was useful to Cindy for it helped her to realize that she made unsubstantiated claims and over generalized what she had to say. Teacher feedback also aided Cindy to become conscious of what was needed to be done to rectify the problem. However one needs be aware that, although Cindy understood and accepted her lecturer’s feedback, she did not at anytime verbalize whether or not the feedback would be incorporated in her revised essay. Perhaps Cindy was thinking about changes that she
would like to include in her revision but failed to voice them aloud. Nevertheless, Cindy’s revised essay shows evidence that she has taken the teacher feedback into consideration and made changes based on the teacher feedback. The changes are evident when compared in the following extracts.

Cindy used a broad generalization in her original essay when she wrote: *Unfortunately, these countries do not seem to be very progressive and advance scientifically. … their governments do not make an effort … introducing good educational programs to the students.* Cindy’s revised draft, on the other hand, shows changes to what she wrote earlier. Perhaps teacher feedback helped her realize the overgeneralization, a possibility which is evident in her second draft. She has dropped her original line of argument and adopted a new argument about technology in the advancement of education. The following extract reflects part of her new argument: *Conversely, many recent studies have attempted to prove the advantages and necessity of children’s exposure to computer technology from an early age. This is … technologies are integral to everything we do.*

Yet another way in which Cindy approached teacher feedback was to attend to her lecturer’s feedback but without verbalizing her acceptance or rejection of the feedback. Cindy first reads the teacher feedback (RFB): *What is the gist of this quote? There is no necessity for such a long quote* (L.12). Reading the feedback aloud helped Cindy recollect (ML) what was said in her class before this writing assignment, as can be seen when she says: *Anyway doctor, I remember you told us about this in class the other day* (L.14). Here Cindy is referring to her writing class where the issue of quoting appropriately was raised in the class. Instead of indicating if she accepts or rejects the feedback given to her, she shows her appreciation (APP) for the feedback and gives a reason (GR) for her lengthy quote; this is clear in the following excerpt: *Thank you very much* (L.16). *Well nobody*
taught me before this and I thought that this is the way (L. 17). Although Cindy’s verbalizations do not explicitly indicate her acceptance or rejection of the feedback, the thought processes that Cindy engaged in imply her acceptance of her lecturer’s feedback. These thought processes are represented in Figure 7.

(RFB-reads feedback; ML-makes links or connections; APP-shows appreciation; GR-gives reason)

**Figure 7: Cindy’s thought processes (Pattern 4)**

Cindy reads the feedback (RFB) first and makes connections (ML) to what she has been taught in her previous classes. In these thought processes, Cindy does not indicate if she accepts or rejects teacher feedback, but instead moves on to show her appreciation (APP) to the lecturer for the feedback, and justifies her writing by giving reason (GR) for writing a lengthy quote in her essay. However, it needs to be pointed out that even though there is no indication in Cindy’s think-aloud processes whether or not feedback was accepted or rejected, her revised draft shows evidence of feedback being accepted and considered.

In her original draft, Cindy began her essay with a long quote: “No discussion of compassionate parenting would be complete without discussing the need for improved parenting ... There comes a time when you’ve got to put away the games, turn off television, shut off the iPod and get your kids down to work.” In her revised essay however, Cindy has discarded the entire quote and has written her introductory paragraph
in this way: In this paper I am going to take the stand that … put forward three arguments clearly indicating that feedback intervention resulted in Cindy’s revision.

However, it needs to be pointed out that Cindy did not attend to all the feedback given. It is evident through her verbal protocols that Cindy only attended to content-focused feedback and not form-focused feedback. Two things stand out in Cindy’s revised draft. The first is that it is very clear that Cindy attended to a major portion of the feedback given, took aboard what was relevant and did a major revamp of her essay in terms of organization, content and layout of her essay. Secondly, it is also clear that she has discarded a number of her original ideas and added in new ideas to her content in her revised draft.

4.4.3 Cindy’s preferences for and reactions towards teacher feedback

In the questionnaire survey, Cindy indicated that she was very satisfied with her lecturer’s feedback and that she had read over all the feedback. Although Cindy indicated her preference for global feedback only, there is nonetheless indication in the questionnaire that Cindy gave thoughtful attention to most of her lecturer’s corrections. It is evident from the questionnaire that Cindy paid equal attention to features regarding content as well as form. This, however, contradicts Cindy’s verbal protocols which highlight only her engagement with content-focused feedback. Even though Cindy did not verbalize her giving attention to form feedback, she could have attended to feedback on form mentally (this possibly suggests she did not verbalize all her thoughts), noted the issues that were brought to light and then taken them into consideration when she revised her essay. It is also possible she did not consider form until she actually revised the draft. In the questionnaire Cindy stated that she found her lecturer’s feedback very useful, especially suggestions and comments that were written to help her improve her writing. She indicated that when she went through her lecturer’s feedback, she just made mental notes and revised
her essay based on the feedback. She also pointed out that she would approach her lecturer
directly if the need arose and that she would prefer to receive more guidance on how to
write well.

4.5 Case study four: Kelly

4.5.1 Overview
Kelly tackles teacher feedback in three different ways. Firstly, when she attends to teacher
feedback, 35% of the time she uses Pattern 1 which shows her acceptance of feedback and
makes changes or corrections verbally which she then takes into consideration when she
revises her first draft. Secondly, 46% of Kelly’s attendance to feedback is based on Pattern
2 which signifies her acceptance of the feedback but without any indication that the
feedback will be taken into account when she revises her draft. Finally, 19% of Kelly uses
Pattern 4 that indicates which she acknowledges and attends to teacher feedback only,
without any indication of her acceptance or rejection of teacher feedback.

4.5.2 Kelly’s think-aloud processes
Kelly’s first reaction seems to have been excitement when she first received her feedback.
Although it appeared that she had some sort of idea of what to expect, there still seemed to
be an element of anxiousness in her, probably because she did not know the exact content
or perhaps it was due to the prospect of thinking aloud. This is evident in her own words: I
am excited. I don’t know what to expect from this think aloud essay but I think I know I
need to find articles and references (L.5-6).

In the first approach Kelly shows her acceptance of teacher feedback. At the same time she
reveals the type of changes that she will make or consider making in her revised draft.
Kelly’s thought processes also revealed that when she attends to feedback, she attempts to
identify the aim of the feedback and at the same time work out a solution she thinks addresses the problem highlighted in the feedback. Figure 8 summarizes Kelly’s first approach to her lecturer’s feedback.

Kelly first reads aloud a part of the teacher feedback (RFB): *Provide a link* (L.37). Failing to understand what the feedback wanted of her, Kelly wondered aloud about what she had written, which in turn prodded her to refer to her essay (REFE) and read from her essay: *Parents involvement in children’s education* (L. 38). Reading aloud part of her essay seems to have enlightened Kelly and she understood (+U) the aim of the feedback and what needed to be done to address the feedback, and this Kelly voices aloud in the following manner: *That means, instead of jumping straight into the subject matter, I could just like remind here or give a clue as to what comes next* (L.39). This understanding led her to accept the first part of the teacher feedback (ATFB).
Having found a way to address this shortcoming in her essay, Kelly proceeded with reading the next half of the feedback (RFB): *Remind your reader about your stand* (L.40). Reading the feedback aloud helped Kelly to find a solution to this and remind her reader about her stand which is evident in the following excerpt: *So that means, I must tell what I said earlier, that school can only set a table and I should say how the previous point links to the current point* (L.41). Kelly’s ability to address her lecturer’s feedback clearly shows that Kelly understood (+U) the objective of the feedback. Her understanding led her to accept the teacher feedback (ATFB), something which is evident in the excerpt where she says, *right, will do exactly that in my next draft* (L.43).

Kelly’s engagement with teacher feedback resulted in her acceptance of the feedback, which she then implemented in her revised draft. In her original draft Kelly seems to have compartmentalized her argument without linking one paragraph to another. For instance, in one of her preceding paragraphs, she concluded the paragraph in this way: *Thus saying that teachers are accountable for student achievement is unreasonable as saying a doctor is responsible for the sickness that the patient suffers.* In the following paragraph, Kelly began her introductory sentence in this way: *Educational institutions also cannot teach all or everything to a child; it is the duty of the parent to be involved in the child’s life of education.* Kelly seems to have failed to link the earlier paragraph with the next one.

However, as a result of teacher feedback, in her revised draft Kelly appears to have understood the teacher feedback and has linked the two paragraphs, which is evident in the following extracts. In the revised draft Kelly concluded her previously quoted paragraph in this way: *… the socioeconomic status of a school had an effect on academic achievement that was comparable to effects that are associated with the socioeconomic background of a family.* She then began a new paragraph by linking the paragraphs in this manner:
However, factors that contributed to these effects need to be considered... Her revised writing shows continuity from the previous paragraph to the subsequent paragraph through the connecting word however, and the use of these and repetition of the word effects.

The second way in which Kelly approaches her lecturer’s feedback differs slightly from the first. Although there is confirmation that Kelly does acknowledge and accept teacher feedback, she gives no indication that the feedback given will be taken into consideration or that she intends to make any changes when she does her revision.

When Kelly reads the feedback aloud (RFB): *What you have written is not about motivation – check* (L.117), she seems to be aware that the objective of the feedback is to ensure whether her content is about motivation or something else. She shows her understanding (+U) of the intention of the feedback as well as her acceptance of it (ATFB) in the following extract: *Oh yah, I need to check my heading and my subheading because my content doesn’t reflect my heading* (L. 118). Her understanding appears to be further enhanced when she refers to her essay (REFE): *I said parents motivating their child, but my content seems like it’s not about motivation* (L.120.) Kelly seems to have to have sought an explanation for the feedback. This culminated in her total acceptance of her lecturer’s feedback (ATFB) which is uttered in the following manner: *Ok I need to check* (L.122). These thought processes of Kelly’s are captured in Figure 9 on the next page.
Kelly first read aloud her lecturer’s feedback (RFB) which resulted in her understanding (+U) of the intention of the feedback and at the same time her acceptance of it (ATFB). This prompted her to refer to her essay (REFE) which guided her to understand (+U) and accept the teacher feedback (ATFB). It must be noted here that, although Kelly accepts her lecturer’s feedback, she does not indicate that she will incorporate the feedback in her revised draft. However, there is sufficient evidence in her revised draft to accept that she did consider the teacher feedback and revised her draft accordingly.

In her original essay there was a mismatch between the subheading and the contents of the paragraph that followed. The subheading was: *Parent motivating their child*. Part of the content was: *Parents know their child best, thus active parent involvement in their child’s education is beneficial* … which did not match the subheading. The following extract from her revised draft shows evidence that Kelly did consider the teacher feedback and revised her draft based on the feedback that was given. The subheading was: *Parents’ psychological state* and a part the content she wrote was: *Parents’ psychological state plays an important role in their involvement in school* which matches the subheading, as is
indicated by repetition of the phrase *psychological state*. Although Kelly’s thought processes as she responded to feedback did not show if feedback was going to be incorporated in her revision, the extract above signifies that teacher feedback did have an effect on Kelly’s revision because she did incorporate it when she revised.

Unlike her previous approaches, the third way in which Kelly approached feedback signifies that she acknowledges teacher feedback but does not indicate her acceptance or rejection of it in her think-aloud protocols. In her original draft, Kelly wrote: ... *direct parent involvement in their child’s education is the most powerful approach in encouraging achievement benefits*. She did not elaborate on this statement which led the teacher to comment that Kelly needed to elaborate this statement. In her revised essay there is evidence that Kelly seems to have taken teacher feedback into consideration even though her think-aloud did not show evidence of her acceptance of teacher feedback. The following extract is part of Kelly’s revised essay where she elaborates on her topic sentence, an indication that teacher feedback had an effect on her revision. She wrote: *Teachers are encouraging parents to be involved in their child’s education by educating them on how to assist and interact with their child’s academic activities at home*. She elaborated this sentence further in this way: *Nowadays parents are willing to participate in school activities and respond to information by providing assistance to their children*, indicating the effect of feedback intervention on revision.

In this approach Kelly begins by reading the feedback (RFB) first: *Elaborate (L.159)* and shows that she understood (+U) the meaning of the feedback when she explains the given feedback in this way: *That means elaborate on the statement (L. 160)*. This then led her to read part of her essay, *encouraging the achievement benefits (L.161)* where she comments and refers back to the feedback given (REFFB) in this manner: *He also underlined*
achievement benefits (L.162) and carries on reading the feedback (RFB), do you mean exam results? (L.163.) This query by the lecturer led Kelly to think and self-reflect (SR) on the feedback, a process which is reflected here when she says, yes, I think exam results (L.164). Kelly also shows that she takes the feedback given rather seriously when she reviews yet again the first feedback (REFFB) in this way: He said I should elaborate (L.165). These thought processes are illustrated in the figure below.

![Figure 10: Kelly's thought processes (Pattern 4)](image)

(RFB- reads feedback; +U- shows positive understanding; RE- reads essay; REFFB-refers to feedback; SR- self-reflects)

Figure 10: Kelly's thought processes (Pattern 4)

Kelly reads aloud her lecturer’s feedback (RFB) which results in her understanding of the feedback given which in turn prods her to read part of her essay (RE). She then reviews the feedback (REFFB) and reads aloud another piece of feedback (RFB) at which point she self-reflects (SR) on the intent of the feedback and reviews the first piece of feedback (REFFB) once again. Although Kelly attended to teacher feedback throughout these thought processes, there is nothing to show her acceptance or rejection of the feedback.
However, her revised draft verifies that Kelly has taken the feedback into consideration in her rewrite.

### 4.5.3 Kelly’s preferences and reactions towards teacher feedback

In the questionnaire survey, Kelly indicated that she is very satisfied with her lecturer’s feedback and that she gave thoughtful attention to all of the feedback that was given to her in her first draft, including form focused as well as content focused feedback. This corresponds to Kelly’s stated preferences that she indicated in the questionnaire. Kelly also indicated that she just made mental notes and took down useful points when she went through the feedback, and then revised her essay based on the feedback. In the questionnaire Kelly also indicated that she finds comments on organization, ideas and style very useful in improving her writing compared to surface level corrections such as spelling and punctuation. She also pointed out that she would meet with her lecturer if she had any doubts about the feedback given.

### 4.6. Case study five: Roxy

#### 4.6.1 Overview

Throughout her think-aloud protocols, 80% of Roxy’s attendance to feedback is based on Pattern 1. This pattern indicates that she accepts all the feedback that is given to her, except for one instance (3%), when she uses Pattern 3 and rejects one piece of feedback. Roxy went through her lecturer’s feedback very diligently and attended to both form and content based feedback. She acknowledged and accepted both negative as well as positive comments that were given by her lecturer. However, 17% of the time Roxy made use of Pattern 5 where she not only commented on the positive comments made by her lecturer, but also indicated that she found them motivating. This is unlike any other participant.
4.6.2 Roxy’s think-aloud processes

When Roxy first got her feedback, she appeared to be resigned to the fact that she had some substantial changes to make in her revision, which is apparent in the following: *Can see a lot of things in blue. I have quite a task here* (L. 5).

In the first pattern that Roxy takes to attending to feedback she indicates her acceptance of teacher feedback, and also indicates the changes that she will make in her revised draft or the plans she intends to carry out in her revision.

In one extended example of the above process, Roxy first reads aloud her lecturer’s feedback (RFB): *So what are you saying? Please refer to the question. Have you answered the question?* (L.186-187). This query by the lecturer seems to have aided Roxy to reflect on what she had written in her first draft and then address the feedback, which appears to show that she thought about the feedback and understood (+U) the aim of the feedback. This is summarized in the following extract: *Well, in my summary I probably have not answered the question* (L.188). This follows Roxy’s acceptance of teacher feedback (ATFB) when she says: *I guess so, yah* (L.189). Roxy’s understanding of the feedback is further revealed when she relates her writing to the audience (AA). This is evident when she says, *you know, I don’t actually summarize for the audience what I have written* (L.190). Having discovered her failure to consider her audience, she comes up with a reason (GR) for her failure in the following protocol: *I was going to. In this essay I didn’t write anything about the curriculum or anything about the educational program because I thought it was just a short essay* (L.192-194). Roxy then follows this up by acknowledging the feedback (ATFB) using the following words: *well, I will, I will. I will attend to it* (L.195). Once Roxy has accepted the feedback, she shows what she intends to do in her revision by outlining her plans (PL) in this manner: *I am going to say what I have done and*
what I have actually talked about, all the literature review and I am going to say what sort of thing I claimed about in this topic (L. 196-198). Figure 11 represents the processes that Roxy goes through when she attends to her lecturer’s feedback and the plans she intends to implement during revision.

Alternating between feedback and her first draft in a recursive way appears to have paved the way for revision. There is evidence in her revised second draft that feedback helped Roxy to implement the changes she planned in her think-alouds. For example, in the original essay there was no concluding statement that summarized her stand in the essay. In her revised version, however, Roxy has done what she said she planned to do. Roxy concluded her revised essay by stating her stand in the argument with the following concluding statement: Therefore, I would like to summarize this essay by making claims that the success of a student can be expressed as being influenced by the student’s life and training as a child.
Although Roxy accepts and acknowledges teacher feedback in her think-aloud protocols, there is one instance where she rejects the teacher feedback, as modeled in Figure 12.

(REFFB-refers to feedback; EI- explains ideas; RTFB- rejects teacher feedback)

**Figure 12: Roxy’s thought processes (Pattern 3)**

In this process Roxy refers to teacher feedback (REFFB) first and questions the reason for the feedback. She then explains (EI) why she thinks the feedback given is not quite accurate and why no changes should take place, and consequently she rejects the teacher feedback (RTFB).

Looking at this example in more detail, it can be seen that the original essay reads: *One of a major factor influencing a student’s life*… and the lecturer corrected the sentence in this way: *One of a major factor influencing a student’s life*…. Roxy refers to the teacher feedback (REFFB) first by questioning her lecturer in this way: *why did you cancel ‘of a’ in ‘one of a major factor’ in my essay* (L.29). She then shows her argument and justification as to why ‘of’ should be retained and not be discarded by explaining her idea (EI) in the following manner: *I personally think that ‘of a’ is ok because I’m talking about one of the major factors you know. It’s not a major factor but it’s just one of it* (L.30-32). With that she refuses to accept her lecturer’s feedback (RTFB) which is clear in the following think-aloud: *I’m sorry. I don’t think so. I’m not going to change that* (L. 32). However, it must be noted here that when Roxy speaks aloud, she says it correctly even thought she rejects the teacher feedback in this instance.
Nonetheless, contrary to Roxy’s responses in her think-alouds where she rejects her lecturer’s feedback and maintains that what she wrote was correct, her revised draft indicates that she has taken the teacher feedback into consideration and revised her essay based on the feedback given. In her original essay she wrote: *One of a major factor influencing a student’s likely education trajectory is the family.* Her revised essay on the other hand reads: *One of the major factors influencing a student’s likely education trajectory is the family* clearly showing that she has revised as the teacher feedback suggested by replacing *one of a major factors* with *one of the major factors*. Perhaps her verbalizations of the correct version, even though she was unaware of it, led to the revision. Thus, it appears that teacher feedback may have played a role in her revision, even if only to draw her attention to it and make her consider it in the detailed way described above.

Another interesting finding in Roxy’s think-aloud processes is that, other than showing appreciation for negative, critical and constructive comments that aided her in her writing, she gave due attention to all the positive comments that reflected praise from her lecturer and showed her appreciation of his work. An example of such a response is captured in Figure 13.

![Figure 13: Roxy's thought processes (Pattern 5)](image)

(REFFB- refers to feedback; SR- self-reflects; APP- shows appreciation)
Roxy refers to the feedback (REFFB), given in the form of praise comprising positive words and ticks, in this way: *I see ticks and ok for the last part of my last paragraph (L.125).* She seems to be satisfied with the positive indications. The satisfaction is evident in her self-reflection (SR): *I really feel very happy when I see ok and the ticks. It’s hard work for me and I feel so good about having these remarks (L.126-127)* and she shows her appreciation (APP) of her lecturer in this way: *you really inspire me with this kind of remarks, thank you (L.129).* Although there is no indication that revision did occur as a direct result of the positive comments, perhaps these comments did motivate Roxy to write a better draft in general when she revised.

### 4.6.3 Roxy’s preferences and perceptions towards teacher feedback

The questionnaire survey indicates that Roxy was satisfied when she read over all the feedback that was given. She found feedback on both form and content very useful. Although in the questionnaire she indicated that she preferred content-focused feedback, she went through both content and form-based feedback during the think-aloud. However, she indicated that she gave more thoughtful attention to feedback on content. Roxy also indicated in her questionnaire that when she read through her lecturer’s feedback, she discussed the feedback with her peers and met with her lecturer to clarify some of the suggestions that were vague; she then revised her essay based on the feedback that was given. Roxy prefers to be given suggestions on ways to improve her writing.

### 4.7 Case study six: Lena

#### 4.7.1 Overview

Lena attends to teacher feedback in two distinctive ways. She uses Pattern 2 61% of the time. In this pattern she indicates that she thinks about teacher feedback thoroughly, always looking for a justification or explanation for the teacher’s feedback before she
accepts it, but without any indication of the revisions that she intends to make. Second, 33% of Lena’s attendance to feedback is based on Pattern 1 where she accepts feedback, and outlines the changes or plans that she intends to make in her second draft based on her lecturer’s feedback. And finally, though throughout her attendance to feedback there is indication that she attends to feedback positively, there is one instance (6%) where she appears to reject her lecturer’s feedback which is based on Pattern 3.

4.7.2 Lena’s think-aloud processes

Lena’s first move when she received her feedback was to scan through the feedback and indicate its usefulness to her; this is clear in the following extract: I can see his comments. He has given useful feedback. His feedback is important for me to improve my academic writing (L.12-13). She then continues by showing her appreciation of her lecturer for his feedback, thanking him for the feedback in this way: Thank you for taking the time to comment on my writing (L.14).

The first approach that Lena adopts in attending to teacher feedback shows that she understands and accepts feedback in a positive manner. However, she does not voice out loud any changes or plans she intends to implement in her revision that are based on the feedback given. These thought processes are captured in Figure 14.

![Diagram](image.png)

(RFB- reads feedback; +U- shows positive understanding; ML-makes links/connections; ATFB- accepts teacher feedback)

Figure 14: Lena's thought processes (Pattern 2)
Lena first reads aloud the following teacher feedback (RFB): *Provide the link. Remind me what this paper is about and what your argument is* (L.100). She then shows her understanding (+U) of the feedback in this manner: *I get what you mean here* (L.102) and appears to explain to herself what needs to be done to address the concern raised in the feedback. This is expressed in the following: *I need to say what I am talking about and to connect this idea to the previous one* (L. 103). She then makes a connection (ML) by linking what she understood to what she has learnt in her writing classes when she says, *this is the basis of academic writing, link and state* (L.104). Lena finally shows her acceptance of the teacher feedback (ATFB) by acknowledging that her lecturer was correct in his feedback with the following words: *I know I don’t have this in my essay* (L. 105).

Even though Lena accepts her lecturer’s feedback on her style of transition and linking one paragraph to another, she does not explicitly state that she would consider the teacher feedback and incorporate it into her revision. However, her revised draft shows evidence that the teacher feedback was instrumental in the changes that occurred in Lena’s revision, especially in the way Lena linked one paragraph to another.

In her original draft, for instance, Lena concluded one paragraph in this way: ... *learning styles towards academic achievement is a result of past experience, hereditary, equipment and training received by the individual.* Lena continued her next paragraph in this manner: *Primary and secondary school students are introduced to various tests and examinations.* What seems to be lacking is a smooth transition between these two paragraphs.

When Lena revised her first draft, she seems to have reformulated her sentences and changed her topic as well, taking teacher feedback into consideration. This is evident in the following extract when she links the reformulated paragraph to the next paragraph by using
a transition expression. Lena concluded her earlier paragraph this way: *... care and stimulation during the early years are critical to establishing a foundation for learning, behavior, and health over the life cycle.* She then linked this paragraph to the next one with the following introductory statement: *My next point is students’ personality as children influence their academic achievement.*

The second way in which Lena approaches teacher feedback indicates not only her acceptance of the feedback but also the changes or plans that she intends to carry out in her second draft. She does this by engaging with the feedback and her text before showing her understanding of the feedback and her acceptance of it. This then leads Lena to make plans that are to be incorporated into her revision.

Lena first reads teacher feedback aloud (RFB): *so what is your main argument here? Make it clear to your reader* (L.27). This then prompts her to refer to a particular section of her essay and explain to herself what she had written in this way: *I have presented a main argument in the third paragraph* (L.28). She then reads aloud the section of her essay (RE) which is directly related to her lecturer’s feedback: *However, not all schools and academic institutions are able to provide first class or quality teaching to their students* (L.29-30. and follows this through by rereading the same teacher feedback (RRFB): *so what is your main argument? Make it clear to your reader* (L. 31). Lena’s engagement with the teacher feedback and her text seems to have contributed to her acceptance of that feedback (ATFB) when she says, *well, I realize that* (L.32). Her acceptance was then followed by understanding (+U) the objective of the feedback, which is shown by her explanation for the feedback in the following excerpt: *It is not clear. I didn’t provide further elaboration to support this point. I realize that I should add in supporting points to strengthen my argument* (L.33-34). This new understanding then steers Lena to make plans (PL) on what
to include in her revision as an attempt to address her lecturer’s feedback; what she plans
to do is stated in the following extract: *I will explain more on how a student’s life and
training as a child influence his or her learning towards success in education. Maybe my
arguments should focus more on this area. Will do that* (L.36-38). This approach is
outlined in Figure 15 below.

![Diagram of Lena's thought processes](image)

(RFB- reads feedback; REFE- refers to essay; RE- reads essay; RRFB- rereads feedback;
ATFB- accepts teacher feedback; +U- shows positive understanding; PL- plans revision)

**Figure 15: Lena's thought processes (Pattern 1)**

The above processes of responding to feedback show that Lena first reads aloud the teacher
feedback (RFB), then refers to a section of her essay (REFE) and then reads aloud
verbatim the same section of the essay. Lena then rereads the same feedback (RE) that she
read earlier which leads her to accept teacher feedback (ATFB) and clarify her
understanding of the objective of the feedback. Acceptance and understanding of the
feedback then guide her to make plans (PL) that were later incorporated in her revised
draft.
Perhaps her engagement with the feedback helped Lena to become more aware of the issues that were addressed in the teacher feedback and this heightened awareness led to revisions in her second draft. By comparing the following extracts from her first and second drafts the changes that Lena incorporated in her second draft, changes that stemmed from the feedback, are evident.

In Lena’s first draft she wrote: *Not all schools and academic institutions are able to provide first class or quality teaching to their students. … the instructional and learning styles should be compatible in order to improve students’ academic achievement.* It is not obvious how quality teaching in the first sentence is related to teaching-learning compatibility in the next, so that a clear line of argument appears to be missing in Lena’s writing. In her revised draft, Lena has made an effort to make her argument clear by restructuring her sentences and elaborating on her idea in this manner: *The quality and effective educational program may not be able to promise students with success in their studies. … a lot of things taught in classroom are not learned by the students, or at least learned in the way the teachers had envisioned.* Here, the inability of schools to promise success is echoed in the idea of students not learning or not learning as planned. Lena has taken feedback on board and made an effort to revise her draft in accordance with the issue that was highlighted in the feedback.

Though Lena shows positive engagement with her lecturer’s feedback throughout her think-aloud protocols, there is, however, one instance where Lena rejects teacher feedback. Her response to this feedback seems to suggest that revision did not occur as a result of the feedback. Lena’s rejection of feedback and the thought processes that she goes through in adopting this approach are depicted in Figure 16.
The above diagram shows the flow of her thought processes Lena first reads aloud a section of her essay (RE): *Parents nowadays are very well-informed of how important it is for their children to succeed in education* (L.66-67). After reading her essay, Lena reads aloud the teacher feedback: *Really? I think all parents knew this a long time ago!* (L.68). Next she contradicts the feedback given by her lecturer (RTFB): *yes, well, I agree all parents knew this a long time ago, but they were not well-informed* (L. 69). She then justifies her rejection of the feedback by explaining (EI) her idea in the following manner: *what I mean here is, nowadays parents are very well-informed and this is different from what they know about it* (L. 71-72).

Even though Lena’s engagement with this particular feedback shows her rejection of the teacher feedback, she appears to have given it some thought and has approached the feedback positively by giving a different twist to the issue that she raised in her first draft. In her original draft, Lena wrote: *Children who are trained to behave and learn well at home will normally be able to perform well in schools, where they receive their formal education. Parents nowadays are very well informed of how important it is for their children to succeed in education. …parent’s decision influences a child’s perception and attitude towards learning.* Lena revised her second draft and by comparison, wrote in this
way: Children who are trained to behave and learn well at home will normally be able to perform well in schools. ... children who come from families that practice and emphasize on the importance of learning will tend to perform better in their academic achievement. In the first draft Lena mentions that parents’ decisions influence a child’s attitudes, but in the second draft Lena identifies specific attitudes of practicing and emphasizing the value of learning, and explains why it is important by tying it to an outcome, namely better academic achievement.

Overall, Lena’s recursive engagement with both the feedback and her essay seem to have brought about a positive outcome; she has revised both locally and globally. Teacher feedback seems to have acted as a stimulus for the revisions that shaped Lena’s second draft.

### 4.7.3 Lena’s preferences and reactions towards teacher feedback

In the questionnaire survey Lena indicated her preference for content-focused feedback, and expressed her satisfaction with her lecturer’s feedback which she has always found very useful. She indicated in her questionnaire that she attended to all the feedback that was given and gave thoughtful attention to both content and form-based feedback. However, she also pointed out that she finds comments on content and organization more helpful than comments on mechanics and that she prefers her lecturer to give suggestions on ways to improve her writing. The questionnaire also confirmed that, though Lena usually seeks out her lecturer to clarify doubts about her feedback, she also revises by taking down some useful points from her lecturer’s feedback and discussing the feedback with her peers.
4.8 Case study seven: Sham

4.8.1 Overview

Sham has a unique way of approaching teacher feedback, one which sets her apart from the other participants. After her first round of going through teacher feedback she doubles back and diligently attends to the same feedback a second time. Each time Sham approaches the feedback in a different way.

In utilizing Pattern 1, 81% of Sham’s attendance to feedback indicates that she accepts her lecturer’s feedback without any reservations. She then outlines her plans for her revision globally based on the feedback given to her. In using Pattern 2, when Sham attends to feedback, 19% of the time, she appears to just gloss over the feedback without giving much thought about what it contains.

4.8.2 Sham’s think-aloud processes

The illustration in Figure 17 on the next page brings out the differences in Sham’s thought processes when she attends to the same feedback at two different times. The two processes seem to be similar at first glance, but there are marginal differences between them and each contributed something different to her revision, which is evident in Sham’s second draft. Figure 17 depicts the differences in her thought processes when Sham engages in the same feedback at two different times.
Sham appears to attend to feedback by breaking up the teacher feedback into sections. She reads the first part of the teacher feedback (RFB) aloud: *These are indeed valid points. However, I wonder if you could revise this paper to be an argumentative academic paper (L.97-98).* After reading the feedback, she immediately comes back with a positive rejoinder in accepting the feedback (ATFB): *Yap surely I will. I will try my best (L.99)*. She then proceeds to justify why her writing is not argumentative in nature, giving reasons (GR) that are evident in the following think-aloud: *I think, I mean, come to think of it, I have not written any argumentative academic paper at all before this, so that could be the reason why this happened (L. 100-102).* She then continues to read the next part of the teacher feedback (RFB): *This means that you have to structure your argument, take a*
stand and then tell me what your points are to support your claims (L.103-104) and accepts it (ATFB) when she says, ok, I can do that (L.105). Sham then rereads part of the same feedback (RRFB); structure your argument (L.106), perhaps to get a better understanding (+U) of it, evident as she voices aloud her insight into the comment in this manner: hmmm, structure, first, second, third, ok I get it (L.108). Sham then refers back to the same feedback (REFFB) by voicing aloud: structure the argument (L.109) before acknowledging the feedback (ATFB) once again with, ok, I will do that (L.110). Subsequently, Sham rereads part of the same feedback (RRFB): take a stand and then tell me what your points are to support your claims (L.111) possibly to help her understand more (+U) of the intent of the feedback as can be seen in the think-aloud: one stand and points to support my stand (L.112).

Following her first round of attendance to feedback, Sham revisits the same feedback a second time; her second round of attendance is outlined in the second diagram. Unlike her first attendance to the same feedback, this time Sham reads aloud only part of the feedback (RFB): I wonder if you could revise (L.267) before accepting teacher feedback (ATFB) in this way: yes, of course (L.268). She then proceeds to read another section of the feedback (RFB), structure your argument (L.269). Her review of her lecturer’s feedback seems to have prompted Sham to reflect (SR) and wonder aloud how she was going to tackle her lecturer’s feedback; this is evident when she says, ok, how am I going to structure my arguments now (L.270). Sham’s self-reflection is followed by understanding (+U) and acceptance of the teacher feedback (ATFB) which is apparent in the following think-aloud: Ok, I will have to provide an argument (L.271) and, in turn, this led her to plan (PL) her revision based on her lecturer’s feedback. Sham’s planning is captured in the extract: so basically the argument for this piece of writing is the question itself and my four points, ok.
That means I talk about factors influencing a child in his growing up process. That can be my stand (L.272-275).

Next Sham refers back to the same feedback (REFFB) that she now voices aloud: hmmmm, structure my arguments (L.276). Reference to the feedback appears to have made her lose her understanding (-U) a feature which is clear in the following excerpt: but now I am lost about the structure (277). However, her loss of understanding seems to have been only momentary as she bounces back by further planning (PL) for revision in this way: argument need to be raised in the first paragraph (L.278). By planning her revision mentally, Sham seems to have come to terms with teacher feedback, apparent when she accepts teacher feedback (ATFB) in this manner: I’m fine with it (L.279) which also gave rise to her understanding (+U) of the feedback which she expresses in this way: of course, the claims will be what I have mentioned in this but I just need to support them with evidence, that’s what I believe Dr. meant anyway (L.280-281).

Having gone through the same feedback twice, Sham finally attends to the feedback globally by providing an outline of what she is going to do in her revised draft. Her plans which she intended to implement in her revision and which were based on teacher feedback are modeled in Figure 18.
Sham begins by reading part of the feedback (RFB): take a stand (L.294), which in turn prompts her to read her essay (RE): … the student’s life and training as a child than the quality and effectiveness of the educational programme (L.295-296). She then conveys her understanding (+U) by puzzling out what needs be done so she addresses the feedback in her revision; this is evident in the following extract: so now the argument is this. Student’s life and training as a child or the quality and effectiveness of the educational program. So I am going to have my stand (L. 297-299). She then outlines her plans of how to address the feedback globally: the points, I will be talking about. So I need to choose now whether I am going to be talking about how they succeed; if they are successful in their education because of their life and training as a child or because of the quality and effectiveness of the educational programme (L. 300-303). Sham then continues to read the rest of the feedback (RFB): Take a stand and tell me what your points are to support your stand (L.304), and explains it to herself at length in a manner that shows that she understood (+U) the objective of the feedback: so I choose only one, not both. I should not be like combining both. Either life or training as a child or quality and effectiveness of the
education programme. So I better decide, only then I can show the connection. It can’t be like two points – talking about their lives and training as a child and then another point talking about the effectiveness of the educational programme. (L. 305-311). Her understanding of the feedback led to more planning (PL) which is clear in the following extract: I am not going to state any arguments about two ideas. So I am going to talk about one stand, my points to support the argument. Looks like I am going to choose student’s life and training as a child in which I can actually talk more about what I feel and also support it with the proper evidence (L.312 -315).

The following extracts from her think aloud bring out the differences in her thinking that are apparent before and after teacher feedback. In her first draft Sham did not express her stand explicitly nor did she say what she was going to talk about. She began her essay by relating her own experiences. An excerpt from her first draft introduction reads this way: I went through a tough time to be what I am right now. ...the success that we gain through education will not only benefit us in our career but is actually the main tool which will shape our entire life.

In Sham’s revised essay, there are indications that she took teacher feedback on board and actually implemented what she planned to do in her revision. The following is an extract from the introduction in Sham’s revised draft; it shows the outcome of the changes made as a result of feedback: In this paper I will provide an argument that success in education is influenced more by the student’s life and training as a child than by the quality and effectiveness of the educational programme. The four main points to support this stand are: student’s life and training ... parents’ roles in a child’s education ... the importance of culture and society ... and student’s self-awareness in acquiring knowledge. Rather than
referring to herself, Sham makes a general statement and then indicates that there are four points to support it, just as the teacher feedback suggested she do.

In using Pattern 2, unlike the first, Sham appears to have just glossed over teacher feedback without giving much thought to it at all. Figure 19 captures Sham’s thought processes as she attended to feedback in this approach.

![Diagram of Thought Processes]

(RFB- reads feedback; REFE- refers to feedback; SR- self-reflects)

**Figure 19: Sham's thought processes (Pattern 2)**

When Sham attended to teacher feedback, she first read the teacher feedback aloud (RFB): *Check your language (L.176).* Reading the feedback probably prompted her to refer to her essay (REFE) where she found the reason for the feedback and make the exclamation: *grammatical mistake! (L.177).* This then perhaps steered her towards self-reflection (SR) which she voiced out in this way: *how can I actually do such an obvious mistake (L.178).*

For Sham, engaging in self-reflection seems to have been productive. Even though Sham just browsed through and did not engage at length with this particular feedback, her attendance to it seems to have helped Sham in her understanding. This is evident in Sham’s revised draft where she has been able to avoid similar surface level errors in her revision.
4.8.3 Sham’s preferences and reaction towards teacher feedback

Sham indicated through her responses to the questionnaire survey that she was satisfied with her lecturer’s feedback. She also conveyed that she did not pay attention to all the feedback even though she read over all the feedback that was given to her. She pointed out in her questionnaire that she preferred global feedback that covered features such as content and organization in contrast to mechanics and vocabulary. Sham also indicated in the questionnaire that when she attended to feedback, she took some useful points, discussed the feedback with her peers and met with her lecturer to clarify any feedback that was vague to her. In addition, Sham also stated that she made references to some journal articles to clarify some issues that were highlighted in her lecturer’s feedback.

4.9 Case study eight: Jean

4.9.1 Overview

Jean appears to be selective when she attends to teacher feedback. She seems to have randomly selected some feedback that caught her attention and skipped the rest. What is distinctive in Jean’s attendance to feedback is that she attends to feedback a first time and then revisits the same teacher feedback a second time. Jean approaches her lecturer’s feedback in two different ways. Firstly, 70% of the time she employs Pattern 2 as she attends to feedback just by reading teacher feedback and then merely acknowledging and accepting it without indicating whether the feedback is going to be incorporated into her second draft. Secondly, 30% of Jean’s attendance to feedback shows that she made use of Pattern 1. In this pattern there is indication that she does some planning as she attends to feedback, with an implication that the teacher feedback might be incorporated into her revision. Finally she plans globally for her revision based on the feedback which acts as an intervention platform for her revision.
4.9.2 Jeans’ think-aloud processes

Jean’s initial approach to feedback shows that she acknowledges and accepts teacher feedback, but she did not indicate if she considers teacher feedback as relevant enough to be taken into consideration in her revision. The following diagram depicts Jean’s thought processes in her initial approach to feedback as she attends to and acknowledges the teacher feedback.

![Diagram](image)

(RFB- reads feedback; +U- shows positive understanding; ATFB- accepts teacher feedback)

**Figure 20: Jean's thought processes (Pattern 2)**

In the original draft Jean did not successfully link her paragraphs. For instance, her conclusion in one of her paragraphs read: ... *I found that a good educational program can ensure the success in education in a student’s life. I would also like to focus on adult learners too.* The topic sentence in the paragraph following went: *There are two different ways to develop competence in a language.* In this instance, Jean’s original writing shows two different ideas with no clear association between the two paragraphs.

In this example, Jean first reads aloud the teacher feedback (RFB) on this part of her essay that reads: *provide a clear link (L.29).* Jean then shows that she understood (+U) what her lecturer was saying when she says, *there is no link from one paragraph to another paragraph (L.30)* and accepts teacher feedback (ATFB) with the following words: *I did not write clearly. I did not connect the two paragraphs (L.31).*
Although Jean accepted the teacher feedback, she did not explicitly signal that she was going to incorporate the teacher feedback in her second draft. However, the extracts show the influence of teacher feedback in Jean’s revision. The following extract is Jean’s conclusion of one of her paragraphs in her revised essay: … *emulating some of the ways students learn as a young child because it recaptures that natural learning process and accelerates the understanding and retention of content.* Jean’s introductory sentence in the subsequent paragraph reads as: *However, when one moves into unfamiliar learning contexts, it takes time*… indicating the influence of teacher feedback in Jean’s revision. She linked the previous paragraph to the following paragraph by signaling a different paragraph topic with a contrastive transition expression, while indicating that the essay subject continues to be learning, and that it is only the context that differs between paragraph topics.

In using Pattern 2, as Jean attends to feedback she shows her acceptance of the teacher feedback and, at the same time, reveals what she plans to incorporate in her revision. Figure 21 on the next page illustrates how Jean plans or considers the revisions she intends to make and how subsequently she attended to the same feedback twice. Although the thought processes seem very similar to one another, differences do exist as is shown in Figure 21.
When Jean first attends to feedback, she reads aloud the teacher feedback (RFB): *Please make your stand clear. Identify your points and structure your argument* (L.46-47). Reading the feedback seems to have made Jean aware of her audience (AA), which is made clear in the following excerpt: *two pages of this assignment and yet he couldn’t seem to understand what I’m trying to say* (L.49-49). This awareness then prompts Jean to self-reflect (SR) in this manner: *I’m really disappointed in my own writing and I’m very disappointed in what I have written* (L.50-51). Her self-reflection is followed by understanding (+U) and acceptance of the teacher feedback at the same time as she says, *well, I guess I have to review back again* (L.53). This understanding and acceptance seem to have prodded her into making plans (PL) to address the teacher feedback, a sequence which is evident in the following extract: *I need to read the question again properly and then again I need to have more research on this* (L.53-54). Planning seems to have prompted her to self-reflect (SR) once again and show disappointment about her writing which is expressed in the following think-aloud: *Oh dear! This is really disappointing. This is not what I thought I will get back* (L. 55-56).
The second part of the illustration shows Jean’s thought processes as she attends to the same teacher feedback a second time, forty-three lines later. In a similar manner to the first time, Jean first reads aloud teacher feedback (RFB): *Please make your stand clear. Identify your main points and structure your argument* (L.99). Reading aloud teacher feedback seems to have prompted her to think about the changes (SC) that she needed to make to address the concerns raised in the feedback; this is apparent in the following excerpt: *well, I guess I have to structure back the sentences* (L. 100). Jean seems to have followed this through by self-reflection (SR) when she says: *there’s nothing much I can say. Well, I’m really disappointed in my own writing* (L.101-102) which is similar to what she voiced aloud when she first attended to the same feedback. Jean then refers to her essay (REFE) in this way: *I guess I just have to read back again* (L.103). This reference prompts her to plan (PL) what she needs to do with regard to revision; her planning is highlighted in the following extract: *I have to read the question over and over again, and I just have to make my stand clear. I just have to write in a way that is not confusing for him as well as for me* (L.104-106). In planning what needs to be done, Jean accepts the teacher feedback (ATFB) as is made clear in the following think-aloud: *all right, I’m going to rewrite the essay again* (L.107); this then led to yet another self-reflection (SR) on her part, evident in the excerpt: *I do really hope that I can improve and get better results in the next writing that I produce* (L.108-109). This self-reflection appears to have brought about an understanding (+U) about the intention of the teacher feedback which is evident in the following think-aloud: *Oh dear! I guess having ideas alone in my mind is not enough. I need to provide more details, not only through personal experience and what I feel that is important, but write my ideas clearly* (L.110-112).

Jean’s acceptance of her teacher feedback is apparent in her revised draft. In her first draft, for instance, Jean did not state her stand clearly nor did she identify the supporting points
for her arguments in her essay. The following excerpt is an example of this: *… students’ life and training as a child can be construed as the lifestyle which a student goes through… The effectiveness of educational program will depend on factors such as methodology, the learning environment and the teachers and students themselves.*

Jean made changes, revising her essay in this way: *I do not agree that success in education is influenced more by the students’ life and training as a child. I believe that with an effective educational program, students are able to excel well in their studies. In support of my stand, I will talk about special education, students from rural areas, successful educational program and finally the emergence of technology in educational programs.* In contrast to Jean’s first draft, her revised draft clearly signifies that teacher feedback probably played a significant role in revision, particularly where she addressed her lecturer’s concern by clearly stating her stand and listing the points she would use to support her argument.

Finally, after attending to teacher feedback twice, Jean gives a brief overall summary of what her intentions are with regards to teacher feedback as illustrated in Figure 22.

*Figure 22: Jean's thought processes (Summary)*
In this process, Jean refers to teacher feedback (REFFB) first before she decides on her next course of actions. She then maps out a plan (PL) of writing that contributes to her understanding (+U) and finally her acceptance of teacher feedback (ATFB).

Viewing this example in more detail, it may be said that Jean first refers to teacher feedback (REFFB) in this way: *all these comments!* (L.121). Referring back to teacher feedback seems to have given her some positive ideas about what needs to be done next to address the teacher feedback; this is evident when she outlines her plans (PL) as follows: *I know what I am going to do. I have to find more information and then rewrite. I have some information about structuralism and behaviorism which I guess I can use to support my points. I will read and find more details to support my argument* (L.122-125).

Planning seems to have helped Jean understand (+U) what needs to be done in her revision next as is evident in the following excerpt: *I guess I can understand now what he actually wants me to do* (L.126). This understanding appears to have brought about her acceptance of teacher feedback on her first draft which she acknowledges in this way: *and yes, I guess what I wrote is confusing now* (L.127).

In comparing Jean’s original written text with her second draft, there is evidence of a revision that is more clearly planned than what was done for her first draft. Using teacher feedback as a guide she has rewritten her whole essay addressing all the issues that were brought up by her lecturer about her first draft.
4.9.3 Jean’s perceptions and reactions towards teacher feedback

Jean indicated via the questionnaire survey that she was very satisfied with her lecturer’s feedback. She also indicated that she prefers global feedback from her lecturer to help her in her writing than form-focused feedback. In attending to the feedback Jean specified that she paid more attention to feedback that was content based as opposed to feedback that highlighted form. She also pointed out in the questionnaire that when she attended to feedback she took down useful points to help her in her revision, and then revised her essay based on the feedback given.

4.10 Summary

This chapter concludes with the thought processes of all the participants as they attended to teacher feedback, specifically the various types of approaches adopted are presented. The next chapter discusses the various themes arising from the students’ verbal protocols in light of the literature previously reviewed.
CHAPTER FIVE
DISCUSSION

5.0 Overview of Chapter

The first aim of this study was to establish ESL students’ preferences for teacher feedback. Other aims of the study were to ascertain how the students attended to and responded to feedback, specifically the teacher feedback they received. This was done by exploring their thought processes as the students attended to written feedback. In order to gain insights into the cognitive processes, eight participants were asked to think aloud as they engaged with teacher feedback. Their concurrent verbalizations were recorded, transcribed and analyzed to better understand their thought processes. A final aim of this study was to determine whether students made use of teacher feedback in their revisions by examining their revised drafts.

The findings from these data sources are presented in Chapter Four and suggest that teacher feedback was an intervention that acted as a platform for revision. The data also reveal that the participants attended to feedback as a recursive process. Besides that, the findings suggest that teacher feedback was instrumental in the students’ processes of noticing gaps in their initial drafts. Additionally, teacher feedback provided the opportunity for the participants to engage in dialogical activity with their feedback giver. Figure 23 on the following page represents the cognitive processes of the participants as they attended to teacher feedback. In general the participants either accepted feedback and made revisions or rejected teacher feedback.
Figure 23: Model of thought processes on feedback
The model shows how teacher feedback acted as input to form an ‘intervention platform’ for the student writers. The intervention of teacher feedback provided input to the student writers. This acted as a supportive platform from which the students could view their writing through their teachers’ eyes, which is to look at it as an object from a distance. Feedback provided both support and collaborative opportunities for the writers. Within this context, teacher feedback drew students’ attention to aspects of their writing that enabled them to recognize, diagnose and determine the necessary steps to address issues that were raised in their first drafts. Teacher feedback was not viewed as coercion or intimidation by the student writers, but instead as a form of assistance. The students had the choice of either accepting the feedback or rejecting the feedback without any adverse results whichever choice they made.

With feedback as an intervention platform, student writers in this study were “pushed” (Swain, 1995) to respond to feedback through various strategies. As Figure 23 shows, students read feedback (RFB), reread feedback (RRFB), referred to feedback (REFFB), read their essays (RE), reread their essays (RRE) and referred to their essays (REFE) constantly throughout the process of attending to feedback. Their movements between these strategies were recursive in nature as they repeatedly moved back and forth between their essays and teacher feedback in no set order. This led the students to respond in two ways.

First, students found justification for particular feedback before they responded either positively or negatively, a feature indicated by the dotted arrows. The solid arrows, on the other hand, indicate the processes that they went through as a result of the choices made when they attended to feedback. Secondly, the students responded to feedback, either positively or negatively, without going through a process of justification; this is
symbolized by the dotted arrows. The solid arrows indicate the processes the students went through as they attended to feedback. When students responded to teacher feedback in a positive manner, most of the time they accepted feedback and incorporated feedback in their revisions. However, when students responded negatively to teacher feedback, they mostly rejected the feedback as is illustrated by the bold arrows in Figure 23.

The think-aloud protocols show that the student writers in this study used teacher feedback to better address the issues that were brought to their attention. They did not attend to their writing as well as they could have; they still needed expert assistance of a teacher to do so. This is an aspect largely unaddressed in writing models that do not distinguish between novice and expert writers. However, Bereiter and Scardamalia (1987) do make this distinction with their KT and KTF approaches (see Chapter Two). Teacher feedback seemed to have prompted them to move recursively from just knowledge-telling to knowledge-transforming as proposed by Bereiter and Scardamalia (1987). The students’ course of actions on their initial drafts were a reflection of Bereiter and Scardamalia’s (1987) KT approach of writing where they wrote on what they knew without paying enough attention to goal setting or content generation that would effectively address the task requirements. The student writers still needed teacher advice and assistance on their content knowledge and discourse knowledge to help them revise. The think-aloud protocols support evidence that teacher feedback assisted them on what to reflect on before their actual revision. This is evident in the participants’ think-alouds which show that they planned, organized their writing, and engaged in problem-solving activities to address the issues highlighted in teacher feedback. These mental operations of the participants are a reflection of Bereiter and Scardamalia’s (1987) KTF approach where they revised essays by transforming their knowledge from merely telling what they knew as they did in their first drafts as a result of teacher feedback. An example of this occurrence is Lena in case
study six, (p.126). Her think-alouds show that teacher feedback helped her to reformulate her sentences as well as change her topic of argument which is evident in her revised draft.

Thus incorporating this study’s model of students’ thought processes on feedback within the existing models of writing, such as that of Bereiter and Scardamalia’s (1987) model extends the writing process through feedback and generates revision. Although this does not occur in all writing processes, it is important to acknowledge that it is an essential aspect in the actual processes of many writers.

The following section presents the discussion in relation to the research questions about students’ stated preferences for teacher feedback and their responses to teacher feedback.

5.1 Students’ stated preferences for teacher feedback

One source of data for this study was the questionnaire survey. Student responses to the questionnaire were collated and analyzed to ascertain the students’ preferences for teacher feedback. In the Findings chapter this data was presented for each case study. Here the significance of the data will be discussed in terms of the group as a whole, with references made to where the case study analysis may be found. Students in this study indicated two preferences. As illustrated in Table 3, a first preference indicated by all the participants was for feedback on global issues which encompassed feedback on content and development of their texts, organization and their use of expressions in writing. These preferences are consistent with their think-alouds as they attended to teacher feedback. This finding is consistent with Straub’s (2000) results. Straub (2000) found that the students in his study perceived comments on content and purpose as more helpful than comments on surface level features. Similarly, the revised drafts of the participants of the present study certainly demonstrated that there was an impact on revision from feedback.
on global issues. This type of feedback helped and guided the participants to think and make major revisions on their second drafts.

Students also appreciated other feedback. A second preference indicated by Angel, Ben and Kelly (p.90) was their preference for comprehensive feedback covering both global as well surface level issues. Researchers in the past (Hedgcock & Lefkowitz, 1994; Leki, 1991; Odeljo, 1993) have reported that students want comprehensive feedback that focused both on meaning and form related concerns. The writers in the present study not only perceived a need for feedback on global issues but also a need for issues pertaining to surface level features. It has been reported that Asian students are often the products of writing programs where the emphasis is on form rather than content (Lee, 1997; Sengupta, 1998). This could explain why some of the students in this study wanted feedback not only on global issues but on surface level features as well.

Previous L1 studies on students’ reactions to, or perception of, teacher’s comments (Bardine, 1999; Sommers, 1982; Straub, 1997) indicate college students paid little attention to teacher’s written comments that were not text-specific. However, the students in this study did take on board comments that were related to global issues on content, development and organization of their texts as well as comments that encompassed local issues such as grammar, spelling and vocabulary, and they revised their texts as a result of this teacher feedback. Perhaps they perceived that addressing global issues in conjunction with local errors is an important part of writing. This seems to support Montgomery and Baker’s (2007) study which reported that students placed significance on local errors. Perhaps feedback which addressed the general rules of mechanics for substantial revision helped participants to revise. The findings from this study also support those of Ferris’ (1997) study which reported feedback on grammar resulted in considerable changes across
the text. It seems that for students in this study, receiving feedback simultaneously on both
global and surface level issues helped them to revise and improve on their initial drafts
(Ashwell, 2000).

However, there appear to be some inconsistencies between the students’ thought processes
and the preferences that were stated in the questionnaire. Only Angel, Ben and Kelly stated
their preferences for comprehensive feedback addressing both global and surface level
features in their questionnaire survey. Their stated preferences are consistent with their
engagement with the teacher feedback which is evident in their think-aloud protocols. On
the other hand, five of the participants, Cindy, Roxy, Lena, Sham and Jean, stated in the
questionnaire survey their preferences for only global feedback as shown in Table 3. However, Roxy, Lena, Sham and Jean attended to feedback covering both global and
surface level features. This is at variance with their stated preferences indicated in the
questionnaire survey. Only one participant, Cindy (see p.104), who abstained from
attending to local feedback, was consistent with her stated preference for only global
feedback in the questionnaire. However, though her verbal protocols showed that she
ignored feedback that dealt with surface level features, her revised draft showed that she
did attend to local feedback in her rewrite. Perhaps she did notice feedback on local issues
but simply failed to voice this aloud, a matter which is discussed in section 5.2.2.

5.1.2 Receptiveness

An additional feature that was apparent among the participants in this study was their level
of receptiveness towards teacher feedback, an outcome which was inferred from the
questionnaire as well as from the verbal protocols. The participants were highly receptive
towards teacher feedback. Mature students are known to devote more effort and reflect
more than young writers (Kellogg, 1994). Probably, as the participants in this study were
mature, in-service teachers and pre-service teachers and were at an advanced level in their language proficiency, they were more receptive towards teacher feedback than younger students might have been. With the exception of two participants, Roxy (p.122) and Lena (p.129), who on two occasions indicated their reluctance to accept teacher feedback, all invariably accepted or acknowledged feedback. However, as is evident from the think-alouds, they did not merely accept teacher feedback blindly. They spent a considerable amount of time engaging with, evaluating and reflecting on feedback before they acknowledged, accepted or rejected the feedback given. Teacher feedback seemed to provide an intervention by giving them assistance to advance in their writing skills and the guidance necessary to accomplish their task.

5.1.3 Additional feedback support

In addition to the students’ stated preferences for teacher feedback, the questionnaire survey also indicated that, although written teacher feedback was the main source upon which all the students relied for revisions, the students in this study stated that they sought support and help from other available sources too such as one to one conferences with their lecturers, their peers and other resources such as the internet and publications. They indicated in the open-ended question that when they failed to understand feedback they sought to clarify it with their lecturer before they began their revisions. In addition, five of the students stated that they consulted with their peers about their written feedback before they commenced their rewrites. Yet another four of the students responded that they referred to dictionaries and other published articles to help them as they revised their initial drafts. While previous studies (Cohen, 1987; Cohen & Cavalcanti, 1990) have reported L2 student writers using a limited range of strategies for responding to and dealing with feedback, the findings of this study seem to indicate that students used a range of strategies in attending to feedback.
In summary, in this study the students expressed two preferences for teacher feedback. Firstly, they indicated their preferences for global level feedback addressing issues pertaining to content, the development of writing and organization and the use of expressions. Secondly, they indicated their preferences feedback on local/surface level features such as grammar, vocabulary, spelling and a correction of their errors. This corroborates data from the think-aloud protocols that showed that the students responded to both global and surface level feedback to polish and revise their drafts. In addition, it was also apparent that the students were highly receptive towards teacher feedback as most of the feedback was accepted and implemented in their revisions. The questionnaire data also indicated that the writers relied on sources in addition to written teacher feedback for improving their drafts. However, there is no concrete evidence to verify this claim and it lies beyond the limits of this study.

5.2 Students’ responses toward teacher feedback

To provide a clearer understanding of the relationship between writers’ engagement with teacher feedback and their revision process, the following sections highlight three main themes that emerged from the verbal protocol data: recursion, a relationship between think-aloud and noticing, and feedback as a social activity. It should be noted here that these themes should not be viewed as a sequence of individual components. Rather, the themes should be perceived as occurring repeatedly and concurrently throughout the writers’ attendance to teacher feedback.

5.2.1 Recursion

The first theme that emerged from the verbal protocol data is the recursiveness of attending to teacher feedback. In this study, recursion refers to the repetitive or cyclical movements of student writers as they moved repeatedly between teacher feedback, their essays and
their thoughts in no set order. In particular, evaluation, reformulation of language and ideas, and monitoring or self-regulation seemed to be evident.

What the participants of this study exhibited is consistent with the cognitive writing models of Hayes and Flower (1980), Bereiter and Scardamalia (1987), and Hayes (1996). Just as writing is a recursive process, attending to feedback is also a recursive process, a process in which writers constantly evaluate their ideas and their drafts with respect to teacher feedback and modify them during their think-aloud sessions. By recursively engaging with feedback, the participants of this study showed they had developed an understanding of the purpose of the feedback they received (Bailey & Vardi, 1999). The recursive process of attending to the feedback appeared to help them develop their understanding of the feedback; this was demonstrated when they successfully revised their essays, that is when they rewrote their revised drafts based on the feedback that was given. This research study therefore shows that revising is recursive as is the writing process, and as is modeled by Hayes and Flower (1980), Bereiter and Scardamalia (1987) and Hayes (1996) in their cognitive models of writing.

The thought processes of the student writers in this study seem to coincide with all the writing models mentioned above, in the sense that students revised their first drafts based on the feedback by moving repeatedly between feedback and their texts, by reading and evaluating teacher feedback and their essays. Other research has also shown that revising, like writing, is recursive in nature (Humes, 1983; Sommers, 1980). Numerous studies highlight the importance of the recursive feature that occurs with planning, composing, translating and reviewing (Faigley & Witte, 1981; Hayes & Flower, 1980). During the recursive stages, writers in this study revised their existing texts and re-envisioned their thoughts and ideas in the process of attending to teacher feedback.
5.2.1.1 Evaluation

One major aspect that was apparent as a result of recursion is the evaluation that the student writers placed on teacher feedback. Revision is “an activity of text reading or thought evaluation” (Almargot & Chanquoy, 2001, p.98) and students in this study engaged in reading their texts and assessing their thoughts repeatedly throughout their attendance to teacher feedback, before they actually accepted or rejected teacher feedback.

Ben, in case study two (p.102-103) for instance, represents how the writers in this study attended to teacher feedback in a recursive pattern leading to evaluation of the feedback. Ben constantly moved back and forth between teacher feedback and his text four times before accepting teacher feedback. Ben read teacher feedback first (RFB) and this reading prompted him to refer to his essay (REFE). Reviewing his essay induced Ben to refer back to teacher feedback again and read his essay (RE) again. These recursive movements between teacher feedback and essay led to Ben’s understanding and positive evaluation of teacher feedback. Ben accepted it by saying: *but instead of that I should have used signpost by saying the second factor that is increasingly recognized*. Ben then revised his first draft to include the changes suggested by the teacher. This succession of events, of reading teacher feedback, referring to his essay, reviewing feedback and reading his essay, suggests recursion that led to Ben’s comprehension and finally to revision.

These alternating movements between teacher feedback and texts seem to have helped the participants of this study identify and evaluate the issues highlighted in teacher feedback. This ultimately culminated in the students making corrections and making major changes to their revised drafts. By moving recursively between their texts and their feedback, writers were offered the opportunity to evaluate their initial drafts in light of teacher feedback, and revisit their written texts in an effort to further enhance their writing, striking
a balance between what they intend to say as writers and what is understood by readers, as indicated by teacher feedback. This will be addressed in more detail under ‘Monitoring and regulation’ (section 5.2.1.3).

5.2.1.2 Reformulation of language and ideas and revision

A second feature that is credited to recursion is the reformulation of ideas. As the writers moved recursively between teacher feedback and their written essays, they reformulated their ideas and revised their essays based on teacher feedback. The main focus of the cognitive theory of writing has been on the cognitive development of writers and their process of discovery in composing (Faigley, Cherry, Jolliffe, & Skinner, 1985; Johns, 1997), which is highly dependent on revision (Taylor, 1981). By providing formative feedback which enables writers to seek and discover meaning, teachers tap into developing writers’ basic desire to communicate and consider alternative ways of expressing their ideas. As writing is a generative process (Susser, 1994) of presenting and formulating, revision in the writing process represents this reformulation (Emig, 1971; Faigley & Witte, 1981; Hall, 1990; Sommers, 1980; Zamel, 1983).

All the student writers in this study seem to have constantly reformulated their writing, in both language and content, to produce better writing as they repeatedly moved between teacher feedback and their written texts. Reformulation of ideas seems to have stimulated more revisions as a whole and not just to reduce errors. This is similar to Raimes’ (1985) findings where a direct relationship between teacher feedback and participants’ attempts to generate more ideas was evident.

All the participants seem to have reformulated their ideas and revised as a result of teacher feedback. Their revised drafts show evidence that they made changes at global levels, as
expert writers do (Sharples, 1999), and that they attended to surface level errors as well. One example of where teacher feedback seems to have acted as a platform for students to reformulate language at the local level through surface changes is the case of Angel. Her thought processes (p.95-96) indicate that although teacher feedback was given implicitly, it nonetheless caused her to notice, and thus became aware of, a grammatical error which was merely underlined by her lecturer. This Angel voiced out aloud in the following manner: *How can I make such grammar mistake?* referring to the following sentence in her original essay: “*Parents that earn well are highly educated …*” Angel perceived the problem by drawing on her linguistic knowledge which culminated in her understanding and correction as is evident in the following protocol: *That for people? That is supposed to be used for things, not people.* This understanding which Angel demonstrated is revealed in her thought processes and the correction of the linguistic problem highlighted in her initial draft is evident in her revised draft which she corrected in this way: “*Naturally, parents who are highly educated…*”.

Another noticeable feature of the recursion process the students were involved in is that content and ideas were being reformulated as the students were thinking aloud. Engaging in externalization of their thoughts about feedback seems to have enhanced students’ awareness and led to reformulation of their existing ideas and revision of their first drafts. A case in point is Lena in case study six (p.127) who engaged with global feedback. In response to the teacher feedback: *So what is your argument here? Make it clear to your reader,* Lena moves recursively between her essay and the teacher feedback by reading and rereading aloud the teacher feedback section of her essay. These recursive movements seem to have led to her understanding and acceptance of feedback when she voices it aloud in this way: *Well, I realize that. It is not clear. I didn’t provide further elaboration to support this point. I realize that I should add in supporting points to strengthen my*
argument. These verbalizations show Lena realizing that her audience may not understand her point without evidence for it; it also shows that she can identify where she needs to add the support. An interpretation informed by SCT, however, would interpret this data as evidence of how the verbalizations of the think-aloud protocols seem to have assisted her to plan to globally reformulate her ideas, as evidenced in the following protocols: I will explain more on how a student’s life and training as a child influences his or her learning towards success in education. Maybe my arguments should focus more on this area. Will do that. Lena’s revised, second draft (discussed on p.125) shows evidence that she revised her draft to address the need for additional content, that she recognized as she thought aloud about the feedback.

Thus, teacher feedback seems to have acted as an intervention platform for the participants as they moved recursively between feedback and their written texts which led to reformulation of ideas and revisions. Their second drafts show evidence that the writers in this study have rewritten their essays, and this involved the generation and reformulation of ideas, as well as addition, deletion and editing to correct errors and inaccuracies based on teacher feedback.

5.2.1.3 Monitoring and regulation

A final noticeable facet of recursion is the monitoring or self-regulation (as it is used in cognitive approaches rather than sociocultural theory) that all the participants of this study engaged in. The most effective learners are self-regulating (Butler & Winne, 1995); self-regulation occurs where learners engage with tasks and take control of their writing and monitor their own progress so that “students become masters of their own learning process” (Zimmermann, 2001, p.1). Monitoring has a crucial role in the self-regulation process (Butler & Winne, 1995) as it enables writers to evaluate their progress towards
achieving their goals. As “a great part of the skill in writing is the ability to monitor and
direct one’s own composing process” (Hayes and Flower, 1980, p.39), the monitor (Hayes
and Flower, 1980) and the executive control (Bereiter & Scardamalia, 1986) are responsible
for the self-regulation processes of writers (Graham & Harris, 1997). This study suggests
that monitoring is deployed through recursion, as the writers moved recursively between
teacher feedback and their written texts. Using feedback as a platform, the students in this
study monitored the progress of their own writing by attending to topic knowledge, writing
plans and audience knowledge. They showed this as they alternated between reading the
feedback and their texts by evaluating and reformulating language and content in light of
their intended meanings with the intention of improving the quality of their texts
(Chanquoy, 2001).

However, monitoring and self-regulation are really opposite sides of the same coin. Just as
the “monitor” in the Hayes and Flower (1980) model of writing, the writers in this study
probably directed their movements from one writing process to another as they composed
and revised their texts. However, this study focuses on how the students responded to
teacher feedback. Teacher feedback seems to have prompted monitoring. This suggests
that students in this study did not regulate themselves on their own, but rather were socially
dependent on the teacher to help them regulate themselves. They monitored their actions
when they engaged with the teacher feedback. Evidence of students’ efforts to regulate
themselves is revealed in their verbal protocols. Their thought processes indicate that they
attended to teacher feedback, assessed, made decisions and revised. They showed that they
were capable of using various techniques of their own choosing to respond to teacher
feedback (Zimmerman, 1998) in addressing writing issues that were commented on in their
initial drafts. Angel (p.88), for example, outlined her plans for a better rewrite in lieu of
teacher feedback and implemented her plans in her revision. Due to feedback intervention,
Kelly (p.114) made the choice of linking her paragraphs in her revised draft and so made it more reader oriented. In the same vein, Roxy (p.120-121) took teacher feedback into consideration and summarized her stand on the argument she was making. The support provided by teacher feedback may have contributed to the development of self-regulation among the students of this study.

Cindy, of case study three (p.107-108), is an example of how recursively attending to feedback may lead to self-regulation. Cindy regulated herself through the process of recursively reading her feedback and her written text five times before understanding apparently set in. This suggests that the recursive movement between feedback and text was required to develop understanding, enabling her to monitor herself until that understanding occurred and she was able to move on to the next stage. This occurs when Cindy implies the teacher’s feedback is justified by giving reasons for her over generalization in her writing and indicates that she understood teacher feedback, in the following extract: *Yes, I know, these countries is very generalized. It’s over generalized. It is not specific at all and it has no literature to support it, to substantiate what I wrote.* Recursive engagement with the feedback led to understanding it, which led to her acceptance of it, and was then incorporated into her writing when she revised her initial draft. In this way feedback helped her monitor herself by forcing her to read and reread feedback and text in order to determine what the feedback meant and what precisely in her writing had warranted it.

Teacher feedback thus seems to have taken on the role of an intervention that prompted monitoring that determined when a writer moved from one stage of attending to feedback to another. In the process of self-regulating themselves, the participants in this study self-monitored themselves in order to ascertain that they met their writing goals and
expectations as they attended to teacher feedback and their texts recursively. This finally led the students to either accept feedback that they incorporated into their revisions or to reject the teacher feedback entirely.

In summary, the students in this study went through an extensive recursive process as they responded to teacher feedback. They did more than just plan on what to revise and how to revise. They interpreted and evaluated the teacher feedback, generated more ideas and made decisions about shaping their revisions by considering and reflecting on the issues that were highlighted in the teacher feedback. This process suggests that self-regulation may have been occurring as they talked themselves through the feedback, as they tried to reach an understanding of the problems highlighted in the feedback and the possible solutions. In a SCT perspective, this suggests that perhaps verbalizing their thoughts, in other words the think-aloud itself, played a role in the way they attended to feedback.

5.2.2 Relationship between think-aloud and noticing

So far this study has looked at the think-aloud protocol data from a cognitive or information-processing perspective. It has worked from the assumption that the protocols were a transparent representation of thinking while performing a task, as described in section 2.5 of the literature review.

The literature review, however, also pointed out that there was not universal agreement about the role of think-alouds, because the act of performing the think-aloud might affect performance on the task through latency, selectivity, or reactivity. This will be more fully addressed from a theoretical perspective in section 5.3. Briefly, however, from the cognitive perspective this argues against think-aloud protocol data as transparent, but from the sociocultural perspective this argues for think-aloud data as evidence of cognitive
change. In this study where there is no comparison group, it is not possible to state whether thinking aloud is more efficacious than not thinking aloud about feedback. However, it is possible to interpret the data from a sociocultural perspective, particularly as the data appears to offer evidence of several features that others working within sociocultural theory have also found. The following sections will examine the data from a sociocultural perspective.

First, thinking aloud about feedback seems to be related to noticing. For feedback to be helpful and valuable, it must be noticed by the recipients (Wigglesworth, 2005). Although Schmidt’s Noticing Hypothesis (2001) highlighted the necessity of noticing for language learning from a cognitive perspective, it has also been widely discussed from sociocultural perspective, where it has been specifically tied to the production of output (Swain, 1995; 2000) and specifically to the use of verbal protocols (2006). In their think alouds, it was evident that the writers in this study not only noticed feedback, but also noticed the gaps between their intended meaning and their audience’s (teacher’s) understanding (Swain, 1995). Swain describes noticing these gaps as the first function of output. In talking aloud and engaging with written feedback, writers seem to have become aware and conscious of the deficiencies in their initial written texts. Questions, comments and even mere indications of errors made them aware of the shortcomings that existed in their initial drafts, and they strived to address as much feedback as possible as they attended to feedback. Lena, mentioned earlier (see p.159; see also p.127), provides an example of this happening. She moves recursively between the feedback and the text, reading both aloud three times before she says, Well, I realize that. It is not clear. I didn’t provide further elaboration to support this point. I realize that I should add in supporting points to strengthen my argument. From the SCT viewpoint, it appears that the act of speaking aloud as she read and reread the feedback and her original text eventually helped her notice the
gap between her writing and her intended meaning. This is similar to past studies that used the think-aloud technique on L2 writing that have claimed output encourages noticing of problems among learners, who then engage in activities to solve these problems (Cumming, 1990; Qi, 1998; Swain & Lapkin, 1995). The think-aloud protocols as well as the revised drafts revealed that the writers of this study attended to the gaps that were present in their initial drafts and revised their writing based on the concerns that were brought up in teacher feedback. Perhaps, verbalizing aloud could have led to, or caused, some of the noticing that took place among the participants of this study (Qi and Lapkin, 2001).

However, contrary to the above observation, some participants noticed the feedback that was given and just glossed over it; they did not incorporate it into their revised drafts. On the other hand, some of the participants’ verbal protocols revealed that they simply did not voice aloud that they noticed the feedback; they nevertheless attended to the feedback as is evident in their revised drafts (although this could have occurred at a later point, after the think-alouds). The indication is that there was an intake of feedback. An example of this occurrence is Cindy in case study three (p.110) Even though surface level errors were underlined by her lecturer in her initial draft, Cindy’s think-aloud did not reveal that Cindy noticed any of those particular surface error indications. Cindy’s verbal protocols only indicated that she attended to feedback that addressed global issues. This is consistent with Cindy’s stated preference for teacher feedback which addressed global issues only such as content, organization, development of writing and use of expressions. However, her revised draft indicates that, contrary to Cindy’s verbal protocols which did not display her verbalizing about any of the surface level errors that were addressed in teacher feedback, Cindy incorporated them in her revision. Her revised draft may be evidence that there was an uptake of feedback by Cindy when she revised her essay.
This corresponds to Sachs and Polio’s (2007) study where they found that the participants in their study corrected even when they failed to notice. However, one other plausible reason might be that participants in the present study could have been aware of the feedback given and noticed it, but they simply failed to verbalize their noticing of feedback issues in their think-alouds. However, it must be acknowledged that a time gap existed between students attending to teacher feedback and students revising their first drafts. This lapse of time may have provided the opportunity for students to notice gaps that they may have failed to notice when they first attended to teacher feedback and also verbalized at that time. They may also have noticed them as they revised. Thus, noticing could have resulted in successive changes and revisions in their revised drafts, although their noticing was not made explicit in their verbal protocols.

Another possible reason why participants sometimes did not show any evidence of noticing feedback is that the participants could have been engaged in hypotheses testing, the second function of output (Swain, 1995). The think-aloud data shows that the participants did not engage themselves in all the feedback that was given to them, but rather attended to a selective few comments. Their verbal protocols certainly indicate that they were rather selective of the feedback that they attended to which implies that they were “only testing out some things and not others” (Swain, 1995, p.131) and that their think-alouds are indications of what they were planning to attend to (Swain, 1995) in their revisions at the time of the think-aloud.

There is also a third function of output, the metalinguistic or reflective function (Swain, 1995). This occurred frequently in the think-aloud data. For instance, thinking aloud seems to have prompted Ben to draw on his prior knowledge of signposting (see p.102 and p.157) and Angel to remember a grammar rule (see p.95 and p.159), demonstrating the
metalinguistic function through the use of metalinguistic language. This third function of output can be a more general kind of reflecting on language without the use of metalinguistic language. A case in point to illustrate the process of self-reflection that the participants of this study adopted at various stages while attending to teacher feedback is that of Sham in case study seven. Sham’s thought processes (p.133-134) indicate that teacher feedback acted as an intervention platform which gave her the space and opportunity for her to self-reflect on the feedback that was given and at the same time generate new ideas and approaches that she could adopt in her revision. Sham tried to make sense of the teacher feedback “structure your argument” by reflecting on the approach to be taken in this way: Ok, how am I going to structure my arguments? Sham’s self-reflection seems to have led to her understanding of teacher feedback which seems to have prompted her to generate plans for her rewrite. This is evident in the following extract which captures her planning that took into consideration teacher feedback: So basically the argument for this piece of writing is the question itself and my four points, ok. That means I talk about factors influencing a child in his growing up process, that can be my stand. Thinking-aloud is a form of output and here, as with other output, it appears to have generated metalinguistic verbalizations that Swain (1995) has identified.

Teacher feedback on the initial drafts of the participants of this study acted as an intervention platform that created a means by which the writers could construct meaning of the feedback, which then ensured the discovery of bigger ideas that they could pursue with the intention of developing their writing. In line with Hyland and Hyland’s (2006a) observation that students should be actively engaged in the feedback process, participants of the present study took an active role to make sense of teacher feedback. They pursued teacher feedback with further thinking and rethinking, reading and rereading which not only led to them noticing the disparities between teacher feedback and their texts but also
to addressing these disparities by drawing on prior knowledge (Ben, p.102), creating new meanings (Lena, p.126), discovering new ideas (Sham, p.133-134), remembering grammar rules (Angel, p.98) and eventually to substantively revising.

In sum, written teacher feedback given to the participants in this study did promote improvement in writing among the writers and this is evident in the well revised second drafts. It can be said that there is a relationship between noticing feedback and improvement in their subsequent writing (Mackey, 2006).

5.2.3 Feedback as a social activity

One aspect of how feedback is attended to by writers is that it is socially constructed between the participants and their lecturer. Though proponents of cognitive theory claim that interactions with another individual could be controlled or removed (Ericsson & Simon, 1993), written response is a social activity (Nystrand, 1989). Hayes (1996) believes that, as writing is increasingly being defined as a communicative act, it needs a social context. Hayes’ (1996) model of writing reflects this current thinking that encompasses the task environment, which includes a social environment (the audience and other texts that a writer may encounter, as well as collaborators, such as teachers and peers) and a physical environment which takes into account the text a writer has produced so far and the writing medium. Thus, there is a provision in the cognitive writing model for writing to be viewed as a social interaction between the reader and the writer in a social context. However, a stronger claim is possible.

Smagorinsky (1998, 2001) and others working from a sociocultural perspective such as that of cultural-historical activity theory, on the other hand, suggest that verbal protocol data is not only socially contextualized, but is socially constructed as well. From the socio-
cultural perspective, interaction and dialogue promotes cognitive development. In the context of writing for the audience of their teacher, who in turn provided feedback to which the students responded through a revised draft, a kind of written dialogue occurred. Thinking aloud contributed to this sense of dialogue. It is through this dialogical activity that the participants tried to develop their arguments and reasoning for deciding about accepting or rejecting teacher feedback. In this way it acted as a pedagogical and social tool as the students engaged with feedback communicatively in the absence of the lecturer by trying to make sense of the feedback that was given in order to learn how to write better. It also appears to confirm the role of externalization in internalization, as verbalizations become an “objective product that can be explored further by the speaker or others” (Swain, 2000, p.102). Each of these will be discussed below.

5.2.3.1 Dialogical activity

The participants attended to feedback by engaging in dialogical activity. It has been suggested that cognition and knowledge are dialogically constructed (Vygotsky, 1997) and can arise in any language learning activity (Swain, Brooks, & Tocalli-Beler, 2002). In this study, revising texts with the guidance of teacher feedback inevitably involved dialogical activity between the feedback giver and the writer. What was needed for learning to occur was the presence of an expert (Vygotsky, 1986), in the form of their lecturer, to help them develop their writing by offering written comments to which the learners respond.

Kelly in case study four (see p.113) is an example of writers who engaged in dialogical activity which led to further revisions. The teacher’s feedback, which was directly addressed to Kelly, led her to respond directly. She did this by explaining aloud what the feedback meant, as if it were a confirmation check of the feedback in a conversation. She then provides references to her original text and how she could revise it. Her
acknowledgement of her teacher’s comments shows that communicating with her feedback-giver even though he was not physically present brought about Kelly’s engagement with teacher feedback and her acceptance of it which she took into consideration when she revised. Like Kelly, all the participants in the present study interacted with their teacher by responding to the teacher’s feedback. They negotiated and made decisions on feedback, and made changes to their writing by engaging in dialogical interaction with their absent interlocutor.

In this way, engaging with feedback as dialogical activity and communicative tool acted as both an environmental and a pedagogical tool (Beason, 1993) for communication on a personal level. Most of the comments given to all the writers on their first drafts were informal and dialogical in nature. The feedback giver addressed the participants personally and gave an overview of the changes that they could attempt in lieu of content, organization and presentation. It appears that the writers were more comfortable and better able to ‘communicate’ with feedback that was dialogical in nature. The verbal protocols and the writers’ revised drafts show that the writers responded to feedback by engaging in a dialogue session with their absent feedback giver, and revised substantially based on this type of dialogical feedback. They spent a considerable time engaging with feedback that was dialogical in nature in comparison to feedback that was a mere indication or marking of errors or underlining of phrases or sentences on their texts.

For example, the feedback that Sham attended to (p.133): These are indeed valid points. However I wonder if you could revise this paper to be an argumentative academic paper? was dialogical in nature being addressed her as the writer and her abilities, and it gave an opportunity for Sham to engage extensively with the feedback. As a result of this oral-like feedback, she had an on-going dialogue with her absent lecturer when she replied, Yap,
surely I will. I will try my best. Sham then proceeded by explaining her reasons for not producing an argumentative essay in the first place. Her lengthy engagement in the dialogical activity with her lecturer finally culminated in Sham’s understanding of teacher feedback and her acceptance of it. The final outcome of Sham’s communication with her feedback provider is a thoroughly revised second draft.

Just like Sham, all the other writers in this study moved back and forth constantly between teacher feedback and their texts, communicating with their lecturer as they tried to comprehend the feedback and find solutions for the issues that were commented on in the feedback before attending to the next feedback. Thus, participants in this study produced successful revisions on their second draft by making necessary changes guided by teacher feedback, which matches with Straub’s (2000) findings, and his report that students responded more positively to written feedback when it was informal and oral in nature. The thought processes of all the writers in this study indicate that all the participants engaged actively by ‘communicating’ actively and negotiating with their absent feedback givers by understanding, weighing, evaluating and justifying the feedback that was given before accepting or rejecting that feedback. This engagement in the process seems to have worked out successfully for the writers.

5.2.3.2 Feedback as a tool for externalization and internalization

Dialogical activity based on feedback appears to be a tool for internalization. Revision, seen from the perspective of a dialogical activity, allowed the writers to focus on the ‘conversation’ with the lecturers in the form of feedback and responses that helped them to internalize feedback. To make sense of their own writing, writers actively attended to their writing by engaging with teacher feedback. They reconsidered, reformulated, and reorganized their original texts which at a later date brought about improved revised texts
which were audience targeted. In doing this they externalized their thoughts. Their think-alouds are an externalization of their engagement with the feedback as a dialogical activity, with the feedback enabling the essays to be treated as objects to be considered. The participants externalized the feedback by taking on the role of their absent lecturer by reading the feedback aloud, to which they then responded, again by externalizing their responses by voicing their thoughts. A SCT view would suggest that it is this voicing of thought as they recursively moved between feedback and text that seems to have led to understanding, evaluation, and revision. Evidence of internalization is more difficult to find as this is not a longitudinal study, but the revisions may indicate that the process of internalization was underway. As the process of internalization is supported by speech (Lantolf, 2000), the think-aloud protocols may have provided the means for the participants to attend to and internalize the meaning of feedback. This was then re-externalized in the form of revised end products of the participants. Jean in case study eight (p.142) may be one example of a student involved in this process. She had a dialogue with her imaginary interlocutor which was externalized in her protocols which possibly shows how internalization occurred. Jean read the following teacher feedback: Please make your stand clear. Identify your main points and structure your argument which prompted the following externalizations: I guess I have to structure back the sentences. There’s nothing much I can say. Well, I am really disappointed in my own writing. I have to read the question over and over again, and I just have to make my stand clear. I just have to write in a way that is not confusing for him as well as for me. Jean’s externalizations of her thoughts finally ended in her internalization of the meaning of feedback which is exhibited in the following verbalization: Oh dear! I guess having ideas alone in my mind is not enough, I need to provide more details, not only through personal experience and what I feel that is important, but write my ideas clearly as well. The process of internalization as a result of thinking aloud is manifested through her words when she expresses her realization
that, for her, ‘make your stand clear’ means providing more details clearly in the revised
draft, where there is evidence that the ideas she apparently had ‘alone in my mind’ are
written out (see p.143).

5.2.4 Summary

The participants’ interaction with their lecturer highlights the importance of teacher
feedback: it acted as a platform for interaction from which ensuing activities that the
participants engaged in took off. The think-aloud protocols arising from teacher feedback
are a means by which meaning is produced in cognitive perspective (Smagorinsky, 2001)
or restructured in sociocultural perspective (Swain, 2006) as a result of interaction between
writers and readers (Vygotsky, 1986).

Teacher feedback in this study was the focal point for interaction between students and the
lecturer. Moreover, it was socially constructed and acted as a channel for communication
for students with their lecturer. The dialogical interaction which the participants initiated
with their absent lecturer guided and helped them reformulate ideas and to rethink and
rewrite what they wanted to say to their audience. The verbal protocols symbolized a
dialogical interaction between the lecturer and the writer. In this context, the writer
communicates with the feedback giver in arriving at an understanding and coming to terms
with the feedback given as is evident in Jean’s interaction with her lecturer as described in
section 5.2.3.2 (p.172). The writer goes through a whole process of thinking-aloud on a
particular feedback before internalization, stemming from the dialogical interaction, sets in
for revision to take place. Revision in this context occurs as a result of these interactive
actions by the writer and the reader through feedback.
As the aim of the written feedback was to “intervene” (Emig, 1967, p.128), it acted as an intervention platform that encouraged students to rework and rewrite their texts; feedback was acting as an intervention platform that culminated in a better developed text. Participants were able to see what was lacking (Johnson, 1988) in their initial drafts as a result of written teacher feedback, and they took steps to find solutions to address the issues that were highlighted in the feedback. Thus, while negotiating and evaluating, the writers were pushed to produce a better piece of writing. Perhaps the different ways they engaged in feedback made it possible for writers of this study to negotiate feedback and promote development in their writing (Mackey, Gass, & McDonough, 2000); there was opportunity for collaboration and intervention from the lecturer as well as peers as writers negotiated for meaning (Reid, 1994; Susser, 1994) that led to revisions.

5.3 Reactivity

It should be recalled that the major source of data for this study are the verbal protocols. A major concern that has been raised in the literature about using the think-aloud technique is the issue of reactivity. In the think-aloud methodology, writers have to do two tasks simultaneously, that is they need to verbalize their thoughts as they attend to another task. It has been suggested that performing dual tasks concurrently raises the issue of reactivity. This section will examine this study in light of this debate.

The think-aloud technique is a process where information about learners’ cognitive processes are collected as they perform the dual tasks of verbalizing their thoughts and attending to a particular task simultaneously. Verbal protocols obtained via this method are used as a source of information in various fields (Bowles & Leow, 2005; Branch, 2001; Camps, 2003) because the protocols provide a “dramatic increase in the amount of behavior that can be observed when a subject is performing a task while thinking aloud.
compare to the same subject working under silent conditions” (Ericsson & Simon, 1993, p.xiii). From the purely cognitive view, Ericsson and Simon’s (1984, 1993) Information Processing model has been an accepted model for collecting verbal protocols, which are true representations of an individual’s thought processes. However, other researchers (Witte & Cherry, 1994; Smagorinsky, 1998, 2001) argue that cognition cannot be segregated from the social domain as verbal protocols and thinking processes are not merely representation of one’s cognitive processes but are socially constructed as well (Pressley & Afflerbach, 1995).

The protocol data collected in the present study cannot be viewed solely from the cognitive approach alone. My data shows that reactivity was present in the verbal protocols of the student writers as they attended to teacher feedback. However, there is more than one way to look at the issue of reactivity. In the following section, I discuss reactivity as viewed from the cognitive and the sociocultural perspectives.

5.3.1 Reactivity from the cognitive and sociocultural perspectives

One major criticism levied at think-aloud protocols is the issue of reactivity where, as a result of thinking aloud, participants’ cognitive processes are affected. Though the issue of reactivity in think-aloud protocols has been highlighted on many occasions (Jourdenais, 2001; Smagorinsky, 2001), empirical studies on think-aloud protocols (Bowles, 2008; Bowles & Leow, 2005; Leow & Morgan-Short, 2004; Levy & Ransdell, 1995; Ransdell, 1995; Stratman and Hamp-Lyons, 1994) negate the methodological issue of reactivity. Contrary to these empirical studies, two other studies (Sachs & Polio, 2007; Sanz, et al. 2009), show the presence of reactivity in verbalizations. This is similar to my study here which shows evidence that the protocol data exhibits indications of reactivity where the participants provided metalinguistic explanations, interacted and engaged in dialogical
activity that is socially oriented, and were selective of the information they reported on. Reactivity also operated as a launching pad for the participants to kick-start their revisions.

5.3.1.1 Metalinguistic verbalizations

In this study, reactivity set in when writers performed the dual tasks of attending to feedback and thinking aloud concurrently as they engaged in metalinguistic verbalizations. Metalinguistic verbalizations refer to verbalizations that require one to vocalize explicit information about a specific subject matter (Bowles & Leow, 2005). The student writers in this study did not merely articulate their thought processes as they unfolded in their minds while executing their task, they also explained, searched for reasons and interpreted their behavior as they attended to feedback and verbalized at the same time. This falls in line with the findings of previous studies reporting that explaining or interpreting an individual’s behavior while performing a task most likely affects the cognitive processes (Pressley & Afflerbach, 1995). The participants in this study failed to report only on their thought sequences as requested; instead they gave a metalinguistic account for their behaviors when they attended to feedback even though they were not asked to provide any explanations or clarifications as they engaged in their tasks.

A significant point to be noted here is that, in responding to teacher feedback, all the participants in this study invariably resorted to giving reasons and explanations for their actions and for what they produced in their initial drafts. The participants thus were engaged in conscious reflection (Swain, 1995) to experiment with how something should be constructed or written. As a result of this conscious metalinguistic engagement with teacher feedback, they were able to draw on their prior knowledge and co-construct new knowledge based on teacher feedback which is evident via their think-aloud protocols. For example, Roxy in case study five (p.120-121) engaged in a metalinguistic explanation in
response to the following teacher feedback: _So what are you saying? Please refer to the question. Have you answered the question?_ Roxy engaged in a metalinguistic explanation in the following manner: _Well in my summary I probably have not answered the question_. Talking aloud could have caused Roxy to become aware of the intention of the feedback and draw on her prior knowledge as she gives further explanation to the feedback. She posed it in this way: _I don’t actually summarize for the audience what I have written. I was going to. In this essay I didn’t write anything about the curriculum or anything about the education program because I thought it was just a short essay_ and then she outlines her plans for revision in response to the teacher feedback. Thus, engaging in metalinguistic talk by providing an explanation for one’s behavior while attending to another task could have triggered reactivity in this study.

### 5.3.1.2 Social orientation

A second issue of reactivity that emerged in this study is that the participants exhibited social orientation towards their lecturer as is apparent in their verbal protocols. However, an alternative view to embrace this issue of reactivity in think-aloud protocols comes from the socio-cultural aspect which argues that speech does not occur in isolation but in a social context where thoughts are mediated by speech (Smagorinsky, 2001). What is viewed as an issue of reactivity from the cognitive aspect can be viewed as evidence of development from the socio-cultural aspect.

Verbal protocols procured from this study show evidence of being constructed both socially and interactively. The participants’ verbal protocols provide evidence that they were addressing their feedback giver and at the same time having a dialogue with him even though he was physically absent. The think-aloud protocols viewed from the status of the social construct show evidence that the participants in this study treated their think-alouds
as a means of interaction with their lecturer. They had an on-going dialogue with the teacher feedback, and were socially inclined as they addressed the feedback giver in their processes of responding, evaluating and making decisions with regards to teacher written feedback which culminated in extensively revised drafts. An extended example displaying the social inclination of the participants towards their lecturer in this study is Roxy of case study five (p.122) where she questions her lecturer in this way: “why did you cancel ‘of a’ in ‘one of a major factor’ in my essay?” As Smagorinsky (1998) argues, any type of communication that “implies a link to other people” (p. 167) is socially grounded. This finding runs parallel to Smagorinsky’s (1997) study where the participant in his study, Doug, recurrently addressed the researcher and was socially oriented. In the same vein of social orientation was Sasaki’s (2003) study, about which he reported that the verbal reports in his study revealed his participants’ social orientation towards the researcher when they made use of polite social markers to address the researcher either directly or indirectly. Verbal protocols in this study here, then, cannot be construed as wholly transparent representations of cognitions because they do not contain only the writers’ thought process but contain dialogical activity that is socially oriented towards the lecturer ‘in absentia’ as well. Thus, students’ cognitive processes are not wholly cognitive in nature but are linked to social and cultural factors (Smagorinsky, 2001). It is this connection that gives rise to the issue of reactivity in their verbal protocols.

5.3.1.3 Selectivity of information

A third factor which contributed to reactivity in the participants’ think-aloud protocols is their selectivity in attending to feedback. Contrary to the instructions given to them that they were to attend to the entire teacher feedback on their initial drafts, and verbalize all their thoughts, all the participants invariably failed to comply. Their protocols show that participants selected only some feedback and ignored the rest. Though this coincides with
Swain’s (1995) hypothesis testing where they select only feedback that they intend to attend to, it however brought about opportunities for participants to be selective about the information they wanted to report on.

All the student writers in this study unfailingly made selections as to which feedback details they attended to. Their verbal protocols indicate that they selected certain feedback to think aloud on (Sasaki, 2003) while information regarding their thoughts on the rest of the feedback remains unattainable. One plausible reason for the student writers to have selected specific feedback to attend to could be that they simply ignored what they were already aware of. For example, a comparison of teacher feedback on their initial drafts and their verbal protocols indicates that minor mechanical corrections such as spelling and punctuation were ignored, not attended to. Perhaps teacher feedback on surface features did not occasion the need for a dialogical response and thus were not attended to. There may be other reasons as well why the student writers selected some feedback to think-aloud on and omitted a selected few; however, there is not enough data on this matter in the present study to make any inferences or deductions.

5.3.1.4 Launching pad

Reactivity to the think-aloud method acted as a launching pad for the writers before they commenced doing their actual revisions. In this study participants were only attending to feedback and thinking aloud as a form of preliminary induction to revision, before they launched into the actual task of revising their initial drafts. Thinking aloud helped the students to prepare for their task of revising. Hence, even if reactivity was present when the participants attended to feedback and verbalized their thoughts concurrently, it did not in any way affect their writing as they did not verbalize their thoughts when they actually carried out their revisions. They did not think aloud as they revised their texts so there did
not exist any possibility for reactivity to set in on the writing task itself. Rather, in this study, thinking-aloud about teacher feedback before the commencement of their actual revision seems to have turned out to be an advantage for the participants because they were thinking aloud about teacher feedback outside the parameters of their writing task; this did not affect their writing by slowing them down or overloading them cognitively (Pressley & Afflerbach, 1995) nor did the thinking aloud change their thought processes (Wigglesworth, 2005) as they rewrote. However, there is some evidence to suggest that a SCT interpretation would indicate that verbalizing their thoughts before writing helped them to clarify and understand the teacher feedback, and also helped them generate ideas and plans which were later incorporated in their revisions.

5.4 Summary

Despite the censure aimed at verbal protocols, and the possibility that think-aloud protocols may not be an accurate representations of writers’ thought processes (Jourdenais, 2001), it was still a useful tool for gathering data from which to make inferences about writers’ thought processes as they attended to teacher feedback. As the student writers in this study reported on what they were aware of, these verbal reports seem to have provided the “clearest evidence that something has exceeded the subjective threshold and been consciously perceived or noticed (Schmidt, 2001, p.20), they providing insights into their thought processes. Talking aloud as they were processing teacher feedback may have contributed to the participants noticing the disparities that were addressed in teacher feedback, and led them to engage with teacher feedback to the extent that produced revisions of a higher quality compared to the participants’ initial drafts. In addition, verbalizing their thoughts quite possibly presented them with more opportunities to analyze and find solutions to the writing problems that were highlighted in their feedback, so resulting in substantively revised drafts.
Their recursive movements between their feedback and their written texts certainly may have led to their development as writers. This development is clearly demonstrated where appropriate revisions have been made in their revised drafts. However, it cannot be assumed that the student writers in this study have developed as writers as a result of teacher feedback on their initial drafts alone. If what the students have learnt and acquired can be sustained in their future drafts without any need for teacher feedback, then there is a possibility they have internalized what they have learned from attending to the feedback, and there would be grounds for saying that development has definitely occurred in these students as writers.

Though the think-aloud protocols in this study are not an absolute representation of the cognitive domain alone encompassing, as they do, the social and interactive domain as well, the think-aloud technique is still an effective method for investigating the cognitive processes of learners and can be used as an instrument to explore how speaking mediates thought (Smagorinsky, 2001). Clearly, this study falls within the parameters of both the cognitive and sociocultural approaches.
CHAPTER SIX
CONCLUSION

6.0 Overview of chapter

The main aim of this study was to identify and understand the thought processes of student writers as they attended to written teacher feedback, and gain an understanding of how these processes affected the students’ writing. This was achieved by analyzing the information provided in the students’ verbal protocols and comparing this data with what appeared in the students’ written drafts. The findings showed that students engaged in types of activities generally regarded as selective and reactive in think-aloud protocols, suggesting that a sociocultural perspective might better account for the data than the information processing perspective in which this thesis was initially situated.

Throughout the discussion in Chapter Five, I focused on what students preferred in teacher feedback, what they did with teacher feedback, and how they responded to teacher feedback. In this chapter, I will first restate the research questions and briefly provide answers for them using the results of the data analysis. I will then discuss the limitations, pedagogical implications and theoretical implications that are associated with from this study. Finally, I will provide some suggestions for future research.

6.1 Research questions

Question 1: What are students’ stated preferences for teacher feedback?

Based on their responses to the questionnaire survey, students in this study viewed teacher feedback positively. While some students indicated that they preferred their lecturers to comment only on global issues on their initial drafts, others indicated their preference for comprehensive feedback addressing both global and surface level features.
**Question 2: Do students attend to teacher feedback? If so, how?**

The evidence from this study shows that students do attend to teacher feedback. Teacher feedback in the context of this study served as a platform for the writers to recursively visit their texts. The students engaged in reading teacher feedback, reading their texts, evaluating feedback and their written texts, rereading teacher feedback and revisiting their texts and finding solutions to the problems raised in teacher feedback before they finally accepted or rejected the feedback. This cyclical movement of student writers between teacher feedback and their written texts seems to have helped them understand the teacher’s comments.

**Question 3: Do students make use of teacher feedback? If so, how?**

Students do make use of teacher feedback in their revisions. However, in this study it was evident that how students attended to teacher feedback and made use of it in their revisions varied. First, when students attended to teacher feedback they indicated the changes that they were going to make in their revisions. These indications were seen in the verbal protocols and in their revised drafts. Secondly, although students’ verbalizations revealed that they engaged with the teacher feedback they received and indicated their intention of incorporating the feedback into their subsequent revision, their revised drafts showed evidence that the teacher feedback was not always taken into consideration. Thirdly, in some cases, it was apparent that students’ verbal protocols did not demonstrate any engagement with some of the feedback. Their revised drafts, however, showed that some of the teacher feedback that students made no mention of engaging with was in fact attended to and was incorporated in their revisions. Finally, the students’ think-alouds revealed that some feedback was entirely ignored by the students as they engaged with their teacher feedback. In this respect the think-alouds were consistent with the students’ revised drafts; they showed that feedback that was ignored was not incorporated into their
revisions. Nonetheless, although students attended to teacher feedback in various ways, all the students revised their drafts using at least some of the written comments indicating that feedback was a key factor in modifying their originals in their rewrites.

In this study, teacher feedback seems to have played a major and constructive role in students’ revision, perhaps because teacher feedback is the major source of explicit input (James & Garret, 1990) for these students. In this study the revised drafts of the students indicated that students made use of teacher feedback given on their initial drafts to revise extensively.

6.2 Limitations of the study

There is a paucity of research on the thought process of ESL students as they attend to feedback. This study was exploratory in nature, and has given insights into how ESL students in this study responded to teacher feedback and by so doing so enhanced their writing in the revision. However, when generalizing from the results of this study, the limitations of the study need to be considered. The limitations arose from the methodology of the study, the interpretation of the data and the selection of the participants.

6.2.1 Methodology

Three factors contributed methodological limitations at different stages of the study. They are the students’ voluntary participation in the study, the technique of thinking aloud while attending to feedback and the students’ self-reporting on the questionnaire.

6.2.1.1 Volunteering

A first limitation from the methodological aspect is the voluntary participation of the students. The writing that the participants of this study did was not part of any formal
academic assignment. They volunteered for this research. Writing for the research could have been a novelty for the participants as they wrote under artificial conditions in a novel way. It is not the norm for the students to record their think-alouds as they attend to teacher feedback and rewrite a second draft based on teacher comments. Thus, it is difficult to determine if the participants wrote their drafts as they normally would have written an academic essay; they could have taken extra care to produce essays they felt were worthy of the research in which they played a significant role.

### 6.2.1.2 Thinking aloud

A second limitation from the methodological viewpoint is the technique of thinking aloud. The participants were asked to think-aloud only enunciating what came to their minds as they engaged themselves in the feedback. My data, however, reveals that their think-alouds were not a completely accurate report of cognitive processes. It was evident that the participants selected particular feedback to verbalize about and left the remainder of the information unattainable for analysis. In addition, while they failed to report only on thoughts that came to their minds, they did however, show social orientations by engaging in dialogical activities with their feedback giver, engaging in metalinguistic talk, and selecting particular feedback to report on, and this gave rise to issues of reactivity. Verbal protocols are said to be reactive when talking aloud alters the main thought process so that it brings about changes to the end result of that process (Sanz, et al., 2009).

In this study reactivity as a result of metalinguistic talk, selection of information and the participants’ social orientation towards their lecturer had an impact on the analysis itself. Thus, another limitation might have been the use on only one teacher in this study. Perhaps future research could investigate if ESL writers respond differently and engage in different thought processes when they attend to different teachers’ comments. When designing a
study such as this, one has to take into account the socio-cultural and interactive aspect when one attends to a task which exhibits inclinations that are socially orientated. As Sasaki (2003), who did a study on L2 writers points out, collecting verbal protocol data as a purely cognitive product does not completely reveal what is actually represented. Initially this study assumed, in light of the literature reviewed, that verbal protocols could provide direct access to thoughts. However, analysis of the verbal protocols showed that this was not the case. The discrepancy may be due to a variety of factors such as the literature, which was not mostly about L2 writers and the type of participants that took part in this study. As verbalizations are constructed cognitively, socially and interactively, these aspects have to be taken into consideration when the methodology of a study is being determined. This in turn accentuates the fact that the think-aloud data need to be analyzed from both the cognitive and socio-cultural perspectives. One needs to acknowledge that verbal protocols are not purely products of cognition alone but are products of social activities that need to be interpreted “based not only on what is produced but also on how it is produced” (Sasaki, 2003, p.33).

6.2.1.3 Questionnaire

The third methodological limitation is linked to the questionnaires. This study made use of a self report questionnaire to survey students’ preferences for teacher feedback. The questionnaire, however, may have limitations as a source of data. Firstly, there is no definite assurance that the questionnaire was answered truthfully by the students. Secondly, there is a possibility that the questions may have been interpreted differently by the students from what was intended, and thus the students may have provided inaccurate responses.
6.2.2 Interpretation of data

The second limitation of this study relates to the nature of the data itself. As the data collected for qualitative analysis was voluminous in nature, it had to be reduced so that it was easily understood and interpreted, and then themes and categories were inferred (Berg, 2007). In attempting to manage the large volume of data from the think-aloud protocols, the questionnaire survey responses and the written drafts, I may have under-represented some data.

6.2.3 Selection of participants

A third limitation from the methodological perspective is in the selection of participants. Selection of participants is a concern in many research studies (Hayes, Flower, Schriver, Stratman, & Carey, 1987). In this study, a full set of data could only be procured from eight out of an initially selected fifteen participants. In addition, all the participants involved were postgraduate students of Asian background. Perhaps working with a larger number of students at different levels and of different nationalities might have produced a different set of results.

All the participants in my study were postgraduate students who were pre-service and in-service teachers from the same university. Because they are teachers, their motivation to enhance their writing skills and revise their drafts is more than likely to be different from other students. Thus, the way in which students responded to teacher feedback and stated their preferences for teacher feedback may not be appropriate for generalization to students of other courses or levels of education. There is also a possibility that the participants in this study, because they are mature students and proficient in their second language, may have adapted to the technique of thinking aloud more easily than a wider student
population and may have been more receptive towards teacher feedback and considered feedback as an aid to further improve their writing.

However, despite the limitations discussed above, the insights gained from this study as to how students respond to teacher feedback can be applied to other language classrooms where written teacher feedback is used as a platform of intervention to aid students in developing their writing abilities and to encourage revision in response to teacher feedback.

6.3 Pedagogical implications

As this study is exploratory in nature and focused only on eight individual case studies, the opportunity for drawing broad implications for practice is limited. Even so, three pedagogical implications emerge from the findings of this study. The first involves the positive way in which students respond to teacher feedback. The second implication concerns the usefulness of teacher feedback as a pedagogical implement in the development of students as writers. The third implication relates to the think-aloud technique as a pedagogical tool for use as an aid for students wanting to enhance their engagement with teacher feedback in the writing process.

In regard to the first, it is evident in this study that the students responded positively to their teacher feedback. All the students seemed to have a keen interest in responding to the teacher feedback. Though they departed from the normal way of attending to teacher feedback, and had to think-aloud as they responded to it, thinking aloud prior to the actual revision taking place seems to have assisted them in their revisions. Their verbal protocols and revised second drafts support this interpretation. All the students diligently attended to most of the written comments made regarding their initial drafts. Although their verbal
protocols indicated that they primarily attended to feedback that addressed issues such as content, organization and structure, the participants did also attend to surface level features such as grammar, spelling and vocabulary sometimes even if in a restricted way. Their second drafts showed evidence that teacher feedback was taken into consideration when the students did their revision based on their lecturer’s written comments on their initial drafts. Thus, it can be said that teacher feedback seems to be useful as an aid for student writers to use in the development of their writing.

The second pedagogical implication is that teacher feedback is a valuable tool in the writing process. Here, it helped students to regulate themselves. Feedback as input helped the students to monitor themselves as they attended to teacher feedback. Secondly, the teacher feedback also took on the role of an intervention platform that helped the writers of this study to evaluate their own writing and make changes to their initial drafts in the absence of their teacher. Feedback as an interaction platform helped them to engage in activities such as asking questions, weighing up different options and evaluating teacher comments. These activities helped them to understand what was meant in the teacher feedback and prompted the writers to search for ways to solve the disparities between what was being asked for and what they had provided in their writing. Giving feedback is a valuable way of ensuring that writers are given the “push” to further enhance and develop their writing skills because it is a means whereby they are presented with opportunities to evaluate and make their own decisions about their writing. Thus, feedback, when viewed in conjunction with thinking-aloud as a self-monitoring mechanism and as an intervention platform, may prove to be a valuable tool for developing the writing skills of students.

The third pedagogical implication relates to the think-alouds and educating writers about the think-aloud technique. Thinking aloud could be a valuable tool for writers as it
increases their engagement with teacher feedback. By providing opportunity for writers to think-aloud about teacher feedback before the onset of the actual revision process, they are encouraged to think about, and also hear, the changes they would likely incorporate into their revisions. Thinking aloud about feedback is a means of intensifying students’ engagement with teacher feedback that could lead to an enhancement of their writing skills and, therefore, better quality writing.

6.4 Theoretical implications

In the following section I will discuss four major theoretical implications that emerge from the data. Firstly, the study expands on existing models by offering a detailed examination of the role of feedback in revisions. Secondly, the study establishes that attending to teacher feedback is recursive in nature. Thirdly, it confirms that feedback can act as an intervention platform for writers to reconsider their writing. Fourthly, it reveals that thinking aloud can be viewed as a dialogical activity.

6.4.1 Model of thought processes on feedback

The first theoretical implication concerns the model of thought processes on feedback developed in this study (Fig.23, p.148), particularly that it should be incorporated into the existing and accepted models of process writing. This study establishes how ESL student writers respond to teacher feedback, as is evident in the discussion of this research in Chapter Five. Hence, existing writing models could be enhanced by incorporating the thought process on feedback model in order to provide a closer representation of the reality writers engage with. Understanding what ESL learners of writing experience in the feedback stage of the writing process that openly embraces the thought process extends our theoretical understanding and appreciation of the writing process.
6.4.2 Recursion in feedback

The second theoretical implication is that, just as with the process of writing, the process of attending to feedback is recursive in nature. There is no provision for the recursiveness of feedback in the existing models of writing and the thought process model fills this void by enhancing one’s understanding of the recursive nature of dealing with feedback. Writers in this study moved recursively between teacher feedback and their written essays as they attended to feedback. In the course of these movements they evaluated the teacher feedback given in regard to their essays and they mentally made modifications to their essays that they verbalized as they engaged with and progressed through their teacher feedback. As the writers verbalized their thoughts they noticed the gaps that existed in their texts and reflected on them. This very act of noticing enabled them to evaluate and reflect on the teacher’s comments and the associated modifications were later incorporated into their revised drafts. Visiting their texts in relation to feedback gave the writers access to problems and opportunity to reflect on and come up with solutions that they could use in their revisions. They moved repeatedly between feedback and their texts as they analyzed the feedback and clarified its meaning by talking aloud. This was then accepted and incorporated into their revisions. This study thus gives some useful insights into how the student writers moved recursively between teacher feedback and their written texts as they responded to teacher feedback and the impact that recursion had in developing students’ writing.

Previous research has not investigated how actively feedback features in the recursive process or how writers respond to teacher feedback as they engage in the thinking aloud process while attending to feedback. The implications from this study are that it is essential to not simply include but understand.
6.4.3 Feedback as an intervention platform

A third theoretical implication of this study is the greater emphasis on the role of teacher feedback as an intervention platform in the revision process. Here, in this study, feedback took on the role of an intervening agent, with its main objective being to present an outside ‘expert’ perspective for the purpose of assisting the student writers in their writing. In addition, the feedback also took on the role of a platform from which activities related to writing “sprang off”. In this context, feedback became a stage that supported writers as they engaged with it, trying to find solutions to their writing problems. This involved writers taking the opportunity to interact with their lecturer even “in absentia” through the feedback. Thus, the feedback was not only an intervention (Susser, 1994) to assist writers in their revisions, it also took on the form of a platform from which other activities developed such as noticing and interaction between writers and feedback giver.

6.4.4 Think-aloud as dialogical activity

A fourth implication from this study is that the think-alouds can be viewed as dialogical activity in promoting cognitive activities among writers. For decades the think-aloud protocols have been advocated as a method of collecting information for this tool taps into learners’ thoughts (Wigglesworth, 2005) and gives direct access to the mental processes of writers (Scardamalia & Bereiter, 1986). Data from my study show that all the participants engaged with teacher feedback by interacting with their lecturer and having on-going dialogue sessions with him. It was shown that attending to feedback was not a mental activity that involved students’ thought processes alone. Thinking aloud was shown to be a dialogical activity that involved both the lecturer and the students in dynamic social action.

Engaging in dialogue may account for the influence that teacher feedback had on the student writers. In their responses to the questionnaire the students indicated that they
perceived feedback as a valuable pedagogical tool for learning writing (as suggested by Beason 1993) and valued teacher feedback on their drafts (as suggested by Cohen & Cavalcanti, 1990; Hedgecock & Lefkowitz, 1994). Teacher feedback in this study provided the input for students to review, re-envision, and reconstruct and recreate the meaning of their written texts.

Students in this study found support, assistance and guidance from an expert (Vygotsky, 1978), their lecturer, through feedback. Teacher feedback in this study provided significant input for students to use to review, re-envision, and reconstruct their written texts by thinking aloud, and the results of the study suggest that thinking aloud may have contributed to critical thinking and problem-solving (Chi, 1999). What the writers in this study did when they verbalized aloud was engage in dialogue with their lecturer that involved in negotiating their revisions (Grabe & Kaplan, 1996). There is evidence of this in the way they addressed the teacher and queried the teacher about the feedback as if the teacher were there to answer; for example, this was done by directly asking what the teacher meant, why the teacher made the comment and what they were expected to do. This interpretation of the think-aloud task as a dialogue suggests that verbal protocols must be interpreted cautiously (Sachs & Polio, 2007) as the think-alouds may not be accurate or complete reflections of a writer’s mental activity, or even suitably transparent tools. These are very much the weaknesses they have been criticized for having (Black, Galambos, & Reiser, 1984). But, it is worth taking a look at how this perspective of the think-aloud as a dialogic activity impacted upon the writers in this study. By engaging in dialogue with their lecturer, they recursively moved back and forth between feedback and their texts as illustrated in Figure 23. These movements enabled noticing in writers and all the other moves the writers engaged in which are described in the findings, and this in turn led to
their acceptance or rejection of the feedback. Ultimately, this dialogic engagement resulted in writers producing extensively revised and significantly improved second drafts.

6.5 Future research

In this study, feedback was given only on initial drafts of participants’ writing. Research that compares such matters as think-alouds on the writing of the initial draft, reading the initial draft with feedback, and writing the revised drafts would offer a clearer picture. There is no evidence provided by the data in this study to show that teacher feedback on their initial drafts alone helped the participants to develop as writers. If there had been a follow-up study of multiple or subsequent student drafts that were done without the assistance of teacher feedback, and then previous feedback tracked to see if it was incorporated into the later drafts, perhaps then it could be ascertained if teacher feedback did indeed promote development in the students as writers. However, neither of these options was within the scope of this study so it remains an aspect of feedback that should be researched for a fuller understanding of the mechanism.

Another complementary aspect of feedback that would benefit from future research is one that incorporates peer feedback from multiple audiences and on multiple drafts. Peer feedback would probably seem less authoritative than teacher feedback (Berkenkotter, 1984; Cho, Schunn, & Charney, 2006). Thus, although teacher feedback may have assisted their performance in revising their initial drafts, peer feedback would likely assist more as students may be less reticent to receive feedback from their peers. Thus, it might be that teacher feedback given with accompanying peer feedback would promote a more collaborative view of their writing, and that may drive students to notice more of the disparities that exist in their writing. As teacher feedback in complement with the think-aloud method encouraged the students to engage at length with feedback, through a process
of evaluating and assessing the feedback and exploring other venues before making decisions, perhaps future researchers could investigate the think-aloud technique as a learning tool that could contribute towards students’ improved writing. In addition, this technique could also be used to investigate the role that dialogical peer comments play in conjunction with the think-aloud technique, and what impact it has on the development of students’ writing abilities. This then brings forth the next development in the context of feedback, namely interaction.

In this study interaction, even in the absence of the feedback-provider, played an important role in the process involved in attending to feedback. While the element of interaction was not built into the design of this study, it nevertheless was significant in how students processed feedback. It appeared to promote understanding that led to revisions. Future research could integrate social interaction into the design of the study to determine if interaction does indeed promote uptake of teacher feedback among writers.

6.6 Conclusion

This study set out to explore the thought processes of students as they responded to teacher feedback using the think-aloud technique. It is generally believed that the role of written teacher feedback is essential as a means of assisting writers to develop their potential as writers. The findings of this study suggest that students generally engaged with teacher feedback at length and responded to teacher feedback positively. This study also affirms that written feedback used in conjunction with verbalizations was important as it encouraged students’ recursiveness with feedback and their written texts. This recursive aspect brought about discoveries which were incorporated into the revised texts. The findings also suggest that the think-aloud method, may not have yield a transparent representation of writers’ thought processes, but a SCT interpretation would account for
the way it affected the writers as they thought about their essays and the feedback on them. This study has thus affirmed that, just as writing is a process that is recursive in nature, attending to feedback is also a recursive process, and it needs to be seen and considered from both the cognitive and socio-cultural perspectives.
REFERENCES


Erickson, F. (1986). Qualitative methods in research on teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 119-161). New York: Collier-Macmillan.


Xu, G. (1989). Helping ESL students improve un-English sentences in one to one conferences (Publication no. ED304003). from ERIC Document Reproduction:


APPENDICES
APPENDIX A:
FEEDBACK ON WRITING

INFORMATION SHEET FOR PARTICIPANTS

I am a Ph D student in the Linguistics Programme, Department of English at the University of Otago. I am interested in finding out how ESL writers attend to teacher feedback in their process of writing.

Participation in the study is entirely voluntary. If you do choose to participate, your identity will be kept entirely confidential. You may withdraw from the study at any time and there will absolutely no negative consequences to you. If you choose to participate, you will be required to write two drafts of an essay and think aloud as you attend to the feedback given by your instructor. You may feel awkward and self-conscious when you think aloud but you will be given training to help you become familiar and comfortable with this method. The process of thinking aloud will enable you to understand your own learning processes more effectively and enable you to have better control of your writing skills.

You will also be asked to complete a questionnaire in English about your educational background. You will also be requested to state your preferences for teacher feedback and your perceptions on feedback in writing. This should take about thirty minutes. Your views will be of great importance and value to my research.

All your written drafts and the data from verbal protocols and the questionnaire survey will be kept entirely confidential. You may have some anxiety at being audio-taped and being
given feedback. However, the feedback is similar to the feedback you typically receive in your writing course and you will not be evaluated on your ability to write or speak. Your writing proficiency will benefit from receiving feedback. My supervisors may also view the data, but I would like to assure you again that your identity would be kept entirely confidential. In the thesis itself or in any future publications, no individuals will be named. University of Otago regulations require the raw data used in the project be kept in secure storage for five years before being destroyed.

If you do agree to participate, you will be asked to sign a consent form that shows that you understand your involvement in the project.

If you have any questions about my research, please feel free to contact me.

Thank you.

Margaret Rajoo (researcher) rajma928@student.otago.ac.nz

Linguistics Programme, Department of English, University of Otago
APPENDIX B:
CONSENT FORM FOR PARTICIPANTS

This questionnaire is part of my research study. The main objective is to collect information about your response/reactions to feedback/comments/corrections made by your lecturers on your compositions. Participation in this study is entirely voluntary and you may decline to participate without any negative consequences.

You need to sign this consent form. As your identity will be entirely confidential, you can be as honest as possible in your answers.

I have read the information sheet regarding this project. I understand the aim of this project and my involvement in it. I know that:

1. My participation in this project is entirely voluntary.

2. I am free to withdraw from this project anytime without any negative consequence.

3. I am not required to put my name on the questionnaire.

4. All participation will be anonymous.

…………………………………..     ……………………..
(Signature of participant)                                                                (Date)
APPENDIX C: 
QUESTIONNAIRE ON FEEDBACK

The purpose of this questionnaire is to gather information on students’ reactions/response towards feedback/comments/corrections made by the teacher on their compositions. The aim is NOT to evaluate lecturers.

Please think of the last essay that your lecturer corrected and returned to you. You will be asked questions about what you did with this feedback from your lecturer. Please answer as honestly as possible.

Please do not sign your name. All responses are anonymous.

Thank you for taking the time to answer the questions thoughtfully.

A. Background information

1. What is your major? ________________

2. How many years have you been studying English? _________

3. What is your first language? _____________________

4. What is your year of study this year? ________

5. How would you rate yourself as a writer in English?

_________ Excellent

_________ Good

_________ Adequate

_________ Poor
B. Feedback on writing. Place a tick on the response that applied to you.

1. How satisfied are you with your lecturer’s feedback?

_____ Very satisfied
_____ Satisfied
_____ Somewhat satisfied
_____ Not satisfied

2. How much of the essay did you read over when you got it back?

_____ All of it
_____ Most of it
_____ Some of it
_____ A Little of it
_____ None of it

3. How many of the teacher’s corrections did you give thoughtful attention to?

_____ All of them
_____ Most of them
_____ Some of them
_____ Few of them
_____ None at all
4. **How much attention did you give to the features listed below:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>a lot</th>
<th>some</th>
<th>little</th>
<th>none</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content (ideas, evidence, examples, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language use (grammar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanics (punctuation, spelling, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization (logical development, Paragraph sequencing, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Style (expressions, tone, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary (accurate word usage)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. **What did you do when you went through your lecturer’s feedback?**

Please choose from the following options and place a tick against the strategies that best applies to you. (You may choose more than one option).

- [ ] Just made mental notes.
- [ ] Wrote some points that were useful.
- [ ] Attempted to rewrite the essay using the feedback.
- [ ] Discussed about the feedback with my peers.
- [ ] Met with my lecturer to clarify some suggestions that were vague.
- [ ] Did not do anything at all.

Others: Please specify. ________________________________
C. Students’ preferences about feedback on writing

Below are some statements regarding feedback.

For questions 1-6, please refer to the scale and write the number that closely corresponds to your preferences and feelings about feedback in the spaces provided.

1 = strongly disagree   2 = disagree   3 = undecided   4 = agree   5 = strongly agree

1. I always find my lecturer’s feedback very helpful/useful.            _____
2. Extensive written comments help me improve my writing.                _____
3. I always meet my lecturer to discuss the feedback given.                   _____
4. Meeting my lecturer face to face and discussing the comments helps me in developing my writing skills.                                                  _____
5. I would like my lecturer to give me feedback as an evaluator.             _____
6. I would like my lecturer to be a reader/audience.                              _____

7. What kinds of comments do you find most helpful?

Please use the following scale and write the number you choose in the spaces provided for each type of comment.

1 = least helpful       2 = somewhat helpful       3 = undecided/no opinion
4 = helpful       5 = most helpful

_____   Comments on my ideas/contents.

_____   Comments on language use (grammar).

_____   Comments on mechanics (punctuation, spelling, etc.)

_____   Comments on the organization (paragraph development, sequencing, etc.)

_____   Comments on my style of writing (expressions, tone, etc.)

_____   Comments on vocabulary (accurate word usage).
8. What type of feedback do you prefer from your lecturer on your writing?

Please use the following scale and write your options in the space provided for each type of preference.

1 = least preferred  2 = somewhat preferred  3 = undecided/no opinion

I prefer my lecturer to:

______ Correct my grammar.

______ Correct my punctuation, spelling, etc.

______ Give suggestions on how to improve my writing/essay.

______ Ask me to identify the errors myself.

______ Indicate that something maybe wrong in a sentence/clause/line (e.g. Is there something wrong in this sentence?)

______ Indicate the type of the error but does not identify. (e.g. There is something wrong with the tense here.)

______ Provide clues for corrections. (e.g. It is not something that is past but is still on going.)

9. What do you usually do when you have doubts about the feedback given?

________________________________________________________________________

________________________________________________________________________

10. After having gone through all the comments/feedback your lecturer has given you, what other comments/feedback would you have preferred to receive?

________________________________________________________________________

________________________________________________________________________

Thank you for completing this questionnaire!
APPENDIX D:
INSTRUCTIONS AND PRACTICE TASKS

Instructions

The aim of this activity is to gain insights into your thought processes when you perform a task. This is done through a method called the think-aloud. When you think-loud, your main objective will be to verbalize all that you are thinking. Whatever you say is data. Although you may not be able to say aloud everything you think of, you can keep on talking constantly about whatever comes to your mind. Say aloud anything and everything, even hesitations, pauses and questions (e.g. “well”, “hmm”, “what does this mean?”). Take as much time as you want. Do not worry about your grammar, pronunciation or vocabulary.

Here are some practice tasks. They are different from the real tasks that you will do in a week’s time, but these tasks will give you an opportunity to practice thinking-aloud so that you will be comfortable when you do the real tasks.

Do you have any questions?
Practice Tasks

1. Mr. Rosli is buying numerals to put on the doors of each apartment in a 99-unit apartment building. The apartments are numbered 1 through 99. How many of each digit should Mr. Rosli buy?

2. Nanthini drove from Johor Baru to Tangkak then to Seremban, then to Kuala Lumpur. She returned over the same route. From Johor Baru to Tangkak is 130 miles. From Tangkak to Seremban is 75 miles. The trip from Kuala Lumpur to Johor Baru is 245 miles. What is the distance between Seremban and Kuala Lumpur?

3. Jono’s scores on four tests were 86, 72, 94, and 77. He wants his average on five tests to be at least 85. What is the lowest score he can get on the fifth test to achieve this average?

4. Skydivers fall at 54 meters per second before their chutes open. They fall at 6 meters per second after their chutes open, if a sky diver jumped from a plane 1400 meters high and reached the ground in 100 seconds, how high was the skydiver when he opened her chute?

Thank you for attending to these practice sessions. Now that you have completed the practice tasks, do you have any comments about the instructions, the practice tasks and the process? Do you have additional comments?

Thank you.
APPENDIX E:

SAMPLE OF A STUDENT’S FIRST DRAFT
"SUCCESS IN EDUCATION IS INFLUENCED MORE BY THE STUDENT'S LIFE AND TRAINING AS A CHILD THAN BY THE QUALITY AND EFFECTIVENESS OF THE EDUCATIONAL PROGRAM".

Parents and educators often lament in ensuring the success of a child in education. In this short essay, I am going to focus my discussion about this topic only on two factors. The two factors are, family background, and peer influence. Firstly, I will discuss on a student's family background. Next, on peers influence in one's decision making and educational aspirations. Finally, I will conclude by summarizing the two factors of this essay.

1. Family background

One of a major factor influencing a student's likely educational trajectory is the family. Family background such as their socioeconomic and education background is worthwhile looking at in this discussion. Aspirations and family support foreshadow student success (Perna and Titus, 2005).

1.1 Socioeconomic status

Child care is a major challenge for a child to pursue post secondary education with low-income parents (Kappner, 2002). Students with sufficient financial support are more likely to remain in school, graduate in fewer years and earn higher grades. Educational aspirations, and family support are easier to come by if the family has economic resources. Put another way, the chances that a student will enjoy the advantages increase as family income increases, because family socioeconomic status sets the stage for students' academic performance by directly providing resources at home and indirectly providing the social capital necessary to succeed in school (Coleman, 1988). Family socioeconomic status determines the kind of school and classroom environment to which the student has access (Reynolds and Walberg, 1992).
Wenglinsky (1998) in his study, compared low socioeconomic status schools with higher socioeconomic status schools and found several important differences in terms of instructional arrangements, materials, teacher experience, and teacher-student ratios. In addition to the quality of instruction, family socioeconomic status also influences the quality of the relationship between school personnel and parents (Watkins, 1997).

1.2 Educational background

In addition to socioeconomic background, parental education also affects students’ educational aspirations (Hamrick and Stage, 2004). Most studies of students who come from family who did not attend higher education tend to attribute to a lower level of academic and social engagement, learning and intellectual development. In addition, their parents are unable to help much, even if the student are so inclined, as they too lack knowledge of, or in some instances may find off-putting, certain activities that could lead to greater levels of engagement (Kenny and Stryker, 1996; London, 1992). Enrollment and graduation rates suggest that students’ succeeding in higher learning come from educated family background (Baum and Payea, 2004). For example, in the United States, in 1996 high school completers’ enrollment rates in higher learning education ranged from 45 percent for those with parents who had less than a high school education to 85 percent for those students with parents with a bachelor’s degree or higher (Choy, 1999).

1.3 Support

Family support is very important to help raise a student’s education aspirations. A substantial body of research on students pursuing their education shows that the timing, quality and quantity of encouragement and motivation from the family can help raise and clarify the student’s educational aspirations (Hossler, Schmit, and Vesper, 1999).

Another promising intervention is supplemental education, the informal learning and development opportunities that occur outside the regular school day (Bridgall and Gordon, 2002). Gordon (1999) found that this type of approach – whether from home
computers, parents and siblings, libraries, mentoring and tutoring programs, peer-based
study groups, or faith-based activities — created an experience similar to that of an
engaging learning community.

Although Billson and Terry (1982) found no differences in the educational aspirations
between students with low-income and high-income family, more recently Terenzini and
others (1996) reported that students had lower educational aspirations than those with
higher income counterparts. Students whose fathers completed college were three times
more likely than their classmates to indicate that achieving a college degree was their
educational goal; respondents whose mothers completed college were twice as likely
(McCarthy and 30 Kuh, 2006). Parental college education had a direct positive influence
on students' predisposition to attend college.

2. Peers

Another major factor in influencing a student’s educational trajectory are peers. As we
shall see, these people play an important role in shaping aspirations and reinforcing
behaviors consistent with academic achievement.

2.1 Influence on decision and development

Cejda and Kaylor (2001) found that students who are in college get a strong positive
influence and encouragement from faculty and to some degree by peers. Parents and
peers seem to influence both students’ pursuing of studies (Perna and Titus, 2005) and
persistence decisions (Bank, Slavinings, and Biddle, 1990).

Whom students choose for friends and spend time with is important to what they do and
how they feel about their experiences (Kuh, 1993). In fact, according to Astin (1993b, p.
398), peers are “the single most potent source of influence,” affecting virtually every
aspect of development - cognitive, affective, psychological, and behavioral. Student
interaction with peers can positively influence overall academic development, knowledge acquisition, analytical and problem-solving skills, and self-esteem (Kuh, 1993, 1995).

2.2 Foster learning

Certain peer interactions foster learning (Astin, 1993b, p. 385):
- Discussing course content with other students,
- Working on group projects for classes,
- Tutoring other students,
- Participating in intramural sports,
- Being a member of a social fraternity or sorority,
- Socializing with someone from a different racial or ethnic group,
- Being elected to a student office, and
- Spending time each week socializing or in student clubs or organizations

Peer teaching and participation in peer tutorial programs also have a positive impact on fostering of learning and personal development for those who do the teaching (Goldschmid and Goldschmid, 1976), because students who teach other students must know the material more thoroughly than if they were only studying it for themselves (Annis, 1983; Bargh and Schul, 1980; Pace, 1990). Moreover, such students become more knowledgeable about the material to be taught, which is presumed to produce greater conceptual learning (Benware and Deci, 1984; Pascarella and Terenzini, 1991).

2.3 Social environment

Peer interactions are particularly important with regard to social integration, because students are more likely to stay in school when they feel comfortable and connected to other students with similar interests and aspirations (Bean, 1980; Spady, 1970; Tinto, 1975, 1987). For this reason, perhaps, fraternity and sorority membership is positively related to persistence (Astin, 1975).
Obtaining the bachelor's degree was positively influenced by attending a college with a high level of cohesion in the peer environment (Pascarella and Terenzini 1991). The number of peers whom the student regarded as close friends or where students frequently participated in college-sponsored activities and there was a high level of personal involvement with and concern for the individual student.

Summary

The major factors from this discussion underscore the complex ways that student background characteristics interacts with student's success. Family education background is related to students' higher postsecondary aspirations and greater likelihood of attainment. Socioeconomic status influences prior academic preparation, pursuing steps to postsecondary education and its success. Peers play important role in influencing one's decision making. By integrating socially, with similar interests and sound competitions help boost educational aspirations, producing higher level of attainment in studies.

So what are you saying - please refer to the question. Have you answered the question?

Policies

You have some interesting points but you seem to rely too heavily on quoting names - please remember that names are used to support ideas always state your stand and then provide evidence to support your claims. I look forward to reading your second draft.
APPENDIX F:

SAMPLE OF A STUDENT’S POST FEEDBACK DRAFT

“SUCCESS IN EDUCATION IS INFLUENCED MORE BY THE STUDENT’S LIFE AND TRAINING AS A CHILD THAN BY THE QUALITY AND EFFECTIVENESS OF THE EDUCATIONAL PROGRAM”.

Parents and educators often raise questions on how to ensure the success of a child in education. In this short essay, I am going to focus my discussion only on two factors. The two factors are family background and support and peer influence. Firstly, I will discuss on a student’s family background and support. Next, on peers’ influence in one’s decision making and I will also discuss on the environment that helps foster learning. Finally, I will conclude this essay by supporting my claims with evidences that student’s success is influenced by the student’s life that is family socioeconomic, education background and support provided by parents. I will also put forth the evidences on the important roles by peers in decision making, personal development and the social environment that help a student in acquiring academic achievement.

1. Family background
One of the major factors influencing a student’s likely educational trajectory is the family. Family background such as their socioeconomic and education and the support provided are worth looking at in this discussion.

1.1 Socioeconomic background
A student from a family with economic resources would be educationally aspired due to the sufficient financial support. The student is more likely to remain in school, graduate in fewer years and earn higher grades. As suggested by Coleman, 1998, a student would be able to enjoy the advantages from the good economic resources of the parents as family socioeconomic background sets the stage for students’ academic performance by directly providing resources at home and indirectly providing the necessity to succeed in school. Socioeconomic background also influences the quality of education a student receives. It determines the kind of school and classroom environment to which the student has access (Reynolds and Walberg, 1992).
Unlike low economic resource parents, they are faced with great challenge in providing an opportunity for a student in pursuing of studies (Kappner, 2002). Additionally, the availability of instructional arrangements, materials, teacher experience, and teacher-student ratios are found to be the several important differences when compared between the high and low socioeconomic background parents (Wenglinsky, 1998). In addition to these differences, family socioeconomic background also influences the quality of relationship between school personnel and parents as documented by Watkins, 1997.

1.2 Educational background
In addition to socioeconomic background, parental education also affects students’ educational aspirations (Hamrick and Stage, 2004). In a study done by Braxton, Sullivan, and Johnson, 1997 suggests that a lower levels of academic and social engagement, learning and intellectual development is closely linked to students who come from family who did not attend higher education. This may be due to their parents who are unable to help much, as they themselves lack of knowledge and are unable to provide sufficient support on activities that could lead the student to greater levels of engagement (Kenny and Stryker, 1996; London, 1992). Enrollment and graduation rates suggest that students’ succeeding in higher learning come from educated family background (Baum and Payea, 2004). For example, in the United States, in 1996 high school completers’ enrollment rates in higher learning education ranged from 45 percent for those with parents who had less than a high school education to 85 percent for those students with parents with a bachelor’s degree or higher (Choy, 1999).

1.3 Support
Family support is very important in helping raise a student’s education aspirations. A substantial body of research on students pursuing their education shows that the timing, quality and quantity of encouragement and motivation from the family can help raise and clarify the student’s educational aspirations (Hosssler, Schmit, and Vesper, 1999). Supplemental education, the informal learning and development opportunities that occur outside the regular school day such as good reference resources, availability of computer at home for easy access to information is a promising intervention for a student’s success
as suggested by Bridgillall and Gordon, 2002. In addition, approaches such as parents and siblings, libraries, mentoring and tutoring programs, peer-based study groups, or faith-based activities has created an experience similar to that of an engaging learning community according to Gordon (1999).

In a study done by Billson and Terry (1982), they found no differences in the educational aspirations between students with low-income and high-income family. However, this was found to be untrue as it was evident in a more recent study done by Terenzini and others (1996) that students had lower educational aspirations than those with higher income counterparts. Students whose fathers completed college were three times more likely than their classmates to indicate that achieving a college degree was their educational goal; respondents whose mothers completed college were twice as likely (McCarthy and 30 Kuh, 2006). Parental college education had a direct positive influence on students’ predisposition to attend college.

2. Peers
Another major factor in influencing a student’s educational trajectory is peers. As we shall see, peers play an important role in shaping aspirations and reinforcing behaviors consistent with academic achievement.

2.1 Influence on decision and development
In the context of decision making, it was evident by Cejda & Kaylor, 2001 that students who get positive influence and encouragement from parents and peers are persistent on decision in pursuing of studies (Cejda & Kaylor, 2001).

Whom students choose for friends and spend time with is important to what they do and how they feel about their experiences (Kuh, 1993). This notion is supported by Astin (1993b, p. 398), peers are “the single most potent source of influence,” affecting virtually every aspect of development: cognitive, affective, psychological, and behavioral. Student interaction with peers can positively influence overall academic development, knowledge acquisition, analytical and problem-solving skills, and self-esteem (Kuh, 1993, 1995).
Summary
In this short essay, the quality and effectiveness of the educational program was not my focus. However, having understood the two factors to the success of a student, and after all the evidences of most findings that were viewed has given us some insights and answers to at least some questions which are often raised by parents and educators in ensuring the success of a child in education.

The major factors from my discussion underscore the ways that student’s background characteristics interact with student’s success. Socioeconomic background of the family influences prior academic preparation, pursuing steps to higher level of education and its success. Additionally, the education background is related to students’ higher educational aspirations and greater likelihood of attainment. Another major factor which was discussed was the important role played by peers in influencing one’s decision making and his or her personal development. By integrating socially among peers in the social environment with similar interests and sound competitions help boost educational aspirations, producing higher level of attainment in studies.

Therefore, I would like to summarize this essay by making claims that the success of a student can be expressed as being influenced by the student’s life and training as a child.
APPENDIX G:
TRANSCRIPTION OF A STUDENT’S VERBAL PROTOCOLS

Roxy’s transcription

look what I’ve got here
ah...you can see a lot of things in blue
I have quite a task here
‘check if this is the best term’ - RFB
one more to check, “lament in ensuring” - RE
well probably it’s not the best term, actually I copied it
from one of your write up – ATFB/ GR
but I’ve looked at the dictionary it sounds alright
but I think I’m going to change it anyway - PL
well perhaps you know better - ATFB
may be I, I should change it to question - SC
because yah, lament is just too much – +U
ok ‘confusing check language’- RFB
ok I’m going to make it more simple – SC/ ATFB
you always tell us to be very simple in the language - ML
I can change it to something more simple - ATFB
it’s a bit beating round the bush isn’t it - +U
and you write here ‘what is your stand and what is your line of argument. This has to be evident from your first paragraph’ - RFB

maybe I should - ATFB

I’m going to put in all whatever I’m going to talk about I’m going to sort of give a preview – +U/ PL

yah I, I remember you said that we need a preview sort of thing - ML

why did you cancel my ‘of’ in “one of a major factor” - REFFB

I, personally think that of is ok because I’m talking about one of major factor you know, it’s not a major factor but it’s just one of - EI

I’m sorry I don’t think so I’m going to change that - RTFB

well the second one aspiration and family support - REFE

well I think I’m jumping into some something else - +U

‘I wonder if this quote actually supports what you said earlier. It seems a little out of place’ - RFB

maybe I’m a little bit out of topic – ATFB / +U

I feel I should just cancel that off - SC

‘the first line confuses me - I’m lost’ - RFB

you said check language - REFFB
the first look I don’t seem to sort of see how terrible the language that I’m using but yah, I see it now - +U / ATFB

I’m going to rephrase it I’m going to put it in another way round

– PL (SC)

‘This should be the first sentence of this paragraph’ - RFB

Yah - ATFB

thank you for giving me the idea - APP

perhaps this could be a better one for me to actually put in the first sentence instead- +U

ok then I start with that - ATFB

‘not academic English’- RFB

sometimes you know this is the difficult part

I don’t quite know what is academic English - L. (50-51) -GR

perhaps I, I have to change this one as well - ATFB

well I have to rephrase it - +U / SC

you seem to be lost about social capital - REFFB

social capital is not suppose to be used I guess - G

it’s just to sort of you know well I think is like a too big a word

perhaps I can use something else - +U / SC

oh, I can see that this paragraph needs a lot of sort of restructuring, the whole paragraph – REFE/+U
you also said that ‘write your topic sentence and then provide
the supporting details’ - RFB
but you wrote it at the bottom I do not know which one
you are referring to - -U
I’m sorry I, I guess I’m going to rephrase it and see how my
topic sentence can be put somewhere that I need that will
bring me to another paragraph – PL/ ATFB
‘so, you have a number of benefits perhaps, all these benefits
could be structured’ - RFB
well, thank you for giving me an example of a sentence that I
can start with – APP/ REFFB
I think it’s a very good sentence, as usual you know you have
the flair of things and it goes so smoothly - EJT
oh I just wish I can do that - SR
I’m going to start the sentence with the example you actually
wrote here ‘Socioeconomic status influences the quality of
education a child receives.
The availability of instructional materials …’ – RFB/PL
yah, I think with this sentence I think I can actually structure
it better because the benefit seems to be sort of you know
jumbled around – +U
thank you I’m very happy to see this, ‘very good transition’ –

RFB/ APP

well I guess this is something I, I learnt from all the writings that

I have been doing with you – ML/APP

in this sentence, make reference, - REFFB

well I, I guess it is not worded correctly - +U

yah, when I said most studies, I admit the fact that I have to put

some reference if not it would be something that I plucked out

from air - +U

I’m going to rephrase it – ATFB/SC

well there is another comment ‘very confusing you seem to be

thinking way faster than you are writing’ - RFB

well again I think this paragraph, the whole paragraph have to

be restructured and I’m going to use some words suggested by

you – ATFB / +U/PL

thank you again - APP

for the last part of my paragraph, ‘good supporting evidence’ -

RFB

that’s what you said hmm, thank you - APP

you know I feel very happy when I see this kind of remarks,

‘good supporting evidence’, ‘very good transition’ - REFFB
it makes feel that well yah, not too bad, well I guess so - SR

‘Elaborate Bridglall and Gordon before going to Gordon’ - RFB

I’ve been too simple in that sentence not telling what is the intervention sort of - +U

well I agree - ATFB

well I think what is it all about what Bridglall and Gordon talk about and then I’m going to talk about Gordon - PL

you wrote here ‘when you use although compare ideas - not names and separate issues’ – RFB

compare ideas, - REFFB

yah, I believe so after you point it out - ATFB

I realized that by putting although I am not referring to someone else earlier because there is no comparison why should I use although - +U

I can see it now because you commented, if not I would not be able to realized that I’ve done wrong - +U / ATFB

yah, perhaps when you said ‘optimize your sentence construction’ – RFB

I think I, I, I write too long a sentence without full stop - +U / ATFB

just break it up yah, I think it works well, it sounds better - MC
well thank you again - APP

I see it’s ‘ok’ for last the part of my last paragraph - REFFB

I really feel very happy when I see ok and the ticks

it’s hard work for me I feel so good about having these

remarks - SR

you said that it’s great and you said you like the sentence -

REFFB

really you inspired me with this kind of remarks, yah, thank you

-APP

I think I’ve done wrong in this paragraph - REFE

but only one word I should change - SC

sometimes you know I’m just putting some words that I use in

the conversation – SR/+U

and I didn’t see from the audience point of view , yah - APP

and well this part 2.1 is pretty bad though

‘please don’t start a sentence with names –state the issue and

then support with the literature’ - RFB

I’m sorry I, I really kind of forget it sometime when I’m writing I

know shouldn’t be – GR/SR

you always advise us not to start a sentence with a name - ML

I will I will have to restructure this, I will completely change the
Whole sentence – ATFB/ PL
and the persistence decision – REFE
‘what is this-how is this linked to your discussion/stand?’ - RFB
well I, I actually meant to look at something like a persistence
in continuing the studies and you know decisions in getting
good grades - EI
well I, I think I have to elaborate it more – ATFB/+U
so that my reader would understand what I mean by
persistence decision – AA
‘when you mention a name in a sentence, don’t jump to
another name in the subsequent sentence-it is very confusing’
- RFB
again, yah, I shouldn’t mention name in a sentence and jump
to another name in subsequent sentence and you said it is
confusing – ATFB/ +U/AA
well thank you, I guess I can use ‘this notion this notion is
supported by’ - RFB
yah, it sounds smoother rather than jumping from one name to
another - ATFB/ +U
wow this is great, my whole page doesn’t seem to have much
changes – REFE
ok this is another compliment with all the ticks - APP

‘any later references?’ - RFB

ok but I’m sorry this reference is just a bit too old I know - ATFB

I’m sorry but this is what I got, this is something I took from one of the literature from one of the article, I know it’s just too long ago 1980, 1970 – +U/ GR

perhaps I should look for something more recent - GI

but somehow it tells you about the aspiration, the social integration and stuff like that, actually a very nice or very good for my social environment of paragraph - EJE

yah, I’m going to change it to something more recent - ATFB

‘A long sentence like this is very confusing’ - RFB

yah, I guess this remark is actually, rather this comment is actually yah, I can see that now the sentence is too long - ATFB

you put VERY in bold, no not bold, hmm, capital, all capital - REFFB

so I guess it must be really painstaking reading this paragraph and it’s confusing – +U

I’m going to change it to something more simple – ATFB/SC
I guess what you want is just simple English but sometime when you just write some literature you just feel that it's ok until you are pointed out to - GR

yah, I know I hope I can write a better second draft - SR

‘So, what are you saying – please refer to the question.

Have you answered the question?’ - RFB

well in my summary I probably have not answered the question

I, I guess so yah - ATFB

you know I don’t actually bring the audience back to wrapping up the whole, as to what I’ve written - +U/AA

I’m going to but in this essay I, I didn’t write anything about the curriculum or anything about educational program because I think it’s just too short an essay so - GR

well I, I will I will I will - ATFB

I am going to say what I’ve done and what I’ve actually talked about, all the literature review and I’m going to say what sort of, what sort of things that I claimed about in this topic – PL

well, I’m happy that you said that I have some interesting points but you said that I’m too heavily relying in quoting names - REFFB
yah, I don’t know, I read a lot of books and I always see people quoting names, it has to be quoting name
I believe that academic writing is sort of quote names so I thought it would be essential for me to do it
I will, I will look at it again - ATFB
I mean, I’ve changed some of it - MC
I’ve changed all what you’ve commented I’ve no argument about it I’m happy with all the comments
I can see all my mistakes now
I can see all your comments from the expert point of view and I realize that there’s still a lot of things for me to work on – (L.199-203) - ATFB
one of the pages actually make me happy because there is practically nothing much to change in that page - REFE
I hope this, I’m changing the way I write this time and maybe better off from my first draft - SR
anyway thank you very much for pointing it out to me APP
I hope I can write better next time - SR
APPENDIX H:

SAMPLE OF TRANSCRIPTION

19 you say 'please include heading and sub-heading to
20 improve your readability' - RFB
21 yes I agree with that - ATFB
22 by including hmm, heading and sub-heading, REFFB
23 it would make my writing more readable and it will look more
24 systematic. +U
25 'start by stating your stand, then preview your main points'. - RFB
26 in my introduction I started of by saying
27 'if education is a life-long process then where does the
28 journey actually start' - RE
29 so instead of writing that I should actually start of by saying that
30 my stand here actually I support or I agree that the student's life
APPENDIX I:
A SAMPLE OF SEGMENTS CODED/MAPPED MANUALLY

| 19 | you say that 'please include heading and sub-heading to improve your readability' - RFB |
| 20 | yes I agree with that because. - ATFB |
| 21 | by including hmm, heading and sub-heading. - REFFB |
| 22 | it would make my writing more readable and it will look more systematic. +U |

```
25  | start by stating your stand, then preview your main points'. - RFB |
26  | 'if education is a life-long process then where does the journey actually start' - RE |
27  | so instead of writing that I should actually start of by saying that my stand here actually I support or I agree that the student's life and training as a child hmm, would create a better quality and effective hmm, education to the child itself (L.31-4) - MC |
28  | hmm, so I should actually state my stand hmm, here - +U |
```

*Feedback prompts him to come up with alternative language to use. Why? Implied understanding of purpose and makes changes.*
APPENDIX J:
FREE NODES
APPENDIX K:
SAMPLE OF SEGMENTS OF HIGHLIGHTED OR CODED PROTOCOLS WITH CODING STRIPS
APPENDIX L:
TREE NODES

<table>
<thead>
<tr>
<th>Name</th>
<th>Source</th>
<th>Reference</th>
<th>Created</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTT - remote teacher feedback</td>
<td>3</td>
<td>0</td>
<td>12/6/2009 12:26:34 PM</td>
<td>12/6/2009 12:26:34 PM</td>
</tr>
<tr>
<td>Positive Response</td>
<td>0</td>
<td>0</td>
<td>11/55:36 AM</td>
<td>15/55:36 AM</td>
</tr>
<tr>
<td>E - explores ideas</td>
<td>21</td>
<td>0</td>
<td>12/6/2009 12:26:45 PM</td>
<td>12/6/2009 12:26:45 PM</td>
</tr>
<tr>
<td>GT - give ideas</td>
<td>1</td>
<td>0</td>
<td>12/6/2009 12:14:45 PM</td>
<td>12/6/2009 12:14:45 PM</td>
</tr>
<tr>
<td>PLR - making links or corrections or reference</td>
<td>5</td>
<td>0</td>
<td>12/6/2009 12:14:45 PM</td>
<td>12/6/2009 12:14:45 PM</td>
</tr>
<tr>
<td>SC - suggest change or corrections</td>
<td>6</td>
<td>0</td>
<td>12/6/2009 12:16:56 PM</td>
<td>12/6/2009 12:16:56 PM</td>
</tr>
</tbody>
</table>