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Patterns of interaction in peer response: the relationship between pair dynamics and revision outcomes

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PATTERNS OF INTERACTION IN PEER RESPONSE: THE RELATIONSHIP BETWEEN

PAIR DYNAMICS AND REVISION OUTCOMES

by

Audrey Roberson

Under the Direction of Gayle Nelson, PhD

ABSTRACT

Sociocultural researchers in SLA consider the interface between the social dynamics of pair interactions and language learning. Using Storch's (2002) *patterns of interaction* coding scheme, studies have found that students who adopt a collaborative pattern are more successful in using language as a learning tool. SLA theorists, however, have suggested research projects that further analyze peer interaction and learning outcomes, including writing development, in ecologically valid settings (Swain, 2002; Ortega, 2012). Peer response is a pedagogical practice where focus on pair dynamics in relation to learning is particularly relevant. Despite its popularity and the theoretical argument for peer response, not all peer response is successful, and Ferris (2003) called for projects that consider both characteristics and outcomes of peer response. This study bridges the gap in these two related research areas, L2 writing and SLA, examining *patterns of interaction* during peer

response, and considering associations between these and revision outcomes. Five pairs of non-native English speaking undergraduates were recording during peer response sessions three times, and also contributed first and second drafts of the papers they discussed. Peer response conversations were coded as exhibiting one of the four patterns (*collaborative, expert/novice, dominant/dominant,* and *dominant/passive*) identified by Storch (2002), which was enhanced by students' perceptions of the peer response sessions that they provided in interviews. Second drafts were analyzed for improvement, and these gains were compared by *pattern of interaction*. Results show that two patterns (*collaborative* and *expert/novice*) are indeed associated with better revision outcomes. What is more, stimulated recall interviews with these students revealed that they become more successful at peer response when they attend to not only the task, but the interpersonal relationship. Overall, results provide classroom-based evidence on the relationship between peer-peer interaction and writing acquisition. These findings complement SLA interaction studies conducted in more experimental settings, as well as contribute to the peer response research in L2 writing by describing in detail students' social interactions. This study also provides valuable pedagogical implications about training and pairing students for peer response. Finally, this study contributes to the emerging research trend of interfaces between SLA and L2 writing (Ortega, 2012).

INDEX WORDS: Patterns of interaction, peer response, sociocultural theory, L2 writing

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Audrey Roberson

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DEDICATION

To Meg and Jack, for all the laughter, love, and support.

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1   INTRODUCTION

I began teaching language classes ten years ago, with very little pedagogical training but a strong dedication to the success of the students in my classes. Although I could not yet support my views with theory, I felt strongly that my voice should not be the dominant one in the classroom, and that my role was to create opportunities for language learners to communicate with each other in ways that seemed meaningful and authentic. Later, I began teaching academic writing at the university level, studying theories of language learning, and learning about pedagogical practices. Through this process, I was able to understand that a teaching philosophy focused on interaction was not only my personal belief, but was also rooted in the theory and practice of applied linguistics. As my knowledge deepened, I began to see that language teaching pedagogy should draw on principled theories of language acquisition, and that these theories should be constantly enhanced and modified by empirical evidence about how learning takes place in the language classroom. Only by participating in this bi-directional process of theory building and theory validation can we develop successful approaches for teaching second language (L2) learners.

This research project is an opportunity for me to investigate the theoretical underpinnings and pedagogical value of peer response, a practice that is commonly used in L2 writing classrooms. I have used this approach in my own composition courses because I believe in its potential to create a sense of community among learners, and to help them view writing as a social act rather than a solitary demonstration of individual knowledge. In these classes I have observed that at its best, peer response allows learners to engage in dialogue about their writing in a way that helps them feel ownership over their work and gain an awareness of their audience. The success of this activity, however, is largely contingent on students' investment in the

feedback and revision process. I have sometimes found that students are resistant to peer response because they question the validity of the feedback, or because they are not accustomed to a process-based writing approach that requires continued effort beyond the first draft. It is thus my hope that this study will provide evidence of the positive revision outcomes that can follow peer response, as well as examples of successful reader/writer interactions. In this way, other writing instructors with under-motivated students might have empirical support for peer response, which they can share with learners to help them become more invested in the process.

Observations about the potential advantages of peer response are underscored by a sociocultural theory (SCT) view of second language acquisition (SLA), which holds that language learning is a social act. Sociocultural theorists believe that negotiating for meaning and testing hypotheses about the target language occurs when learners communicate with each other in meaningful ways. Peer response is also supported by a communicative language teaching approach, where authentic learner-learner interaction is central, and by a process approach to writing, where students engage in revising and editing their work using feedback and an awareness of their target audience. Although peer response is in line with the SCT view of SLA that informs current language teaching approaches, few SLA researchers have examined it . Rather, SLA researchers examining the role of writing in language development have employed tasks like dictogloss and text reconstruction, which have been criticized for being "contrived". (Ortega, 2012, p. 412). These tasks, while they do allow researchers to examine learner-learner interaction during writing tasks, may not mirror the kinds of work that students are doing in writing classrooms. Peer response, on the other hand, is a task that is commonly used in L2 writing classrooms.

The current study, which examines peer response in a classroom setting with matriculated first-year composition students, allows me to provide further empirical evidence for an SCT approach to SLA, answering the call to include more ecologically valid tasks in our examination of the interfaces between SLA and L2 writing (Ortega, 2012). It also offers valuable pedagogical implications for how to best support learners in this task. The remainder of this chapter will address in more detail how my study achieves these theoretical and pedagogical goals by: describing the problematic gap in our current understanding of the factors that influence peer response outcomes, and how an SLA perspective may provide new insight into these factors; explaining the purpose of this study; and addressing its potential significance.

Second language writing researchers examining peer response have found that despite its popularity (Ferris, 2003) and the theoretical argument for peer response, not all peer response is successful. Students may not provide helpful comments to each other (Leki 1990; Liu, 2002), interact in a collaborative way (Leki, 1990; Nelson and Murphy, 1992, 1994; Liu, 2002), or use their peers' comments during revision (Connor and Asenagave, 1994; Tang and Tithecott, 1999). Although several studies have suggested that when students adopt a collaborative stance in peer response, they have better revision outcomes (Lockhardt and Ng, 1995; deGuerrero and Villamil, 2000; Hyland, 2008), L2 writing scholars note that this connection has been loosely investigated. Ferris (2003), for example, has called for "multi-featured, triangulated projects that simultaneously consider feedback characteristics and outcomes" (p. 85) of peer response. One of the feedback characteristics that have been under-examined in relation to the outcomes of peer response is the social positioning of peer responders. To date, no studies have explored the potential relationship between social interaction during peer response and revision outcomes.

In a body of research that is separate from, but related to, peer response in L2 writing, SLA researchers have examined pair interactions and language learning in ways that may be helpful for understanding the social dimension of peer response. They have found that not all pairs are successful in creating the kind of collaboration that results in learning, and as such have begun to examine not only the linguistic features of learner-learner interactions, but also the pair dynamics that occur during these conversations (Watanabe and Swain, 2007). One way researchers have investigated pair dynamics during collaborative tasks is by using Storch's (1999) patterns of interaction framework, which describes the social dimension of learner-leaner interaction by considering their mutuality, or the degree to which learners engage with each other's ideas, and their equality, or the degree to which they share control over the direction of the task. These studies have considered issues such as the relationship between patterns of interaction and post-test results (Watanabe and Swain, 2007), the effect of interlocutor proficiency on patterns of interaction (Kim and McDonough, 2008), and the effect of pre-task modeling on patterns of interaction (Kim and McDonough, 2011).

Overall, these studies have found that students who adopt a collaborative pattern of interaction are more successful in using language as a learning tool. The patterns of interaction scheme allows researchers to describe expert and novice positionality within pair talk, and to consider its effect on the co-construction of knowledge. The studies cited above, however, have used the patterns of interaction coding scheme to examine controlled, isolated tasks, rather than the reading and writing activities that occur in an existing classroom. The current study, then, is an opportunity to consider the validity of the patterns of interaction scheme in a new context.

This dissertation bridges the gap in these two separate but related research areas, L2 Writing and SLA. In contrast to the experimental SLA studies cited above, the current study describes peer response as it occurs in a writing classroom. Swain (2002), in her review of student interaction in language learning, notes that while it appears from experimental settings that peer feedback is effective for the development of writing skills, these claims need to be tested in ecologically valid settings (e.g., classrooms). In addition, using patterns of interaction describes the social dynamics of peer response in a principled way, as called for by Ferris (2003). As such, this study examines peer response in one freshman composition course for non-native speakers of English , using a case study approach that draws on multiple, rich data sources: student writing, peer response conversations, individual interviews with students, and classroom observations. It addresses the following research questions: (1)What are the patterns of interaction among peer response pairs in an L2 writing classroom, and how do students experience them; (2) are different patterns of interaction associated with different revision outcomes, and how do students explain their revision choices; and (3) do these patterns of interaction change over the course of a semester, and how do students experience this shift?

As this chapter has attempted to show, the fields of L2 writing and SLA have, for the most part, developed separately; the separate bodies of research on peer response and on patterns of interaction reviewed above are one example this divergence. SLA researchers have traditionally focused on oral language as central to definitions of interlanguage competence, viewing writing as "a culture-dependent, secondary manifestation of human language" (Ortega, 2012, p. 405). Recently, however, SLA and L2 writing researchers have begun to investigate the role of writing in second language development (Williams, 2012).

This study adds to the emerging research trend of interfaces between SLA and L2 Writing by providing classroom-based evidence on the relationship between peer-peer interaction and writing acquisition. The findings complement SLA interaction studies conducted in more experimental settings, especially those that have used the patterns of interaction framework. Insights from stimulated recall interviews help us deepen our understanding of the dimensions of mutuality and equality by gaining a student perspective on why social interactions unfold as they do, and what students consider when they use peer feedback while revising. Equally as important, the description of successful peer response sessions, and ones that are less so, has pedagogical implications for peer response, specifically in terms of pairing and training students. Drawing on studies like this one, then, writing teachers who believe in a sociocultural approach to teaching L2 writing can coach students to reap the benefits of peer response.

In this document, I will first review literature relevant to peer response in sociocultural theory (Chapter Two) and second language writing (Chapter Three). Chapter Four will explain the methodology for the study, and Chapter Five, data analysis procedures. I will present results of research questions one, two, and three, as well as discuss their significance, in Chapters Six, Seven, and Eight, respectively. Finally, Chapter Nine will conclude with final thoughts and future directions.

2   SOCIOCULTURAL THEORY

This chapter will examine the theoretical underpinnings of the current study. Sociocultural theory (SCT), which was first proposed as a psychological theory that explains children's first language learning, provides a lens through which to view second language acquisition (SLA). In an SLA context, one of the applications of SCT is its explanation of how

the spoken interaction that occurs between learners helps them to develop their second language. Two SLA concepts that are relevant for exploring this relationship between spoken interaction and language development, collaborative dialogue and pair dynamics, will be explored in this chapter. It will describe the premises of SCT as it was first proposed, and will then describe how it has been applied to SLA, both theoretically and empirically. It will conclude with a consideration of the strengths and weaknesses of examining pair dynamics from a sociocultural perspective in a context that has not been fully addressed by this theory: the learning that happens when students discuss their writing in an L2 classroom setting.

A theory of how social processes develop the mind, sociocultural theory (SCT) was first proposed as a way to explain how children develop their first language based on interaction with parents or other adults (Vygotsky, 1978). According to SCT, the relationship between the mind and people's interactions with others and with their environment is central to the ability to learn higher mental functions like voluntary memory, reasoning, and attention (Lantolf & Thorne, 2006). An important consideration, especially when discussing second language learning, is what role culture plays in this kind of learning theory. Vygotksy's L1 learning theory holds that imitation is an important mechanism by which children acquire their L1 from more competent adults. Tomasello (1991) pointed out that imitation is cultural, and not just the simple kind of mimicry that a behaviorist approach to learning describes. Indeed, as Lantolf and Thorne (2006) note, humans use culturally constructed meaning to organize their mental functioning. Language is crucial to this process of cultural construction, and language development is central to Vygotsky's theory of mind. In describing this culturally constructed meaning, sociocultural theorists use various key concepts. The SCT concepts that are most relevant to language

acquisition broadly defined will be briefly explained below: the use of language as a symbolic tool, the zone of proximal development, and mediation.

2.1   Language as a Symbolic Tool

Sociocultural theory holds that learners have several different language tools to draw on, forming a mediated relationship that lets them plan mental activities. Among these language tools are the learners' first language, their second language, and their private speech (Lantolf, 2005, 2011). Among these, private speech, a form of externalized thinking where learners solve linguistic problems, is particularly relevant for a peer response context. In both feedback and revision activities, learners may use this process of "thinking out loud" to better understand writing processes. One line of research examines the role of L1 private speech, where learners use their L1 to make connections with and solve problems in their L2, and results suggest that this kind of language mediates mental activities (Lantolf & Thorne, 2006). Another related concept is that of *languaging*, a term coined by Swain (2006) to describe the dual functions of language (social and cognitive) that occur when learners work together to complete a language task. Overall, socioculturally informed empirical research has established a link between L2 development and the use of private speech and languaging (Swain and Lapkin, 1998, 2001).

2.2   Zone of Proximal Development

The zone of proximal development (ZPD) is a metaphorical space in which a learner is able to make progress toward mastery of a complicated task. This space represents the interim between the learner's current level and what he or she is able to achieve with assistance. As Vygotsky (1978, p. 86) explains, the ZPD can be understood as

> the distance between the actual developmental level as determined by individual problem solving, and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.

In a second language context, one of the ways for learners to foster acquisition

within their ZPD is to collaborate with other language learners. That is, language learning can

occur when peers rely on each other to solve language problems and negotiate for meaning. As

Cross (2010) notes, learners "modify, clarify, extend, and solidify their own understanding"

when they converse with a peer and strive to make their meaning understood (p. 283).

2.3   Mediation

Another central concept of SCT as explained by Vygotsky is that human consciousness is

a fundamentally mediated activity. The concept of mediation can be understood as a departure

from behaviorist theories of cognition, where human action is a direct result of stimuli in the

environment, and given sufficient repetition and reinforcement, habits will be formed. Under a

behaviorist view of the mind, language is one such habit (Lantolf & Appel, 1994). But rather

than posit a direct relationship between humans and the world, SCT holds that humans use tools,

both symbolic and physical, to mediate interaction with their environment. By doing so, they

develop complex mental processes.

2.4   Sociocultural Theory in Second Language Acquisition

This section first will examine how language as a tool to mediate knowledge

development is understood in a second language acquisition (SLA) context. It will then explore

how SCT-based SLA theories have been applied in research settings that examine learner-learner

interaction.

2.4.1   *The Role of Output in Language Development*

In order to understand how the SCT concept of language as a symbolic tool has

influenced SLA research, it is first important to examine how the field has come to view the role

of spoken interaction in L2 learning. Swain (1985) proposed the output hypothesis based on the observation that second language learners in a French immersion setting were exposed to more than six years of comprehensible input, yet their speaking and writing skills remained surprisingly not target-like. These learners rarely had the opportunity to produce extended written and spoken discourse, and as such lacked the opportunity to control and manipulate their own language efforts. Swain used this observation to suggest that output is crucial to language development, and that these learners were denied the opportunity to fully develop in their L2 because they were not encouraged to express themselves meaningfully, both orally and through writing, in the classroom.

Swain further explained that output serves several crucial functions in language learning. First, producing output pushes learners to notice gaps in their interlanguage system as they try to express ideas while speaking. Under pressure to create effective linguistic form and meaning, learners become aware of what they are and are not able to do in the second language. Second, producing language allows learners to test hypotheses about how the language works and to eventually use this information to develop their language knowledge. For example, Swain (2000) describes two language learners in the French L2 setting who made a grammatical error and then, after consulting a dictionary, crossed it out. Swain takes this process of trying out different grammatical forms, questioning each other, and consulting an outside tool as evidence that the two learners were engaged in testing a hypothesis about grammar. This process, for Swain, shows another way that output aids learners in language acquisition: it can allow them to work together to identify and solve linguistic problems (2000). While the output hypothesis is rooted in a cognitivist perspective on SLA, rather than a sociocultural one, Swain's early work helps build the foundation for an examination of how speech mediates cognition.

2.4.2   Collaborative Dialogue

This kind of dialogue, which is considered an extension of the initial output hypothesis, is that in which "speakers are engaged in joint problem solving and knowledge building" (Swain, 2000, p. 102). Thus, in collaborative dialogue, output serves a cognitive function, in that speaking mediates language learners' understanding of how lexical and syntactic systems function in the target language. Among the benefits of collaboration is that it provides opportunities for learners to engage in negotiation for meaning, treating what they have said as an object that they can continue to explore as the dialogue unfolds. Through this exploration, learners are able to co-construct their linguistic knowledge and further develop their interlanguage (Swain et al, 2002). In examining the concept of collaborative dialogue and its possible benefits for language learners, researchers have used two key analytical tools: language-related episodes (LREs), and pair dynamics. Before turning to the results of empirical studies that have utilized these units of analysis, they will be briefly explained below.

2.4.2.1   Language-related Episodes

Identifying the concept of collaborative dialogue in data from language classrooms, some researchers have operationalized this concept using language-related episodes (LREs). For these researchers, the effect of collaborative dialogue can be understood by noting the occurrence and describing the quality of LREs, which Swain and Lapkin (1998) have described as "any part of the dialogue where the students talk about the language they are producing, question their language use, or correct themselves or others" (p. 326). That is, identifying LREs helps pinpoint and describe the parts of collaborative dialogue where co-construction of knowledge is occurring. Based on this definition, two main types of LREs have been identified: lexical and grammatical.

2.4.2.2 Patterns of Interaction

This chapter will also explore peer-peer interaction by reviewing studies that have

applied Storch's (2002a) concept of patterns of interaction. This idea arose from a criticism of

focusing only on the linguistic characteristics of peer-peer interaction, an approach which

according to Storch

> seems to assume that all small groups/pairs behave in the same way or that the nature of
> relation does not affect learning outcomes . . . the analysis of the language used by the
> learners seems to ignore the fact that in face-to-face interactions, learners negotiate not
> only the basic topic but also their relationship (2002, p. 120).

As is clear from her identification of the shortcomings of an analytic approach based

solely on linguistic indicators (as are LRE's), Storch was interested in exploring pair dynamics in

collaborative dialogues. Specifically, she explained pair dynamics in terms of *mutuality*, or the

level of learners' engagement with each other's contributions, and *equality*, or the degree of

control and authority over the task. As Figure 1 shows, mutuality and equality are continuums,

and each can range from high to low. Thus, there are four possible patterns of dyadic interaction

in Storch's scheme.

High mutuality

4   1
Expert/Novice   Collaborative

Low equality _____ High equality

3   2
Dominant/Passive   Dominant/Dominant
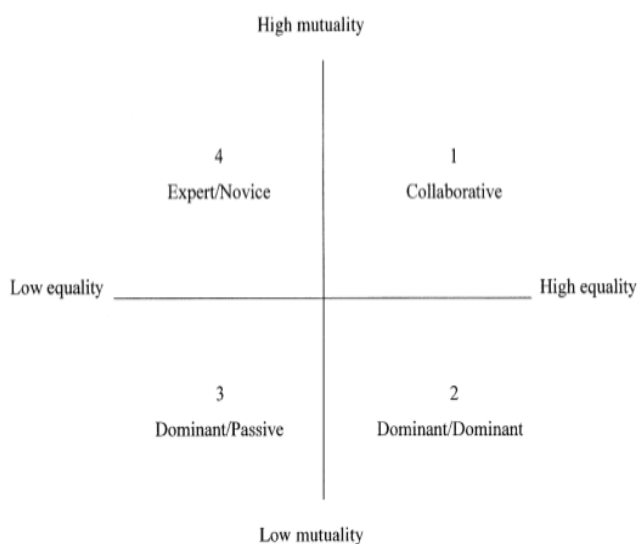
Low mutuality

Figure 2.1 Storch's (2002) Patterns of Interaction

The figure above provides a visual representation of the axes of *mutuality* and *equality*, and shows that this framework allows researchers to identify four different patterns: collaborative, dominant/dominant, dominant/passive, and expert/novice.

2.5 Summary: Collaborative Dialogue and Patterns of Interaction in SCT

The belief that collaborative dialogue and the interactional dynamics that occur within it are at the heart of language acquisition is one that is rooted in a sociocultural perspective on learning. A central tenet of SCT is that learning is mediated by symbolic tools, including language (Vygotksy, 1978). By using tools to mediate their relationship with the world, learners develop their cognition.

According to Swain et al. (2002), collaborative dialogue mediates joint problem solving and knowledge building. By talking with each other to work out language puzzles, learners further develop their language competence, such that social interaction affects cognitive function. Language that has been learned can then mediate further language learning (Swain, 2000). The concept of collaborative dialogue allows researchers to empirically examine the theoretical claim that peer-peer interaction can foster language learning in the zone of proximal development (Wells, 1999).

In addition to collaborative dialogue, the examination of the *patterns of interaction* that occur among learners is also in line with an SCT perspective on language learning. Vygotsky (1976) noted that in order for novices to achieve what they would not be able to alone, they need support from an expert. When extending this theory to second language learners in peer-peer interaction, peers can concurrently be experts and novices (Brooks & Swain, 2001). Storch's (2002) *patterns of interaction* framework allows second language researchers to further describe expert and novice positionality within peer talk, and to question how it might affect the co-

construction of knowledge. As Donato (1994) notes, successful collaboration involves a meaningful core activity, considers individuals as parts and accepts their contributions as useful, builds coherence within and among social relations, and co-constructs new knowledge that goes beyond any knowledge possessed by a single member in isolation. Taken together, collaborative dialogue and patterns of interaction allow SLA researchers to test claims like Donato's in natural language data.

2.5.1   *Empirical Studies of Collaborative Dialogue and Patterns of Interaction*

Using this SCT understanding of collaboration as their base, SLA researchers have provided compelling evidence that certain kinds of peer-peer interaction are successful in contributing to language learning. While there have been socioculturally-influenced SLA studies that have adopted a qualitative case study approach, in this manuscript I will generally limit my attention to those using more experimental designs. These studies, which I will refer to as *interaction studies*, collect data using controlled pair tasks, and consider different variables that may affect learning outcomes. The following section will review these studies, grouping them in terms of variables they have examined. These variables include: individual versus collaborative tasks, the proficiency level of learners, and the effect of patterns of interaction on collaborative dialogue.

2.5.1.1   *Language learning in individual and collaborative tasks*

Several studies have examined the difference in students' performance when they complete collaborative tasks in comparison to when they work alone (Kim 2008; Storch, 1999; Storch, 2007). With experimental designs that group learners into those who complete tasks individually and those who complete them in pairs, researchers in this line of inquiry have been able to provide evidence for the benefit of pair work in fostering language development.

Storch (1999) was interested in whether or not ESL students in an Australian university working in pairs and discussing their grammatical choices (during a cloze exercise, text reconstruction, and joint composition) produced more accurate written texts on these exercises than students working individually. When grammatical accuracy results for the three tasks were examined as a whole, she found that collaboration had a positive effect on grammatical accuracy for all students who worked in pairs. Storch notes that in addition to the benefits of collaborative dialogue for solving language puzzles, learners who worked in pairs may also have been more accurate because these pairs took more time to complete their task and sometimes revised several times before they turned in their work, compared to the individual task learners who took less time to work and edit. However, there was variation in improved accuracy in pair work for specific grammatical items. Specifically, article production did not show a clear pattern of improvement across learner pairing and task type.

In a later study, Storch (2007) gave students in four intact Australian ESL classes the choice of working alone or in pairs to complete a text-editing task. In contrast to the previous study, there were no significantly different scores in grammatical accuracy between pairs and individuals. However, analysis of pair talk revealed that a high proportion of the LREs that arose in pairs were resolved interactively, and Storch holds that "pair work afforded learners opportunities to pool their linguistic resources and co-construct knowledge about language" (p. 155).

Kim (2008) examined the potential for collaborative dialogue to help Korean as a second language (KSL) learners acquire vocabulary in the target language. In this study, thirty-two adult KSL learners were randomly assigned to either the collaborative or the individual group for the completion of a dictogloss task. Both groups then completed a task sequence of pretest (where

they were asked to identify unfamiliar words from the dictogloss text), task (listening to and reconstructing the dictogloss text), and a post-test (which included vocabulary items that learners had indicated in the pretest). Students working individually were asked to verbalize their thought processes using a think aloud protocol. Kim found that while both groups produced almost the same amount of lexical LREs, the collaborative group had higher scores on the post-test and were better able to correctly resolve their LREs.

Taken together, then, the results of Storch (1999, 2007) and Kim (2008) suggest that when peers work collaboratively, they are able to resolve language issues that may have been left unattended without the assistance of another learner. Storch (1999) notes that pairs in this study were able to increase their grammatical accuracy by working together because doing so provided them with two different types of feedback: individual acoustic feedback when they verbalized their own decisions, as well as peer feedback. The think aloud protocol employed in Kim's (2008) study showed that the individual learners also tried different pronunciations by repeating words, but as previously mentioned, these learners were less successful in correctly resolving pronunciation-related LREs than were their counterparts who worked in pairs. Perhaps, then, individual vocalizations of reasoning processes are more successful when there is an interlocutor present to confirm the learner's correct hunches or to help them abandon inaccurate ones. Even though this point is speculative, it does seem increasingly evident that learners who work in pairs are more successful at correctly resolving vocabulary-related LREs and at improving their grammatical accuracy.

2.5.1.2   *The Effect of Interlocutor Proficiency on Collaborative Dialogue*

Instead of comparing collaborative tasks to individual ones, other studies have considered how the proficiency differences of participants might affect their ability to produce collaborative

dialogue that fosters language learning (Leeser, 2004; Wantanabe and Swain, 2007; Kim and McDonough, 2008).

Leeser (2004) examined the LREs that adult L2 learners of Spanish produced during a dictogloss activity. In addition to examining the focus of LREs and their outcomes, Leeser was also interested in whether or not proficiency pairing made a difference. In this study, proficiency pairings included higher proficiency-higher proficiency pairs, higher proficiency-lower proficiency pairs, and lower proficiency-lower proficiency pairs. He found that as the overall proficiency of the dyad increased, so did the number of LREs, the proportion of grammatical LREs, and the proportion of correctly resolved LREs. That is, high-high pairings were more likely to correctly resolve LREs than were high-low pairings or low-low pairings. Leeser suggests that for higher proficiency students, task demands of comprehending the passage may have been lower, and thus they may have been more able to focus linguistic resources on identifying and solving grammatical LREs (as VanPatten's 1996 input processing model suggests). Using higher global comprehension as an explanation for the ability to focus on grammatical form, however, merits further attention.

One of the areas of focus of Watanabe and Swain's (2007) study was to investigate the relationship between proficiency differences of learners and the frequency of LREs, and between proficiency differences and scores on post-tests. While previous studies had examined learners of different proficiency levels, these researchers were interested in how the same learner's collaborative dialogue may change when he or she works with a higher versus a lower proficiency partner. As such, the study identified four "core" Japanese ESL participants, each of whom completed a text reformulation exercise with a higher and lower proficiency peer. Watanabe and Swain found that core-high pairs produced a greater frequency of LREs, but that

core participants achieved slightly higher scores on the post-test after working with a lower

proficiency partner. The researchers take these results to suggest that core participants learned

more from working with lower proficiency peers, and they suggest that there is value for mixed

proficiency pairing in collaborative tasks.

Finally, Kim and McDonough (2008) worked with 24 KSL learners to determine how the

occurrence and resolution of LREs differed based on the proficiency of the interlocutor. They

found that when paired with an advanced interlocutor, intermediate KSL learners completing a

dictogloss task produced more lexical LREs than when they were paired with another

intermediate proficiency partner. In addition, significantly more resolved LREs occurred when

speaking with an advanced interlocutor. However, there was no significant difference in the

amount of grammatical LREs produced by intermediate-advanced and intermediate-intermediate

pairs in this study.

Overall, these studies on proficiency differences and collaborative dialogue suggest that

learners who are at a higher proficiency level are better able to produce and correctly resolve

LREs than are their lower proficiency counterparts. Similar results were found in Williams

(1999, 2001). Gan's (2010) description of high performing oral assessment groups noted that

these interlocutors were able to engage constructively with each other's ideas by offering

suggestions, giving explanations and making challenges. Thus, it seems that as language

proficiency increases, learners become more able to perform the sophisticated language functions

that Gan points out, perhaps allowing them to engage more deeply with the language problems

they are attempting to solve. These results seem to be true for the overall proficiency of the pair,

such that pairing a less proficient interlocutor with a more advanced one results in more success

during collaborative dialogue than would a low-low matched pairing, and more subsequent retention of the forms discussed in this setting.

2.5.1.3   The Effect of Patterns of Interaction on Collaborative Dialogue

Some of the studies mentioned above, in addition to examining the effect of learner proficiency on collaborative dialogue outcomes, also considered Storch's (2002a) framework for identifying *patterns of interaction*. This framework allows researchers to examine not only learner and task variables in collaborative interaction, but also enables them to consider the equally important interpersonal aspects of these tasks. Collaboration in a learning environment involves building and fostering social relationships (Donato, 1994), and the *patterns of interaction* framework allows interaction researchers to explore the relational stances that learners adopt when working together.

As mentioned previously, the *patterns of interaction* framework identifies four possible patterns. The table below summarizes the features that Storch (2002) identified in each pattern.

Table 2.1 Features of Storch's (2002) Patterns of Interaction

Quadrant	Pattern	Characterized by	Features found in Storch (2002)'s data
I	Collaborative	•moderate to high equality •moderate to high mutuality	•repetition / extension of utterances •positive and negative feedback •requests for and provision of information
II	Dominant / Dominant	•moderate to high equality •moderate to low mutuality	•few requests / collaborations •peer repairs given but not accepted •raised voices
III	Dominant / Passive	•moderate to low equality •moderate to low mutuality	•dominant partner makes self-directed questions as opposed to questions for peer •little negotiation, because passive participant gives few contributions / challenges
IV	Expert / Novice	•moderate to low equality •moderate to high mutuality	•expert provides assistance that helps novice learn •expert does not impose view but rather provides explanations •novice accepts and repeats explanations •expert actively encourages novice to take part

The importance of *patterns of interaction* in collaborative dialogue is highlighted by empirical data showing that when one peer adopts a dominant stance, the other may lose opportunities to engage in the kind of language learning that generally occurs in collaboration. Storch (2007) pointed out that while most instructors would perceive the collaborative stance as the one that best fosters language learning during collaborative dialogue, this pattern does not necessarily occur just because learners are asked to work in pairs. Storch characterized one of the pairs in this study as dominant/passive, and noted that opportunities to engage in solving

language problems arose only for the dominant learner. She suggests that teachers monitor this kind of pair work to ensure that beneficial collaboration occurs.

Other studies have built on Storch's observation that the collaborative pattern is linked to more successful collaborative dialogue by connecting patterns of interaction to LREs. Watanabe and Swain (2007) considered the relationship between *patterns of interaction* and frequency of LREs, as well as that between *patterns of interaction* and post-test results, among 12 Japanese ESL learners. They found that pairs who adopted the collaborative pattern not only produced more lexical and grammatical LREs, but also had higher post test scores than the other three patterns. Thus, when learners adopted a collaborative pattern of interaction, both learners benefitted, as evidenced by an increase in post-test scores.

Kim and McDonough (2008) examined patterns of interaction among KSL learners. Examining how pair dynamics differ when intermediate KSL learners collaborate with an intermediate interlocutor compared with an advanced one, they found that proficiency did seem to influence patterns of interaction. Learners who adopted a collaborative stance when working with intermediate interlocutor adopted a passive or novice stance when they were paired with a more advanced speaker. Also, several learners who adopted a dominant stance with an intermediate interlocutor were collaborative when working with an advanced one. The authors suggest that the learner's own perception of his or her linguistic ability relative to that of a peer might have contributed to this shift in stance.

Overall, these studies on pair dynamics suggest that a collaborative stance is more conducive to producing and correctly resolving LREs than are other stances. Although Storch's (2001, 2002a, 2002b) observations suggested that expert/novice patterns may also be beneficial for fostering learning, the studies cited above, which employed post-tests to gauge the learning of

individual students, suggest that only the collaborative pattern shows a clear advantage. It seems

prudent, then, to further investigate the features of pairs who are able to successfully adopt a

collaborative stance and use it to focus on form during collaborative dialogue. Kim and

McDonough (2008) suggest that individual learners' perceptions of their own language deficits

in relation to their partner might affect their adoption of a less collaborative stance. This idea is

an intriguing one that can be further investigated by asking learners about their perceptions of

their partners during a stimulated recall interview, which is used in the current study and will be

described in further detail in Chapter Four. Further exploring learners' ideas about collaboration

to investigate why they adopt the stances they do will enrich our understanding of how pair

dynamics contribute to the learning outcomes of collaborative dialogue.

2.5.2   Summary: Findings on Collaborative Dialogue and Patterns of Interaction

The studies reviewed here suggest that there is growing support for the claim that

collaborative dialogue fosters language learning, at least when the production and resolution of

language related episodes (LREs) are considered. Comparisons of individuals and pairs

completing the same task show that pairs produce and correctly resolve more LREs than their

counterparts working alone. In addition, it seems that pairs whose overall proficiency is higher

are more successful in generating and resolving LREs. Finally, *patterns of interaction* analyses

have shown that pairs who adopt a collaborative stance are more likely to produce and resolve

LREs than are pairs in other patterns. However, research in the area of the *patterns of interaction*

in collaborative dialogue could be extended. Kim and McDonough (2008) found that proficiency

differences may affect patterns of interaction if pairs are mismatched in their proficiency,

because learners may perceive that they have a linguistic deficit in relation to their interlocutor.

Thus, these researchers suggest approaches that not only quantify the occurrence and resolution

of LREs, but also provide qualitative support for findings about patterns of interaction by interviewing participants about their experiences of pair dynamics during collaborative tasks

2.6   Applying Collaborative Dialogue and Patterns of Interaction to Peer Response

In her review of peer-peer dialogue, Swain (2002) noted that while it appears from experimental settings that collaborative dialogue and peer feedback are effective for the development of writing skills, further investigations in ecologically valid settings should be conducted. Examining peer response, or a feedback practice in writing classrooms where students read and comment on each other's work, is an interesting context to examine in response to Swain's call for further research.

SLA studies have coded collaborative dialogue for lexical or grammatical LREs, and have examined the occurrence of correctly resolved LREs, where learners eventually arrive at the correct form. However, students in peer response sessions are usually asked to comment on rhetorical issues of content and idea expression, as L2 writing theorists generally believe that writing instructors should be the ones to correct language errors (Ferris, 2003). It is not as straightforward with peer response data from a typical L2 writing classroom to codify whether or not instances of collaboration about rhetorical structure have been correctly or incorrectly resolved. After all, there may be multiple ways to improve cohesion in writing, to give just one example of a rhetorical feature that students might focus on. In addition, students often take their peers' suggestions and use them to revise in later drafts, such that evidence of resolution of the issue would not be present in the interaction itself. As such, it is necessary to measure learning outcomes of peer response in ways that are more appropriate for writing classrooms. Peer response studies in second language writing have employed various methods for measuring these learning outcomes, and these studies will be discussed in Chapter Three.

While the concept of LREs as they are understood by collaborative dialogue is not directly applicable to peer response data, the *patterns of interaction* framework is a useful tool for describing the social dynamics of these interactions. As with the SLA studies cited here, in the L2 writing literature, peer response pairs and small groups that work more collaboratively tend to have more positive outcomes in terms of student attitudes and revisions (a finding which will be explained in Chapter Three). However, Ferris suggests that "multifeatured, triangulated projects that simultaneously consider feedback characteristics and outcomes" (p. 85) are needed to further this line of research. Ferris has criticized peer response studies for loosely describing the social interactions that occur there. This study will apply Storch's coding scheme, which arose from learner-learner data and has been applied successfully in various studies, to help lend the kind of methodological rigor that Ferris calls for. The identification of *patterns of interaction*, and measurements of their revision outcomes, will be discussed in detail in Chapter Five.

3   PEER RESPONSE

The previous chapter described the basic tenets of sociocultural theory, and reviewed how these concepts have been applied in SLA studies examining collaborative tasks. This chapter will describe the existing literature on peer response in second language (L2) writing settings, and will explore how this literature might be enriched by applying some of the SCT-based analytical tools used in SLA research.

Although the fields of L2 writing and SLA have, for the most part, developed separately, Liu and Hansen (2002) note that peer response is supported by SLA theories that tout the importance of spoken interaction for language development, as well as sociocultural theories that value the role of spoken interaction for the development of cognition. Because learners

participating in peer response sessions are asked to use each other as sources of feedback, this activity has the potential to create collaborative dialogue as defined by the SLA studies reviewed in the previous chapter. Just as students who collaborate with another learner produce and resolve more LREs, peer response has been shown in some cases to result in improved writing on subsequent drafts (Ferris, 2003).

A separate but related writing concept, the idea of literacy development as a social act, also underlies the pedagogical practice of peer response. In the same way that collaborative dialogue researchers view spoken negotiation for meaning as crucial for language development, second language writing researchers argue that individual cognitive processes can only be understood within the unique context of learning. In an L2 writing setting, the unique context of learning may involve the kinds of spoken negotiations for meaning that occur in a peer response session and lead to the writer's improvement during later revisions.

Nelson (1993) suggests a bidirectional relationship between context and cognition in a composition classroom (citing Flower, 1990), where cognition and context are dynamic and mutually influential. That is, cognition may be influenced by the context of each learner's culture and experiences, but cognition is not simply a product of these contextual factors; new cognitive knowledge might shape the individual's perception of his or her context. She argues that in an ESL composition classroom, this interplay of cognition and context creates a challenge for instructors: creating a classroom where social interactions (context) help students to become better individual writers (cognition).

Peer response has the potential to foster such a connection between context and cognition, or between reader-writer interactions and future individual writing development. Students who successfully participate in peer response are not simply developing their individual

skills as writers; they are developing a social relationship with a peer, one in which writers feel comfortable giving and receiving constructive feedback that is beneficial for their subsequent revisions. Because it mirrors this interplay between context and cognition, peer response is promising for fostering writing development among students.

However, descriptions of social interactions during peer response in the literature have shown that not all groups are successful in establishing a collaborative relationship. In addition, a smaller body of studies suggests that peer response is not always beneficial for the revision process or for longitudinal writing development. Overall, few studies have connected social interactions during peer response to revision outcomes in a way that systematically examines how this complex relationship between cognition and context develops over time. This study aims to extend the existing knowledge about peer response by examining two neglected areas: the potential change over time in pair dynamics during peer response sessions, and the effect that these pair dynamics may have on revision outcomes.

The section that follows will examine the existing literature on peer response. Although investigations have been conducted with both pairs and small groups of three or four students, those that focus on pairs will be reviewed here. This section will attempt to demonstrate the need for a study that more rigorously connects social dynamics during peer response to revision outcomes, considering how these contextual and cognitive dimensions influence each other over the course of a semester-long composition course. It will first review studies can be viewed as primarily focused on the cognitive dimension of peer response, because they consider the revision outcomes and possible long-term effects of peer response on writing development. Next, studies that primarily examine the contextual dimension of peer response will be reviewed. During peer response, contextual variables include the individual ones like students' first

language and cultural background and their attitudes toward peer response, as well as interpersonal ones such as the social dynamics of the group.

3.1   Cognitive Factors: Revision and Writing Development

The studies reviewed below place primary importance on the cognitive dimension of peer response, in that they examine what individual students do with peer comments after response sessions. While they sometimes comment on the contextual dimension by considering revisions in terms of comments made during peer response sessions, the establishment of social dynamics during peer response sessions is not their primary focus. Rather, any contextual focus is implicit. The first group of studies examines the revision choices that writers make, while the second group examines how peer response might affect future writing development.

3.2   Connecting Peer Response to Revision

Some studies have described what peers do with feedback by considering both teacher and peer feedback and comparing the uptake of both in later drafts. Connor and Asenagave (1994) examined the types of revisions (text-based or surface changes) that students made based on peer comments, and how these revisions compared in number to revisions based on teacher commentary. Examining eight pairs of students, they found that although these freshman ESL students made many revisions from first to second drafts, only five percent of those could be traced to peer comments. Also, peer response groups made mostly surface changes, which can be considered as less substantial improvements than the text-based changes made based on teacher comments.

Raibee's (2010) study in an Iranian EFL setting grouped students experimentally into three groups: those who received only teacher comments, only peer comments, or both. She found that the peer comment group showed the least gains in holistic scoring from first to second

drafts. These studies seem to suggest that when L2 writing students have access to both peer and teacher comments, they are hesitant to incorporate their peers' feedback in later drafts. The students in both Connor and Asenagave's and Raibee's studies made more revisions, and more successful revisions, based on teacher feedback than on peer feedback.

Other studies have described the connection between what is said in peer response groups and what happens with revisions by quantifying the amount of peer suggestions that are used in revised drafts. Some of these studies have found that students incorporate only a moderate amount of their peers' suggestions into their drafts.

The twelve advanced ESL students in Mendonca and Johnson's (1994) study used only about half of their peer's comments; by audio recording peer response sessions, comparing first and second drafts, and interviewing students, the researchers conclude that writers were selective about incorporating peer feedback into their drafts, and that they used only some of these comments in their revisions. These decisions were sometimes based on whether the students saw their peer as a valuable source of feedback, suggesting that instructors should not assume that students will use the comments that their peers supply.

Tang and Tithecott (1999) report similar results: only six of the twelve focal students in this study incorporated peer feedback in their drafts at all. In addition to the low amount of incorporated changes, a problematic picture of peer feedback emerges in this study; some group members did not receive any suggestions, and some incorporated changes that did not result in improvements in drafts. Like Mendonca and Johnson, this study suggests that students were hesitant to incorporate feedback from their peers.

As mentioned previously in this chapter, some L2 writing theorists believe in a model of writing development that connects the social context of peer response to the cognitive act of

individual revision. The studies reviewed above suggest that peer response sessions may not be allowing students to engage socially to give and receive comments in a way that helps them make beneficial revisions. Based on the studies, it appears that the connection between context (peer response suggestions) and cognition (the individual incorporation of these comments after the peer response session) may not be exploited successfully in all peer response sessions.

3.2.1   *The Possible Effects of Peer Response on Writing Development*

Revision outcomes can be seen as a short-term effect of peer response sessions. Perhaps a more important outcome might be the effect of peer response on long-term development in student writing. One study attempted to uncover this connection by examining student progress over the course of a semester. Lundstrom and Baker (2009) consider whether giving or receiving feedback is more beneficial to improving student writing. Their experimental design divided students into two groups. One group commented on others' papers, but did not receive any feedback on their own writing, while the other group received peer feedback, but did not give any to others. Both groups participated in four training sessions about how to either give or receive effective feedback. Based on a timed writing task for pre- and post-measurement of writing ability, Lundstrom and Baker report that the givers benefitted more than the receivers. This study suggests that students who participate in the practice of reading and commenting on another's writing may experience benefits in their own writing development. In this way, giving peer feedback may have a long-term effect because it helps the giver of feedback improve in new pieces of writing.

Tsui and Ng's (2000) investigation of student attitudes toward peer review and how these affect revision efforts also examines the possible long term effects that peer response sessions can have on writing development. By conducting semi-structured interviews with students and

administering questionnaires, the authors conclude that peer comments serve four main functions: to develop a sense of audience, to enhance learners' awareness of their strengths and weaknesses, to encourage collaborative learning, and to create a sense of ownership over the text. The authors suggest that these functions of peer comments may affect writers' development beyond the peer response session, although they acknowledge that longitudinal studies should further investigate these claims.

Another method that can be used to uncover writing development beyond the comments made in peer response sessions is to consider whether or not students make self-revisions that originate in peer response sessions, but go beyond what was suggested there. Villamil and deGeurrero (1998) note that the fourteen Spanish speaking ESL students in their study made further revisions on the paper they discussed with a peer, which were "adopted in the session and further revised at home" (p. 497) and self-revisions, which were "performed at home and not discussed in the session" (p. 497). They identified these two kinds of revision by comparing pre- and post- peer response drafts, as well as by relying on audio recordings of peer response sessions. The researchers take the presence of further revisions and self-revisions as evidence that "certain linguistic or rhetorical processes which were in a state of development or instability may have had an opportunity to mature and consolidate, and new knowledge may have been generated" (p. 504). That is, the process of talking about writing with a peer may have contributed to the writers' ability to make further improvements when revising alone.

The studies reviewed in this section have quantified the extent to which peers incorporate each other's suggestions, have compared the amount of peer feedback relative to teacher feedback that is incorporated in revisions, and have considered revisions that occur beyond the peer response session. Overall, they paint a somewhat inconclusive picture of the effects of peer

response on revision outcomes and on writing development. It seems that some peer response groups (e.g., Villamil and deGeurrero) are more willing to incorporate changes than are others (e.g., Connor and Asenagave, 1994). What remains to be addressed in more detail, though, is why this is so. It seems reasonable that students who choose not to incorporate their peers' suggestions do not see their peers' contributions as valuable or accurate, but a more compelling question is why students have this view about peer feedback. This question can be examined with methodologies such as think-aloud protocols that ask students to explain their choices (as Hyland, 2000 suggests).

Also, more studies are needed that not only trace changes made in drafts to suggestions raised in peer response groups (e.g., Tang and Tithecott, 1999; Villamil and deGuerrero, 1998; and Mendonca and Johnson, 1994), but also consider the extent to which incorporated suggestions actually result in improvements in later drafts. Finally, the compelling question of if and how repeated peer response sessions may influence learners' participation in and attitudes about this process merits further investigation. While participants in the study did not participate in traditional peer response, but rather solely gave or received comments, Lundstrom and Baker's (2009) longitudinal design has begun to scratch the surface of this possible line of research. Examining questions such as these will allow peer response researchers to describe the interplay between individual writing development (cognition) and the social interactions that help foster it (context).

3.3   Contextual Factors: Student Attitudes, Culture, and Social Dynamics

The following studies focus primarily on the contextual factors that are involved in peer response. These include individual student factors, such as their attitudes toward the practice of peer response, and their cultural and L1 backgrounds. They also address the social dynamics of

peer response groups, considering how peers establish their relationships as reviewers and writers, and how they negotiate their stances toward this task. Taken together, these studies provide a detailed view of what students talk about in peer response groups, how they negotiate the relationship between reader and writer, and what effect their background characteristics may have. Understanding these contextual factors is an important step toward describing effective peer response groups, and linking these interactions to later positive revision outcomes.

3.3.1 Student Attitudes Toward Peer Response

A large body of research has addressed the question of how students feel about peer response by administering questionnaires (Mangelsdorf, 1992; Jacbos et al, 1998; Rollinson, 2004), conducting interviews (Mendonca and Johnson, 1994; Carson and Nelson, 1998; Rollinson, 2004), and analyzing students' journal entries about peer response (Tang and Tithecott, 1999). Student attitudes are an important consideration in describing peer response, as students who do not view their peer's suggestions as valid or who do not see the value in participating in peer response may be unlikely to benefit from this practice.

Some studies on student views of peer response used questionnaires and concluded that students do value peer response as one source of feedback (Mendonca, 1992; Jacobs et al, 1998). Other investigations have asked students to further explain their opinions after they participated in peer response, thus deepening researchers' understandings of the reasons why students value peer feedback. Among these reasons are that peers can identify areas of student writing that are clear (Rollinson, 1994; Mendonca and Johnson, 1994), as well as those that are less so (Mendonca and Johnson, 1994; Tang and Tithecott, 1999). In addition, students in peer response groups have stated that they are exposed to new ways to express their own ideas by reading those of a peer (Mendonca and Johsnon, 1994). In the case of intact peer response groups that meet

over time, peers may even come to rely on their readers to identify problems, and be upset if they miss these (Rollinson, 1994).

However, not all research on student attitudes has revealed that they value and enjoy the process of peer response. Students have expressed reservations about their ability to respond effectively to another student's writing, and have stated that they feel more comfortable when the teacher fills this role (Tang and Tithecott, 1999; Rollinson, 2004). Students who receive feedback from their peers have also expressed hesitations about this feedback source, because they feel their partner lacks the background knowledge necessary to make effective comments (Mendonca and Johnson, 1994), or because they are hesitant to accept grammar feedback from another learner (Carson and Nelson, 1998). The Chinese peer responders in Carson and Nelson's (1994) study also noted that they were hesitant to accept suggestions when the entire group did not reach consensus. In Tang and Tithecott's (1999) study, students were asked to read their papers aloud, and peer responders expressed difficulty with listening comprehension during such long stretches of discourse.

It is difficult to draw overall conclusions about student attitudes toward peer response because the research about student attitudes summarized above has been conducted in a variety of settings (EFL and ESL) at a variety of levels (pre-university, university, and graduate). However, it seems that some of the claims about the benefits and drawbacks of peer response for students mentioned in the pedagogical literature are born out in research about student attitudes. For example, students may not know what to look for in their peers' writing, as Liu (2002) mentions, and they may be unsure about the accuracy of their peers' advice (Leki, 1990). However, not all students have negative views about peer response; Ferris's (2003) claim that peers can provide developmentally appropriate feedback is echoed by students who note that

their peers are able to identify problems that they are not able to alone (Mendonca and Johnson, 1994; Tang and Tithecott, 1999).

3.3.2   *Student Cultural and L1 Backgrounds*

Another line of research in the contextual description of peer response groups is the consideration of how participants' language and culture might impact this interaction. Based on their data from three peer response groups, Carson and Nelson (1994, 1996) suggest that students from Japanese and Chinese backgrounds may be hesitant to provide suggestions to peers in response groups or to disagree with their group members. They suggest that L2 writers from these cultural backgrounds may value the preservation of group harmony over what they see as face-threatening behavior. As such, these group members may not be as willing to participate in the kind of collaborative interaction that researchers examining the social dimension of peer response have identified as beneficial for talking about writing. In a subsequent (2006) publication, Nelson and Carson revisit the idea of culture as an explanation of group members' behavior in peer response sessions. While they admit that the notion of culture has become problematic from an ideological standpoint, they still maintain that "our identities are influenced by culture … we need to understand the ways in which culture may affect student behavior in peer response groups" (p. 54), and suggest research approaches that consider culture as just one of the multitude of influences on student behavior in peer response groups.

Studies that investigate students' L1 backgrounds seem to support the argument that this dimension, in addition to culture, should not be ignored as a potential influencing factor in peer response. Levine et al (2002), compares of a group of Israeli and American students, and a group of only Israeli students, completing peer response in English. They report that the homogenous Israeli group was more supportive of each other and gave more helpful comments. They suggest

that the students with a shared linguistic background felt more comfortable giving feedback to each other. In addition, a comparison of L1 (first language) and L2 (second language) English peer response groups finds that the former group's attitudes toward peer response and their beliefs about its value were more positive than those of the latter (Huang, 1995). Also, in a peer response group composed of both native speaking (NS) and non-native English speaking (NNS) students, NNS produce fewer turns, suggesting that they feel uncomfortable providing suggestions to their native speaking peers (Zhu, 2001). Finally, Villamil and deGeurrero's (1998) examination of native Spanish speaking ESL peer response groups reveals that these students use their shared first language to mediate grammar issues in each other's writing.

Considered together, these language and culture studies suggest that there are benefits for peer responders who share these backgrounds. They may feel more comfortable with each other because they share a culturally influenced interaction style, and they may be able to use their mutual L1 to solve language problems in their writing. However, it is seldom the reality that L2 writing teachers in an ESL setting have the option of matching culture and/or language in peer response groups. As such, it is important to continue to investigate how L2 writing teachers who wish to use peer review in their classrooms can encourage mixed cultural and linguistic groups to communicate successfully.

3.3.3   *The Social Dimension of Peer Response Groups*

Another important contextual variable in peer response is how students interact with their peer reviewer. Nelson and Murphy (1994) define the social dimension of peer response groups as "the way participants perceive, relate to, and interact with each other" (p. 181). The studies reviewed below describe the social dimension of peer response groups in terms of: group and individual roles (Nelson and Murphy, 1992); learner stances toward the peer response task

(Mangelsdorf and Schlumberger, 1992; Lockhardt and Ng, 1995); learner revision profiles (Rollinson, 2004); and the sociocultural theory concepts of scaffolding (deGuerro and Villamil, 2000; Hyland, 2008) and mediation (deGuerrero and Villamil, 2000).

Some studies have focused on describing the role or stance of writers in an L2 peer response group. Nelson and Murphy (1992) examines four L2 writers who were part of a writing group and describes their interaction processes and dynamics. Students, who were participating in a ten-week writing class, were provided with guiding questions and information about group etiquette and reader-based responses, and were asked to share their work with a writing group that remained intact for the duration of the course. Although coding for the task dimension of peer response in this study is encouraging in that nearly three-quarters of group talk was devoted to the study of language, Nelson and Murphy report more discouraging results in terms of the social dimension of this group. They write that perhaps an "apt metaphor for describing the group participation patterns is a duel" (p.181), as there was one student who positioned herself in the role of "attacker" (p. 182) by dominating floor time and giving negative comments to other students in the group.

Instead of describing students' roles in peer response groups, other studies have focused on their stances toward the task. Mangelsdorf and Schlumberger (1992) asked 60 ESL freshman composition students to write comments on an essay written the previous semester by the same kind of student. Participants were asked to write a letter in which they told the writer about his or her strengths and weaknesses and gave suggestions for revision. The researchers coded the comments according to the stance that the readers adopted: interpretive (the reader imposed his or her own ideas), prescriptive (readers expected the text to follow a prescribed form) and collaborative (students tried to see the text through the author's eyes). They found that the most

common type of response letter was prescriptive. The authors suggest that students who wrote prescriptive letters valued a "traditional pedagogic approach" (p. 247) to writing, in which the focus is on correctness rather than expression of meaning, and that these students may need to be guided toward adopting a more collaborative stance, and toward focusing on global concerns, in peer response sessions.

Although as Mangelsdorf and Schlumberger admit, their data were collected in an artificial and de-contextualized way that does not mirror face to face peer review interaction, they did propose useful descriptive categories that were further investigated in more ecologically valid settings. For example, Lockhardt and Ng (1995) analyzed transcripts of twenty-seven peer response groups and identified four reader stances. In the authoritative stance, readers have preconceived ideas of what they essay should be, and tell the writer what changes to make; in the interpretive stance, readers present personal responses to writer's text, focus on what they like, and give reasons; in the probing stance, readers try to puzzle out meaning in text, ask the writer for clarification, and focus on confusing areas; and in the collaborative one, readers negotiate with the writer to discover the writer's intention and build meaning. The authors highlight both the probing and collaborative stances as more productive ones for peer response, because in both of these, the writer must articulate his intended meaning, and thus gain a fuller understanding of the argument he or she is trying to make and whether or not it is successfully expressed. In addition, students who adopted probing and collaborative stances tended to focus more on the rhetorical concerns of ideas, audience, and purpose, and tended to give suggestions rather than state opinions.

Rollinson (2004) highlights the importance of considering how individual personality characteristics of writers might affect the social dimension of peer response. Although the four

native Spanish speaking women in this writing class participated in a "homogenous, motivated, and collaborative group" (p. 79), Rollinson notes that each one had her own revision profile, and that the women varied in terms of their openness to suggestions, uptake of feedback, and perception of the value of peer response. Drawing on peer response transcripts, post-peer response drafts, and interviews with participants, Rollinson describes four different revision profiles that describe each writer: the receptive reviser, the dedicated reviser, finding a new voice, and the problematic, self-directed reviser. The receptive reviser was an active member of the peer response group, and she was generally willing to revise based on her peers' comments, while the dedicated reviser was direct and brief with her own comments and expected the same from her peers. The writer characterized as "finding a new voice" (p. 96) was at first resistant to her peers' criticism of her narrative writing style, but later conformed to their suggestions for making her voice more academic. Finally, the problematic, self-directed reviser was the least interested in using her peers' comments in subsequent drafts.

Other studies have described the social dimension of peer response groups by utilizing the sociocultural theory (SCT) concept of scaffolding to explain how learning occurs in these groups. Peer interaction is central to SCT, as this theory holds that by using language as a tool to speak with interlocutors, learners are able to develop higher mental processes. That is, spoken language, in discussions about writing, is a tool that mediates participants' writing development (Villamil and deGeurrero, 2006). In their investigation of two Spanish speaking ESL students in a peer response session, Villamil and deGeurrero (2000) posit that scaffolding, or supportive behaviors adopted by the more competent learner to facilitate the less competent learner's progress (Ohta, 1995) allowed peer response interaction to evolve. Specifically, participants moved from reader-dominated to more active participation between reader and writer toward the

end of the session. Hyland (2008) was also interested in analyzing how learners in peer response groups scaffold each other. By examining the ways that two different teachers structured peer interaction in writing workshops, Hyland found that students in both classes provided verbal scaffolding to each other, suggesting that students "felt a need for such interaction" (p. 186). One instructor openly encouraged students to use each other as resources, and thus fostered scaffolding. The other created "micro-communities" (p. 186) of writers that were stable over the course of the semester, fostering a sense of security in sharing ideas and writing.

Sharing one's writing may involve personal vulnerability and the threat of being criticized. It is perhaps not surprising, then, that the studies on the social dimension of peer response groups reviewed here seem to suggest that those peer response groups which function more collaboratively are more successful. The students in Lockhardt and Ng's (1995) study who adopted probing or collaborative stances generated more talk about content and ideas. DeGeurrero and Villamil's (2000) and Hyland's (2008) description of scaffolding among peer response members suggests that these students were also able to interact in a way that mediated their writing development.

Based on this review of the peer response literature, it seems that researchers and practitioners are approaching consensus in some areas. There are certain aspects of peer response groups that may to lead to better outcomes, both during group interaction and in later revisions: groups that interact in a collaborative way are more successful. The students in Lockhardt and Ng's (1995) study who adopted probing or collaborative stances generated more talk about content and ideas. When scaffolding occurred among peer response members (DeGeurrero and Villamil, 2000; Hyland, 2008) they were able to interact in a way that mediated their writing development. There is also some evidence that group members with matched first language and

cultural backgrounds are more successful in achieving these kinds of collaborative dynamics than are heterogeneous groups (e.g., Levine, 2002; Carson and Nelson, 2006).

3.4   Research Goals and Questions

Chapter Two of this dissertation explored SLA findings about collaborative dialogue in language learning, and the current chapter has reviewed peer response studies in the L2 writing literature. While both bodies of literature suggest that working collaboratively is beneficial for learners, SLA and L2 writing researchers alike have identified gaps in our current knowledge about how students experience collaboration in ecologically valid settings, and about how to measure the learning outcomes associated with this kind of interaction. This dissertation aims to extend our knowledge in both areas.

The fields of SLA and L2 writing have, for the most part, developed separately. SLA researchers have traditionally focused on oral language as central to definitions of interlanguage competence, viewing writing as "a culture-dependent, secondary manifestation of human language" (Ortega, 2012, p. 405). Recently, however, SLA and L2 writing researchers have begun to investigate the role of writing in second language development (e.g. Williams, 2012). A recent special issue of the Journal of Second Language Writing (Ortega, 2012) on relationships between SLA and L2 Writing highlight this emerging line of research.

In particular, the sociocultural theory of language learning (Lantolf, 2011) described in Chapter Two has received growing attention in L2 writing research and classrooms. Based on the work of Vygotsky (1976), sociocultural theory focuses on learners' development in using language to mediate mental and communicative activity (Lantolf, 2011). Vygotsky's work demonstrates that when children play/learn with older peers, the older peers provide mediation and modeling for the younger ones. The children achieve "through collaborative mediation what

is unattainable alone" (Lantolf, 2011, p. 29). SLA researchers working within sociocultural theory study learner-learner interactions with the belief that peer interaction mediates joint problem solving and knowledge building (Swain et al, 2002).

SLA interaction researchers have also considered the interface between the social dynamics of pair interactions and language learning. They have found that not all pairs are successful in creating the kind of collaboration that results in learning, and it follows that in addition to collaborative dialogue, the pair dynamics that occur among learners should also be examined (Watanabe and Swain, 2007). Using Storch's (2002) *patterns of interaction* coding scheme, interaction researchers have considered issues such as the relationship between *patterns of interaction* and post-test results (Watanabe and Swain, 2007), the effect of interlocutor proficiency on *patterns of interaction* (Kim and McDonough, 2008), and the effect of pre-task modeling on *patterns of interaction* (Kim and McDonough, 2011). Overall, these studies have found that students who adopt a collaborative pattern of interaction are more successful in using language as a learning tool. The *patterns of interaction* scheme, which will be used in this study, allows researchers to describe expert and novice positionality within peer talk, as well as pair dynamics that are more oppositional, and to consider the effect of these on the co-construction of knowledge.

Peer response, which occurs when pairs of students provide feedback to each other about their compositions, is a pedagogical practice where SLA researchers' focus on pair dynamics in relationship to learning outcomes is particularly relevant. The intent of peer response is for student writers to consider the suggestions of their peers when revising their drafts. Despite its popularity (Ferris, 2003) and the sociocultural theory argument for peer response (Villamil and deGuerrero, 2006), not all peer response is successful. Students may not provide helpful

comments to each other (Leki 1990; Liu, 2002), interact in a collaborative way (Leki, 1990; Nelson and Murphy, 1992, 1994; Liu, 2002), or use their peer's comments during revision (Connor and Asenagave, 1994; Tang and Tithecott, 1999). Although several studies have suggested that when students adopt a collaborative stance in peer response, they have better revision outcomes (Lockhardt and Ng, 1995; deGuerrero and Villamil, 2000; Hyland, 2008), L2 writing scholars note that this collaboration has been loosely investigated. Ferris (2003), for example, has called for "multi-featured, triangulated projects that simultaneously consider feedback characteristics and outcomes" (p. 85) of peer response.

This study bridges the gap in these two separate but related research areas, L2 writing and SLA. In contrast to the tightly controlled, experimental SLA studies cited above, the current study will describe peer response as it occurs in a writing classroom. Swain (2002), in her review of student interaction in language learning, notes that while it appears from experimental settings that peer feedback is effective for the development of writing skills, these claims need to be tested in ecologically valid settings (e.g., classrooms). In addition, using *patterns of interaction* will describe the social dynamics of peer response in a principled way, as called for by Ferris (2003).

A study like this one builds on the existing research base in both peer-peer interaction literature in SLA, and peer response literature in L2 writing by using multiple data sources (peer response transcripts, first and second drafts of student writing, stimulated recall interviews with participants, and classroom data) to triangulate observations of the connections between the social interaction during peer response and revision outcomes. In addition, it addresses the compelling question of how peer response pairs who remain stable over the course of a semester develop their response practices and their relationship. With the exception of Lundstom and

Baker (2009), peer response studies have not considered this longitudinal variable, although it is common in second language writing classrooms for peer response pairs to meet multiple times over the course of a semester. This study, then, will address the following three research questions:

> (1)What are the patterns of interaction among peer response pairs in an L2 writing classroom, and how do students experience them?

> (2) Are different patterns of interaction associated with different revision outcomes, and how do students explain their revision choices?

> (3) Do these patterns of interaction change over the course of a semester, and how do students experience this shift?

4   METHODOLOGY

The previous two chapters have underscored the need for further research on peer response by reviewing two bodies of work: the SLA literature on pair dynamics during peer-peer interaction, and the L2 writing literature on peer response. The next two chapters will describe the current study, where a case study approach was chosen because I am examining phenomena within the real-life context where it occurs (Duff, 2008). The current chapter will describe methods for data collection, and the next one will explain data analysis.

4.1   Case Study Research

Case study research is a widely-used research method in the context of second language learning, teaching, and use (Duff, 2008). Specifically, the characteristics of case study that are relevant for this study are boundedness, triangulation, and in-depth study. Creswell explains the concept of boundedness by noting that a case study is an exploration of a "bounded system", or case (or multiple cases) (1998, p. 61). In this study, boundedness is relevant because I will

describe peer response practices in one L2 writing classroom during one semester. As Lee (2013) suggests, this kind of ecological study is crucial to "shed light on the situatedness of the learning and teaching of writing" (p. 436). The concept of triangulation (Yin, 2003) refers to the researcher's reliance on multiple sources of evidence, the benefit of which is a more comprehensive perspective on the chosen cases. The current study will employ triangulation in both data collection (with multiple sources of data) and analysis (with multiple methods of, and perspectives on, this element of the study). Finally, Gall et al. (2003) have described in-depth study as the study of instances of a phenomenon in its natural context, drawing on the perspective of the participants involved. Stimulated recall interviews with peer responders are central to my interpretation of the social dynamics that occur in these groups, and of the revision outcomes that follow the sessions.

It is also important in case study research to consider the researcher's positionality within the study. Duff (2008), for example, suggests being candid and reflective about one's own subjectivities, as well as engagement with research participants. In this spirit of reflection and disclosure, I should say that while I am interested in reporting the full range of pair dynamics and revision activities that occur in the classroom study site, it is my pedagogical belief that peer response is a worthwhile activity, and that pairs who work collaboratively reap the most benefit from it. The teacher participant in this study is a colleague, and has similar views about peer response. While this study will primarily focus on students' cognitions and actions, I will share insight about the teacher's actions during peer response class sessions wherever relevant. Because both the teacher and I were present for these class sessions, I will also make a clear distinction between us. Later in this chapter when I describe peer response procedures, I will

provide more detail about both my own and the teacher's interactions with students during peer response class sessions.

Examining peer response practices using a classroom-based, multiple case study approach draws on the strengths of case study research mentioned above. Larsen-Freeman (1997) has noted that case study research has advantages for examining complex, non-linear systems like SLA because in this research approach, the behavior of the whole emerges out of the interaction of its parts. For the peer response context, using multiple cases to examine the complex relationship between social interactions and revision outcomes sheds light on this element of the process of academic writing development for second language writers. Throughout this chapter, I will explain how these elements of case study research are present in the current study, beginning with the next section, which will describes the context in which the study will takes place.

4.2   Study site: English 1102 for Bilingual or Non-native Speakers

This classroom-based study on peer response takes place in a first-year composition classroom at a large urban university. The chosen course, English 1102, meets part of the university's requirement for two consecutive semesters of freshman composition, but it is a special section that is designed to address the needs of bilingual or non-native speakers of English. The course is marketed across the university to solicit students who fit this description, and students self-select to enroll in the course. These ESL sections of English 1102 are taught by PhD students and faculty from the Department of Applied Linguistics and ESL. As is reflected in the language of the departmentally standardized syllabus below, this course is designed to foster students' academic writing development using a process-oriented approach:

> English 1102 is an intensive writing course designed to help bilingual or non-native speakers of English write clearly and concisely in an academic setting for a variety of purposes. We

will explore the connections between reading and writing—this course requires frequent reading, writing, rewriting, and sharing your writing with others. We will focus on learning strategies and techniques (e.g., editing, analyzing language errors, maintaining and reviewing lists of personal grammar problems, conducting language research) for taking responsibility of the quality of your written work.

In addition, although there are multiple learning outcomes listed on the syllabus, peer response may help students meet some of these in particular. These selected learning outcomes are the following:

- Participate in collaborative activities, such as discussing your writing with others and offering constructive peer feedback
- Demonstrate effective use of writing tools, such as reference guides and dictionaries, computer resources, library staff, and tutoring labs on campus
- Focus on learning strategies and techniques for taking responsibility of the quality of your written work (e.g., maintain a writing portfolio, understand personal learning styles, understand the "culture" of U.S. college classrooms, self-identify needs and plans to strengthen your academic writing & language skills, rely on your classmates for feedback)

4.2.1   Writing assignments

In this course, students complete writing assignments throughout the semester which allow them to practice reading, writing, and revising in different academic genres such as summaries, response papers, annotated bibliographies, and research papers. The instructor for this course teaches using a process-oriented approach to writing, a common practice in university L2 writing classrooms (Casanave, 2012). In a process-oriented writing classroom, students complete pre-writing activities and compose multiple drafts of the same paper. After each draft is completed, students receive feedback that they are expected to incorporate in subsequent drafts. Students in this course complete five major writing assignments over the course of the semester, each one involving one or two initial drafts and a final draft. For three of these assignments, students participate in peer response sessions. The next sections will describe each of the writing assignments where peer response occurs.

4.2.1.1 Summary-response paper (peer response sessions 1 and 2)

This is a one to two page paper that includes three components: a summary of the assigned text, a personal connection, and opinions or evaluations of the text. In the connection section, students may highlight similarities between the author's ideas and their own experience, or compare/contrast the author's ideas with those of another author that they have read. In the opinion/evaluation section, students are asked to write about their own opinion of the original topic and the author's presentation of this topic, such as the author's writing style or vocabulary choice. For the first summary-response paper, students wrote about the university-wide first year book (which each student read as a class requirement), a non-fiction account of a team of refugee soccer players in Clarkston, Georgia called *Outcasts United*. For the second one, they wrote about an article they chose on the topic of the research paper they would write later in the semester (see Appendix A for a copy of the summary-response assignment description).

4.2.1.2 Persuasive research paper (Peer response session 3)

This is a three to four page paper that includes at least three academic sources. In this paper, students choose a controversial topic about which they would like to state their opinion. They educate readers about their topic by providing background information, and then present different positions on the topic, drawing from their secondary research. Finally, they attempt to persuade the readers to share their conclusions based on this research and presentation of opposing sides (See Appendix B for a copy of the persuasive research paper assignment description).

4.2.2 Peer response in ENGL 1102

Several studies have investigated the effects of training on peer response (e.g, Stanley, 2002; Min, 2006), and there is growing consensus that training is helpful in fostering successful

peer response sessions, according to a variety of measurements of second drafts for trained versus untrained groups. Training, however, is not the focus of this study. Rather, this case study approach describes the peer response procedures as they occur in the classroom under investigation. As such, I observed the class session at the beginning of the semester where students were trained in how to successfully complete peer response. This section will describe the instruction during that class session, as well as describe the instructions that students were given in subsequent class sessions when they completed peer response.

During the third week of the course, the instructor led students in a training activity, the purpose of which was to communicate her expectations about peer response, and to allow students to practice giving feedback on student writing. I observed this class session but did not interact with students or the teacher; I sat in the back of the classroom, recorded the class session, and took observation notes. First, the instructor asked students to choose a partner, and informed them that they would continue to work with this partner for the three ensuing peer response sessions. She told students that they could work with "whoever you want, and if you need to move, go ahead and do that now. It's okay to move. Just choose someone you want to share your writing with." Most students decided to work with the person sitting next to them, although a few moved to work with students in other parts of the classroom. Then, students began the activity by silently reading an example paper.

Next, the instructor distributed a handout titled "Tips for Being a Successful Peer Responder", which included pointing out areas to improve and then giving advice, telling the writer what he/she did well, and asking clarifying questions. (Appendix C). The instructor presented these tips using a combination of reading from the handout and providing specific examples, and students asked clarifying questions in a whole-class format. Students were then

asked to work with a partner and role-play a peer response session, using the example essay they had been given and modeling their conversations according to the peer response tips. The example essay was a summary-response paper about the class book. The instructor let students know that in future peer response sessions, they would be given guidelines about what to comment on, but that for the role-play activity, she would like them to focus on putting the peer response tips into practice, while commenting on any of the rhetorical elements that they had been discussing in class (keeping the audience of writing in mind, organizing writing effectively, and giving enough details so that the reader can follow your argument). The instructor wrote these elements on the board.

After each pair had switched roles so that each student had a chance to act as both a reader and a writer, the instructor led students in a whole-class discussion. During this discussion, students offered comments about what was successful and unsuccessful in their mock peer response sessions, and the instructor wrote these comments on the board. According to the students, successful practices included noting positive aspects of the paper, and asking the writer about strategies he/she used when writing the paper. Unsuccessful practices included giving direct critiques rather than asking questions. Overall, it seemed that students were engaged in the role-play and invested in the ensuing discussion, and they seemed to understand the instructor's expectations for completing peer response in the course.

During the three class sessions in which peer response data were collected, I attended the class to facilitate data collection, take observation notes, and collect peer response handouts. I sat in the back of the classroom, recorded the class session, and made notes for almost the whole class period. I did, however, help study participants turn their digital recorders on and off, and assist them in signing up for an interview time. I did not interact with study participants or other

students beyond this. The instructor asked students to follow peer response procedures. First, students were given a peer response handout with guiding questions (see Appendix D for the summary-response paper guiding questions, and Appendix E for persuasive research paper guiding questions), and were permitted to ask questions about the handout in a whole-group format. Guiding questions focused on global concerns such as paragraph development, transitions between different sections of the paper, and the inclusion of a thesis statement that signaled the development of the rest of the paper. During this part of the class, the instructor also reminded students of class activities and discussions that might be useful for them when making comments. For example, during one peer response session she told students that they might consult the list of transition devices they had been given in class if they were unsure of how to identify these in their partners' papers. Next, students exchanged papers and silently read their peer's work, while making brief notes on the draft about the guiding questions. Students were told to make enough notes so that they could remember what they would like to say, but that the majority of the feedback would be given orally when they had discussions with their partner.

When students were ready to begin discussing their papers, pairs who had agreed to participate in the current study raised their hands and I turned on a digital recorder (Olympus digital voice recorder, model VN-8100PC) that was placed on the desk between them. All students in the class completed peer response, but only students who had consented to join the study were recorded. Students negotiated whose paper to discuss first, and then switched roles. They used the notes they had made on their partners' papers to discuss their responses to the questions on the handout.

While students were verbally discussing each other's papers, the teacher circulated around the room, quietly listening to students' conversations to ensure that they were on task.

Occasionally students asked the teacher questions. If these questions were related to technical

details, such as whether to email or print the revised draft, she answered them. Some questions,

however, were related to the items on the peer response handout. In these cases, the instructor

encouraged students to arrive at the answer by working together. For example, during the first

peer response session, one student asked the teacher, "Do I have to add more details here?" She

responded by asking the student's partner, who had read the paper, "Well, does that critique part

seem clear to you? Were you able to follow it?" The students then talked to each other about

potential revisions.

Each of the three peer response sessions lasted for almost the duration of the seventy-five

minute class period: ten minutes to review the handout with guiding questions, twenty minutes

for reading and making notes, and forty minutes for discussing the feedback (twenty minutes

each paper). However, because after the explanation of the guiding questions, students were

allowed to move from one part of the procedure to another as they were ready, there was

variation in the amount of time spent reading and reviewing each paper. Chapter Six will report

word and turn counts, as well as describe how many minutes participants spent discussing each

paper.

After each class session where peer response occurred, the instructor asked students to

revise their draft, taking into account their partner's feedback. The revised draft was turned in at

the next class meeting. The class met twice a week, from 9:30 to 10:45am on Tuesdays and

Thursdays; each peer response sessions took place on a Tuesday, and revised drafts were turned

in at the next (Thursday) class session. Each Tuesday, when study participants had finished their

peer response session, I asked them to choose a one-hour time slot for their stimulated recall

interview, which began on Thursday afternoons (the day they turned in second drafts) and

continued on Friday. Immediately after class on Tuesdays, I downloaded mp3 files with recordings of peer response sessions and sent them to transcribers, who transcribed them within approximately twenty-four hours, so that I had a transcript of each peer response session by Wednesday afternoon. Each Thursday, I met with the instructor immediately after class to make photocopies of study participants' second drafts. Between peer response class periods and the stimulated recall interview, I reviewed peer response transcripts and second drafts to prepare for the interviews. Stimulated recall procedures will be described in detail later in this chapter.

4.3   Participants

This section will describe the students who agreed to participate this study. They include the classroom teacher and students in one section of English 1102, as well as graduate students in Applied Linguistics, who participated in transcribing peer response sessions and stimulated recall interviews, as well as in analyzing student drafts.

4.3.1   Instructor and students.

Of the twenty students in this English 1102 course, ten agreed to participate in the study. To recruit participants, I visited the classroom during the second week of class and explained the project and what was required of students (see Appendix F for the recruitment script, and Appendix G for the informed consent form). As participants in the study, they consented to provide me with copies of first and second drafts of three major writing assignments, to be audio recorded while they participated in three peer response sessions, and to meet with me for a an interview of approximately one hour following each peer response session. Table 4-1 describes the ten participants in terms of their basic demographics, language background, and academic major.

Table 4.1 Participant characteristics

Pair number	Name*	Gender	First Language	Length of residency in US	Academic Major
1	Dan	M	Korean	7 years	Undecided
	Alex	M	Mandarin	1 year	Finance
2	Joe	M	Swahili	6 years	Computing
	SongWoo	F	Korean	3 years	Undecided
3	HaeSun	F	Korean	3 years	Business
	JeeHae	F	Korean	0.5 years	Interior Design
4	Ivana	F	Russian	0.5 years	Hospitality
	Zelda	F	Russian	0.5 years	Biology
5	Dave	M	Korean	5 years	Accounting
	Jay	M	Korean	3 years	Marketing

* Pseudonym

As Table 4.1 shows, there is a fair amount of diversity in L1 background. While about half of the students are Korean speakers, Mandarin, Swahili, and Russian are also represented. Three of the five pairs have matched L1 backgrounds, and all but one are of the same gender. The potential influence of student characteristics, such as their cultural background, on peer response is an interesting topic, and one that has been investigated in the L2 writing literature (e.g., Carson and Nelson, 1994, 1996). As was also discussed in Chapter Two, students' attitudes towards peer response may play a role in how they participate in this activity (e.g., Rollinson, 2004). In this case study, however, I am not explicitly examining the association of culture or attitude with peer response and revision. However, when discussing results, I will consider information about students' cultural backgrounds and personal attitudes which are helpful in understanding pair dynamics during peer response.

Participants chose their own partners for completing the peer response sessions, making their selection on the day that peer response training occurred. As is common practice in writing classrooms, I asked them to work with the same partner for all of the peer response sessions that semester. The question of how students choose who they would like to work with, and what role the instructor can or should have in this process is definitely a valuable one, and it will be

explored in Chapter Eight when I report results for the third research question about change in *patterns of interaction* over time.

The instructor in this course, Cindy (a pseudonym), is an experienced ESL writing instructor who has taught English 1101 and 1102 multiple times. She is a doctoral student in Applied Linguistics who was working on her dissertation proposal at the time the data were collected. Cindy values the collaboration and critical thinking peer response can foster in students; she has included it in each writing class that she has taught. She also served as a second coder for identifying *patterns of interaction* in peer response transcripts. Chapter Five will describe this process in detail.

4.3.2   *Independent raters.*

MA Applied Linguistics students were recruited to assist in three data analysis tasks: transcribing peer response and stimulated recall interviews, coding second drafts for types of revisions, and rating second drafts with a rubric. I recruited these raters and transcribers by sending an email invitation to all graduate students in the Applied Linguistics department, which stated that they were required to have experience rating the university's ESL placement exam and/or teaching academic writing (for analyzing drafts), or transcribing second language speech (for transcribing peer response sessions and interviews). Chapter Five will describe and justify the rating and training procedures for each data analysis task in detail.

4.4   Data Sources

As was mentioned previously in this chapter, in order to fully describe the context of a case, it is important to examine it from various perspectives and draw on multiple data sources, using triangulation (Duff, 2008). This study does so by collecting data from four different sources: (1) peer response sessions; (2) pre- and post- peer response drafts; (3) interviews with

focal participants; and (4) researcher observation notes and classroom documents. Each data source is described below.

4.4.1 Peer response sessions

Participants were recorded as they completed the last part of each of three peer response sessions, where they orally discussed their feedback. Each pair who agreed to participate was given a small digital recorder that was placed on the desk between them, and were asked to speak as they normally would during a peer response session. Chapter Five will describe how these sessions were transcribed. Each of the five pairs should have completed three peer response sessions (totaling to fifteen sessions), but two pairs missed a session, so that there were thirteen peer response sessions in total.

4.4.2 Student drafts

In order to examine the revisions that students made after peer response sessions, I obtained copies of their first and second drafts by photocopying them and then returning them to the instructor. Each of the ten participants should have written a first and second draft for each peer response session (twenty drafts total), and peer response took place during three different class periods (sixty drafts). As stated above, however, two pairs missed one of the class sessions when peer response occurred, so that fifty-six drafts in total were collected. Chapter 4 will describe how pre-and post- peer response drafts for each student were rated.

4.4.3 Stimulated recall interviews

In addition to transcriptions of peer response sessions and student drafts, stimulated recall interviews with participants provide an additional data source. In order to help conduct the kind of in-depth investigation that occurs in case studies, I chose to consider peer response from the

perspective of participants involved. These interviews "prompt participants to recall thoughts they had while performing a task or participating in an event" (Mackey and Gass, 2000, p. 17). While stimulated recall interviews have the potential to provide valuable insight into participants' experiences, they are not without limitations. As Mackey and Gass themselves admit, people are "sense-making beings" (p.5) by nature, and when asked to recall their thoughts and feelings, may create explanations. Likewise, Borg (2006) notes that these interviews may not prompt participants to express real thoughts, but rather encourage them to generalize or talk about possibilities. Despite their limitations, however, the importance of interviews with focal participants is highlighted by peer response studies like Zhu (2011), which describes the vastly different ways that students in the same writing classroom might approach and conceptualize peer response tasks.

Mackey and Gass suggest that stimulated recall interviews occur as soon as possible after the event, that a strong stimulus be used, and that participants receive minimal training (2000). I followed these tips as closely as possible when conducting my own stimulated recall interviews with participants. In the current study, stimuli used were recordings of peer response sessions and revised second drafts, which helped students recall their thoughts during peer response and their revision choices afterwards. I received transcripts of peer response sessions from research assistants by Wednesday afternoon (one day after the sessions occurred), and photocopies of first and second drafts on Thursday morning (the day that students turned in second drafts). Participants completed stimulated recall interviews of approximately one hour on either Thursday afternoon (the day they turned in revised drafts) or Friday, following the Tuesday peer response sessions. For two of the twenty-six interviews, however, it was not possible to meet with the student until the following Monday, due to illness and scheduling issues.

To prepare for stimulated recall interviews, I read student transcripts and noted segments that seemed important for further understanding how students shared control over the direction of the peer response task, and how they engaged with each other's suggestions about revisions. These two areas match Storch's dimensions of *equality* and *mutuality*, and I marked up transcripts with these concepts in mind so that I could further understand student participation in different patterns of interaction. Because coding transcripts for patterns of interaction was an intensive process, and involved a second coder (as described in Chapter Five), I did not code transcripts for these patterns before the stimulated recall interviews. Rather, I approached transcripts with the general dimensions of *mutuality* and *equality* as guidance. For example, areas of the transcript that I marked included things like discussions of a revision that seemed collaborative, arguments or disagreements about revisions or about the task, and areas where the writer did not seem to understand the suggested revision. I also listened to recorded peer response sessions and reviewed transcripts to record the minute and second of any areas of the recording that it did not seem necessary to listen to; these included procedural negotiations at the beginning and end, as well as parts where participants discussed things other than the peer response task. I used these notes to skip through irrelevant sections of the recording during the interview.

Before stimulated recall interviews, I also underlined any revisions that were made in the students' second drafts, and made a copy of this for each participant to have during the stimulated recall interview. On my own copy of the second draft, I made a note of any section of the transcript where the revision that had been made was discussed. I also examined the peer response transcript for any suggested revisions that were not made in the second draft, and marked the second draft in the place where the revision would have occurred. By following this

procedure, I had a marked-up second draft that showed where suggested revisions were made, and where these were absent.

I used both the transcript and the second drafts to guide any questions that I asked during stimulated recall interviews. The goal of these questions was to help me understand the following: how the participant perceived the social dynamics at particular segments of the recording, how they felt about giving or receiving feedback at particular segments, how they understood their partner's suggestions at particular segments, and how they decided to make (or not make) suggested revisions. I also, however, allowed students to stop the peer response recording at any moment where they felt they had something to say about what they were thinking or feeling at the time they were participating in the peer response session. Sometimes students stopped the recording at areas I had marked on the transcripts, but other times they did not. I prioritized student-initiated comments over asking my own questions, so sometimes (especially for longer peer response sessions), I was not able to ask the questions I had planned. In all cases but two, however, I was able to play the entire peer response recording during the interview.

For the interviews, participants met me at the Department of Applied Linguistics and I escorted them to a private room that I had arranged to use; these included meeting rooms and faculty members' offices. I made small talk with participants as we walked to the interview room, and as we sat down, to make them feel at ease. Next, I read the stimulated recall protocol (Appendix H). This protocol informed participants that I would play their recorded peer response session on my laptop, and we would consult their revised draft, so that I could learn more about what they were thinking and feeling during the peer response session, and how they made revisions following the session. I told them that I would stop the recording to ask them questions

about the peer response session and about their revised drafts, but that they could also pause the recording any time they wanted to comment on something they were saying, thinking, or feeling. They could also pause the recording to tell me about making the revisions that their partner suggested. Before we began the session, I modeled how to press pause on my laptop, and then asked them to practice once.

Occasionally, when students paused the recording, we looked at their draft and talked about the corresponding revision before re-starting the recording. Other times, we listened to the recording first and then discussed the draft. In the beginning, most students seemed hesitant to pause the recording themselves, and to talk about what they had heard. Some asked permission to push stop, and others, after talking about the recording, asked me if their comments were what I wanted to hear. I responded by saying that any time they had something to say about their revisions or the recording, they should push stop, and that I wanted to learn more about their experiences, rather than look for a specific answer. After the first interview, all participants became more comfortable with the procedure.

I sent recorded files to transcribers after each day of interviews, and they returned stimulated recall transcripts to me within one week. Before the next interview, I reviewed the previous interview transcript, which sometimes informed the questions that I listed when marking up the transcript and draft.

4.4.4   *Researcher observation notes and classroom documents.*

As this is a case study that attempts to describe the current peer response practices in one English 1002 section, I did not provide the instructor with any specific procedures to follow for peer response. Rather, I describe peer response as it occurs in the classroom, keeping observation notes from the peer response sessions and from the prior class session when training occurred.

While observation notes are subject to researcher bias in that he or she chooses what to record, notes from class sessions may also provide valuable contextual information about the case (Hesse-Biber and Leavy, 2011). Appendix I provides guiding questions for the observation notes taken during peer response sessions.

In case studies, examining physical artifacts such as course handouts has the advantage of providing insight into cultural features of the context, and illuminating the nature of technical operations in the chosen setting (Hesse-Biber and Leavy, 2011). For this study, examination of peer response handouts (in addition to the instructor's explanation of the task) provides insight into how students are told to approach the task.

Several peer response studies have found that students benefit from viewing and analyzing examples of peer response groups that highlight the benefits of turn taking, giving suggestions rather than opinions, and probing the writer to explain ideas. This kind of training seems to produce peer responders who are better able to use their peers' feedback successfully in revision (Stanley, 1992; McGroarty and Zhu, 1997; Berg, 1999; Min, 2008). Thus, it was important to examine the messages that students received about peer response, so I could consider how this information may have influenced their interactions.

4.5 Summary

This chapter has described the research site, participants, and data sources for this study of the association of *patterns of interaction* during peer response with revision outcomes. The research study was conducted in an ESL section of a freshman composition course, and recruited students, the instructor, and independent essay raters as participants. It draws on multiple data sources, including peer response transcripts, student drafts, stimulated recall interviews, and classroom observations. In this study, students produced a first draft of a writing assignment, met

with a peer to receive feedback, and made revisions based on the peer's suggestions. This process took place three times over the course of the semester. Participants then participated in a stimulated recall interview that explored their behavior in the peer response and their revision choices afterwards. Figure 3.1 represents the flow of data collection.
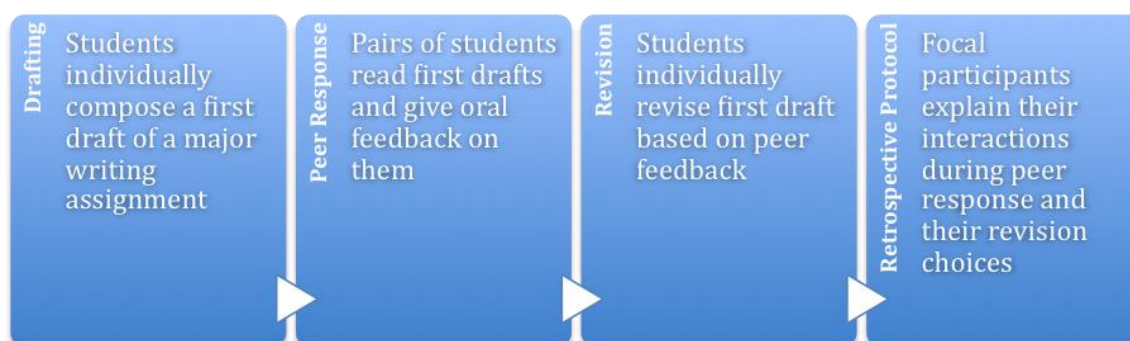
Figure 4.1 Flows of Data Collection

In addition, this chapter has justified the multiple case study approach as an appropriate one for examining this context. By conducting an in-depth study of peer response as it naturally occurs, and gaining insight from focal participants, I hope to shed light on the relationship between pair dynamics in peer response and revision outcomes.

5   DATA ANALYSIS

This chapter first describes the methods used to analyze each data source: peer response sessions, stimulated recall interviews, student drafts, and classroom data. Next, it explains which data sources are used to address each of the three research questions.

5.1   Peer response sessions

The analytical framework *patterns of interaction* (Storch, 2002) was created to describe how students position themselves during pair work in a university ESL writing course.

Participants in this study participated in three types of collaborative writing tasks: (1) drafting a joint composition based on a diagram; (2) editing a text that neither student had written; and (3) inserting function words in a group of content words to construct a grammatically correct text. The coding scheme that emerged from examining the pair talk in Storch (2002) describes pair interactions based on the extent to which learners engage with each other's suggestions (*mutuality*) and the extent to which they share control over the direction of the task (*equality*). Chapter Two of this dissertation provides an extensive description of Storch's coding scheme and a discussion of the studies that have applied it to pair talk in various kinds of collaborative language tasks. To review, pairs that adopt *collaborative* patterns experience more positive learning outcomes than those who adopt other patterns (Storch, 2001, 2002a, 2002b; Wantanabe and Swain, 2007; Kim and McDonough, 2008). At present, only Zheng (2002) has applied the *patterns of interaction* scheme to peer response data, but this study did not analyze revised papers. The following sections will describe the steps that I took to identify Storch's *patterns of interaction* in the current study.

5.1.1 *Transcription*

Trained research assistants transcribed each peer response session within twenty-four hours after it occurred. The research assistants were MA students in Applied Linguistics with previous transcription experience who attended a training session. Seven transcribers met with me in the graduate student laboratory at the Department of Applied Linguistics and ESL. In this session, I first gave an overview of the study and an explanation of how the peer response transcripts would be used in data analysis. Next, transcribers were presented with transcription conventions (Appendix J). Research assistants then listened to sample peer response

conversations played on my laptop, from previously collected peer response data not used in the current study, while viewing the corresponding transcripts.

Next, a segment of approximately one minute of a peer response session was played for transcribers, and they transcribed on their individual laptops as they listened. Because it was not possible to provide computers with transcription software for each transcriber, the segment was played multiple times and transcribers did their best to transcribe all words. Transcribers then asked questions to clarify their understanding of how transcription conventions should be followed. Most questions were about how to transcribe fillers such as "um" and "mmhmm" (transcribers were told to choose one spelling at the beginning of the transcript and be consistent), and about how to transcribe unclear words (transcribers were told to place a word in brackets if they were relatively certain they had heard it correctly, and to write [unclear] if they listened multiple times and still could not make any guess about what the word was). Finally, transcribers were given instructions about how to download and use SoundScriber, a freeware transcription package that allows users to slow down and loop sound files while transcribing.

After that, twenty-six peer response sessions were independently transcribed. There are five pairs in this study, and each time a pair completed a peer response session, two transcripts were generated: one when the first paper was reviewed, and another when the second paper was reviewed. Each pair participated in three peer response sessions, such that there should have been thirty transcripts (five pairs, participating in three peer response sessions, with two transcripts per session). However, two pairs missed one session each, so that four transcripts were missing, resulting in twenty-six total.

Transcribers were invited to join a shared online file space (Dropbox.com) where I uploaded sound files (mp3), labeled with a pair number and date of the session (for example,

"Pair 1_Feb 1.mp3"). The transcriber assigned to that file downloaded the mp3 file, transcribed it into a Microsoft Word document using SoundScriber, and then uploaded the Word document to the shared file space, with the corresponding file name (for example, "Pair 1_Feb 1.doc"). Transcribers referred to the first student they heard on the recording as "S1" and the second, "S2". Because students were given files labeled with pair numbers and referred to students as "S1" and "S2", the identity of participants remained anonymous.

4.1.2 Dividing transcripts into episodes

To ensure careful application of Storch's coding scheme to this data, transcripts were first divided into episodes. While Storch (2002) does not report dividing data in this way, Zheng (2012), a study which applies the *patterns of interaction* scheme to peer response data, also uses episodes, which in that study were generally structured as a presentation of the problem, discussion of possible solutions, and (possibly) reaching consensus about how the writer should revise. A similar procedure was employed in Nelson and Murphy (1992), who divided peer response transcripts into thought groups, which were generally a single clause. These units have also been referred to as idea units (Chafe, 1980); Lockhart and Ng's (1995) peer response study used idea units in their transcript analysis. Thought groups and idea units, though, are smaller units of analysis than episodes, because they divide speech around syntactic units rather than topics.

For the current study, an episode was considered to be a section of the peer response transcript where students discussed a single topic of the paper being reviewed. When students moved on to another topic, another episode began. An example of a clear episode is given below. Here, Alex is giving Dan feedback on his summary-response paper about the class book,

Outcasts United, which chronicles the struggles of a soccer team comprised of refugee children.

The team is named *The Fugees*:.

> Alex: Okay, um, the first part is your summary, right?
> Dan: Yeah.
> Alex: Um, it's really good about, uh, your summary, about the introduction of the book, but I think um you need to put more detail about what's going on in the background, the background of the novel. Where they come from …
> Dan: Like everybody? I was … I didn't know if I should put all the people.
> Alex: Yeah, that was hard for my paper too. I think not like everybody, you know, just key people. Like the background of the novel, like what kind of team it is.
> Dan: Background. Yeah, background of, of the team. Like Fugees?
> Alex: Like Fugees, yeah.
> Dan: Yeah, uh, a little bit more details?
> Alex: Yes.
> Dan: Okay. I wrote this in a very short time, so it's not very good.
> Alex: It's okay. Just a rough draft.
> Dan: Yeah.
>
> (Dan and Alex, Peer Response Session One, February 2013)

This excerpt illustrates what was considered to be a single topic. In this case, the topic was how much background information about the book's characters Dan should include in his summary. From here, the pair moved on to discuss the next paragraph, which was marked as a separate episode.

Pairs did not always spend as much time on one topic, and take turns discussing it, as Dan and Alex did in the last excerpt. Sometimes the reviewer would speak without waiting for the writer to respond, or would move quickly from one topic to another. Discourse like this was difficult to divide into episodes, as doing so would not result in sections of transcripts that could be not be easily coded with a *pattern of interaction*. An example of this kind of talk is provided in the following excerpt. In this excerpt, HaeSun is reviewing JeeHae's summary-response paper about the class book, and it seems that rather than engage in discussion about the questions provided in the peer response handout, she is simply listing her answers to them:

HaeSun: So I like that you have good, um, details, good details and good
             supporting ideas. You are very detailed at giving data and stuff
             like that, and you list out your supporting details. Length is good,
             too. I like your structure also, but I think your conclusion is a little
             bit short.
JeeHae: Mm, yeah. Just so hard to do conclusion.
                        (HaeSun and JeeHae, Peer Response Session One, February 2013)

If this part of the transcript were divided into episodes (defined by conversation about a

single topic) there may be considered four episodes within HaeSun's first turn: one about details

and supporting ideas, one about length, one about structure, and one about the conclusion.

Dividing the transcript in this way, however, would not aid in coding for *patterns of interaction*,

as episodes that consist of a single phrase of only one student's speech do not reveal much about

the dynamics between the pair. I thus decided that HaeSun's first turn would not be divided into

episodes, but considered as one. After JeeHae admits that it was difficult for her to decide what

to include in the conclusion, the pair spend some time thinking about how she might expand it.

The resulting episode, then, includes HaeSun's initial positive comments about idea

development, length, and structure, while the remainder of the episode continues to discuss the

conclusion.

Another unclear aspect of episode division was that during the interactions, students did

not always talk about the drafts. Because the objective of this phase of data analysis is to identify

patterns of interaction that occur when students are discussing writing, off-topic episodes were

marked as "no code" (NC). In these NC episodes, students negotiated topics such as whose paper

to discuss first, how to turn the digital recorder on and off, or they talked about things not related

to the papers being reviewed. In the excerpt below, which was marked as NC, I give Joe and

SongWoo a digital recorder, and they negotiate whose paper to review first:

Researcher:	Alright. We're recording, so just talk normal. You know, like the last time.
SongWoo:	Alright.
Researcher:	Okay? Thanks.
SongWoo:	You go first.
Joe:	Me? Okay. About your paper, right?
SongWoo:	Yeah.

<div align="right">(Joe and Song Woo, Peer Response Session One, February 2013)</div>

Episodes like these generally occurred at the beginning of transcripts, where students decide who will be the first reviewer, and at the end, where they determine how to turn off the digital recorder. There were some episodes where students' conversation veered away from the paper being discussed and toward personal matters. These were also coded as NC, but they were infrequent.

5.1.2   *Coding patterns of interaction in episodes and transcripts*

During this step, I reviewed each episode and assigned it one of four *patterns of interaction* (collaborative, dominant/passive, expert/novice, or dominant/dominant), by identifying instances of the features already described in two studies of pair interaction: Storch (2002) and Zheng (2012). Storch (2002) describes the features of each *pattern of interaction* as they were displayed among students completing the three collaborative writing tasks (but not peer response tasks) described earlier in this chapter. A subsequent study, Zheng (2012), applies these same patterns to peer response data, adding peer response-specific features of each pattern to the existing coding scheme. In Zheng's ethnographic study, EFL students in China completing a writing course for non-English majors discuss a narrative writing task using peer response.

Table 5-1 summarizes the features from Storch (2002) and Zheng (2012) that I identified in the current data during this phase of analysis. I started with a list of all features of patterns of interaction found in both studies, but not all features of patterns of interaction from these two studies were present in the current data. For example, Storch (2002) found that dominant

participants in the dominant/passive pattern made self-directed questions and answered them during long monologues, but dominant participants in the current study did not do so. In the table below, features from Zheng (2012) are marked with (*), and unmarked features are from Storch (2002):

Table 5.1 Features of patterns of interaction (adapted from Storch 2002 and Zheng 2012)

Pattern	Features
Collaborative	reader and writer discuss optional revisions together* students discuss alternative views, and reach resolution students request and provide information
Dominant / Dominant	students engage in disputes each student insists on own opinion; no consensus reached* teasing/hostility
Dominant / Passive	dominants do not try to involve passives to help them learn * little negotiation because passives give few contributions/challenges dominants take authoritative stance, while passives are subservient
Expert / Novice	experts are authoritative and provide scaffolding/direct instruction* novices admit failure or error* experts do not impose view but provide suggestions

During this phase of the analysis, I also explored the transcripts to determine whether there were any features which were not mentioned in Storch or Zheng, but which seemed in my data to manifest *patterns of interaction* by displaying how students shared control over the task (*equality*) and engaged with each other's suggestions (*mutuality*). This process matches what Patton (2002) would call content analysis to identify patterns or themes, which involves "data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify score consistencies and meanings" (p.453). I found, however, that the previously identified features captured the way that participants in my study controlled the task and engaged with each other. Stimulated recall transcripts (which will be discussed in the next section), on the other hand, did provide me with new insight into how students experienced the patterns.

As Storch herself (2002) notes, categorizing peer interaction is, by its very nature, imprecise. In coding her data, she placed each interaction in the quadrant that best described the predominant pattern evident in the pair talk. Similarly, throughout the coding process, I relied not only on the coding scheme, but also on the broader dimensions of *mutuality* and *equality* that characterize the patterns. Figure 5-1 displays how the four *patterns of interaction* are oriented on the axes of *mutuality* and *equality*:

High mutuality

| 4 | 1 |
| Expert/Novice | Collaborative |

Low equality _____ High equality

| 3 | 2 |
| Dominant/Passive | Dominant/Dominant |
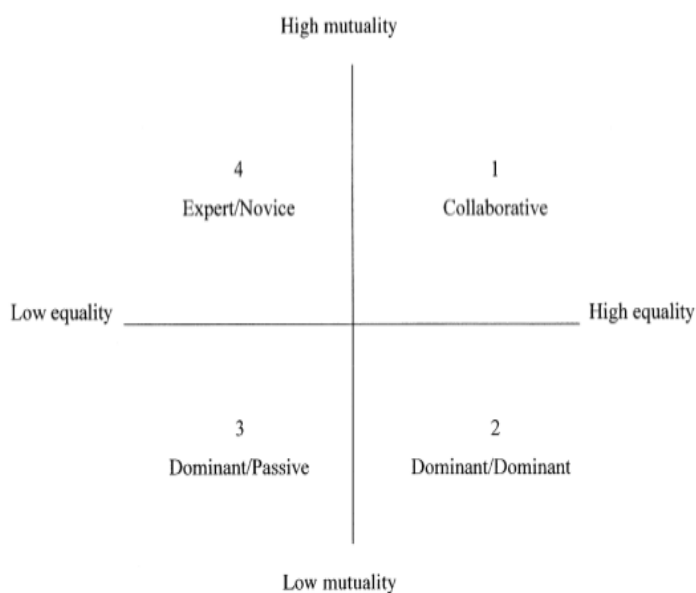
Low mutuality

Figure 5.1 Storch's (2002) patterns of interaction

Mutuality refers to the level of engagement with one and other's contributions, while *equality* represents the degree of control over the direction of a task. At first glance, it may appear that some patterns are similar. For example, in the dominant/passive and expert/novice patterns, there is one participant who controls the direction of the task. Thus, these two patterns both exhibit low equality. The difference between these two patterns is in the dimension of mutuality: there is more engagement with the reader's suggestions in the expert/novice pattern than in the dominant/passive one. As Storch (2002) explains, in the expert/novice pattern, unlike the

dominant/passive one, the participant who takes control over the direction of the task acts an

expert who "actively encourages the other participant (the novice) to participate in the task" (p.

129). This example illustrates how the dimensions of *mutuality* and *equality* informed the coding

process.

The following four sub-sections (*collaborative pattern, dominant/dominant pattern,*

dominant/passive pattern, and *expert/novice pattern*) will provide and analyze examples of

episodes that were coded with each of the four *patterns of interaction*. For each pattern, its

relative *mutuality* and *equality* will be highlighted in the explanation that follows. A more in-

depth discussion of the features of each pattern of interaction will be provided along with the

results presented in Chapter Six.

5.1.2.1   Collaborative pattern

The excerpt below, where Zelda is reviewing Ivana's summary-response paper about the

class book, *Outcasts United*, represents the collaborative pattern. The pair has reached the last

paragraph of the paper, where the writer is asked to evaluate some aspect of the author's writing

or of the topic. Ivana wrote about a couple of instances where the refugees in the novel

experienced discrimination in their American community. She is expressing that she thinks the

paragraph needs to be expanded:

        Ivana: Here I stop because I have no idea, because I have no clue (laughing)
        Zelda: (laughing) I'll just write you some notes here about just "church and store" and
                  um, "stories", and "your opinion" about it.
        Ivana: Because maybe I can say that they had to be thankful for escaping from war, um,
                  and don't be so aggressive …
        Zelda: Mhm.
        Ivana: to the new life
        Zelda: You can keep going, saying about the church and the store and what happened in
                  your opinion …
        Ivana: Yes, there I will say about it [should not happen
        Zelda: Yes, that it's not] supposed to be to happen …
        Ivana: Mhm.

Zelda: because it is in United States. And in conclusion, you can just say that *although in theory it sounds [so easy …*
Ivana: Perfect, yeah]
Zelda: uh, *but in reality …*

(Zelda and Ivana, Peer Response Session One, February 2013)

In this episode, Ivana and Zelda engage in collaborative brainstorming that results in the generation of language that Ivana might use in her second draft. In this way, they exhibit high *mutuality*. Ivana begins by admitting that she had stopped writing because she had "no clue", and Zelda responds by offering to write Ivana some notes that would help her expand the text during revision. These ideas spur Ivana to describe how she might finish the paragraph; she says, "maybe I could say that they had to be thankful …", and Zelda joins in the brainstorming process by adding, "you can keep going, saying about the church ...". In her last utterance of this episode, Ivana voices her approval of the ideas that the two have generated.

Ivana and Zelda expand upon each other's views, and seem to reach consensus at the end of the episode about how Ivana will rewrite her last paragraph. Another aspect of the collaborative pattern illustrated here is the *equality* that the pair exhibits. Rather than wait for Zelda to point out problematic aspects of her paper, Ivana begins the episode by sharing that she is stuck. Both women then participate in generating new ideas, thus showing that they are sharing control over the direction of the task, illustrating the high degree of *equality* that characterizes the collaborative pattern.

5.1.2.2 *Dominant/dominant pattern*

The excerpt below presents an example of a dominant/dominant episode, where Jay is reviewing Dave's research paper about organ trafficking. In his paper, Dave has included China as an example of a country where this practice is problematic. Jay questions this choice, and also maintains that statistics should be included:

Jay:	Why do you say China? Why do you include China?
Dave:	Well, China is the major country. Where it happens a lot, you know?
Jay:	No.
Dave:	You do know.
Jay:	No, I don't know. Did you look it up?
Dave:	I look it up.
Jay:	Then, where's the statistic of it?
Dave:	Well, I didn't put it, though. That's not the point. So, next.
Jay:	How do I know it's true or not?
Dave:	Well, whether you believe or not, it's true. Okay, move on.
Jay:	No, you must, you have to convince me. Or like, try to make me trust you, or …
Dave:	Well, that's not the point, so …

(Dave and Jay, Peer Response Session Three, April 2013)

This episode is a clear example of the disputes that can occur in the dominant-dominant pattern. The main issue of contention seems to be whether or not Dave can mention that there is a high incidence of organ trafficking in China without including statistics to support his statement. Jay begins the interaction in a hostile manner, asking Dave, "Why do you say China? Why do you include China?" When Dave explains "China is the major country where it [organ trafficking] happens a lot", Jay questions the validity of this statement. He demands to know, "Did you look it up? … Where's the statistic of it?" Each participant clings to his own view, such that no consensus about whether to include statistics is reached: Dave ends the episode by saying that convincing the reader, as Jay suggests he do, is "not the point." These two are both engaged in trying to control the direction of the task, but are unwilling to engage with each other's discourse, exhibiting the high *equality* but low *mutuality* that characterize the dominant-dominant pattern.

5.1.2.3   *Dominant-passive pattern*

In this pattern, while one participant controls the direction of the task, the other demonstrates little engagement. In the excerpt below, HaeSun is reviewing JeeHae's research paper, on which she has marked syntax errors:

HaeSun: And then, um, here it was kind of a run-on
JeeHae: Which one?
(non-verbal pointing at run-on sentence)
JeeHae: Oh, okay.
HaeSun: So, I … uh, I deleted this part …
JeeHae: Mmhm
HaeSun: And put this part over here …
JeeHae: Mmhm.
HaeSun: And then, and then made a period, and then made a new sentence.
JeeHae: Okay.

(JeeHae and HaeSun, Peer Response Session Three, April 2013)

In the beginning of this episode, HaeSun positions herself as someone knowledgeable about grammar, and makes little effort to involve JeeHae in understanding how to revise her sentence. Instead, HaeSun informs JeeHae of how she corrected the syntax error. Because HaeSun does not ask whether or not JeeHae understands why the sentence was wrong or how the correction is right, it is not clear whether or not JeeHae has learned how to avoid these kinds of errors in her writing. Likewise, JeeHae does not ask any questions or make any statements that might indicate her understanding or lack thereof. She thus adopts a passive role, allowing the reviewer to report to her about her errors in the paper. This episode displays low *equality*, as HaeSun is controlling the direction of the interaction, as well as low *mutuality*, because there is no evidence of engagement or collaboration.

5.1.2.4   Expert-novice pattern

This pattern is similar to the dominant-passive one in that one participant assumes responsibility for the direction of the interaction. However, unlike the dominant participant, the expert one ensures that the novice is engaged in the discourse and understands the topics being discussed. In Excerpt 4.7, Joe is reviewing SongWoo's summary paper about an article she read on cultural adjustment. He identifies a sentence that is confusing to him and guides SongWoo toward choosing a clearer way to express her idea:

Joe:	I didn't understand what you meant, like this you write ["they had a …"
SongWoo:	"They had a way] they could to understand each other"? Yeah, I don't know is there a word for it …
Joe:	Yeah, what did you mean by that? Maybe you mean without words?
SongWoo:	You know, like, they have a, they speak different languages, but they could understand each other … but the way I write is confused.
Joe:	Okay, so basically they could understand each other even though they speak different languages? Like, they do gesture and things like that?
SongWoo:	Yes, like that.
Joe:	Okay so for that we can say the body language. Using the body language. That's what you're trying to say?
SongWoo:	Yeah, using the body language, yeah.
Joe:	Yeah, using the body language, I like that idea.

(Joe and SongWoo, Peer Response Session One, February 2013)

Joe begins this episode by pointing out an unclear sentence in SongWoo's paper. She positions herself as the novice by responding that she does not know if there is a word that expresses her idea. Although it seems clear from the end of the episode that Joe knows an appropriate phrase to use, rather supply it for SongWoo, he asks her to first explain what she was trying to express. After listening to her explanation of how people of different linguistic backgrounds communicate, he allows her to confirm that he understood correctly, and surmises that the phrase "body language" would be appropriate to include in her sentence. In her last utterance, SongWoo indicates that she approves of the phrase, and it seems that the two have reached consensus about how to revise the sentence. While there is low *equality* in this episode because Joe is directing the interaction, there does appear to be high *mutuality* because SongWoo is actively engaged in finding the right words for her ideas. Joe, the expert, does not simply tell her what the correct phrase is, but rather asks clarifying questions ("What did you mean by that?") and seeks SongWoo's agreement with his suggestion ("the body language …. That's what you're trying to say"?).

After all the episodes in a transcript were assigned a *pattern of interaction*, an overall pattern was assigned for each paper. To make this designation, the *pattern of interaction* needed to be

present in at least seventy-five percent of the episodes. For example, if seventy-five percent of

episodes were marked as collaborative, ten percent as expert-novice, and fifteen percent as

dominant-passive, the transcript would be coded as collaborative. Transcripts were coded by

episodes to account for the variability in interaction that naturally occurs over the course of a

conversation based on the topic being discussed. However, for the purposes of analysis of

revision outcomes in this study, the discussion of each paper was assigned a single pattern of

interaction.

That is, a pattern of interaction was identified once for each transcript, where one

transcript consisted of the talk about a single paper. For example, when Dan and Alex (Pair One)

completed their first peer response session, they decided to discuss Alex's paper first. During this

discussion, a collaborative pattern was adopted. When this pair switched roles to discuss Dan's

paper, they adopted an expert/novice pattern, where Alex was the expert and Dan the novice. The

two patterns of interaction for this pair during the first peer response session, then, are

expert/novice and collaborative. Because there were thirteen peer response sessions (five pairs

completing three peer response sessions with two pairs missing one session each), twenty-six

patterns of interaction overall (one for each transcript) were identified.

5.1.3   Step four: double coding

After I identified a pattern of interaction for each transcript, an independent second rater

also coded the data. The rater is an advanced PhD student in Applied Linguistics who is

currently completing an ethnographic dissertation. She has extensive training and experience

with qualitative coding. It should be noted that the second coder was also the instructor in the

course where peer response data were collected. While this emic perspective might be seen as a

biased one, more importantly, the instructor's role is as a "legitimate knower" who can be

solicited for relevant agreement and debate about the study (Hesse-Biber and Leavy, 2001, p. 318).

The second coder completed a training session with me, where I first described Storch's patterns of interaction, and defined *mutuality* and *equality*. We then discussed research on the patterns of interaction scheme, reviewed the coding scheme for this study (see Table 4.1), and coded three example transcripts not used for this study. After the second coder had finished with the three transcripts, she reviewed her codes with me episode by episode. Although the second coder and I assigned the same *pattern of interaction* for each of the three transcripts in this training exercise, some of the individual episodes were coded differently. In coding transcripts used for this study, it was considered agreement if the transcript codes matched, and the pattern of interaction for the transcript occurred in at least seventy-five percent of the episodes; it was not necessary for each episode code to match. However, for training purposes, reviewing the episodes where mismatched codes were given was an opportunity to deepen our understanding of how the scheme should be applied to the data.

Most of our discrepancies in coding the episodes during training were related to choosing between the expert/novice and dominant/passive patterns, both of which describe an interaction where one student (the expert or the dominant) controls the direction of the task, while the other (the novice or the passive, respectively) follows the lead. The difference in these two patterns lies in the dimension of *mutuality*, where the novice displays engagement with the expert's comments. This kind of engagement is less prominent in the passive student's speech. For this example, once we discussed *mutuality* in the episodes in question, we agreed on a single code.

After training, the second coder was provided with audio recordings, anonymous clean copies of transcripts, and a copy of the coding scheme. After she had independently coded all of

the episodes and transcripts, she shared her results with me, and I calculated inter-rater reliability. We agreed on twenty-three out of twenty-six patterns, or eighty-five percent. For those patterns where we did not agree, we re-read the transcript episode by episode, referring repeatedly to the coding scheme to agree on a pattern for each episode, and finally for each transcript (this procedure was also used in Carson and Nelson, 1992). After this discussion, one hundred percent inter-coder reliability was reached.

5.1.4   Step five: triangulation of pattern of interaction codes

The *patterns of interaction* coding scheme is somewhat subjective, and findings about revision outcomes hinge on the identification of these patterns. For this reason, I completed an additional analysis to ensure the highest degree of certainty possible in the assignment of patterns of interaction.

This final analysis of patterns of interaction is a quantification of average turn length (in number of words) and average number of turns, by reader and writer role for each *pattern of interaction*. This was accomplished by copying and pasting transcripts into Microsoft Excel and using the "sort data" feature to divide transcripts by participant and to count the number of turns; after that I used Microsoft Word's "word count" feature for each participants' speech. Transcripts were not filtered for filler words, so things like "mmhmm" and "um" were also counted. A turn was considered to be all of one student's utterance; when the next student spoke, it was considered a new turn.

It was hypothesized that the high *equality* that characterizes collaborative and dominant/dominant patterns would be evident in evenly distributed numbers of turns and length of turns. In patterns with less equality, on the other hand, passive participants may take fewer turns and use fewer words than do their dominant counterparts, and the same may hold true for

experts and novices. It does not appear that any published studies using the *patterns of interaction* framework have reported average turn length and number of turns. In a conference presentation about *patterns of interaction* in peer response, however, I found that passive and novice participants had shorter average turn lengths than their dominant and expert counterparts (Roberson, 2010). Results for average turn length and number of turns by *pattern of interaction* are reported in Chapter Five.

5.2   Stimulated recall interviews

The second data source, stimulated recall interviews, (Mackey and Gass, 2000) was used to better understand participants' interactions during peer response and their subsequent revision choices. In this kind of interview, participants are prompted to recall thoughts that they had while performing a task or participating in an event. This kind of interview has been used in both SLA interaction studies that apply pair dynamics (see, e.g., Watanabe and Swain, 2000), and peer response studies in the L2 writing literature (see, e.g., Carson and Nelson, 1996). This approach was chosen because it allowed me to further understand how participants experienced the pair dynamics of peer response, and how they decided to use their peer's feedback when revising.

Each participant met individually with me after the peer response session for a one-hour stimulated recall interview where they listened to the peer response recording and reviewed the revised draft. Participants were asked to stop the recording whenever they heard something that made them remember what they were thinking or feeling at the time that peer response occurred. I also occasionally paused the recording at moments of interest and asked my own questions. After listening to the recording, I directed the participant's attention to his or her revisions, and asked additional questions about the changes he or she decided to make. Sometimes the participants referenced their draft while listening to the recorded peer response session as well.

As was mentioned in Chapter Four, Appendix H provides a script and guiding questions for stimulated recall interviews. These conversations were audio-recorded and transcribed. The transcription reflects the entire stimulated recall interaction, including the peer response recording that was played. When the participant or I paused the recording, that speech was marked with bold text in the transcript. Figure 5-2 provides an excerpt of an example stimulated recall transcript, from my conversation with Joe about his and SongWoo's second peer response session:

Joe: Wanna go first?
SongWoo: You go first.
Joe: OK. Umm, oh yeah, you need, umm, as, umm, Cindy say, you need to use useful expressions, like introduction. Like, say, "in the article, what does beauty mean?" Umm, and also says, "to me the closest peoples, specifically meaning to think that they can beautiful," like that. You can include any, um, an expression.

Joe: Um, at that part, I was telling her that she didn't use the expressions, um, Ms. Cindy wanted.
Interviewer: Uh huh.
Joe: She she talk, like, her summary was like she she's the one who is writing the paper, and I just wanted to let her know what I thought about it.
Interviewer: Okay.
Joe: So I wanted her to remember to mention the source. I didn't want to hurt her feelings, but I thought it sounded she had written the article.

Figure 5.2 Excerpt of stimulated recall interview with Joe

I used stimulated recall transcripts to better understand how students experienced the *pattern of interaction* that they had been assigned. Throughout this process, I asked the following guiding questions about the data:

- How do focal participants explain their revision choices?
- How do they characterize their spoken interactions with their peer reviewer?
- How do they conceptualize the task of peer review?
- What is implicit in these feelings and conceptualizations? What underlying beliefs about feedback and writing development might they reveal?

This process of inductive analysis to discover themes (Patton, 2002) in each pattern of interaction resulted in another set of features for each pattern of interaction. Table 5-2 provides a list of the features identified in stimulated recall transcripts by pattern of interaction.

Table 5.2 Stimulated recall features by pattern of interaction

Collaborative	Readers believe that giving feedback has a positive impact on their own writing development
	Writers believe that readers provide a perspective on their writing that they could not find alone
Dominant/dominant	Readers and writers believe that arguing is enjoyable
	Writers are defensive because of sensitive paper topics
Dominant/passive	Passive writers believe they are less proficient than their partners
	Dominant readers believe that their feedback is direct, and thus effective
Expert/novice	Novice writers appreciate positive feedback from readers
	Expert readers see value in allowing novice writers to correct their own mistakes

In Chapters Five through Seven, I will describe in detail the way that stimulated recall interviews were used to triangulate my own analysis of pair dynamics, and to further understand how students decided to make revision changes.

5.3 Student drafts

The next data source used in this study are first (pre-peer response) and second (post-peer response) drafts of student writing. Three different measures were used to quantify the improvement in student writing from first to second drafts: 1) Rating each pair of first and second drafts with a rubric; 2) classifying the types of revisions made in second drafts; and 3) identifying the types of suggestions that readers made and determining whether or not they were used in second drafts. This section will describe each measure in turn, justifying its selection and explaining how it contributes to an understanding of revision outcomes.

5.3.1 *Rating drafts with a rubric*

This section will describe how a scoring rubric was chosen and modified, and then used to rate first and second student drafts. Because there were twenty-six pairs of first and second drafts, fifty-two drafts were rated in this phase of the data analysis.

First, a rubric was chosen and modified. The rubric used for rating drafts is adapted from Paulus' (1999) measure that was developed for ESL writers and has been used in peer response studies (e.g., Tang and Tithecott, 1999). Paulus' analytic rubric used point values from one to ten for each score category, but for the purposes of this study, the point values were compressed to five. The bottom two categories were removed because the language proficiency they describe is below that of freshman ESL composition students, and highest category was omitted because it describes an error-free, native speaker standard that is also inappropriate for this study. After these three categories were omitted, the remaining seven were compressed into five.

Paulus' original rubric is comprised of six analytical categories: organization/unity, development, structure, vocabulary, cohesion/coherence, and mechanics. For this study, cohesion and coherence were subsumed into organization and unity, because there seemed to be a fair amount of overlap in these two categories in the original rubric. Also, mechanics were seen as unnecessary for type-written essays that are grammar and spell-checked automatically, so this category was deleted. After these revisions, the modified rubric included four analytical categories with five possible points for each one, such that each essay could be given a maximum score of twenty points. Table 5-3 displays the revised rubric:

Table 5.3 Scoring rubric for student drafts (adapted from Paulus, 1999)

	Organization / Unity	Development	Structure	Vocabulary
1	Some organization. Relationship between ideas not evident. Absent or unclear thesis.	Lacks content. Few examples and details.	Almost all simple sentences. Attempts at complicated sentences impede meaning. No embedding.	Meaning inhibited by limited range of vocabulary.
2	Organization present. Ideas show grouping. May have general thesis.	Underdeveloped. Examples may be inappropriate/ineffective. May use main points as support for each other.	Mainly simple sentences. Attempts at embedding may be present in simple structures with inconsistent success.	Somewhat limited command of word usage. Frequent use of circumlocution. Often uses informal language.
3	Clear introduction, body, and conclusion. Topic sentences present but may lack focus. Narrowed thesis. Relationship between ideas present.	Partially underdeveloped. Logic flaws may be evident. Some areas under-supported and generalized. Repetitive.	Some variety of complex structures. Clause construction and placement somewhat under control. Errors may occasionally impede meaning.	Meaning seldom inhibited. Adequate range and variety. Little use of circumlocution. Infrequent errors.
4	Appropriate paragraphing and focused topic sentences. Narrowed thesis, but essay may digress from it. Hierarchy of ideas generally present and effective.	Acceptable level of development. Logic evident. Mostly adequate supporting ideas. May be repetitive.	Sentence variety evident. Frequent successful attempts at complex structures. Meaning generally not impeded by errors.	Meaning not inhibited. Adequate range and variety. Mistakes almost never distracting. Appropriately academic.
5	Definite control of organization. Uses transitions between parts of essay. Focused thesis that directs organization of essay.	Each point clearly developed with variety of convincing types of evidence. Ideas supported effectively. Clear and logical progression of ideas.	Successful variety of sentences and complex structures. Manipulates syntax with attention to style. No errors that impede meaning.	Meaning totally clear. Sophisticated range and variety. Attempts at original, appropriate word choices.

Using the rubric presented above, I assigned first and second drafts a score out of twenty total points, and then calculated the gain in score for that participant. For example, a writer who scored sixteen points on his first draft and eighteen points on his second one would have a gain in score of two points. I completed this process for all drafts: ten participants with two drafts each across three writing assignments (with four participants missing one pair of drafts), or fifty-six drafts.

After I assigned a score for each draft, second raters were recruited and trained. These are MA students in Applied Linguistics who had experience either teaching ESL composition or rating the university's ESL placement exam. Rater training, which is important for sound measurement because it eliminates extreme differences in rater interpretation of the scoring rubric, increases the self-consistency of raters, and reduces individual biases displayed by raters (Knoch, 2007), was also completed.

During the rater training session, I presented an overview of the study, explained how ratings would be used to answer the research question, distributed and discussed the writing prompts (summary-response and persuasive research paper), and asked raters to assign scores to a first and second draft of summary-response papers that were not included in the study. Raters were encouraged to compare the second draft to the first when assigning ratings, to take into account how revisions may have improved the composition.

Next, raters were invited to share their scores for each category, and any disputes were discussed as a group. Disputes were resolved by referencing the language in the rubric and the assignment sheet for the paper, and considering how it applied to the draft in question. For example, some raters thought that summary-response papers without a thesis statement should lose points in the organization/unity category, but I pointed them to the assignment sheet for that paper, which did not require a thesis statement. The procedure was repeated for the persuasive research paper. Appendix K provides the training packet that was used for raters.

Three raters completed rating sessions over five consecutive days, and each session lasted from three and a half to five hours. At the beginning of each rating session, the raters and I completed a norming activity where we rated a sample paper not used in the current study and discussed our scores. For the first three days, these norming sessions focused on summary-

response papers, and we used a persuasive research paper on the fourth and fifth days, corresponding to the paper type that they were rating each day. After each draft was double-rated, the average gain in score for each pair of drafts was calculated. For example, rater one scored Ivana's first draft at fourteen points, and rater two at fifteen points, so her average score for draft one was 14.5 points. For her second draft, Ivana scored sixteen points from rater one and sixteen from rater two, for an average of sixteen. Ivana's average score gain, then, is 1.5 (the difference between 14.5 on her first draft and sixteen on her second). Inter-rater reliability for all drafts was also calculated.

For this study, it is appropriate to use consensus estimates for reliability, which are applied when raters use rubrics that represent a linear continuum of progress along a construct of writing ability (Brown et al., 2004), as do the four categories of this rubric. In percent exact agreement, which is one measure of consensus estimates, exact agreement levels of 70% are considered indications of reliable scoring (Stemler, 2004). Because it is possible for students to earn twenty points based on this rubric, 70% percent exact agreement can be considered as two raters having no more than six points of difference between their final ratings. Percent exact agreement between the second raters and me for this study was 94%. As the high percent exact agreement shows, third rating was not necessary for any papers.

5.3.2 *Classifying types of revisions*

While rating drafts with the rubric provides an overall picture of improvement (or lack thereof), gains in score cannot fully explain what peer responders decide to do with comments after their feedback sessions. For example, Ivana, whose first and second drafts were used as an example for calculating score gains in the last section of this chapter, had only a 1.5 point average gain in score for the second assignment. It may appear from this number alone that she

did not make substantial changes on the second draft. However, classifying the types of her revisions in the way described in the rest of this section shows that she actually made multiple revisions throughout: Ivana was substantially engaged in making changes to her draft. Classifying the types of revisions students make (the focus of this section), as well as tracing reviewer comments for uptake in the second draft (described in the next section), provide a more nuanced account of what happens after peer response.

Faigley and Witte's (1981) taxonomy of revisions, which analyzes the effects of revision on text meaning, is used in this study to investigate the kinds of changes that writers decide to make after peer response sessions. In this taxonomy, there are two different kinds of revisions: those that affect meaning (text-based changes), and those that do not (surface changes). Meaning is construed as "concepts in the extant text, as well as those concepts that can be reasonably inferred from it" (p. 404). If new information is either brought to or removed from the text in such a way that it cannot be recovered through drawing inferences, a text-based change has occurred. Text-based changes can be either macrostructure changes, which are major revision changes that would alter the summary of a text, or microstructure ones that would not alter the summary of the text. Surface changes, on the other hand, do not bring new information to the text, or remove old information: these changes include formal changes like edits in spelling, tense, and punctuation; and meaning-preserving changes, or paraphrasing where meaning is not altered. Within each category, revisions can be further classified according how the text is altered (eg., additions, deletions). Figure 5-3 shows a visual representation of the revision taxonomy.
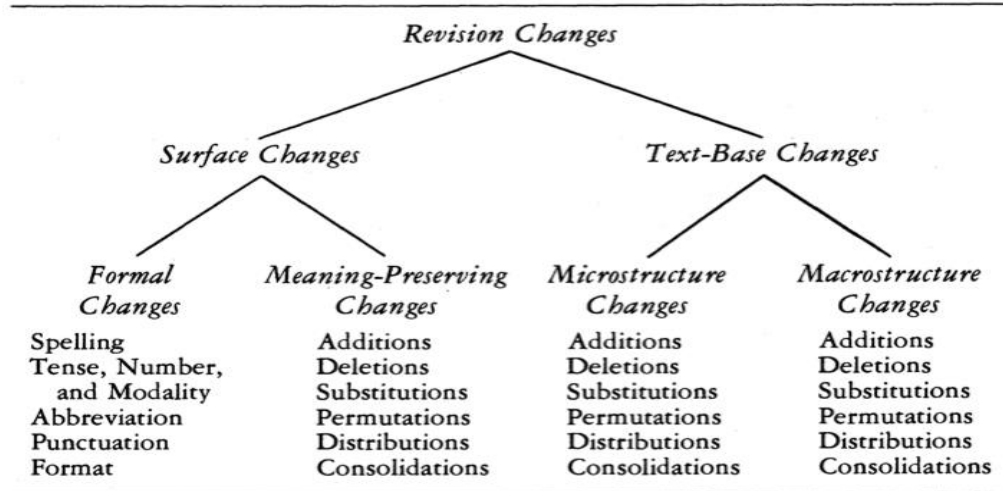
Figure 1. A Taxonomy of Revision Changes

Figure 5.3 Faigley and Witte's revision taxonomy (1981)

The following three sections will explain how I marked revisions made in the second draft, classified them according to the taxonomy provided in Figure 4.2, and trained research assistants to confirm or amend these classifications.

On clean copies of the drafts, I first placed first and second drafts side by side and underlined the revisions present in the second text. If words were removed from the first text, ($\varnothing$) was written on the second draft where the original words had been. Figure 5-4 provides an example of how second drafts were marked up in this way. In this figure, the beginning of Ivana's first and second drafts for assignment two are displayed. Revised sections of the second draft are presented in bold and underlined font:

First Draft	Second Draft
The article *The Immunzation-Autism Myth Debunked* (Recame, 2012) was written by Ph.D student Michelle Recame, BS in response to British medical researcher Wakefield's study, which claimed that autism is an outcome of MMR (measles, mumps, rubella) vaccine. Wakefield's study was published in 1998 and caused big concern among the public. The researcher argued that MMR vaccine lead to gastrointestinal disease, Crohn's disease and autism. Michelle Recame (2012) completely disagree that there is any connection between immunization and these diseases. In the article the author asserts that not enough evidence was provided to prove this connection, and the Wakefield's study was based on insignificant amount of examined children. The author accused Wakefield and his co-researchers in creating fear among the parents, who became frightened to take MMR vaccine, which rating was essentially declined in Britain. According to the article, the number of unvaccinated children increased, therefore there is a big risk of disease outbreak. The author explains the risk of rejecting immunization, showing that 98% of infected children were not previously vaccinated.	The article *The Immunzation-Autism Myth Debunked* (Recame, 2012) was written by Ph.D student Michelle Recame ∅ in response to British medical researcher **Andrew Wakefield. The study claimed that autism is an outcome of MMR (measles, mumps, rubella) vaccine.** Wakefield's study was published in 1998 and caused big concern among the public. The researcher argued that MMR vaccine lead to gastrointestinal disease, Crohn's disease and autism. Michelle Recame (2012) completely **disagrees** that there is any connection between immunization and these diseases. ∅ The author asserts that not enough evidence was provided to prove this connection, and the Wakefield's study was based on insignificant amount of examined children. **Also, Recame accused Wakefield** in creating fear among the parents, who became frightened to take MMR vaccine. **Consequently, the rating of the vaccine has essentially declined in Britain and all over the world in the aftermath.** According to the article, the number of unvaccinated children increased, therefore there is a big risk of disease outbreak. The author explains the risk of rejecting immunization, showing that 98% of infected children were not previously vaccinated. **Recame claimed that concerned parents amp to trust more the mass media, Internet, family and friends instead of doctors. The lack of dialogue between parents and their pediatricians is the chief problem, which must be resolved, according to Recame (2012).**

Figure 5.4 Ivana's first and second drafts (revisions highlighted and in bold text)

As the right column (Second Draft) in Figure 4.4 shows, Ivana added new text in the

second draft of her paper in five different places. These additions are shown in bold and

underlined text. Among these additions are sentences (e.g., "The study claimed that autism is an outcome of MMR (measles, mumps, rubella) vaccine"), phrases (e.g., "Also, Recame accused Wakefield …"), and words (e.g., "disagrees). The right column also shows that there were two places where Ivana omitted words or phrases from the second draft that had been included in the first one; these omissions are marked with the symbol "∅" in the second draft. For example, in the first draft Ivana referred to the author of the article she summarizes as "Michelle Recame, BS", but in the second draft, she removes the bachelor's degree abbreviation, so that the second draft reads simply "Michelle Recame". This change is represented as "Michelle Recame ∅" in the right column of Figure 4.4.

After changes were marked on all twenty-six second drafts, I completed a revision record for each draft, which listed each change that occurred in the second draft, and assigned it a revision code according to Faigley and Witte's taxonomy. Figure 5-5 provides the revision record for the same paragraph of Ivana's writing that is presented above.

SURFACE CHANGES		TEXT-BASED CHANGES	
Formal Changes	**Meaning-preserving changes**	**Microstructure changes**	**Macrostructure changes**
Spelling (Sp)	Additions (S-Ad)	Additions (Mic-Ad)	Additions (Mac-Ad)
Tense, number, modality (T)	Deletions (S-Del)	Deletions (Mic-Del)	Deletions (Mac-Del)
Abbreviation (Ab)	Substitutions (S-Sub)	Substitutions (Mic-Sub)	Substitutions (Mac-Sub)
Punctuation (P)	Permutations (S-Perm)	Permutations (Mic-Perm)	Permutations (Mac-Perm)
Format (F)	Distributions (S-Dis)	Distributions (Mic-Dis)	Distributions (Mac-Dis)
	Consolidations (S-Con)	Consolidations (Mic-Con)	Consolidations (Mac-Con)

Draft One	Draft Two	Revision Code
(1) BS	∅	S-Del
(2) Study, which claimed	Wakefield. The study claimed.	S-Dis
(3) disagree	disagrees	T
(4) In the article	∅	S-Del
(5) The author accused Wakefiled	Also, Recame accused Wakefield	S-Sub
(6) ∅	Consequently, the rating of the vaccine …	Mic-Ad
(7) ∅	Recame claimed …	Mic-Ad
(8) ∅	The lack of dialogue …	Mic-Ad

Figure 5.5 Revision worksheet for Ivana's second draft

As Figure 4.5 shows, if a writer adds new sentences to the second draft, each new sentence is assigned a code (see entries six through eight). On the revision worksheet, entire sentences are not reproduced, but rather the first few words are written, followed by an ellipsis. Because raters are looking at first and second drafts while they complete the worksheet, they can locate the entire sentence on the draft.

After I completed a worksheet like the one shown in Figure 4.5 for each of the twenty-six second drafts, the same group of raters who scored drafts with the rubric were trained to confirm or replace the revision codes. In a training session, I described the coding scheme and provided examples of each type of revision from Faigley and Witte's (1981) article. The coders and I then worked together to practice assigning revision codes to student writing not used in the study. During the second coding that followed, research assistants used the worksheets I had already

completed (see Figure 4.5 above for an example), and noted whether they agreed with the code, or thought a new one should be assigned. Inter-coder reliability was calculated at ninety-eight percent in this phase of data analysis. The few discrepancies were resolved by discussion between me and the second coder. In these discussions, we referred to the description of Faigley and Witte's taxonomy, sometimes referencing Faigley and Witte's original article in addition to the summary contained in the rater-training packet. After these disputes were resolved, one hundred percent inter-coder reliability was reached.

5.3.3   *Classifying types of comments and identifying them in revisions*

First, I read peer response transcripts and coded each comment made by a peer responder according to a modification of a scheme developed for a peer response study that compares the kinds of comments that ESL freshman composition students make in face-to-face versus online peer response settings (Liu and Sadler, 2003). The original coding scheme considers the type of comment (evaluation, clarification, suggestion, or alternation); the area of the comment (global or local) and the nature of the comment (revision-oriented or non-revision oriented). Evaluations focus on either good or bad features of writing, clarifications probe for explanation or justification, suggestions point out the directions for changes, and alterations provide specific changes. Global comments focus on idea development, audience, purpose, and organization of writing; local ones are oriented toward copy-editing, such as wording, grammar, and punctuation (McGroarty and Zhu, 1997, as cited in Liu and Sadler, 2003). Finally, revision-oriented comments point to areas that need to be changed, while non-revision-oriented comments signal areas of the paper that are strong and should not be changed. For the purposes of this study, with its small number of participants relative to other studies like Liu and Sadler, I considered only the area of comments (global or local) and their nature (revision-oriented or non-revision

oriented). Table 5-4 provides an example of each of these types of comment as they were identified in the current study:

Table 5.4 Modified scheme for classifying comments (Liu and Sadler, 2003)

	Global	Local
Revision-oriented	*This section should be longer.*	*"These children" sounds kinda rude.*
Non-revision oriented	*I really like your personal connection.*	*I didn't think you had any grammar problems.*

The final measure used to gauge improvement from first to second drafts is a consideration of whether or not writers used their partners' comments when making revisions. This attempt to trace peer response suggestions from the spoken interaction to the revision phase has been used in other peer response studies (e.g., Nelson and Murphy, 1993). To complete the task for this study, I used a revision record to: (1) record each specific, revision-oriented comment (according to Table 4.4) that was made in peer response; (2) determine from the second draft whether or not it was incorporated; and (3) record any insights about making the revision choice that were supplied in stimulated recall interviews. Table 5-5 provides an example revision record, showing a selection of the suggestions that Zelda gave Ivana for the second paper:

Table 5.5 Revision record for Ivana

Revision Suggestion	Action	Stimulated Recall Comments
Add personal experience to conclusion	N	Ivana didn't do this because she didn't think it was appropriate for an academic paper.
Add a transition sentence between first and second paragraphs	Y	Ivana said she was "inattentive in the class" and forgot that the instructor asked them to make transitions.
Expand the conclusion	Y	Ivana said that while she didn't think it's appropriate to include personal opinion, she did think the conclusion was too short.

I completed a revision record for each participant's second draft (twenty-six draft). Next, I calculated the number of comments and the percent of comments included in second drafts.

Chapter Seven reports the results of this analysis, presenting uptake of writer comments according to the *pattern of interaction* role that he or she adopted during the conversation about the draft. It also provides more detail about how I identified specific, revision-oriented comments in the peer response transcripts.

5.4   Researcher observation notes and classroom documents

The final data source comes from classroom observation of the sessions when peer response was conducted. I attended class sessions and took observation notes about how the instructor set up the peer response task, moderated the task while students interacted with each other, and communicated with students what they should do after the peer response task. I also audio recorded and transcribed the class session when students received a brief training about how to participate in peer response. Finally, I collected class materials related to the peer response session. Yin (2003) would call these handouts *physical artifacts*, and lists them as one of the six sources of evidence that can be used in case study research. These documents can help the researcher to contextualize the case study by fully describing the classroom setting (Duff, 2008).

In this study, these physical artifacts helped me to understand some of the language and content of students' peer response sessions, as well as to consider how the instructor's behavior and her framing of the task might influence their revision behavior. In the handout prepared for the third peer response session, where each student had written a research paper about a topic of his or her choice, the instructions asked the students to tell their partner something they liked and/or something they learned from the paper. Several students used the phrase "one thing I liked about your paper…" in these sessions, illustrating how class handouts directed topics and language in peer response dyads.

Observation notes from class sessions showed that the instructor circulated around the room while students were reviewing each other's papers, pausing to answer questions when necessary. Thus, a pair who could not reach consensus on the proper way to use in-text citation decided that they should "just ask Cindy". It bears mentioning that although the instructor was present to answer questions, she encouraged students to rely on each other for the majority of their feedback, while she occasionally answered technical questions like the one mentioned above.

Finally, observation notes from peer response sessions show that the instructor always encouraged students to use their own judgment when deciding if and how to incorporate their partner's feedback during revisions. She closed one class by asking students to make revisions after the session, reminding them that "ultimately, you are the writer, and you decide". While none of the participants directly referenced these instructions in their stimulated recall interviews, it is possible that students who decided not to incorporate their partners' feedback felt justified in doing so because of the way the instructor explained the revision process at the end of class.

5.5   Addressing Research Questions

Analysis of the various data sources in this study has been described. This section will turn to how these data sources are used to answer each of the three research questions.

Research question 1: (1)What are the patterns of interaction among peer response pairs in an L2 writing classroom, and how do students experience them?
In order to address this research question, all transcriptions of peer response talk from each of the three peer response sessions were divided into episodes and coded, and I, along with a second coder, described each one as having a distinct *pattern of interaction*. To quantify the differences

among *patterns of interaction*, turn number and length were calculated. Additionally, stimulated recall interviews with focal participants inform this research question, because they allowed me to understand how participants experienced the process of peer response. In this way, I gained a deeper understanding of how students experience pair dynamics in peer response sessions.

Research Question 2: Are different patterns of interaction associated with different revision outcomes, and how do students explain their revision choices? In order to address this research question, the three measures of writing improvement (rubic-based score, revision classification, and uptake of reviewer suggestions) were used. For the first measure, mean gains in score by pattern of interaction role of the writer were calculated. The mean amount of revisions were also compared across pattern of interaction role of the writer using descriptive statistics. Finally, descriptive statistics were used to determine the mean number of revision suggestions, and the mean percentage of uptake of revision suggestions, by pattern of interaction role of the writer. Stimulated recall transcripts were also consulted to better understand students' decisions about using their partners' feedback after peer response sessions.

Research question 3: Do these patterns of interaction change over the course of a semester, and how do students experience this shift? To address this research question, a comparison across the three writing assignments was conducted. For each of the five participating pairs, coded transcripts were examined to determine whether the identified pattern of interaction remained stable across the three writing tasks, or changed over the course of the semester. Stimulated recall transcripts were also used here, since I took time at the end of the second and third interviews to ask each participant about how the experience working with the same partner did (or did not) change their perception of peer response.

5.6   Summary

This chapter has described how each data source was analyzed, and how each one was used to address the three research questions in this study. By employing this kind of triangulation, it is hoped that more insight can be gained into how peer response practices affect revision outcomes. In addition to inductive qualitative coding, descriptive statistics are also employed. Hesse-Biber and Leavy (2011) refer to this process of transforming codes into numbers that allow for the application of statistical analytical techniques as *quantizing* (p. 288), and they maintain that this approach is helpful in examining associations between variables.

6   RESULTS AND DISCUSSION FOR RESEARCH QUESTION ONE

In this chapter I will review and discuss results for the first research question: What are the patterns of interaction among peer response pairs in an L2 writing classroom, and how do students experience them?Results will be drawn from both peer response transcripts (to explain how students' talk during peer response displays the four different *patterns of interaction*) and stimulated recall interviews (to explore how the participants experienced peer response interactions). I will first present the number of instances of each *pattern of interaction* that were identified during peer response sessions, which took place for three different writing assignments over the course of one semester. This information will be summarized both by pair and by individual student. I will also provide word/turn counts by *pattern of interaction*, explore the quantifiable differences among the four. Next I will present the results of a qualitative analysis that describes how students participate in and experience each pattern. This section will also consider how the findings about *patterns of interaction* relate to and expand upon those of other studies that have used the coding scheme.

6.1   Number of instances of *patterns of interaction*

A single *pattern of interaction* (collaborative, dominant/passive, dominant/dominant, or expert/novice) was identified for each peer response transcript, where one transcript consists of a pair's discussion of one of their drafts. Their discussion about the second student's draft is provided in another transcript. Because there were three writing assignments and five pairs, thirty *patterns of interaction* (three writing assignments times five pairs, with two papers per pair) should have been identified. However, one pair missed the second session and another the third, so that there are instead twenty-six patterns in total. Table 6-1 shows the pattern of interaction that was identified for each pair, during each session of peer response. There are three sessions that correspond with three different writing assignments. For each session, there are two *patterns of interaction* listed: one for the discussion of the first paper, and one for the discussion of the second.

Table 6.1 Patterns of interaction for each transcript, across three sessions

Pair	Participants	Session One	Session Two	Session Three
1	Dan and Alex	collaborative expert/novice	collaborative expert/novice	expert/novice collaborative
2	Joe and SongWoo	expert/novice collaborative	expert/novice collaborative	expert/novice collaborative
3	HaeSun and JeeHae	dominant/passive collaborative	(did not complete)	dominant/passive dominant/dominant
4	Ivana and Zelda	expert/novice collaborative	collaborative collaborative	(did not complete)
5	Dave and Jay	dominant/passive dominant/dominant	dominant/passive dominant/dominant	dominant/passive dominant/dominant

As Table 5.1 shows, each of Storch's four *patterns of interaction* were identified in this study. Using the process described in Chapter Five, the second coder and I came to agreement

about all *patterns of interaction*. For all transcripts, the predominant *pattern of interaction* occurred in an average (of the second coders' and my codes) of at least seventy-seven percent of the transcript. That is to say, although coding by episode allowed us to account for variability within the interaction, each transcript did seem to exhibit a strong tendency toward one of the four patterns. The most common pattern is the collaborative one, which occurs in close to half of the peer response discussions (ten out of twenty-six). The second most common pattern is the expert-novice one, which was identified in about one quarter of the discussions (seven). The remainder of the discussions are split almost evenly between dominant/passive (five) and dominant/dominant (four).

The predominance of the collaborative pattern in the current study is in line with most other studies that have examined *patterns of interaction* with a single experimental group (Storch, 2002; Watanabe, 2008; Watanabe and Swain, 2007). Other studies had two groups of participants, and these studies found that the collaborative pattern was the most common in one of the groups: students in Kim and McDonough's (2011) study who received pre-task modeling of the collaborative pattern demonstrated it more than did their classmates who had not received modeling, and Tan et al. (2010) found that the collaborative pattern was more common among students completing peer response using a computer as opposed to those conducting the activity face-to-face. The only study to date that did not identify mostly collaborative patterns is Zheng (2012), where the dominant/dominant pattern was most common. Because Zheng was an exploratory study with a limited number of participants, however, this high representation of the dominant/dominant pattern should be interpreted with caution.

Because one of the objectives of this study is to consider the impact of patterns of interaction on individual revision choices, it is also useful to identify the specific role, within the

pair's *pattern of interaction*, that each student adopted. That is, it is important to compare revision outcomes not only by the four patterns (for example, the expert/novice pattern), but also by the outcomes of both the expert and the novice student in turn. Table 5.2 presents a summary of participant roles across the three sessions of peer response. The term *role* will be used in the rest of this dissertation to indicate the part of the *pattern of interaction* that each participant adopted. In two of the four patterns, there are two distinct roles: expert/novice, and dominant/passive. In the other two patterns, collaborative and dominant/dominant, there are not distinct roles; both students are collaborative or dominant, respectively. In addition, I will use the terms *reader* and *writer* in combination with the *pattern of interaction* role. For example, I may refer to a participant as a *collaborative writer* or an *expert reader*. In this study, adjectives such as *collaborative* and *expert* refer only to *patterns of interaction*, and are not meant to describe students' knowledge or the writing task.

In Table 6-2, for the two patterns in which there are two distinct roles (expert/novice and dominant/passive), the role that each participant assumed is underlined. For example, in Session One, Dan (the reader) and Alex (the writer) assumed a collaborative pattern when discussing Alex's paper. After they switched roles and Dan was the writer and Alex the reader, they adopted an expert (Alex) /novice (Dan) pattern. When participants were readers (read their partner's paper and gave feedback), the role is indicated with an "R". When students were writers (received feedback from their partners), the role is indicated with a "W":

Table 6.2 Patterns of interaction roles for each transcript, across three sessions

Pair	Participants	Round 1	Round 2	Round 3
1	Dan	R: collaborative W: expert/<u>novice</u>	R: <u>expert</u>/novice W: collaborative	R: <u>expert</u>/novice W: collaborative
	Alex	R: <u>expert</u>/novice W: collaborative	R: collaborative W: expert/<u>novice</u>	R: collaborative W: expert/<u>novice</u>
2	Joe	R: <u>expert</u>/novice W: collaborative	R: <u>expert</u>/novice W: collaborative	R: <u>expert</u>/novice W: collaborative
	SongWoo	R: collaborative W: expert/<u>novice</u>	R: collaborative W: expert/<u>novice</u>	R: collaborative W: expert/<u>novice</u>
3	HaeSun	R: <u>dominant</u>/passive W: collaborative	(did not complete)	R: <u>dominant</u>/passive W: dominant
	JeeHae	R: collaborative W: dominant/<u>passive</u>		R: dominant W: dominant/<u>passive</u>
4	Ivana	R: collaborative W: expert/<u>novice</u>	R: collaborative W: collaborative	(did not complete)
	Zelda	R: <u>expert</u>/novice W: collaborative	R: collaborative W: collaborative	
5	Dave	R: <u>dominant</u>/passive W: dominant	R: <u>dominant</u>/passive W: dominant	R: <u>dominant</u>/passive W: dominant
	Jay	R: dominant W: dominant/<u>passive</u>	R: dominant W: dominant/<u>passive</u>	R: dominant W: dominant/<u>passive</u>

When student roles are identified, an interesting pattern emerges. It seems that in some pairs, students assume a consistent role as reader and a consistent role as writer, throughout the semester. This occurs with the second pair, Joe and SongWoo, where Joe is always the expert when reading SongWoo's paper. When she is the reader, the pair always adopts a collaborative pattern. Likewise, pair five, Dave and Jay, maintain the same roles throughout the study: Dave is a dominant reader while Jay is a passive writer, and both are dominant when Jay reads Dave's

papers. In other words, Dave is always assumes a dominant role whether he is the reader or the writer. This student preference for a single role was also present in Storch (2002). I will further examine whether pairs continue to adopt the same *pattern of interaction*, or display change over the course of the semester, in Chapter Eight when research question three is discussed.

6.1.1   *Word and turn counts by patterns of interaction*

The patterns of interaction displayed in Tables 6-1 and 6-2 were identified using the transcript coding process described in Chapter 4, which relied on a qualitative analysis of how students shared control of the task (*equality*) and engaged with each other's suggestions (*mutuality*). In order to triangulate the differences among *patterns of interaction* in this study, an additional analysis was conducted: a calculation of the number of words and number of turns by pattern of interaction. Average number of turns and average turn length (in words) for each student were also calculated. Table 6-3 displays these results:

Table 6.3 Mean number of turns and length of turns by pattern of interaction

Pattern of Interaction (number of transcripts)	Mean turn length in number of words (SD)	Mean turns (SD)	Mean total words (SD)	Mean transcript length in minutes (SD)
Collaborative (10)				
Student 1	20.3 (5.1)	60.1 (6)	1222.4 (334.5)	20.8 (3)
Student 2	18.8 (6.5)	59.6 (5.8)	1108.6 (350.6)	
Expert/Novice (7)				
Expert	26.9 (3.9)	61.6 (9.6)	1647 (248.5)	22.4 (4.1)
Novice	13.8 (2.3)	61.3 (9.4)	828.4 (15.3)	
Dominant/Passive (5)				
Dominant	23.3 (3.3)	52 (3.4)	1213.6 (193.4)	16.9 (3.1)
Passive	12 (1)	52 (3.4)	624	
Dominant/Dominant (4)				
Student 1	19.3 (4.4)	61.8 (3.4)	1196.5 (319)	21.3 (2.7)
Student 2	19.6 (4.7)	61.5 (2.5)	1211.5 (329.5)	

Table 6-3 illustrates several trends that corroborate the identification of *patterns of interaction* in the current study. In the two patterns with relatively low equality, expert/novice

and dominant/passive, experts and dominant students take turns that are roughly twice as long as their novice and passive counterparts. Although none of the published studies that use *patterns of interaction* report word and turn count, I gave a conference presentation using this framework and found the same turn length distribution in low equality patterns (2011). Also, Table 6-3 shows that experts took the longest turns of any of the student roles, and that expert/novice transcripts were the longest of all four patterns. This stands to reason if we consider that a feature of the expert/novice pattern is the expert's tendency to ask clarifying questions of their novice counterparts, and to provide detailed explanations of their comments. All in all, the word and turn count analysis supported the identification of *patterns of interaction* that were made based on reading the transcripts.

The first part of this chapter has provided a summary of the number of occurrences of *patterns of interaction* in an L2 writing class during peer response. The next sections will further discuss each of the four patterns, providing excerpts from both peer response transcripts and stimulated recall interviews to illustrate the characteristic features of each pattern. Excerpts from peer response transcripts will provide examples of the features of each pattern that were found in prior studies, and excerpts from stimulated recall interviews will provide new insight into the way students experience each one of the patterns in the peer response context.

Watanabe and Swain (2007) also conducted stimulated recall interviews with participants after coding transcripts of their talk during collaborative writing tasks for *patterns of interaction*. While not all instances are reported, these researchers found in at least one instance that the pattern assigned based on a reading of the transcript was not appropriate, after talking with the student about his intent during the session. In the current study, no *pattern of interaction* codes

changed based on stimulated recall interviews, but these sessions did serve to deepen my understanding of pair dynamics in each *pattern of interaction*.

6.1.2 Collaborative pattern

This section will describe the most common *pattern of interaction* found in this data, the collaborative one. It will begin with examples from the current study of features of collaboration that were found in previous pair interaction studies, showing how findings from this study are in line with the existing *patterns of interaction* literature. It will next turn to insights from stimulated recall interviews that illustrate how collaboration works in a peer response context, which is a unique contribution of the current study.

With the exception of Zheng (2012), other studies that have used the *patterns of interaction* framework have not focused on peer response, and have not included individual writing tasks (although Watanabe and Swain, 2007, and Watanabe, 2008 asked students to individually reconstruct a text that was initially written in pairs). Instead they have asked students to complete collaborative writing tasks (Storch, 2002; Tan et al., 2010), or to participate in other collaborative tasks like information gap activities (Kim and McDonough, 2011). While the tasks that students complete in most previous studies are different from the one in this study, key features of the collaborative pattern that they reported are also present in the current data. The remainder of this section will discuss those similarities and provide examples of them. The features that will be discussed are: (1) students offer alternative views about how to solve language problems and ultimately arrive at a resolution; and (2) they request and provide information to each other.

6.1.2.1   Offering alternative views and arriving at resolution

When describing how students complete tasks in the collaborative pattern, almost all of the existing *patterns of interaction* studies report that these participants discuss alternative views about how to solve language problems, and ultimately arrive at an answer that seems acceptable to all parties (Storch, 2002: Watanabe and Swain, 2007; Watanabe, 2008; Tan et al., 2010; Zheng, 2012). This section will explain how students in the current study carried out this kind of discussion and resolution, as well as consider how their deliberations about revision choices are different from the kinds of discussions that students in previous *pattern of interaction* studies participated in.

When students in the current peer response study discuss alternatives about their papers, they are often deliberating about whether the writer should leave things as they are, or make changes during the revision phase. In collaborative pairs, both the writer and the reader contribute to this discussion, and the writer closes the episode with a statement that indicates whether he or she plans to make changes during the revision process. The excerpt below provides an example of this kind of deliberation, where Dan (the writer) and Alex (the reader) are discussing Dan's persuasive research paper. This third writing assignment of the semester required students to choose a controversial topic, present research that argues both sides of the topic, and take their own stance about the issue. They were told to include a "thesis statement of opinion" in the first paragraph, which should include one or two sentences that present the issue, describe the two sides of it, and indicate the writer's stance on the issue. In his paper titled "Society Has It Wrong About College Education", Dan chose to write about the merits and downfalls of pursuing higher education, and he is of the opinion that going to college is not for everyone. In the draft that Alex read for the peer response session, Dan's thesis statement of

opinion reads, "Ultimately, I do not believe that graduating high school seniors should

mindlessly rush to the college education. College is simply not as effective as society views it."

In the excerpt below, Alex suggests that Dan revise his thesis statement to make the reasons why

he arrives at this conclusion clearer:

> Alex: I think, uh, for the first part of the introduction, it's a little confusing.
> Dan: Confusing, yeah.
> Alex: It is, I mean, it's not clear what you …
> Dan: Oh, okay.
> Alex: What your meaning … what your thesis statement was.
> Dan: I agree. I'm going to fix a little bit of that. I agree it's a little bit messy.
> Alex: I think, you just, you need to focus your topic.
> Dan: Mmhmm. We need to give both sides and the stance, right?
> Alex: Yeah your topic …
> Dan: Yeah, I think that, um I'll clean up my thesis statement a little bit. Do you, um, do you see what my stance is?
> Alex: Stance is? You mean, your thesis statement of opinion?
> Dan: Yeah, do you see? Can you see the reasons why I said no, I don't think so?
> Alex: Um …
> Dan: Cause if you don't, I might have to, like, add some details. But I want it to not be too long. I think it's clear here?
> Alex: Yeah, I saw that you say in the first paragraph "it's a waste of money", but it's not clear the pro side of your thesis statement.
> Dan: Yeah, I still need to clean it up a bit. I guess the support of college is missing.
> Alex: Yeah, you need to.
>
> (Dan and Alex, Peer Response Session Three, April 2013)

From the beginning of this episode, Dan seems receptive to Alex's opinion that his thesis

statement needs revision; he says "I agree …. I agree it's a little bit messy". Dan then asks Alex

direct questions about whether and how he should revise it: "Do you see what my stance is …

cause if you don't I might have to, like, add some details." While he presents expanding the

thesis statement as an option, he also states "I want it [the thesis statement] to not be too long …

I think it's clear here?" Alex lets Dan know that his stance is indeed unclear, mentioning that

while Dan did include some reasons why students should not pursue higher education, the format

of his thesis statement of opinion still does not match the one presented in class. The instructor

asked the students to present both sides of the argument, and in Dan's draft thesis statement "the pro side" [the argument in favor of college education] as Alex puts it, is missing. In his final draft, Dan does change the last couple sentences of his first paragraph to more closely resemble the required thesis statement. In the revision, he acknowledges both sides of the higher education debate before taking his own stance.

Because of the nature of peer response versus collaborative writing tasks, discussions about solutions to language problems in the current study differ from those in most other studies that use the *patterns of interaction* framework. When students in the current peer response study arrive at a resolution of a language problem, the writer states how he or she will revise the paper based on the outcome of the discussion. That is, the resolution of the problem can only be confirmed by looking at the writer's second draft to see how the revisions were made. In studies that employ collaborative writing tasks, however, when students debate language problems, the resolution is immediately visible in the text they are jointly composing or editing.

For example, Watanabe and Swain (2007) asked students to jointly compose an essay on a provided topic, and one of their research questions was focused on the relationship between *patterns of interaction* and the frequency of LREs (language-related episodes) that students produce. An LRE, a frequently used unit of analysis in SLA studies, is defined as "any part of the dialogue where learners talk about the language they produced, and reflect on their language use" (Swain and Lapkin, 2002, p. 292). In a pair identified as collaborative by Watanabe and Swain, two students discuss whether "reduce" or "decrease" is a better verb to use in the sentence they are writing for the joint composition task; they decide to use "reduce" (p. 133). The resolution of this LRE is present in the composition that students produce.

Overall, the nature of the collaborative pattern in the current study is in line with that of SLA studies such as Watanabe and Swain (2007) that use joint composition tasks. Students completing peer response, like those writing together, discuss linguistic choices and arrive at resolution. The difference between these kinds of existing studies and the current one lies in the kinds of language issues that students discuss, and in how the resolution is manifested. The instructor in this study asked students not to focus on language and grammar issues, but rather structural and organizational ones (a pedagogical practice that is recommended for peer response with second language writers; see Ferris, 2003). Collaborative pairs thus discussed higher order concerns like revising thesis statements (see Dan and Alex's conversation in the excerpt above), instead of lower-order ones like the lexical choice example from Watanabe and Swain. The mutually acceptable resolution that is one of the main features of the collaborative pattern can be seen in the joint composition itself, in the case of SLA studies, and in the individually revised paper in the current study. Thus, while students discuss different concerns in SLA tasks than they do in peer response, and they employ the resolutions during individual revisions instead of during the task, this feature of the collaborative pattern as described initially by Storch (2002) is present in the current study. It seems that regardless of the task, discussing language problems and arriving at a resolution during collaboration is universal, and the *patterns of interaction* framework is an appropriate one for identifying it.

6.1.2.2 *Requesting and providing information*

In addition to deliberating about and agreeing upon language issues, collaborative students in prior peer response studies also rely on each other as sources of linguistic information (Storch, 2002; Watanabe and Swain, 2007; Tan et al., 2010; Kim and McDonough, 2011). Students in the current study make similar requests when they are collaborating on the peer

response task. In an illustration of equality, or shared control over the direction of the task, the

writer does not rely solely on the reader to provide feedback. Rather, the writer sometimes asks

for feedback from the reader.

In the excerpt below, Joe (the reader) and SongWoo (the writer) are discussing her

second summary response paper, which should contain three parts: a summary, a critique, and a

personal connection. They are discussing whether or not the existing paragraphs in SongWoo's

paper fit the description. Throughout this part of their discussion, SongWoo asks questions about

her draft that she feels will help her in the revision phase, rather than waiting for Joe to generate

suggestions:

Joe:	I think you need to explain more on the critique. Ok. Um, the summary paragraph did not contain any opinions. You introduced the text generally, then you talked about it a little bit and left it with a question. What is this paragraph, the body paragraph?
SongWoo:	Wait, so this paragraph should be like a critique, not …
Joe:	It's a summary, right?
SongWoo:	It's not a summary, this one is the summary.
Joe:	Yeah?
SongWoo:	This one was the introduction.
Joe:	Introduction. Okay, this is introduction and this is summary. So, that's okay. I mean, you introduce it generally, then you just come back to this question.
SongWoo:	So, in your essay, you introduced this whole article first?
Joe:	Mmhmm.
SongWoo:	And you, cause she said summary, then critique, right?
Joe:	Mmhmm.
SongWoo:	So I should use my introduction as my critique?
Joe:	Yeah, I think this paragraph will work as your critique.
	(SongWoo and SongWoo, Peer Response Session Two, March 2014)

By asking clarifying questions and referencing Joe's paper when she is the writer,

SongWoo illustrates the requests and provision of information that are common in the

collaborative pattern. She asks Joe "in your essay, you introduced this whole article first?",

requesting information about Joe's paper that he provides. By the end of the episode, the pair has

decided that SongWoo should change the order of the paragraphs in her paper, which she does in the second draft. It is interesting to note that while the transcript for the conversation about SongWoo's paper was coded as expert/novice (with Joe as the expert and SongWoo as the novice), this particular episode was a collaborative one. Because it was only one episode of thirteen, the majority of which were coded as expert/novice, the transcript overall was coded as expert/novice. This combination of patterns of interaction underscores Storch's (2002) statement that categorizing for patterns of interaction is "by its very nature imprecise" and that pairs in her study were "placed in the quadrant that best described the predominant pattern evident in the pair talk" (p. 129).

Previous *pattern of interaction* studies have also found that collaborative pairs request and provide information. In Storch (2002), a collaborative pair were writing a joint composition interpreting a graph about the English proficiency levels of various immigrant groups. One student asked the other "English language fluency between two countries, yeah?", and the other responded "yes, and they compare before they came here and now" (p. 131). Students completing a collaborative writing task in Tan et al. (2010) asked each other questions about the requirements of the task ("don't we have to say what time?", p. 9), and about lexical items ("eight o'clock?" … "yes, eight o'clock in the morning", p. 9). Collaborative pairs in the studies cited above alternately rely on each other as sources of information; sometimes a student is asking a question and sometimes he or she is answering it. The same is true for collaborative pairs in the current peer response study. Rather than wait for their reader to provide feedback, writers sometimes request information about their own papers, which the reader provides. These requests for and provision of information represent another feature of the *patterns of interaction* framework that was identified in prior studies and also appears in the current one.

6.1.2.3   Insights from stimulated recall

The previous sections have showed how the collaborative pattern in the current study is line with previous research on *patterns of interaction.* One of the strengths of the current study is that it not only relies on the researcher to code drafts for patterns of interaction, but also asks participants about their experiences during peer response in a stimulated recall interview. This section will provide examples from stimulated recall interviews with students whose interactions were coded as collaborative, expanding upon the description of collaboration in the existing literature. In addition to deepening my understanding of how students collaborate in general, these comments from stimulated recall interviews revealed features of collaboration that are unique to the peer response task.

The excerpt below is from Song Woo's stimulated recall interview after her first peer response session with Joe, where they adopted a collaborative pattern while reviewing his paper. She spoke about the impact of being a reader on her own writing process. Rather than see peer response only as an opportunity to receive suggestions on their own papers, collaborative participants like SongWoo see the learning potential in giving feedback:

> Interviewer: So how did you feel about giving comments to Joseph?
> SongWoo: Okay, I like, as I'm giving, by giving him a suggestion, I also learn …
>   cause to give a suggestion I have to understand it, and have to have some
>   ideas. Other ideas or some different ways to say, like other opinion, I
>   guess. I have to have some idea, some different idea to suggest him, right?
>   So I'm, I, by giving suggestion, I learned, like I got suggestion also?
>   (SongWoo, Stimulated Recall Interview Two, March 2013)

Collaborative participants readers like SongWoo revealed in interviews that they have positive attitudes about peer response, and this may contribute to the cooperative and engaged stance that they and other collaborative participants adopt during peer response sessions. Because they believe that peer response is beneficial for both readers and writers, collaborative

participants seem to fully engage in the activity and carefully consider their peers' suggestions when making revisions. Storch (2002) also found that students who reported positive attitudes toward group work were more likely to adopt a collaborative *pattern of interaction.* In addition, several researchers (Allwright, 1984; van Lier, 1996; Webb, 1989) have confirmed what SongWoo identified in her own experience as a peer responder: that providing an explanation is beneficial for learning because the learner must first clarify and organizer her own knowledge (as cited in Storch, 2002). Likewise, while Lundstrom and Baker (2009) did not consider pair dynamics, they did find that givers of peer feedback showed more gains in writing ability over the course of a semester than receivers of feedback did.

Another theme that emerged when analyzing stimulated recall interviews with collaborative participants is that writers in collaborative patterns sincerely value their reader's feedback. They appreciate that their readers provide a unique perspective, especially for identifying parts of drafts that are clear, and those that are confusing. In the excerpt below, Ivana is discussing how her partner's feedback influenced her revision decisions. The paper they are discussing asked students to choose an article that they intended to cite in the persuasive research paper, and write a summary of it. As such, peer response pairs were not familiar with each other's topics, and had not read the source material that was being summarized. Ivana chose an article about childhood vaccines and their contribution to the development of autism, a topic that was unfamiliar to her partner, Zelda. In the excerpt below, Ivana is describing why Zelda's opinion of the clarity of her draft was important to her:

Ivana: Because, uh, if from the beginning she had no clue what she's reading about …it made me, like, doubt if my, is my summary really good? If, um, a person, um, which is, who is not familiar with the topic can understand the main, maybe, points from my summary.

Interviewer: Uh huh. Uh huh.

Ivana:	But, I explained everything, and she seemed to be, like, she understood everything.
Interviewer:	Ok. So you said, um, at first it made you doubt if your summary was clear?
Ivana:	Uh huh.
Interviewer:	The way you had written it?
Ivana:	Yeah. And I thought I should revise it maybe if it's not clear. Maybe I should ma- made some revisions about that.

(Ivana, Stimulated Recall Interview Two, March 2013)

Seeing the value in a partner's perspective appears to be a feature of the collaborative pattern that is unique to peer response. It stands to reason that talking about the value of a partner's perspective would occur in peer response, but not in collaborative writing or other pair tasks. Often times a draft is clear to the writer, and only by asking the opinion of an outside reader can he or she identify areas that should be clarified. Students in collaborative writing tasks, on the other hand, are working on creating clear writing during the shared process of composing; there is no participant who can approach the writing as an outsider. It should be noted that Watanbe and Swain (2007) conducted stimulated recall interviews with participants in order to better understand pair dynamics, but these researchers only included one excerpt, from an expert/novice pair, due to limited space in the article.

6.1.3   *Dominant/dominant pattern*

This section will describe the dominant/dominant pattern of interaction, where there is high equality (because both participants attempt to control the task), but low mutuality (because they do not engage with each other's discourse). In the current study, the dominant/dominant pattern was identified in four out of twenty-six peer response transcripts. First, ways in which the dominant/dominant pattern in the current study echoes other researcher's findings will be discussed. Next, I will turn to novel insights into the dominant/dominant pattern that were revealed in stimulated recall interviews with these participants.

In pair five, Dave and Jay's conversations were coded as either dominant/dominant or dominant/passive, and Dave assumed a dominant role in all conversations. Examining their peer response transcripts as a whole, there appears to be a hostile attitude, and they are sometimes so consumed with teasing or confronting each other that they seem unable to engage with suggestions. One of the resulting trends from this kind of interaction is that students fail to reach consensus on issues they debate about.

6.1.3.1   *Failure to reach consensus*

The following excerpt is from the second peer response session, where students have chosen an article that they might like to include in their persuasive research paper, and written a summary-response essay about it. Jay read Dave's draft of a paper about organ donation and is demanding that Dave use a consistent word to describe organ donors, rather than using synonyms:

Jay:	When I read this paper, I have a question over this thing. Here. What is the difference between …. donors and donators?
Dave:	Same thing.
Jay:	Then why did you use donator in this sentence?
Dave:	Huh?
Jay:	Then why did you use donator in this sentence?
Dave:	Well, it's the same thing so I can use … whatever I want.
Jay:	Well, it's confusing me. You confuse readers, is that what you do?
Dave:	Because you don't understand? I confuse you? How about studying vocabulary first.
Jay:	I encourage you to use one word to not confuse the readers, man.
Dave:	That's not matter (sic).
Jay:	Yes it does. It's confusing me. Already, nobody's going to read your paper.
Dave:	A lot of authors, a lot of authors who write articles they use different words each time.
Jay:	Not for important words. You see, (reading) "*donors, donors, a lot of donors*", but then this thing, you see. *Donators* set me up, man.
Dave:	Why's it matter? You understood. Okay, skip …

(Dave and Jay, Peer Response Session Two)

Jay begins his comment in a respectful way; it followed the training guidelines given in class that recommended that students ask questions of the writer instead of giving commands. It does not seem, however, that Dave ever seriously considers Jay's suggestion that he choose one term and use it consistently. This suggestion also seems like a reasonable one, and it is in keeping with the peer response activity that asks students to focus on global concerns such as creating cohesion throughout a paper. However, Dave's first comment in response to the suggestion is that "I can use whatever I want", and he does not appear to change that sentiment as the conversation goes on. After Dave's defensive response to the suggestion, Jay follows suit as his comments become more aggressive and sarcastic; he asks, "You confuse readers? Is that what you do?", and concludes that "nobody's going to read your paper". Dave finally says "okay, skip", and Jay moves on to discuss another part of Dave's paper. This excerpt thus fits with previous researchers' findings that students in a dominant/dominant pattern engage in disagreements that do not lead to resolution: Dave and Jay disagree about the importance of using consistent terminology throughout the paper.

It is clear from the transcript that Jae and Dave do not reach consensus on the issue being discussed, and that Dave does not seriously consider it, but the words alone cannot explain Dave's initial defensiveness. This is a case where the stimulated recall interview proved invaluable in my understanding the pair dynamics at play. During Dave's interview, he stopped the recording after listening to the exchange in the excerpt above. He told me, in the excerpt below, that he didn't perceive Jay's comment as a sincere attempt to offer feedback. Dave also seemed adamant about his autonomy as a writer:

Dave: He's being kind of ridiculous. I think the words "donors" and "donators" Is the same thing, and I just, that's what I had in my mind. And like, he was, was pointing out that, and I was like 'no, that's not a big deal.'

Interviewer:	Okay. So when you say you feel like he was being ridiculous, what Do you mean?
Dave:	Um, well, I don't have to follow what he say.
Interviewer:	Uh huh.
Dave:	I'm the writer and I'm writing the paper, and I can write whatever I want.
Interviewer:	Okay. So do you think, do you think he was being serious about His suggestion?
Dave:	Um, no.
Interviewer:	You don't. You don't think he was serious?
Dave:	No. Because he was like, he wasn't taking it serious, and his face is smiling.

<div align="right">(Dave, Stimulated Recall Interview Two, March 2013)</div>

We learn crucial information about this episode from the recall transcript. A description of Jay's body language ("His [Jay's] face is smiling") helps us understand that Dave's refusal to accept Jay's comment is as much about the suggestion itself ("I think the words … are the same thing"), as it is about Jay's demeanor and tone ("He was being ridiculous … he wasn't taking it serious"). This provides more insight into the social reasons why dominant/dominant pairs tend to have disagreements that lead nowhere. In this case, Dave seems to be disturbed by the fact that Jay was not taking the peer response activity, or his comment here, seriously. Because this is the second time the pair has worked together, it is possible that the first peer response session, where Dave told me in the stimulated recall interview that "he [Jay] was teasing me … it made me feel kinda mad" has predisposed Dave to be doubtful about Jay's sincerity.

Four other studies that used the patterns of interaction framework (Storch, 2002; Kim and McDonough, 2001; Zheng, 2012) also identified refusal to reach consensus among dominant/dominant pairs. In Zheng, the only study that used a peer response task, the writer in a peer response group of four students insisted on her opinion about which preposition she should use, even after the other three suggested she change this word and one asks her to "stop arguing" (p. 116). A dominant/dominant pair completing a collaborative writing task in Tan et al. (2010)

spend several turns saying "yes it is" and "no it's not" when trying to interpret the graph they are describing (p.11). Students in Storch (2002) doing a text reconstruction task have an unresolved disagreement about the demonstrative pronouns "this" and "that" (p. 132-133). In Kim and McDonough, which coded both dominant/dominant and dominant/passive pairs as 'non-collaborative', students argue about the Korean translation of the word "Thanksgiving", and after several turns say "let's move on" (p. 191).

This feature of the dominant/dominant pattern is represented similarly in the current study; these kinds of pairs often argue about the choice between two different lexical items, like Dave and Jay do. However, the unique contribution of the current study is that the stimulated recall interviews allowed me to better understand why students fail to reach consensus. In the case of the example above, the writer does not believe that the reader is taking the activity seriously, a dynamic that is established in the first session and continues throughout the semester. Participants' perceptions of the dominant/dominant pattern will be further explored later in this section.

6.1.3.2   Rejection of suggestions

In addition to failing to reach consensus about arguments, participants in previous studies who have worked in dominant/dominant patterns have also rejected their classmates' suggestions. These kinds of refusals represent another way that dominant/dominant pairs in the current study are in line with those in the existing body of research.

Excerpt 5.7 shows an example of how refusal to accept suggestions is represented in this study. Jay has read Dave's first paper, a summary-response assignment, which asked students to choose a section of the class book, Outcasts United, summarize the section, and then write a personal connection and critique. In the explanation of how to write the paper, the instructor had

shared an example paper with the class that they analyzed during a group discussion. One of the

points raised was that although each paragraph has its own focus (the first paragraph a summary,

the second a personal connection, and the third an evaluation of the topic or the author), the

paper should be a cohesive whole. In the excerpt below, Jay has read Dave's summary-response

paper and is suggesting that Dave make more of a connection between the first paragraph, which

summarizes the experience of the refugee soccer players who are the focus of the book, and the

second, where Dave shares his personal experience about making friends while playing sports:

Jay: In my opinion it needs more, I mean, you need to show, like the relationship between the refugees living in the United States. What is, like, you said, uh, playing sports is good way to make friends and deal with issues? That's what you said?

Dave: It's all different parts. Why are we talking about the personal connection?

Jay: No, no, no, no. It's, 'cause, it's all connected.

Dave: No. It's parts, parts. [Parts.

Jay: Yeah], it's separate parts, but it's supposed to be connected like the example she [the instructor] gave us. It's all connected. But it doesn't connect. It doesn't tell the relationship between these two paragraphs.

Dave: Yes it does. It's all about sports.

Jay: Yeah, you said sports are good right?

Dave: Yes … did you even complete reading my essay?

Jay: Yeah. But um, you didn't put the reason how the sports is a good way to make friends.

Dave: What are you talking about, man?

Jay: You didn't put the reason. Or you didn't put example.

Dave: Whatever.

(Dave and Jay, Peer Response Session One, February 2013)

Jay is following the guidelines of peer response, asking Dave to focus on issues of

cohesion in his paper, referencing materials and discussions from previous classes. He begins his

comment with a clarifying question ("Playing sports is a good way to make friends … that's

what you said?"). Dave, however, responds defensively by asking "why are we talking about the

personal connection?", and later accuses Jay of not having read his paper. Even though Jay

continues to try and explain his point, Dave makes it clear toward the end of the excerpt that he is not interested in understanding his reader's feedback when he says "Whatever."

Tan et al. (2010) and Zheng (2012) also report that students in the dominant/dominant pattern reject each other's suggestions. Zheng notes that even when a reader in a dominant/dominant pair offered a strong suggestion ("shall we add some more plot here to enrich the content?", p. 116), her partner responded negatively without seeming to consider the suggestion ("don't you think it is already very rich in content?"). In Tan et al. (2010) students who display a dominant/dominant pattern also "ignore the other participant's opinion … and reject each other's suggestions" (p. 8). Likewise, students in the non-collaborative pattern of Kim and McDonough (2011) "failed to engage their partner's suggestions" (p. 191), and it seems that this disengagement occurred when one partner simply ignored the other's utterance and moved on to another point.

It is interesting to note that the disengagements described in the studies cited above usually occurred across a few turns, and then the pair moved on to another topic. In the current study, however, it was common for one dominant partner to insist so much on his viewpoint that the pair would spend relatively more time arguing than the students in other studies. This disparity in length of disagreements could be due again to the nature of the task of peer response versus other pair tasks. With only one exception (Zheng, 2012), students are completing a collaborative activity where they are jointly composing, editing, or doing a dictogloss task. Perhaps dominant writers in the current study are more likely to cling to their own opinion because they feel an ownership over their writing than students who are producing a text as they work. As Dave puts it, "I'm the writer … I can write whatever I want".

6.1.3.3   Insights from stimulated recall

Talking to Dave in stimulated recall interviews revealed more complexity in his relationship with Jay. As mentioned above, Dave was sometimes resentful of Jay's cavalier attitude about peer response. It would be tempting for me to assume that whenever tension or hostility seemed present in a reading of the transcripts, Dave was experiencing similar negative feelings about Jay's inability to take the activity seriously. Interestingly, though, a stimulated recall interview with Dave after they completed the first session reveals that sometimes he actually enjoys arguing with Jay. In this segment of the interview (Excerpt 5.8), Dave had just listened to a recording of Jay laughing at Dave's second paragraph and telling him that "you have only three sentences, man. Why do you think that's enough?"

Interviewer:	So do you remember anything about um, like what you were thinking or feeling when the two of you were going back and forth?
Dave:	Um, it was kind of fun.
Interviewer:	It was fun?
Dave:	Yeah, it was fun.
Interviewer:	Okay. Um, what do you mean by that?
Dave:	Kinda, like, I was trying to, like, attack him, like offend him, and he's kinda Defending his opinion, so
Interviewer:	Mmhmm. Okay, so that felt fun to you?
Dave:	Yeah.
Interviewer:	Okay, okay. So of course we don't know, but do you think it felt fun to David?
Dave:	Yeah, he's, he's yeah cause he was laughing too.
Interviewer:	Mmhmm, mmhmm.
Dave:	We couldn't stop laughing.

(Dave, Stimulated Recall Interview One, February 2013)

The insight gained from stimulated recall for the dominant/dominant pattern highlights the need for these kinds of interviews. If I had relied on the transcript alone, I might have assumed that the interaction was unpleasant for the participants. However, Dave revealed that he enjoyed "trying to attack him, to offend him". Likewise, Jay revealed in his first stimulated recall interview that Dave "knows I'm not serious about it [the teasing comments]" and that "he [Dave]

does that to me too". From a pedagogical standpoint, dominant/dominant participants may not

have an incentive to move toward a more collaborative pattern if they enjoy arguing or joking.

6.1.4   Dominant/Passive Pattern

This section will describe how the dominant/passive pattern was displayed in the current

study. In this pattern, there is low mutuality (because participants do not engage with each other)

and low equality (because the dominant student controls the task, with little to no input from the

passive student). In the current study, the dominant/passive pattern occurred five times, and two

of the pairs (HaeSun and JeeHae, and Dave and Jay) displayed the pattern. I will first identify

ways that the dominant/passive pattern in my data matches what other researchers using the

patterns of interaction framework have identified. Next I will turn to the ways in which

stimulated recall interviews deepened my understanding of how both dominant and passive

students experience this pattern, and what their motivations for adopting their respective roles

may be.

Like the previous two patterns, dominant/passive students in this study behave in a

similar way as did their counterparts in other studies (Storch, 2002; Watanabe and Swain, 2007;

Watanabe, 2008; Tan et al, 2010; Zheng, 2012). In these studies as well as in the current one,

dominant students do not make attempts to involve passive students in the discourse, and neither

do passive students make contributions or challenges when they are discussing papers.

6.1.4.1   No attempts to involve passive student

In the current study, pair three, HaeSun and JeeHae, displayed the dominant/passive

pattern while discussing JeeHae's research paper during the third session. In this pattern,

throughout the current study, the reader adopted a dominant role, and the writer a passive one. In

the excerpt below, HaeSun is giving JeeHae feedback about her persuasive research paper, which

is about the legality of same-sex marriage in the United States. As can be seen, the dominant

reader (HaeSun) makes no attempts to involve the writer in the process of receiving feedback.

Rather than ask JeeHae clarification questions, she conducts the peer response session as a series

of statement about JeeHae's paper:

HaeSun:	Um, about your paper, um, your paper is about the same sex marriage.
JeeHae:	Mhm.
HaeSun:	And I know it's, um, it's been a current issue because um President Obama
JeeHae:	Mhm.
HaeSun:	Um says he's going to pass the law
JeeHae:	Mhm.
HaeSun:	On this issue. So, um, you said you want me to focus on main thesis statement and argument but the, here, thesis, um, thesis statement is kind of clear, but I think it should be longer and give a reason.
JeeHae:	Uh huh.
HaeSun:	briefly in the thesis statement.
JeeHae:	Mhm.
HaeSun:	As other people.
JeeHae:	Mhm.
HaeSun:	And, but your supporting point is only focused on the opposing idea.
JeeHae:	Mhm.
HaeSun:	Um, you said you are ready to accept, um, same sex marriage, but not, included supporting idea about why he should pass the law, so I think you should, um, put something on detail.
JeeHae:	Mhm.

(HaeSun and JeeHae, Peer Response Session Three, April 2013)

HaeSun is making solid suggestions about how JeeHae might improve her paper. In fact,

as it was written in the first draft, JeeHae's thesis statement did not match the required format

presented in class, because it did not include her rationale for taking the side that she did when

discussing the controversial issue. Instead of approaching her suggestions in the dialogic and

supportive way presented in peer response training during this class (asking the reader questions

about her intention, using phrases like "you might consider"), HaeSun's feedback is presented as

a series of first person commands about how JeeHae should revise ("I think you should put more

detail in citations"). She misses opportunities to engage in discussion about exactly how to revise

the paper when she makes statements like "[you did not] include supporting idea about why he should pass the law". Had she approached the delivery of her feedback in a more inclusive way, she and JeeHae might have discussed together the kinds of supporting details that could have been included in the revision of the paper.

Other studies have similarly observed that dominant students do not make an attempt to involve passive ones in the task at hand. While a dominant student in Storch (2002) completed a collaborative text-editing task, he exhibited "long monologues" where he "read, deliberated, and decided how to edit the text" (p. 133), asking for no input or direction from his partner. Similarly, the dominant student highlighted in Watanabe and Swain (2007) makes self-directed utterances as he thinks aloud to accomplish a task that he seems to view as an individual one. Zheng (2012) reports that dominant students neglect to clarify misunderstandings for their passive partners, even when it seems that they know their partner is confused. Tan et al. (2010) found that dominant students in her study produced the majority of the L2 and ignored contributions from the passive participant. In the current study, dominant readers also seem to see peer response as an individual task; they read out a list of directives to their partners, not stopping to ask questions or seek reactions.

6.1.4.2   *Passive student makes few contributions*

Another feature of the dominant/passive pattern in this study that is in line with previous research is that the passive participant makes few contributions to the task, and does not challenge the dominant partner's appropriation of it. Again, HaeSun and JeeHae display this feature when they discuss the third assignment, a persuasive research paper. In the following excerpt, HaeSun is giving JeeHae feedback about JeeHae's research paper on same-sex marriage.

JeeHae does not ask any clarifying questions about HaeSun's feedback, and it is not clear from

the transcript whether or not she understands or agrees with it:

HaeSun:	Your position … I think it is clear, but, like, a little more clear.
JeeHae:	Okay.
HaeSun:	And then [background
JeeHae:	Mhm]
HaeSun:	Paragraph. I mean, you had a little background information, but … little more.
JeeHae:	Yeah.

<div align="center">(HaeSun and JeeHae, Peer Response Session Three, April 2013)</div>

From a reading of the transcript, it seems that JeeHae is missing the opportunity to

discuss how she might make her position "a little more clear" and give a "little more"

background information. These vague suggestions may have proved more useful had JeeHae

asked her reader for clarification and used that information to guide her revisions. JeeHae's

stimulated recall interview helped me understand why she contributed so little during the

discussion. She told me, "I didn't understand what the background information would be", and I

asked her why she responded "okay" if she was actually unclear about what her reader was

asking her to do. JeeHae responded, "I didn't even, I mean, I don't know how to write in detail

…I don't know much information about my paper and I was so confused how to write my

argument." As the interview went on, JeeHae was not able to explain whether it was the

assignment itself or the articles she had gathered that were the source of the confusion. It seemed

that she was generally overwhelmed by the assignment and not confident that her draft met the

requirements, but did not feel clear enough about what her questions were to even ask them.

Her lack of interaction may also be related to her belief that HaeSun's English

proficiency is higher than hers, which will be discussed in the next section. Overall, though, it

seems from this interaction that students who do not arrive to class with a clear idea of what the

assignment calls for, and a solid attempt at a first draft, are unlikely to benefit from peer response

because their lack of preparation and understanding hinders their ability to engage with their reader's suggestions.

A few of the previous studies that have used the *patterns of interaction* framework have also noted lack of participation from passive students. In Tan et al. (2010), passive students ask fewer questions than students in other patterns, and Storch (2002) reports that passive students made no challenges to the dominant participant's suggestions and they did not seek assistance when they were confused. In Watanabe and Swain (2007), when passive participants spoke, it was only to repeat the expert's words. We do not have a sense of how passive students participate in Zheng (2012), the only peer response study among these, because she describes this pattern from perspective of dominant participant, saying that their overbearing approach to the peer response task denies passive participants "access to the learning activity" (p. 118). It should be noted, though, that the passive participant in Zheng was part of a group of four who were reviewing one student's paper, and she was one of the readers. In the current study, passive participants are always writers. Passive writers may be at even more of a disadvantage in a peer response task than in the collaborative tasks used in most of the above-cited studies (Storch, 2002; Watanabe and Swain, 2007; Tan et al., 2010), because a passive writer who does not ask questions or engage with his or her reader's suggestions is left with little feedback to work with during revisions. Passive participants in collaborative tasks, on the other hand, may lose opportunities to learn from the activity, but they are still able to complete the task because the end product is a joint one. Here again, because task completion looks different in peer response than in collaborative tasks, adopting a passive role affects participants in the current study in a different way than it did in prior ones.

Passive participants in the current study contributed the fewest number of words per turn during peer response sessions. This lack of interaction makes it difficult to understand their role from the transcript alone, perhaps even more so than participants who speak more. In this section I will explore a major theme that emerged during stimulated recall interviews with passive participants: they think their lower language proficiency means they should contribute less. I will also explain this pattern from the perspective of dominant readers, exploring why they approach the task as they do, drawing on a stimulated recall interview with Dave.

6.1.4.3 Insights from stimulated recall

Interviews with JeeHae suggest that passive students may be quieter because they do not feel confident as writers, and they view themselves as less proficient in English than their dominant partners. When HaeSun read JeeHae's first paper, a summary response that asks students to make a personal connection to some aspect of the class book, HaeSun told her, "I think your personal connection should be how, how hard it was for you fitting into America as a refugee" to which JeeHae responds "okay". In the stimulated recall interview after that session, I ask her about her response:

Interviewer: Here she says your personal connection should be about being a refugee. Are you a refugee?
JeeHae: No, I'm an international student.
Interviewer: Okay. So you said 'okay' to her suggestion, but do you remember what you were thinking?
JeeHae: I think she meant, um, the hard experience when first came into the United States as the foreign student, and most other students think I'm Asian so I can speak English and stuff. Yeah, so I think she wanted me to write about that because she wrote about things like that in her paper.
Interviewer: But that's not what you wanted to write about?
JeeHae: No, I tried to think of something and think back but I couldn't really find anything.
Interviewer: So you wanted to follow her suggestion, but you couldn't?

JeeHae: Yeah. And I say okay because I really like her personal connection and she is better English than me. I think I was confused. I'm just lack of speaking skills so when I start speaking I feel confused.

(JeeHae, Stimulated Recall Interview One, February 2013)

HaeSun supplied JeeHae with an idea about what to write for her personal connection, and JeeHae seems receptive to using it. JeeHae does not correct HaeSun when she incorrectly calls her a refugee, and she thinks that her partner wanted her to write about the hardships of being a refugee "because she wrote about things like that in her paper". In other words, something as individual as a personal connection is appropriated by the dominant reader, and the passive writer says nothing to change the course of the discussion. JeeHae revealed to me that she is hesitant to challenge HaeSun's suggestion because she sees herself as having relatively lower English proficiency. Interestingly, from my perspective and that of their instructor, JeeHae and HaeSun are relatively well matched in terms of language proficiency and writing ability. JeeHae's lack of confidence highlights the fact that writing teachers may need to educate students about their ability to give helpful feedback even if they are not completely confident with their speaking or writing skills. JeeHae's thoughts during stimulated recall provide support for the hypothesis of Kim and McDonough (2008), who investigated the effects of interlocutor proficiency on collaborative dialogue during pair work among KSL learners and suggested that participants in their study who adopted a novice or passive role may also perceive themselves as less proficient than their partner.

Stimulated recall interviews with dominant readers like Dave further deepened my understanding of why students adopt these roles when doing peer response. During my first interview with Dave, he stopped the recording after hearing himself badger Jay about why Jay did not mention the soccer coach in his summary-response paper about the class book. Unprompted by me, he had the following to say:

Interviewer:	Did you have something to say there?
Dave:	I'm really mean. Why did I say that? It's okay, whatever.
Interviewer:	You think you're mean?
Dave:	Kind of.
Interviewer:	Which words are mean?
Dave:	I don't know. I'm real offensive. Yeah, I don't know why.
Interviewer:	Okay.
Dave:	I tried to hurt him, I guess. I don't know. I don't know why I did it but it sounds too offensive I guess.
Interviewer:	It sounds that way to you? Offensive?
Dave:	Yeah.
Interviewer:	Okay, how do you think that affects doing peer review?
Dave:	Mm, I think if I did it, like, nicer way, he would be like 'Okay, whatever' and stuff, but if I did it, like, straightforward, then he would listen. So I try to help him out.
Interviewer:	Oh, okay. So you think actually if you were nicer, he wouldn't listen to you.
Dave:	Yeah, yeah.
Interviewer:	Okay, so this is how you communicate, so he can hear your comments.
Dave:	Yes.

(Dave, Stimulated Recall Interview One, February 2013)

It seems that while Dave is aware that his tone and comments sound hostile, he may not be behaving this way out of malice. He thinks that if he made comments in a "nicer way", Jay would not listen to him. Instead, he makes comments in a way that he sees as more direct to "help him out." Jay, on the other hand, told me when listening to this peer response session that he felt like Dave was "kinda humiliating me. 'Cause we are recording and obviously you're going to listen to it, so I was kinda embarrassed at the moment". We cannot know the extent to which Jay's embarrassment was amplified by being recorded, but it seems probable that he would have experienced some degree of negative feelings about the way Dave was speaking to him whether the recorder had been there or not. Regardless, Dave and Jay's peer response session does not mirror the constructive criticism and polite tone that writing teachers would probably desire. Stimulated recall interviews with dominant participants like Dave reveal that

students need training about how to deliver feedback in a way that is direct without being offensive.

6.1.5 Expert/Novice Pattern

The final pattern that will be explored in this chapter is the expert/novice one. In this pattern, there is low equality (because the expert controls the direction of the task), but high mutuality (because the expert invites the novice to participate in the peer response session). In this study, the expert/novice pattern occurred seven times, and three of the five pairs exhibited this pattern at least once. Each time, the reader was the expert and the writer a novice. In this section, I will explain the ways that this pattern is similar in the current study to other studies that have used the *patterns of interaction* framework. Next I will explore new insights about this pattern that students revealed in stimulated recall interviews.

Other studies using the patterns of interaction framework have noted: (1) that experts do not impose their view, but rather invite novices to participate in the process of completing the task, and (2) that novices often admit their shortcomings and misunderstandings during the task. In this section I will explore how these two features of the expert/novice pattern manifested in peer response transcripts in the current study.

Watanabe (2008) writes that experts in her study listen carefully to novice's utterances and only provide assistance when they feel it is needed. In Storch (2002), an expert participant invites his partner to contribute to the task, asking "What is your opinion?" (p. 135) when the two are deliberating about which verb tense to choose. Experts completing peer response in Zheng (2012) involve the novice to help them learn by asking questions that serve as "instruction or meaning-explicating invitations" (p. 115). Likewise, one student who adopted an expert role in Watanabe and Swain (2007) "provided assistance that helped the novice learn" (p. 133). An

example these researchers give of this kind of assistance is when an expert student asks the novice "What do you want to say next?" (p. 133) and spends the next several turns helping the novice choose words to finish the paragraph they are jointly composing.

6.1.5.1 *Experts provide instruction and scaffolding*

In the current study, expert readers exhibit similar behavior to that described above. Rather than state outright what they think their partner should do during revisions, they often ask clarifying questions of the writer first, and they also make it clear to the writer that it is his or her choice whether to include the suggestions during revisions. In the following excerpt, Joe is reading SongWoo's first paper, a summary-response about the class book. He is unsure of her intended meaning in the paragraph that summarizes her selected section of the novel, so he asks her the following:

Joe:	And, here I was confused. [reading from paper] 'as become good team'. Is that what you were trying to say? That the Fugees had become a good team? The Fugees or
SongWoo:	Can I say 'as time goes… goes along or something'?
Joe:	'As time goes by', yeah you can say that. 'As time goes by, the Fugees has become a good team'. You don't have to use this, you can . . .
SongWoo:	Yeah, it's like you know, to be a good team, the teamwork is very important, yeah, that's what I meant.
Joe:	Yeah, you can say that. 'To be a good team, teamwork is very important.'
SongWoo:	Uh huh, uh huh, okay.

(Joe and SongWoo, Peer Response Session One, February 2013)

Assuming the expert stance, Joe begins the episode with a question for SongWoo, encouraging her to participate in the process of making her writing more clear. He also gives her a suggestion about the wording to use ('As time goes by, the Fugees has become a good team'), a phrase that builds on SongWoo's question in line before (Can I say 'as time goes …along or something'?). Although he supplies this sentence, he makes sure to let SongWoo know that "you

don't have to use this", displaying a respect for the writer's autonomy that is line with previous researchers' observation that experts to do not impose their own view, but rather make suggestions.

6.1.5.2   *Novices admit misunderstanding*

Researchers using the *patterns of interaction* framework have also observed that students position themselves as novices by verbalizing their misunderstandings or mistakes during the task. In Zheng (2012) a novice admits her shortcomings, admitting to her group members that 'I don't know how to express [shy] in English' (p. 115). In Tan et al. (2010), a novice student asks questions of the expert that belie his lack of confidence in vocabulary knowledge for completing the task; he asks his partner 'after he returned to work, that would be … rework, so can you say *shangban*?' (p. 14). In the current study, novice students exhibit this admission of confusion by asking their expert readers to suggest language they might use during revisions. In the following excerpt, SongWoo (the novice writer) is asking Joe (the expert reader) to give her a suggestion about how to revise a sentence that she admits has confused her:

Joe:	Do you want to, like, restructure the sentence? Like you could structure
SongWoo:	Could you …
Joe:	Oh, write it down?
SongWoo:	Yeah, ah, you just give me a suggestion, cause that sentence always confused
Joe:	Confuse
SongWoo:	Yeah, I don't know how to make it.
Joe:	Yeah, you could say, like, 'the Fugees have a connection between each other'. Yeah, that'd be better. Is that what you want to say?
SongWoo:	Instead of 'they love each other.' That'd be better.

<div align="right">(Joe and SongWoo, Peer Response Session One, February 2013)</div>

Joe, the expert, begins this episode by asking his partner if she would like to try and restructure one of her sentences. She does not answer his initial question, but rather asks him to write on her draft and give her a suggestion for how she might write the sentence in her revision.

SongWoo admits that "that sentence always confused [me]" and that "I don't know how to make it". Joe complies, supplying SongWoo with a sentence that they both agree by the end of the episode is better than the draft sentence. Although the linguistic units discussed are different in prior studies and in the current one (single words and whole sentences, respectively), novices behave in a similar way when they admit their confusion and ask for help or clarification.

While I was able to identify two key features of the expert/novice pattern in the current study that had been identified previously, I also noted a feature of this pattern in my data that seems unique to peer response. In an attempt to scaffold novice writers toward making revisions that improve their papers, one expert used his own paper as a model. In the excerpt below, Dan and Alex are reviewing their third writing assignment, a persuasive research paper. They started the session reading Alex's paper, and Dan positioned himself as an expert. One of the suggestions that Dan made for Alex is that Alex should revise his first paragraph to include an opening that catches the reader's attention. At the end of the session, Dan calls attention back to Alex's draft and suggests a possible revision, using his own paper as a model:

Dan:	Oh, like what I told you about using, like, how to catch, like, the readers?
Alex:	Mhm.
Dan:	Like, um, my first sentence? It says "in today's society, going to college after high school seems to be the way the river flows". Right?
Alex:	Mhm.
Dan:	I could have just said "In today's societies most people go to college after high school". But, you know, I said in a different way to like, unusual way, to like
Alex:	I got you. Catch the attentions.
Dan:	So you could do something like that.
Alex:	Okay. I can, I will try.

<div align="right">(Dan and Alex, Peer Response Session Three, April 2013)</div>

In other studies that use patterns of interaction, experts do not have their own work to reference, because they are completing a collaborative task. Zheng (2012) does use peer response, but this study does not report experts using their own papers as a reference in the way described above. The current study has thus contributed to our understanding of the features of the expert/novice pattern in a peer response-specific context.

6.1.5.3   Insights from stimulated recall

Further contributions to our understanding of this pattern come from stimulated recall interviews with both expert readers and novice writers. In stimulated recall sessions, novices revealed that they appreciate the expert's advice. In the following excerpt, Alex (the novice writer) is talking about how he appreciates Dan (the expert reader)'s tendency to first focus on what he likes about Alex's writing:

Alex:	Uh, he's a good advisor.
Interviewer:	You think so?
Alex:	Yeah I think so. He talked about my essay in two parts, the good part and the bad part, it's good for the peer review.
Interviewer:	So you think that makes a good peer reviewer?
Alex:	Mmhmm.
Interviewer:	Why?
Alex:	Um, because he suggests me a lot, advise me a lot, and he fix my mistake.
Interviewer:	Mmhmm. So why is it good to talk about good things and then bad things?
Alex:	If he talk about the bad things, I can just fix it, and he talk about good things I can just keep on working on this part so I can maybe be better on the good thing.
Interviewer:	So you'd like to know the things that you're doing well, so you can keep doing them?
Alex:	Yes.

<div align="right">(Dan and Alex, Stimulated Recall Interview Two, March 2013)</div>

While novices value the positive feedback they get from experts, those who position themselves as experts also believe that by assuming this role, they are benefitting their partners. Specifically, they seem to believe that writing development is best fostered when students have

to correct their own mistakes. In the following excerpt, Dan is talking about how he tries not to

fix Alex's problems, but rather simply point them out:

Dan:	So, I know, like I know his weaknesses, and I guess his strengths … I know and he knows that he has grammar issues, so I try not to comment on that as much cause he knows he has problems and he tries to fix them. So I try not to talk about it as much as I would with other people who have similar problems to focus on, like, the main ideas he's missing, or something like that.
Interviewer:	Mmhmm, mmhmm.
Dan:	So, I guess that does, like play a role in peer reviewing.
Interviewer:	Mmhmm, mmhmm.
Dan:	Getting to know his style of writing.
Interviewer:	Okay, okay. And, is that um, a conversation that the two of you had, or, did it just kind of happen naturally?
Dan:	I think that, uh, reading his paper a couple of times.
Interviewer:	Okay, okay. But did the two of you ever talk about, "oh, you have grammar issues so I'm not going to comment on them?", or you just sort of came to that realization on your own?
Dan:	I think I came to that realization on my own. And he knows it too, that's why. Cause, last time I addressed it, he was like "oh yeah, I know". He was like that.

(Dan, Stimulated Recall Interview Three, April 2013)

As the expert reader, Dan is making thoughtful decisions about the areas for

improvement in his novice partner's paper. While it is true that the instructor asked students not

to comment on grammar in their partners' papers, Dan seems to have his own reasons for doing

so. He reveals that although he knows that Alex has grammar issues, he chooses not to comment

on them so that Alex can "try to fix them" on his own. Dan believes that the process of

correcting his own grammar errors is beneficial for Alex, and he wants to give him room to do

so.

6.2   Summary and Conclusion

In the current study, I was able to identify all four *patterns of interaction* that Storch

(2002) identified, and many of the defining features found in her study and subsequent SLA

studies were also present in this data. Although differences in the nature of tightly-controlled pair

tasks used in SLA studies and the peer response task in the current one means that the features are present in different ways, they still seem to be valid indicators of distinctions between the four patterns.

The current study also adds depth to the existing framework by incorporating student perceptions from stimulated recall interviews. These discussions revealed that in some cases, it is not possible from the transcript alone to understand the pair dynamics at play. For example, Dave and Jay, whose interactions seem hostile, may actually enjoy arguing with each other. Stimulated recall interviews also allowed me to explore student motivations for assuming the roles they do. Collaborative readers feel that providing comments on a peer's paper helps them develop their own writing skills, and a perceived lack of sincerity may cause the hostile dynamic in dominant/dominant pairs. Passive writers may see themselves as lacking proficiency, expert readers often see value in allowing novices to correct mistakes themselves, and novice writers appreciate the positive feedback they get from their reviewers, to name just a few of the features that emerged from these interviews.

We cannot and should not assume that these findings from stimulated recall interviews are unique to the pattern they are associated with in this study; it is possible, for example, that students in collaborative and expert/novice patterns share some motivations for adopting these stances. The stimulated recall interview used in this study, though, did allow students to talk about their motivations in a way that was relevant and meaningful for them. In addition to asking them my own questions, I also allowed them to comment when they felt they had something to say. This kind of self-reflection from students is crucial for understanding how they position themselves during peer response.

7   RESULTS AND DISCUSSION FOR RESEARCH QUESTION TWO

In this chapter I will present and analyze the results of the second research question: (2) Are different patterns of interaction associated with different revision outcomes, and how do students explain their revision choices? In order to examine the complex question of whether students in the current study improved their writing from one draft to another, I conducted three different analyses of their drafts: (1) identifying the kinds of comments that students make during peer response, and calculating the percentage of these that were implemented in the second draft; (2) scoring first and second drafts on an analytic rubric to determine any gains in score; and (3) calculating of the number and type of revisions made using a revision taxonomy. A consideration of all of these measures, when examined by *pattern of interaction*, capture the revision activities in which students engaged and the extent to which these improved their writing. This chapter will first review previous L2 writing studies that have measured revision outcomes of peer response. It will then present the results of each of the three analyses in turn, considering how the findings in this study fit in with previous peer response studies for that particular measure. It will conclude with a consideration of what we can glean overall about revision outcomes by *pattern of interaction* in the current study, synthesizing the results from each analysis.

7.1   Previous measurements of peer response and improvement in student writing

Throughout this chapter I will situate the findings from this study within the broader context of what we already know about peer response groups and their influence on revision. Not all peer response studies have measured revision outcomes; some are limited to describing what happens in during the activity, and these studies are reviewed in Chapter Three of this dissertation. However, some L2 writing studies have examined a contextual feature of peer response, and have organized experimental groups according to these features when measuring

revision outcomes. The contextual features of peer response that have been considered include teacher and/or self-feedback in relation to peer feedback, the effects of training, the difference between giving and receiving feedback, and the potential effects of completing peer response in a CMC (computer mediated communication) environment versus face to face.

To consider how these contextual features might influence the ways that students revise after peer response sessions, the studies have employed measurements including calculations of the percentage of comments incorporated in second drafts, classifications of comment types, classification of revision types, and the use of holistic and analytic rubrics to score first and second drafts. Table 7-1 summarizes the studies to date that have attempted to measure some aspect of student writing after peer response sessions. The column "contextual feature" describes the experimental groups that were formed and "measurement" displays how the study analyzed student writing after revising. A few additional studies did not group students according to a contextual feature but rather considered revision outcomes for all students in the study; these studies are listed as "one experimental group".

Table 7.1 Peer response studies that measure revision outcomes

Study	Contextual Feature	Measurement
Rothschild & Klingenberg (1990)	Effects of training	Comparison of student and teacher ratings of second drafts on holistic rubric
Stanley (1990)	Effects of coaching	Implementation of comments, Analysis of revision effects using rating scale
Nelson and Murphy (1993)	(One experimental group)	Implementation of comments
Connor and Asenagave (1994)	Use of teacher comments versus peer comments	Classification of revision types, implementation of comments
Mendonca and Johnson (1994)	(One experimental group)	Implementation of comments
McGroarty and Zhu (1997)	Effects of training	Classification of comment types, number of comments, holistic scoring of drafts
Tang and Tithecott (1999)	(One experimental group)	Implementation of comments, Analysis of revision effects using rating scale
Berg (1999)	Effects of training	Classification of revision types, holistic scoring of drafts using rubric
Tsui and Ng (2000)	Use of teacher comments versus peer comments	Implementation of comments
Liu and Sadler (2003)	Online versus face to face sessions	Implementation of comments
Suzuki (2008)	Use of self feedback versus peer comments	Implementation of comments
Lundstrom and Baker (2009)	Giving versus receiving feedback	Scoring of drafts with analytic rubric
Raibee (2010)	Use of peer comments versus teacher comments versus combination of teacher and peer comments	Scoring of drafts with analytic rubric
Nguyen (2010)	(One experimental group; online peer response session)	Classification of types of comments, implementation of comments
Zhao (2010)	Use of teacher versus peer comments	Implementation of comments

The group of studies displayed in the above table influenced my decisions to examine

revision outcomes by *pattern of interaction*, and to use multiple measures to quantify the gains

that students in different patterns make. In 2003, Ferris called for "multifeatured, triangulated

projects that simultaneously consider peer feedback characteristics and outcomes". As can be seen in the table, several researchers have answered this call to examine peer feedback characteristics; they have examined online feedback sessions (Liu and Sadler, 2003); feedback from peer, self, and teacher sources (Suzuki, 2008; Raibee, 2010; Zhao, 2010); and student role in the feedback session as giver or receiver (Lundstrom and Baker, 2009).

It does not seem that any study to date, however, has examined the social dimension of peer response in relationship to revision outcomes (see, however, Nelson and Murphy, 1993 for a brief report). As Ferris also stated, the success or failure of peer response pairs often hinges on the establishment of a harmonious working relationship, but no major studies at that time had linked the stances that students take to what they do with feedback after the session (2003). Some studies (see, e.g., Mangelsdorf and Schlumberger, 1992; Rollinson, 1994; Carson and Nelson, 1994, 1996; Lockhardt and Ng, 1995) have aimed to describe social interaction during peer response by identifying reader stances and writer responses to them. These studies, however, stopped at describing the interactions, without linking them to revision outcomes. The current study thus adds to the already robust list of contextual features that have been examined in relationship to what happens in revision. It describes the social dimension of peer response with a framework that grew out of and has been validated in studies of peer-peer interaction.

In addition to examining a neglected area of peer response sessions themselves, this study also builds upon previous studies by using multiple measurements to attempt to answer the question of whether certain types of social interaction during peer response sessions give some students an advantage when revising. The three measurements chosen each contribute a different perspective on how feedback is used after peer response sessions. As has been done in many previous peer response studies (Stanley, 1992; Nelson and Murphy, 1993; Connor and

Asenagave, 1994; Tang and Tithecott, Tsui and Ng, 2000; Liu and Sadler, 2003; Suzuki, 2008; Nguyen, 2010; Zhao, 2010), this one will report the percentage of suggestions received during peer feedback that can be seen in subsequent drafts. If we consider that one of the purposes of peer response sessions is for the writer to receive useful feedback, looking at uptake of suggestions is an appropriate measure. However, this measure can only identify revisions that can be traced to comments that are specific and direct. Students in this study, however, sometimes made comments that, while potentially helpful, were not specific enough to be directly traceable in the second draft.

Beyond this, is it also interesting to consider not only the amount of feedback that students are incorporating, but the amount and type of revisions that they make. As such, all revisions in this study were classified using Faigley and Witte's (1981) taxonomy, which was also employed in Connor and Asenagave (1994). Second language peer responders are encouraged to focus on high order concerns and to ignore grammar issues, a practice that is recommended by L2 writing theorists (e.g., Ferris, 2003), and borne out by most classroom teachers. Faigley and Witte's taxonomy, which distinguishes between surface changes (like spelling, punctuation, and format) and text-based changes (more substantial additions, deletions, and substitutions that may change the meaning of a text), allowed me to determine whether or not students followed classroom guidelines that asked them to focus on high-order, text-based concerns in the revisions after peer response, as well as to determine how students accomplish these text-based changes (adding, deleting, or moving sentences, for example). Classifying comments in this way helped me understand not only the amount of feedback that students decided to use, but also how exactly they incorporated it during revisions.

We know, however, that the suggestions made in peer response sessions are not always sound ones. Inappropriate peer suggestions have been identified in studies (see, e.g, Tang and Tithecott, 1999), and Nelson and Murphy (1993) noted that using peer feedback may not always lead to a better draft. That is, counting the number of suggestions that students use and classifying the kinds of revisions that they make with them does not provide a full picture of the impacts of peer response sessions on student writing. A related question, then, is whether or not a second draft earns a higher score when assessing the entire paper (as examined in McGroarty and Zhu, 1997; Berg, 1999; Lundstrom and Baker, 2009; Raibee, 2010). In this study, the same analytic rubric used in Lundstrom and Baker was adapted to suit the proficiency level of participants and the writing assignments they were given (as described in Chapter Five of this dissertation), and first and second drafts were evaluated so that gains in score could be calculated. Given the reality of writing classrooms, where students may perceive grades to be as important, or more so, than learning the writing process, it was important in this classroom-based study to consider scores for first and second drafts. Taken together, and with the insights about their revision choices that students provided in stimulated recall, it is my hope that these three measures can help us understand how social interaction during peer response might influence writing outcomes.

Before presenting any results, it should be noted that we cannot assume causality between the pattern of interaction role of the writer and revision outcomes. Revision is a multi-faceted process that involves more than just receiving feedback from a partner during peer response. Student writing may improve (or not) due to factors outside of the peer response session, such as the benefit of time away from the draft, the writer's own evolving knowledge of the revision process, or outside sources of feedback. Likewise, pair dynamics are just one of

the myriad of factors that may influence the way that students interact with each other during feedback sessions. Also relevant are students' personalities, culture, language background, and gender, to name just a few factors. Throughout this chapter on revision outcomes, then, my intention is to explore the potential influence of pair dynamics on revision outcomes. At the same time, I understand that there is not a causal relationship between the two, and that peer response is a complicated process that involves more than social interaction and revision choices.

7.2   What kinds of comments do readers make?

Before considering whether or not students implement the comments that their readers provide, it is helpful to understand the nature of those comments themselves. Not all comments are alike. They may focus on different aspects of writing (global versus local); direct the writer towards a specific revision, or point out what is going well; and be phrased as either general or specific suggestions, evaluations, or questions, to name just a few characteristics. Other peer response studies (McGroarty and Zhu, 1997; Liu and Sadler, 2003; Nguyen, 2010) have classified comments using coding schemes that address these areas.

In this study, I have adapted Liu and Sadler's 2003 scheme, using a simplified version to examine the kinds of comments that students in this study make (as described in Chapter Five of this dissertation). For this study, I considered whether comments were about global or local concerns, and whether they were focused on revision or pointed out a successful feature of the writing (revision-oriented or non-revision oriented, respectively). Each comment was coded for both features, so that a comment could be, for example, global and revision-oriented, or local and non-revision oriented.

I consider these comment types according to the role of the reader who made them: collaborative, dominant (in the dominant/dominant pattern), dominant (in the dominant/passive pattern), and expert (in the expert/novice pattern). For each pattern, I have included all of the readers who adopted that role in each session of peer response. For example, across all three peer response sessions there were ten collaborative readers, so the thirty total comments were spread across those ten papers. The averages (of each type of comment and of total comments) per reader role reflect the number of times each role appeared. For example, the collaborative averages are totals divided by ten (because the collaborative reader role was identified ten times). Also, because each comment was coded as global or local and as revision-oriented or non-revision oriented, the global plus the local average equals the total average; the revision-oriented plus the non-revision oriented column also equals the total average. Table 7-2 presents the results of this analysis.

Table 7.2 Mean number and type of comments by reader role

Reader role	Total	Revision-oriented	Non-revision oriented	Global	Local
Collaborative (10)					
Mean	7.4	5.8	1.6	6	1.4
SD	2.4	2.2	1	2	0.8
Dominant/dominant (4)					
Mean	7	6.3	0.7	6.3	0.7
SD	1.8	1.3	1	1	1
Dominant/passive (5)					
Mean	13.8	13	0.8	12.2	1.6
SD	7.9	7.2	0.8	7.7	1.5
Expert/Novice (7)					
Mean	14.1	12	2.1	12.3	1.9
SD	3.3	2.6	0.9	3.7	1.5

Taken as a whole, the distribution of comment types presented in Table 7-2 paints a favorable picture of feedback in peer response sessions. Across the twenty-six sessions, readers

give writers an average of about twelve comments per paper. A large majority (about ninety percent) of the comments made across all twenty-six peer response sessions are revision-oriented, meaning that they point to areas of the papers that can be improved in the final draft. Students are pointing out areas for improvement, which is one of the main purposes of peer response. Students also, however, make non-revision oriented comments that point out positive features of the writing (these account for about ten percent of overall comments); this likely partly because the peer response sheets asked readers to point out things that they liked about their partner's paper. These comments are also important in building rapport among students; for example, novice writers reported in stimulated recall interviews that they enjoyed hearing what they are doing well, so that they can try to keep doing these things (see Chapter Six of this dissertation for a discussion of providing positive comments during peer response sessions).

In addition, there is also an overall majority of comments that are global (ninety-three percent) as opposed to local in nature. Students in this study were asked to focus on global concerns (like organization and development) and to ignore local ones like grammar, by the peer response sheet and classroom instruction, following the recommendations of L2 writing theorists (Ferris, 2003). Each individual pattern of interaction role also follows these general trends toward mostly global and mostly revision-oriented comments. An interesting difference among the reader roles emerges, however, when we consider the average amount of comments made per paper. This difference will be explored in the section below, when I discuss the percentages of comments that writers in each pattern of interaction incorporate into their final drafts.

7.2.1   *Do writers implement the comments they receive?*

This section will report the amount of reader feedback that writers incorporated into their second drafts, grouping writers by the *pattern of interaction* role they adopted. For the purposes

of this analysis, I reviewed peer response transcripts to identify all specific, revision-oriented comments, and then examined the twenty-six second drafts to determine if these comments were implemented. Only revision-oriented comments where it seemed possible to identify implementation in the second draft were considered (a similar procedure was used in Liu and Sadler, 2003).

For example, during their second peer response session, Dan (the reader) had the following feedback for Alex, his partner: "I think summary, you need, um, to introduce the article, like the title of the article or the author". This comment is specific and revision-oriented. I read Alex's second draft to determine whether or not the comment was implemented during revisions; in the above example I looked for an added sentence or phrase mentioning the title and author of the article he was summarizing. The revised language was recorded on the form (this particular comment was considered to be implemented because Alex did add an attribution sentence in his second draft). Finally, stimulated recall transcripts were reviewed for any writer comments that may help explain why and how the writer incorporated that feedback item (or why the writer chose not to).

Not all revision-oriented comments are captured in this analysis, because some comments were too vague, or too general, for their implementation to be directly observable in the second draft. For example, during the same peer response session cited above, when Alex was reading Dan's paper, he suggested that Dan should "talk about some vocabulary things the author writes". Because Dan didn't ask Alex to clarify what he meant by "vocabulary things", we can't know whether or how this comment played into Alex's revision process. Other comments were too general to be examined in this phase of analysis. Looking again at Dan and Alex, when Dan was reading Alex's paper, he suggested that Alex use "higher vocabularies" in his revision. Later

in the session, the two decide that using higher vocabularies means avoiding "simple, overused words". While this suggestion is clearer than the one given at the beginning of this paragraph, it is still not appropriate to examine in this analysis because it would be difficult to identify its implementation. It would be a stretch for me to assume that Alex was trying to implement "higher vocabulary" every time he made a word substitution, unless this were something that Alex commented on in stimulated recall. Changes like this are better identified in the next section, where I discuss the amount and types of revisions that writers make.

For the reasons outlined above, I limited the analysis of comments during this phase of analysis to revision-oriented comments that are specific, and to those where the resulting revision could be observed in the second draft. Table 7-3 displays the results of this calculation, reporting the total number of specific comments, and the number and percent of those comments that were implemented in the second draft, by pattern of interaction role of the writer. The writer roles are: collaborative, novice, dominant, and passive. There is no expert group because in the expert/novice pattern, the writers always assumed a novice role (and readers were experts). Likewise, in the dominant/passive pattern, the writer always assumed the passive role (and the readers were dominant).   The numbers reported are an average of all peer response transcripts and corresponding second drafts that occurred for each role. For example, the collaborative pattern occurred ten times, and the average number of specific revision-oriented comments received was 5.1. Across all collaborative writers, an average of 3.9 (76.5%) were implemented.

Table 7.3 Implementation of specific, revision oriented comments per paper, by writer role

Writer role	Comments Received	Comments Implemented	Percent Implemented
Collaborative (10)			
Mean	5.1	3.9	76.5 %
SD	2.4	2.1	
Dominant (4)			
Mean	6	1.2	20 %
SD	2.2	1.3	
Passive (5)			
Mean	12	7.8	64.6 %
SD	6.8	2.1	
Novice (7)			
Mean	12.4	10.6	85.1 %
SD	3.4	3.3	

Examining Table 7-3 yields a couple of important observations about the number of comments that students in different roles receive, and the percentage of those that they incorporate in their papers. First, when examining the average number of comments received per paper within each pattern, it appears that results correlate with the relative amount of equality in each pattern. That is, in patterns with relatively low equality (dominant/passive and expert/novice) writers receive more comments (12 average per paper, and 12.4 average per paper, respectively). In collaborative and dominant/dominant patterns, on the other hand, where equality is higher, writers receive fewer comments (5.1 average per paper, and 6 average per paper, respectively). Second, the concept of mutuality may be related to the percentage of comments that writers implement. In patterns with high mutuality (collaborative and expert/novice), writers incorporate a higher percentage of feedback (76.5 percent and 85.1 percent, respectively) than in lower mutuality patterns (passive writers use 64.6 percent of the feedback they receive, and dominant writers, only 20 percent). Finally, while the amount of comments that collaborative and passive writers incorporate in their papers is generally in line

with previous research, novice writers incorporate more than students in other studies, and dominant writers, less. The next two sections will discuss each of these trends in turn, drawing on data from peer response and stimulated recall transcripts.

7.2.2   *Differences in amount of comments received by pattern of interaction*

Not all studies that measure provision and uptake of student comments in the L2 writing literature report the amount of comments made on each paper. Most of them report the number of comments in group form, that is, the amount of comments provided by all students (or by all students in a single experimental group) on all papers in a single study. For this reason, it is not possible or helpful to directly compare the number of comments provided per paper in this study to the number of comments provided per paper in other studies (the next section, however, about percent uptake of comments, will consider the findings on uptake in the current study in light of previous ones).

What is illuminating for understanding the comments students make in peer response sessions in this study, however, is examining the two patterns that exhibited a lower number of comments relative to the other two patterns.

The first of these patterns is the dominant/dominant one, which is characterized by high equality, where both students attempt to control the direction of the task. In the first peer response session, for example, the dominant reader (Jay) gave his partner (Dave, also dominant) only three specific revision-oriented comments over the entire peer response session. Examining the peer response transcript from this session reveals that the reason for this paucity of comments in the dominant/dominant pattern may be related to the relatively high equality that characterizes it. Because each student wants to control the direction of the task, no one student has more influence over the direction of the task than the other. In the excerpt below, Jay is giving Dave

feedback about his summary-response paper, the topic of which is the class book. Jay is asking

Dave why he did not mention Luma, the soccer coach in the story, at all in his summary

paragraph. Earlier in this session, the two had argued about whether or not a summary should

include personal opinion; Dave thought this was permissible, and Jay held the opposite:

> Jay: Why, why didn't you put about Luma?
> Dave: It's, you know, it's a summary, so I just summarize, the, uh, the most important parts.
> Jay: So you, you think that Luma is not important?
> Dave: I didn't say [that
> Jay: She's not taking an important role?]
> Dave: I didn't say Luma is not important, but the [the
> Jay: I don't know, man, I don't see any "L" in this sentence]
> Dave: The soccer team is more important in my opinion so I put just the basic [information
> Jay: So another opinion] right here, man. See?
> Dave: That's not an opinion.
>
> (Dave and Jay, Peer Response Session One, February 2013)

From the beginning of this excerpt, Jay seems intent on proving that Dave's omission of

Luma from his summary paragraph was a mistake. Even though Dave tries to respond to Jay's

comment with a reasonable explanation ("I didn't say Luma is not important … the soccer team

is more important in my opinion") Jay seems unwilling to consider this point, and he accuses

Dave of using personal opinion in his summary again. Because these two are locked in a

dominant/dominant pattern, they spend time arguing with each other's suggestions and

explanations, which may cause them to lose opportunities to generate more comments. We can

see from this excerpt that one of the potential effects of high equality in a peer response context

is that students in these patterns may give relatively fewer comments than students in patterns

where one student has more control over the task. This occurs because the two dominant students

are engaged in battle for control over the task; the writer does not want to grant power to the

reader.

Students in a collaborative pattern also exhibit relatively high equality relative to other patterns, although high equality manifests differently for these pairs than for dominant/dominant ones. Rather than battling for control over the task, students in the collaborative pattern seem to agree to share it. Interestingly, this feature of the collaborative pattern may be partly responsible for the lowest average number of specific revision-oriented comments per paper (5.1), because students in a collaborative pattern take their time discussing possible revisions. Collaborative students, then, may make fewer suggestions, but for the ones they do make, they have thoughtful discussions and arrive at consensus about how to revise at the end of the episode. What they lack in quantity, they make up for in quality. In the excerpt below, Alex has read Dan's research paper, and Dan asks for feedback about cohesion, one of the points listed on the peer response handout they were following. Alex is suggesting that maybe Dan needs to include more transitional devices in his revisions:

Dan:	Oh, maybe we should focus on transition, I mean
Alex:	You mean the transitions?
Dan:	Between each paragraph.
Alex:	Okay, like, uh transition to the paragraph. Better one. Uh, lemme see, do you want to do each paragraph like individual?
Dan:	Uh, I like my essay to like, really, you know, flow. Does it flow, the paragraphs?
Alex:	Oh, okay. So you can maybe just put transitions here.
Dan:	Yeah. Where's the paper, like, thingie
Alex:	Huh?
Dan:	With the list of words she gave us, [for the flow
Alex:	oh, the flow] the transitioning words.
Dan:	Yeah, never mind I'll find it after.
Alex:	Yeah, you can just use that one for ideas.

(Dan and Alex, Peer Response Session Three, April 2013)

These two take a relatively long amount of time (thirteen turns) to discuss transition devices in Dan's paper. Part of the reason for this longer episode may be that Dan (the writer), rather than passively receiving comments, is involved in the peer response process, asking for

feedback ("does it flow, my paragraphs?") and considering the resources he might use to revise ("where's the paper … with the list of [transition] words?). Likewise, Alex takes time to make sure he understands how Dan would like to improve his paper ("do you want to do each paragraph like individual?"). Dan and Alex end this episode appearing to have agreed on how Dan will revise his paper to include more transition words. Part of the reason why they were able to reach consensus at the end may be that they display the high equality that is characteristic of the collaborative pattern, where participants share control over the task. Dan, the writer, participates in the feedback process, which may ensure that he understands and will implement his reader's suggestions. Because they spend a longer amount of time on each episode, collaborative participants give fewer specific revision-oriented comments, but the ones they do give are reasoned and thoughtful.

Two other patterns, dominant/passive and expert/novice, display a relatively low amount of equality, because one student (the dominant and expert student, respectively) has more control over the task than the other. Their motivations are different: the dominant student moves quickly through a list of things that the writer should "fix" in revisions, while the expert student directs the task in order to ensure that the novice understands how to implement comments during revisions. The implication of this low amount of equality is that these students give more comments relative to their collaborative and dominant/dominant counterparts.

Dominant readers tend to give direct comments to their passive partners without pausing to foster engagement, the result of which is that passive students receive a fairly large amount of comments without necessarily understanding them or knowing how to implement them. Excerpt 6.3 illustrates this tendency. In this episode, HaeSun is reading JeeHae's persuasive research paper, which should include a thesis statement of opinion that makes clear the writer's position

on a controversial topic. JeeHae's paper is about the legality of same-sex marriage in the United

States. HaeSun moves quickly through a series of suggestions with little input from JeeHae:

HaeSun:	And then um … you had a thesis statement but it wasn't very clear enough.
JeeHae:	Oh, okay.
HaeSun:	Yeah, so. I want you to be more detail about it.
JeeHae:	[Mhm
HaeSun:	and] focus on, like, what your paper is going to be. And then, yeah, you have a side that you are supporting, you're not supporting the discrimination.
JeeHae:	Yeah, [it's terrible
HaeSun:	But,] yeah it's … I, I want, I think it should be more detail, also more descriptive. And then, um, your position
JeeHae:	Mhm
HaeSun:	I think it's clear, but, like … a little more clear
JeeHae:	Okay.
HaeSun:	I guess, And then [background
JeeHae:	Mhm]
HaeSun:	paragraph. I mean, you did had it a little, but … little more.
JeeHae:	Yeah.

(HaeSun and JeeHae, Peer Response Session Three, April 2013)

Over fourteen turns, HaeSun gives JeeHae at least three specific revision-oriented

comments: make her thesis statement clearer and more detailed, make her stance on the issue

clearer, and expand her background paragraph. These are appropriate suggestions given the

instructions for peer response; they match points that readers were asked to focus on. It is not

apparent from the transcript, however, that JeeHae understands these comments or that she will

use them when revising her paper. Some of the comments, although focused on global concerns

as requested, might bear some explanation. For instance, there are many ways to make a thesis

statement more clear and detailed, but HaeSun does not elaborate on this suggestion, and JeeHae

does not ask questions.

JeeHae revealed in the stimulated recall interview after this session that she was indeed confused about how to revise her thesis statement of opinion. When I asked her why she chose not to ask any clarifying questions, she had the following to say:

> Um, because first of all, I didn't even, I mean, um, I don't know how to write, um, in the detail. I don't know much information about my paper because I was so confused how to put my argument. I just put my, all my facts against, um, the same-sex, the discrimination in the marriage, but I don't, I didn't know how to put my arguments there, so I just say 'okay'.
>
> (JeeHae, Stimulated Recall Interview Three, April 2013)

Had JeeHae stopped HaeSun to signal her confusion about how to revise her thesis statement of opinion, the two may have spent some time deciding how to do this. It appears, however, that JeeHae's confusion about her paper topic keeps her from speaking up. Instead, HaeSun moves on to her next comment, resulting in a peer response session where JeeHae receives a relatively high number of revision oriented comments, but is left with little idea about what to do with them. This confusion underscores an important consideration for peer response, which is that comments are only as valuable as they are clear. Second language writing researchers are beginning to investigate this neglected area; Zhao (2010) found through interviews with students that although they implemented a majority of their instructors' comments in second drafts, they generally did not understand their content or significance.

In terms of the number of comments that readers give, the expert/novice pattern aligns with the dominant/passive one, in that experts control the direction of the task, and they give a relatively higher number of comments than in patterns with higher equality. The nature of these comments, however, is strikingly different from that of dominant reader comments. While dominant readers move rapidly through a succession of comments that are not explained to the writer, experts take time to ensure that their novice partners understand and intend to implement the feedback.

Because expert writers are exploiting their control of the task to give both more comments and more thorough comments, expert/novice transcripts are among the longest in this study. Experts produce longer turns, and more turns, than do any other roles. Among the longest transcripts in this study, in fact, was produced by Zelda and Ivana when they were reviewing Ivana's summary-response paper during the first peer response session. Zelda took the time to give Ivana thirteen specific revision-oriented comments over the course of this session. In the excerpt below, Zelda is giving Ivana feedback on her summary-response paper about the class book. In the paper, Ivana has cited a theory of cultural adjustment that relates to immigrants, and Zelda is questioning whether Ivana needs to make a more explicit connection between the theory and the refugee boys in the book:

Zelda:	We are talking right now only about immigrants. Do you want to talk about boys too? How it is connected to them? You can tell it's …
Ivana:	Oh, actually I thought since the boys are immigrants? So talking about immigrants, it's in, in general. But now I think maybe is confusing.
Zelda:	So you mean it's including these boys, right?
Ivana:	Yeah.
Zelda:	So yeah, I can see that. But you may want to, yeah, because you are, um, summarizing this whole part about the whole immigration, you want to say that the refugee boys are same as immigrants.
Ivana:	Yeah?
Zelda:	So if you want to you can include it.
Ivana:	Mhm.
Zelda:	It's up to you.
Ivana:	But why would I … just to make it more connected to the *Outcasts United*? Do you mean like add some sentence?
Zelda:	Yeah if you want to, [but
Ivana:	but I don't have to].
Zelda:	You don't have to, but I think would be good to say more about the connection. Because it is so good, this theory.
Ivana:	Mhm. I see now, just a little more direct the connection.
Zelda:	Do you think so? Right?
Ivana:	Yeah. Okay, okay.

(Zelda and Ivana, Peer Response Session One, Febraury 2013)

Like collaborative readers, expert ones take time to make sure that their novice partners understand and agree with their suggestions. They do so, however, by exhibiting control over the direction of the task in a way that collaborative readers do not. In the excerpt above, Zelda, the expert reader, comes back to the second paragraph (the one that mentions the immigration theory) after they had moved on to the third, because she notices another area for improvement. Directing Ivana's attention back to a previously discussed area of the paper allowed Zelda to provide her with an additional specific revision-oriented comment that Ivana might use to revise. Rather than wait for Ivana to ask for feedback about areas of her paper, like collaborative writers do, Zelda took control of the task and pointed out an area of the paper that they should discuss. She does so skillfully, asking clarifying questions before making a recommendation ("so you mean it's including these boys, right?"), and making sure that Ivana understands her suggestion while ultimately respecting Ivana's ownership over her own paper ("so if you want you can include it … it's up to you"). In this way, the control that expert readers exert over the peer response session may allow them to make more revision-oriented comments for their novice partners.

While the number of comments that readers give aligns with the concept of equality in patterns of interaction, the percentage of comments that writers use in their revisions seems related to mutuality. In patterns with higher mutuality, collaborative and expert/novice, writers use more comments in their revisions than in other patterns. Collaborative and novice writers implement 76.5 and 85.1 percent of the comments they receive, while dominant and passive writers use only twenty and 64.6 percent, respectively. In this section I will first explore stimulated recall transcripts and student papers of collaborative and novice, and dominant and passive writers, to attempt to explain these varying rates of use of student comments. I will

conclude with a consideration of how student writers in my study compare with those in previous research in terms of the amount of comments from reviewers that can be seen in second drafts.

This section will explore how interaction during the peer response session might affect writers' decisions to use their partners' feedback when revising. I will focus on collaborative and novice writers, who used more comments than their classmates in other patterns (76.5 percent and 85.1 percent, respectively). Stimulated recall transcripts will provide the data for this section, as they illustrate students' thoughts and feelings during the peer response session, and afterwards, when making revisions.

An analysis of all stimulated recall transcripts from collaborative writers revealed two trends that might help us understand why these writers are more likely to use feedback when revising than dominant or passive writers. First, students in collaborative patterns attend not only to the task but also to their relationship. Also, these writers sometimes ask for feedback on their own papers, rather than rely on the reader to provide all the comments.

In Ivana's second stimulated recall interview, I asked her what she thought about the part of her peer response conversation with Zelda where they brainstormed about how Ivana might expand the critique section of her summary-response paper. She reflected on her personal relationship with Zelda and how it may be associated with her receptivity to Zelda's feedback:

Ivana: It was very effective. First, it's, um, like, difference a lot from, for example what was in the last semester when I was peer reviewing. Uh, I trust Zelda, and we have a connection, like, uh, I like her, like, like a friend … so that's why I accept ideas from her, and I can adequately react to critique from her. Like, what do you think about that? What do you think about another? … I like our process of working, so I really try to make her paper better, and she tries to make my paper better. So I'm lucky this semester with her.

Interviewer: Mhm. And so, you said, with Zelda you feel like you can react well to criticism? Um, what do you think is a good way to react? What does it mean for you, 'adequately reacting'?

> Ivana: You can hear another people advice, and you can accept it. You can actually think about that. Uh, is it a good idea to impl… I think, like, to try to imply [implement] that, you know? … I was very open to accept ideas from her and to change something, maybe, or to add or something.
> (Ivana, Stimulated Recall Interview Two, March 2013)

Ivana's words highlight the importance for her of having a good relationship with her partner, and it seems like her positive view of their work together influences her decision to accept feedback from Zelda. The high mutuality that collaborative pairs exhibit may lead them to like and respect each other as their relationship develops, and this could be one of the reasons why collaborative writers implement a relatively large amount of their partners' feedback.

Another feature of collaborative pairs that seems related to a high uptake of feedback is that collaborative writers ask their readers for feedback. This equality may result in comments that seem relevant and useful to the writer, because he or she pointed to the area for improvement. In my third and final interview with Dan, he stopped the recording at a place where he had asked Alex, his partner, "Does it go smoothly, like my transitions and my grammars and everything like that?" He had the following to say about that episode:

> So what I'm doing here is asking him a lot of questions I got commented before. For example, I got a lot of comments over the years that I should have smoother transition and drawing people in … I try to ask him if he saw the same thing that I've been commented on over the course of years. And these are, many times, I'll say like ninety percent of the time like, um, like the teacher says I need more supporting details. It's kind of major thing for my paper and I wanted him to see.
> (Dan, Stimulated Recall Interview Three, April 2013)

Because Dan and Alex's conversation exhibited the high equality that is characteristic of this pattern, Dan (the writer) was able to stop Alex (the reader) and ask him specific questions that he wanted feedback on. Although Dan did not directly state as much in this interview, it is reasonable to assume that he would be inclined to incorporate writer-requested feedback in his revision. And indeed, in Dan's second draft, there are sentences added that appear to be

supporting details for his argument, as well as some added transition words. In this way, students in the collaborative pattern take advantage of task sharing to receive feedback that is useful in its specificity to their personal concerns about writing.

Novice writers, the group that incorporated the highest amount of feedback (85.1 percent) revealed a unique motivation for doing so. The theme that emerged from these interviews is that novice writers view their partners as better at writing. For this reason, they assume that the feedback they are receiving is sound, and they are likely to implement it during revisions.

In our second stimulated recall interview, I asked Alex why he chose to use Dan's suggestion that he expand the second paragraph of his summary response paper. He told me the following:

> Um, I think because he come here, like really long time, I mean his grammar, I mean his English is better than me, so he can advise me more better than what I thought, and he knew much more than me, so I just respect his opinion … yeah, um, because he comes here like I think seven years or six years.
>
> (Alex, Stimulated Recall Interview Two, March 2013)

Alex seems to trust Dan's opinions about his writing more than he trusts his own, and it appears that his assessment of Dan's English proficiency influenced his decisions to be receptive to his feedback. Another participant, SongWoo, echoed Alex's sentiments in her last interview with me:

> I know the, how to organize the paper … because I'm really bad at organizing paper, but he, I guess Joe is good at oraganizing, so I'm like feel like I learned a lot.
>
> (SongWoo, Stimulated Recall Interview Three, April 2013)

SongWoo did, in fact, revise her persuasive research paper in a way that improved its organization. Her score in the organization category for this paper increased from three to five points, out of a possible total of five points. The next section will discuss in more detail these kinds of score gains in relationship to the role of the writer, but it appears from SongWoo's

words that she finds her partner better in at least one aspect of writing, and that this was beneficial for her.

If we see uptake of comments as a positive outcome of peer response, then collaborative and novice writers experience better outcomes in this area than do their dominant and passive counterparts. This finding echoes those in the SLA studies that have used the *patterns of interaction* framework. They have found that collaborative students generate more LREs (Watanabe, 2008), and both that collaborative and expert/novice students show more transfer of knowledge than other patterns (Storch, 2002), and have higher post-test scores (Watanabe and Swain, 2007). The tasks in these studies were not peer response tasks; rather, they participated in various other kinds of collaborative tasks. It is encouraging, then, that collaborative and expert/novice patterns are associated with favorable learning outcomes across a variety of tasks. This consistency in findings shows us that the *patterns of interaction* coding scheme is reliable because it seems to produce similar findings, even given different settings.

This section will explore the motivations of writers who adopted roles where less feedback was used: dominant (from the dominant/dominant pattern) and passive (from the dominant/passive pattern. Relative to other roles, dominant writers use roughly a third of the amount of comments that collaborative and novice writers do; they incorporate only twenty percent of the comments that they receive during peer response. While passive writers use more feedback than dominant ones (64.6 percent), they still fall behind collaborative and novice writers in this area.

A finding that emerged when examining stimulated recall transcripts with dominant writers is that these students may actually be confused about how to use the feedback they

receive. At the end of my last interview with Dave, I asked him if there was anything else he

wanted to say about peer response, and he told me the following:

Dave:	Uh … I don't know it's because we are both, like, foreigner, like we're both international student, but I feel like …we need some more discussion, like, each time we … telling each other what do you have to fix, and what to edit. But, we don't, like, explain those kind of detailed, I feel like.
Interviewer:	Okay, so are you saying that during the peer response, you want more information about how to revise?
Dave:	Yeah, like, point it out, even the detail, like, little, like, "this sentence, this sentence, this sentence".
Interviewer:	And you don't think that happened with Jay.
Dave:	We didn't do it. So, like, yeah. I think we need more detail. When we discuss.

(Dave, Stimulated Recall Interview Three, April 2013)

Later, Dave clarified what he meant by his comment about being international students,

revealing that language proficiency might be preventing him and Jay from talking with the level

of detail he wanted:

Well, our English is not perfect, so, like, if … sometimes, like, even in the discussion we have kind of a hardship about what we're discussing … and explaining things in English.
(Dave, Stimulated Recall Interview Three, April 2013)

It may be true, then, that dominant writers use a relatively low amount of feedback in

their revisions because they leave the session with vague suggestions. As was discussed earlier in

this chapter, dominant writers also receive fewer comments than other patterns. Because their

priority sometimes seems to be gaining control over the direction of the task, dominant writers

may miss opportunities to ask clarifying questions that could leave them with clearer

suggestions. Dominant readers in this pattern also may not be taking time to thoroughly explain

their comments because they are distracted by arguing.

Passive writers also spoke about not understanding the comments they received in peer

response sessions. In her last interview, JeeHae and I listened to her peer response session about

the third writing assignment, a persuasive research paper. She wrote her paper about same sex

marriage, and her position is that it should be legal. When she heard HaeSun say "And I think

you'll be very good if you put some examples of same sex guy", she stopped the recording to

reflect on this episode, revealing the following:

JeeHae:	She's trying to help me out with it, by using examples like how their struggles in the real life. Yeah, I think that's what she's talking about.
Interviewer:	But you're not sure?
JeeHae:	No, now I don't know. But I haven't found any articles on the same sex couple. Maybe on their struggles in the real life.
Interviewer:	Yeah, in your second draft I don't see that. So did you, did you think about other ways to add detail here?
JeeHae:	I found some of them but I don't think that goes with my paper. Some that is credible. And other ways, I don't know what is those ways.

(JeeHae, Stimulated Recall Interview Three, April 2013)

JeeHae reveals that she was receptive to HeeSoo's comment, but that she wasn't sure that

she understood it. She thinks that her partner suggested that she find articles on "their [same sex

males'] struggles in the real life". Interestingly, it does not seem like JeeHae considered finding

another way to expand the paragraph in question, because, she says, "I don't know what is those

ways". In their peer response transcript, JeeHae responded "mhm" to the suggestion mentioned

above, and then HaeSun moved on to comment on her conclusion. It is possible that if the two

had spent more time discussing this comment, with JeeHae asking questions to clarify her

understanding, she would have been able to implement a suggestion that is actually a strong one.

This episode illustrates that, like dominant writers, passive ones may be at a disadvantage when

implementing comments. Their lower rate of implementation of comments relative to the two

patterns with high mutuality (collaborative and novice) suggests that the lack of engagement that

is characteristic of the dominant/passive pattern may leave writers with comments that they do

not understand.

In this section I have explored how *patterns of interaction* may be associated with the amount of feedback that readers give, and the amount of feedback that writers use in their second drafts. For both of these areas, the concepts of mutuality and equality are helpful in understanding differences among groups. Readers in patterns with low equality, dominant/passive and expert/novice, give more comments than do readers in the other two patterns. This trend suggests that dominant and expert readers' control of the peer response session allows them to move through a relatively large amount of feedback (although they do so in different ways). When examining the amount of feedback that writers use in their second drafts, on the other hand, groups seem to align along the dimension of mutuality. Novice and collaborative writers, who are situated in patterns with relatively high mutuality, use more of their partners' feedback during revisions, relative to dominant and passive writers. This advantage for writers in high mutuality patterns may mean that students benefit from the engagement that happens there. The majority of other studies that have measured the amount of feedback that writers use after peer response sessions have reported that writers use between half and three quarters of the feedback they receive (Nelson and Murphy, 1993; Mendonca and Johnson 1994; Tang and Tithecott 1999; Tsui and Ng 2000; Liu and Sadler 2003; Zhao 2010). In this study, students in the collaborative and passive patterns used 76.5 percent and 64.6 percent, respectively. This amount of feedback use puts them in line with students in the studies mentioned above. Novice writers, who used 85.1 percent of the feedback they received, though, have a higher percentage of feedback use than has been previously reported. Dominant writers, who used only twenty percent of the feedback received, are below the average rate of use in most other peer response studies. The next section will discuss the implications of these rates of uptake in terms of gain in score from first to second draft.

7.3   Do scores improve from first to second drafts?

While measuring the amount of comments that students include in second drafts is helpful for understanding what they do with reader suggestions during revision, these figures do not paint a full picture of revision outcomes. This is true in part because comments that students implement may not necessarily improve their papers, and because students whose first drafts are relatively strong may not implement as many comments as other students, but may still experience gains in score on the second draft. This section will attempt to address the question of overall improvement from one draft to another, considering differences among the four patterns of interaction. As is described in Chapter Five of this dissertation, all twenty-six first drafts and twenty-six second drafts were scored with an analytic rubric comprised of four categories: organization, development, structure, and vocabulary. It was possible to earn five points in each category, such that twenty points were possible overall. After first and second drafts were rated, any gain in score was calculated. Table 7-4 displays the results of this analysis.

Table 7.4 Mean score gains from first to second draft, by writer role

Writer Role	Draft One	Draft Two	Point Gain	Percent Gain
Collaborative (10)				
Mean	14.5	16.4	1.9	13.1
SD	0.7	1.9	1.7	
Dominant (4)				
Mean	11.7	12.6	0.9	7.7
SD	1.6	1.4	0.6	
Passive (5)				
Mean	10.4	11.8	1.4	13.5
SD	1.6	1.8	0.7	
Novice (7)				
Mean	12.8	15.7	2.9	22.7
SD	2.3	0.6	2.2	

Table 7-4 displays several interesting trends. First, all patterns of interaction showed a score increase from first to second drafts, which is encouraging for peer response. The average beginning score for all twenty-six papers is 12.4, and the average gain in score is 1.8 points, or a 14.5 percent gain on the twenty-point rubric. Looking at point gains by pattern of interaction, however, shows that some writers fared better than others: collaborative writers improved more (1.9 point gain) than dominant (0.9 point gain) and passive (1.4 point gain) writers. Novice writers gained the most points from first to second draft, with a 2.9 point gain, which is roughly three times the gain of dominant writers, and roughly twice the gain of passive ones. Because writers started with a range of first draft scores, it also helpful to examine percent gain from first to second draft. Doing so yields a slightly different order of improvement than looking at average point gain. Passive writers have a slightly higher percent gain (13.5) than do collaborative writers (13.1 percent gain), because passive writers started with the lowest average score for draft one (10.4 points), while collaborative writers started with the highest (14.5 points). Finally, and also encouragingly, percent gains in score by writer role align almost exactly with the amount of comments these students used in their second drafts: novice writers improved the most, followed by passive, collaborative, and dominant writers.

Another question when considering revision outcomes after peer response is the extent to which the amount of revisions is aligned with percent gains in score. An analysis of the average number of revisions that different groups made (conducted as described in Chapter 4), shows the that distribution of revisions almost parallels the distribution of percent score gains; those writers who improved more in terms of percent gain from second draft were the ones who made the most revisions, and the same holds true for those who improved the least. Table 7-5 presents the results of the analysis of number of revisions by writer role.

Table 7.5 Mean number of revisions by writer role

Writer role	Mean	SD
Collaborative (10)	13.7	9
Dominant (4)	6.3	2.2
Passive (5)	17.2	12.4
Novice (7)	20.3	14.4

Table 7-5 shows that when students did make revisions, they benefited from those. That is, the distribution of number of revisions by writer role parallels the average percent gain in score for these groups: novice writers made the most revisions and had the highest score gains, followed by passive, collaborative, and dominant writers, respectively. A further analysis of revision types by writer role is also informative for understanding how writers in this study used revisions to make their papers stronger. Table 7-6 displays the percentage of revisions that were global and local, by writer role:

Table 7.6 Percentage of global and local revisions by writer role

Writer role	Percent text-based revisions	Percent local revisions
Collaborative (10)	75.6 %	24.4 %
Dominant (4)	81.3 %	18.7 %
Passive (5)	96.6 %	3.4 %
Novice (7)	88.7 %	11.3 %

This analysis shows that as a whole, writers in this study made mostly text-based revisions, which parallels the distribution of comments; they also received more global than local suggestions. Students are following the peer response protocol both in the comments they offer and the revisions they make by prioritizing higher-order concerns. One interesting difference among writer roles, however, is that collaborative writers make a slightly higher percentage of surface revisions (roughly one quarter) than do writers in the three other patterns, with percentages of surface revisions from 3.4 to 18.7 percent. Examining the first and second drafts of collaborative writers shows that this higher percentage of surface revisions may be related to their improved use of citation, which is one of the features they were asked to comment on,

especially in the persuasive research paper assignment. For example, in the first paper, Zelda wrote the following sentence:

> In her occasional moments of self-doubt, Luma asked herself: "Can I really get these boys to play together? Can I really get them to win?" (John, 2009).

After she and Ivana decided that direct quotes should include page numbers, according to APA citation rules, she revised her sentence to include "p. 134" after the publication year in the in-text citation. Revisions like these, related to citation, were coded as surface changes because they do not change the meaning of the text. They are, however, important because learning citation practices is a slow process for first year composition students. Most students in this study discussed citation issues as they were requested to do by the peer response sheet, but collaborative writers were the most successful at arriving at correct answers during their conversations, and making revisions that reflected these.

7.4 Are some patterns of interaction associated with better revision outcomes than others?

The amount of comments offered and used, gains in score from first to second draft, and amount of revisions made in the second draft, when taken together, show that some patterns of interaction do experience better revision outcomes than others. If we consider average point gains and average second draft scores alone, collaborative writers are the strongest ones. It should be considered, though, that the collaborative group also had the highest average scores on the first draft of their papers. It might be true, then, that highly proficient students are more likely to adopt a collaborative role than are other students. These students' better writing ability might also partially explain their lower rates of uptake of comments compared to novice writers. Because their drafts are already strong, they are able to be more discerning in the feedback from their peers that they decide to use.

For novice writers, however, there is a clearer picture of improvement from first to second drafts. These students show the highest percent gain in score, as well as out-performing other writers according to the other two analyses (percent uptake of comments and amount of revisions). Writers who assume this position benefit from the relatively high amount of comments that they receive from their expert readers. Perhaps because they see themselves as less proficient than their partners, they implement a large amount of these comments, use them to make more revisions, and improve the most from first to second drafts.

Other pattern of interaction studies have found that experts also perform well on post-task measures of improvement (see, e.g., Watanabe and Swain, 2007), and these researchers suggest that the act of adopting a teaching role during the task actually benefits these students. Because experts in this study were always readers, and not writers, we cannot compare their performance from first to second drafts relative to students in other roles. However, in each case where a student was an expert reader, he or she was a collaborative writer. It may be true, then, given how well collaborative writers fare in the current study, that expert readers are experiencing some of the benefit that has been pointed out previously in the literature. This point is speculative, however, because data analysis in this study was conducted according to reader and writer roles overall, and not according to combinations of reader and writer roles for individual students.

Dominant writers (in the dominant/dominant pattern), on the other hand, perform poorly on all indices, relative to their classmates. These results parallel some of the findings of second language acquisition researchers who have used the *patterns of interaction* framework to measure student performance on collaborative tasks. In Storch (2002), for example, students in the dominant/dominant pattern showed the lowest amount of "transfer of knowledge", or the

indication that they had understood their partner's contributions to the task. Watanabe and Swain (2007), however, found that dominant students were among the highest performing ones on the post-test.

It should be noted that patterns of interaction are not the only factor in the way that students choose to implement these comments in terms of the specific kinds of revisions they make. This highlights the fact that proficiency might be an important variable to consider in peer response. It is impossible to know, for example, if collaborative writers experienced good revision outcomes because of the social relationship they developed, or because they were already more proficient writers relative to their classmates. In SLA collaborative dialogue studies, higher proficiency pairs have produced more language-related episodes, and have correctly resolved more of these (Leeser, 2004; Kim and McDonough, 2008). By and large, however, it does appear that the collaborative and expert/novice patterns are associated with better revision outcomes than are the other two patterns. For collaborative writers, this is may be true partially because proficient writers tend to adopt this pattern. Novice writers, however, writers show more improvement than writers in any of the other patterns. These students' first draft scores were lower than those of collaborative writers, but they were able to achieve almost twice the point gain and percent gain that collaborative writers did.

8   RESULTS AND DISCUSSION FOR RESEARCH QUESTION THREE

This chapter will present and explore the findings from the third research question: Do patterns of interaction change over the course of a semester, and how do students experience this shift?The three-session data collection procedure in this study allows me to consider whether

students establish a stable pattern in the first session, or if they change over time. For the patterns that do change, I will explore stimulated recall and peer response transcripts to identify factors that may potentially influence these shifts. The chapter will start with a summary of consistency and change in patterns of interaction in the current study, and will then explore the patterns that exhibit change, and situate these results in relation to previous research. I will also consider pedagogical implications of the findings, suggesting what the role of the writing teacher might be when students establish peer response pairs.

8.1 Are pairs consistent in patterns of interaction, or do they shift over time?

Table 8-1 summarizes the pattern of interaction roles across the three peer response sessions that were presented in Chapter Six. In this study, two out of five pairs assumed the same reader/writer roles in each of the three sessions. One pair maintained the same pattern throughout the semester but switched reader/writer roles for the discussion of one paper, one pair moved to a collaborative pattern, and one to a dominant/dominant one.

Table 8.1 Change and consistency in patterns of interaction, across three peer response sessions

Pair	Participants	Change/Consistency
1	Dan Alex	Change: Alex is an expert reader in the first session. After that, Dan adopts the expert reader role.
2	Joe SongWoo	Consistency: Joe is always an expert reader of SongWoo's papers. SongWoo is always a collaborative reader of Joseph's papers.
3	HaeSun JeeHae	Change: In the first session HeeSoo is a collaborative reader of JooYoung's paper, but she is dominant reader for the third.
4	Ivana Zelda	Change: In the first session, Zelda is an expert reader and Ivana a novice writer. Zelda is a collaborative reader in the second session.
5	Dave Jay	Consistency: Dave is always a dominant reader of Jay's papers (Jay is passive), and they are dominant/dominant when reviewing Dave's.

8.2   What factors might influence change over time?

As Table 7.1 shows, Dave and Alex, HaeSun and JeeHae, and Ivana and Zelda display

change in the patterns of interaction they adopt across three sessions. This next section will

explore the dynamics of each of these pairs in turn, considering factors that may have influenced

these shifts. It will also compare, whenever possible, the influencing factors in this study to those

of previous *pattern of interaction* studies.

8.2.1   Dan and Alex: Switching roles in the expert/novice pattern

In two of the peer response sessions, Dan adopted an expert role when he read Alex's

papers. As has been discussed in previous chapters, Dan identified with this role, and saw

himself as someone who could guide Alex's grammar and vocabulary development by making

suggestions and pointing out areas of weakness without insisting that Alex make changes. In the

first session, however, Dan positioned himself as a novice writer, while Alex was the expert

reader. The following excerpt illustrates the way that Alex advised Dan as an expert, and Dan

took on the role of a novice:

Alex:	Okay, um, the first part is your summary, right?
Dan:	Yeah.
Alex:	Um, it's really good about uh your summary about the introduction of the book, but you might need to put more detail about …the what's going on with this in the background of the background of the novel. Where they come from …
Dan:	Like everybody? I was … I didn't know if I should put all the people.
Alex:	Yeah, that was hard for my paper too. I think not like everybody you know just like key people. Like the background of the novel like what kind of team it is.
Dan:	Background. Yeah, background of the team. Like Fugees?
Alex:	Like Fugees, yeah.
Dan:	Yeah, uh, a little bit more details?
Alex:	Yes.
Dan:	Okay, I wrote this in a very short time, so it's not very good.
Alex:	It's okay. It's just a rough draft.

(Peer Response Session One, Dan and Alex, February 2012)

Alex starts this episode with a clarifying question, ostensibly to make sure that he is interpreting Dan's writing as it was intended. He then gives suggestions that are hedged to give the writer room to decide how to use them ("you might need to put more detail), to which Dan responds with clarifying questions of his own ("like everybody? … a little bit more details?"), showing that he wants to understand the feedback so that he can use it during revisions, as novice writers tended to do in this study. Dan also admits his lack of understanding and his shortcomings ("I didn't know if I should put all the people … it's not very good").

Dan's stimulated recall interview after this session revealed that he was indeed open to Ale'x suggestions, and it also helped me understand why he positioned himself as a novice. When he heard the section of his peer response session with Alex in the excerpt above, he stopped the recoding to tell me that:

honestly I was in a hurry to write this, and I knew that it wasn't very good … I told him that I see what he's saying. So I was planning in my head a little bit, I should do this and that to fix it.

(Alex, Stimulated Recall Interview One, February 2013)

Like his classmate SongWoo who cites her perceived lack of writing ability as a reason for positioning herself as a novice, Dan seems to think that his paper is weak, and this may influence his choice to act as a novice for this session. It seems, then, that one of the factors influencing assumption of a novice position is a lack of confidence, whether it is about writing ability in general or about one assignment in particular. This finding corroborates SLA studies examining *patterns of interaction* in collaborative dialogue, which have shown that students may adopt a novice or passive role when they are less proficient than their partners, and that the students' perceived proficiency in relation to their partner may also be influential in this context (Kim and McDonough, 2008).

8.2.2 *Zelda and Ivana: Shifting toward the collaborative pattern*

Another pair in this study, Zelda and Ivana, shift to a collaborative pattern after adopting an expert/novice one when they review Ivana's paper in the first session. In the stimulated recall interview with Ivana after this session, she revealed that she was "inattentive with the class" and she had partially misunderstood the required components of the summary-response paper. She thus thought "I should revise it maybe if it's not clear. Maybe I should make some revisions about that because maybe I wasn't giving attention when she [the instructor] talked about it. So I let her [Zelda] tell me because she is always being attentive." It seems, then that Ivana may also perceive herself as less knowledgeable than her partner, this time in terms of her understanding of the requirements of the assignment. Dan may have felt similar inadequacy about the length of his first draft, and SongWoo about her writing ability in general. This admission lends further support to the idea that novices may position themselves this way partially because of a perceived deficit between their abilities or understandings and those of their partners.

In the second session, though, Ivana adopted a collaborative position when Zelda was reading her paper. In the stimulated recall interview after this session, I asked what her thoughts were about working with the same partner consistently, and how it may change her approach to peer response. She had the following to say:

> I think, um, like I told you last time that this is very important not to change the partner for the peer review. And it really works, I think. Because, um, you trust him more, and um, you're getting closer I think, and um, I think … you, you can just start to believe him more … you can listen to critique and take it more freely I think.
>
> (Ivana, Stimulated Recall Interview Two, March 2013)

Ivana does not say this directly, but it seems possible that part of "taking it [critique] more freely" means adopting the collaborative role, where higher equality allows both participants to control the direction of the task. She went on to talk about her role as a reviewer, and how it shifted over the course of the semester. Although for the purposes of this study Ivana was always coded as a collaborative reader, her words still underscore the effect of changing attitudes over time on peer response:

> So it's better than the first time. For example, for the first time I didn't want to make a lot of critique and to say something is wrong. By the third time, I was more fine with that. Just make this. I just said, uh, straightforward, "I think this should be changed, this should be changed, this should be changed, and this should be changed," and it's fine. Probably the first time, I wouldn't be that straightforward. But now if I have ideas about, uh, her research paper, I just express them. I think she, if she wants, she, she can … um, think about that. And something will work. Something she will sort out, and I think it's, with suggestions, new ideas maybe, you know. I think it's helpful.
>
> (Ivana, Stimulated Recall Interview Two, March 2013)

If we see the ability to deliver sound and thoughtful feedback as one of the benefits of peer response, Ivana's words suggest that asking students to work with the same partner over the course of a semester may help them achieve this goal, particularly if they adopt a collaborative pattern. In his third stimulated recall interview, Dan echoed these words:

Definitely working with the same people over time, you definitely learn about them more because you, you interact with them and you definitely learn, um, I don't know, I don't know how to say it, but you do, um, so I think kind of like what we did …we kind of build a chemistry together and working together … if you go from another person to another person, it kind of, for me, I don't know about another people, but you kind of have a fear of judgment of how people will look at your paper. But, if you have the same person you have less than that, if not none.

(Dan, Stimulated Recall Interview Three, April 2013)

These two participants highlight the potential benefits for asking students to work with the same peer responder over the course of one semester. This consistency may allow them to develop a level of personal familiarity that helps them feel more comfortable with approaching the peer response task in a way that allows them to deliver thoughtful and constructive feedback.

8.2.3   *HaeSun and JeeHae: Shifting toward the dominant/dominant pattern*

One pair in the current study, HaeSun and JeeHae, adopted a collaborative pattern the first time they reviewed HaeSun's paper, but a dominant/dominant one when completing peer response for HaeSun's paper in the third session (this pair missed the second session). This shift from a pattern with high mutuality to one with low mutuality may be explained by both JeeHae's beliefs about effective feedback, and the topic that HaeSun chose for her paper, which may have lead her to be more reactive to feedback than usual.

When I asked JeeHae if her experience giving feedback changed in any way from the first session to the last one, she had the following to say:

JeeHae: I guess I changed because now I can say more like what I like and not like about it, yeah what I agree or disagree … if it was a new person every time I don't think I'd be more direct [so direct] as with HaeSun, I'd be saying more good things to her and not the like, not the bad thing about the paper.

Interviewer: Why do you think that? Why do you think you would say more good things with a new person?

JeeHae: I think it's more like connections, like getting to know new people. Yeah, I don't want to make her feel bad. It was her hard work, and I don't want to say all the bad things that she had on it.

Interviewer: Okay, but then you keep working together and that changes?

JeeHae: Yeah, then it feels okay to say maybe you should change this, because you keep working together.

(JeeHae, Stimulated Recall Interview Three, April 2013)

JeeHae states that with a consistent partner, she is more likely to deliver feedback about areas for improvement, rather than focus on "the bad thing about the paper". Consulting her peer response transcript from the third session shows that she does indeed focus on areas for improvement in HaeSun's paper, but she delivers the feedback in a way that may be considered harsh, which is in contrast to the collaborative stance that she adopted in the first session. Addressing HaeSun's persuasive research paper, she tells her, rather than asking questions or making suggestions, for example, "you need to fix your paper more like mine, more citations and supporting ideas", and later "you didn't cite it enough. You didn't put the name, or you didn't put the date or the page number of the thing" (Peer Response Session Three, April 2013).

It may be the case that JeeHae thinks this direct approach makes for a successful peer response session, but the dominant/dominant stance that the two adopt suggests otherwise. HaeSun, in fact, is resistant to her partner's feedback, which seems evident in the peer response transcript. In one part of their discussion about HaeSun's paper on North Korea's proliferation of nuclear weapons, JeeHae questions HaeSun's thesis statement, which leads to an emotionally charged discussion:

JeeHae: Where is it? Your thesis statement? You don't have.
HaeSun: I think it is here, [reads from paper] "North Korea have used their new weapons as a threatening tool to gain a lot of benefits from other countries. Threatening with people's lives is ridiculously ignorant."
JeeHae: No, that is not the thesis statement with opinions. You have to say the both sides.
HaeSun: What is it, the side that North Korea is right? How can that be a side? Kim Jong-un is the ruthless dictator, like in the article.
JeeHae: No, but you have to say the other side. It is the other side for persuasive paper.
HaeSun: There is no support side! Not even China will support now. You think we should to support him?

JeeHae: For the thesis statement of opinion you have to show the both sides. You don't have.

HaeSun: I cannot have!

(JeeHae and HaeSun, Peer Response Session Three, April 2013)

It seems from the peer response transcript that JeeHae and HaeSun are misunderstanding each other. JeeHae is critiquing not the topic of HaeSun's paper, but the fact that she thinks HaeSun has not followed the required format for a thesis statement of opinion, which asks students to acknowledge both sides of an argument before taking their own stance on the issue. Based on HaeSun's first draft, JeeHae is correct in her assessment of the thesis statement. HaeSun, however, thinks that JeeHae is implying that she should support the North Korean leader. Because HaeSun feels so strongly that no one should support Kim Jong-un, she is unable to engage in discussion about the structure of her thesis statement.

The stimulated recall interview with HaeSun after this session reveals that interpreting the transcript as emotionally charged was likely valid. When we listened to the segment above, I stopped the recording to ask her if she recalled what she was thinking and feeling at the time. She was quiet for several seconds and then said, "Now I feel embarrass. But I read for this paper that the missiles are getting better and better, and Kim Jung-un threatens always the United States, and it is very scary …. things to imagine" (April, 2013). She went on to tell me that she feels embarrassed because "You will listen, and she [JeeHae] was try to talk about my thesis statement".

It does not seem that HaeSun understood the requirements for the persuasive research paper, even after the peer response session. This assignment asked students to choose a controversial topic about which there were two arguments, and HaeSun's problem was that she was unwilling to identify an argument in support of North Korea's nuclear proliferation. In fact,

her revised draft, while the wording of the thesis was changed, did not include a thesis statement of opinion.

As was discussed earlier, JeeHae adopted a direct and critical stance when delivering her feedback during this session which HaeSun said "made me to feel that I do not understand the paper" (Stimulated Recall Interview Three, April 2013). Not far into their discussion of her paper, the thesis statement episode listed above occurred, and HaeSun continued to seem resistant to the rest of JeeHae's feedback, even after the topic had changed. This dominant/dominant discussion reveals another factor that may affect students' patterns of interaction during peer response: their personal opinions and emotions about the topics of their papers.

8.2.4   *Dave and Jay, SongWoo and Joe: Becoming more comfortable with peer response*

Two other pairs, Dave and Jay and SongWoo and Joe, remained consistent in their patterns of interaction across all three sessions. All of these participants, however, reported a shift in their level of comfort with giving and receiving peer feedback.

Even Dave and Jay, who adopted the two lowest-performing patterns of interaction, dominant/dominant (when discussing Dave's papers) and dominant/passive (when discussing Jay's papers), expressed positive changes with regards to the way they approach the task and what they chose to comment on. Although the *patterns of interaction* coding scheme did not reflect a shift from the dominant/dominant pattern, Dave expressed an awareness of his hostile tone during the first peer response sessions, and stated that he tried to joke less in the later ones. Interestingly, Dave claims that it was the first stimulated recall interview that lead him to try and change:

Dave: I guess…tried not to joke to each other, I guess.
Interviewer: So why did you decide not to joke?

Dave: Uh…I thought I'm really mean, so. Yeah.
Interviewer: So, you think, you think you, you changed, or you tried to change?
Dave: I tried to change.
Interviewer: The way you talked to Jay?
Dave: Uh huh.
Interviewer: Ok. Um, why do you think that happened? Why did you decide to do that?
Dave: At the first recording. Because I could hear that I was mean.
                                        (Dave, Stimulated Recall Interview Three, April 2013)

Dave's partner Jay also expressed that he began to view the task more seriously as the

semester went on, and also that he gained a better understanding of how to participate in peer

response:

Jay: Before we, like, was joking a lot. And making fun of each other's papers.
               But, now it's…more related to, like, real peer review.
Interviewer: Ok. And, why do you think that happened? Do you have any ideas?
Jay: Uh…I think because of experience. Like, it's our third peer review,
               so, like, we have experience, like, first, second, third, so, I think…well,
               we're becoming more accurate.
Interviewer: Ok. What do you mean by accurate?
Jay: Like…like, we kinda know, um, what to discuss. So, how we, we learn
               how to discuss.
Interviewer: Ok. So, it sounds like you're saying that some of the joking and the
               teasing was because you weren't really comfortable with peer response?
Jay: Yes, I think it's because we become more comfortable cause, um, in the
               beginning, when we don't know how to discuss, like, instead of
               discussion, we joking and teasing, but now we know, like, what do you
               have to discuss, so we were no longer joking just focused on discussion.
                                        (Jay, Stimulated Recall Interview Three, April 2013)

Another participant whose pattern of interaction remained stable over the semester,

SongWoo, also expressed that she gained a better understanding of what kinds of comments to

give during peer response. From the first session to the third, she maintained a collaborative

stance when working with her partner Joe, but she does feel that her comfort with the task

changed:

SongWoo: For the first time, we don't really know … what to talk about. But, I think
               the last peer review we know what to talk, we just know, uh, what to talk
               about and what to point out.

Interviewer: Mhmm. So when you say you know what to talk about, what do you mean by that?

SongWoo: Like, um…like what's wrong with the paper, what should be changed in his paper, and just changes, what shouldn't be there. And we get more friendly, we get used to each other so we just know. Like, we don't have to explain that much cause we know what we are talking about.

(SongWoo, Stimulated Recall Interview Three, April 2013)

SongWoo's partner Joe echoed her idea that developing a friendly relationship over time made it easier to give feedback, especially because becoming more comfortable allowed him to let go of worry about offending his partner:

Joe: In terms of interacting, I think it's much better because first time we didn't know each other and now the interacting is good. We can kinda say tell the truth, be straightforward, and yeah, I say in the interacting.

Interviewer: Okay, what do you mean by tell the truth?

Joe: I mean if she makes a mistakes just tell her the truth, don't hide it. In the beginning you don't want to hurt their feelings. So now the interaction is I think mostly friendly, so we can speak plainly.

Interviewer: So you worry less about hurting her feelings?

Joe: Yes, because, like, it's mutual. She's helping me too.

(Joe, Stimulated Recall Interview Three, April 2013)

Although Joe's stance as a reader was always coded as expert in this study, it seems that he experienced a shift in his attitude toward peer response that was not captured by the *patterns of interaction* framework: he felt that he could be safe in assuming that his feedback would not be perceived as offensive by his partner, because they had established a friendly and mutually beneficial relationship. This finding again underscores the deeper understanding of student participation in peer response that we can gain when we ask students themselves about their thoughts and experiences.

8.3   Summary and implications

In the current study, two pairs adopted the same patterns of interaction across all three tasks, one pair shifted only slightly, and two pairs changed to a different pattern. The two pairs that changed, however, (Zelda and Ivana and HaeSun and JooYoung) were the two pairs who

only completed two of the three peer response sessions, so we should exercise caution in interpreting these findings as an indication of change over time. The shifts in patterns of interaction that did occur seemed to be influenced by the writer's perception of the strength of his draft (in the case of Dan) and by the writer's feelings about the topic of her paper (in the case of HaeSun). Taken as a whole, however, there seems to be no clear pattern of consistency or change across the sessions.

What did shift, though, was students' relationships with their partners and their comfort level with giving feedback, which was revealed in stimulated recall interviews. Even for pairs whose patterns of interaction remained stable, friendly relationships that allowed for more comfortable delivery of feedback were established over time. This finding suggests that there is a pedagogical advantage for asking students to participate in peer response multiple times, and for allowing them to choose their partners and work with them over the course of the semester.

Writing teachers who implement peer response should not assume, however, that giving students a choice and allowing for consistency will result in favorable patterns of interaction. In her semester-long study of ESL pairs Storch (2002) found that most pairs established their pattern of interaction during the first task and maintained it throughout the rest. This was also the case for two pairs in the current study, and a third that showed only one shift in role within the same pattern. If students establish or move toward a collaborative or expert/novice pattern, a stable pattern might benefit both students over the course of the semester. One pair in this study, though, established dominant/dominant and dominant/passive relationships in the first session, and maintained these throughout the semester. For pairs like these, ongoing training about how to participate in peer response may be necessary, so it is possible for them to adopt a pattern with higher mutuality over time.

Finally, while writing instructors may not have control over emotional reactions to controversial topics or lack of confidence about weak drafts, they are able to decide whether to assign peer response pairs or allow students to choose. Pairing students in group tasks has received attention in the SLA literature, especially because ESL and EFL teachers must sometimes decide how to match students when the class consists of an array of proficiency levels. Based on their findings, for example, Kim and McDonough (2008) suggest that learners paired with a higher proficiency partner experience better outcomes in terms of pair dynamics and correctly resolved LREs. Likewise, Storch (2002) suggests that teachers should monitor pair dynamics closely, and change students' partners when dominant/dominant or dominant/passive dynamics arise.

Because of the nature of peer response, however, it may be better for writing instructors to allow students to choose their partners, and to maintain these pairings if possible. Sharing writing is more personal and potentially more vulnerable than completing a paired task where the end result is co-constructed. Participants in the current study suggested that when they were allowed to establish a personal relationship with their partners over the course of the semester, they benefitted. Admittedly, in the current study, sometimes students' increasing comfort with each other and with the task did not lead them to establish more collaborative patterns of interaction. Identifying and potentially shifting problematic pair dynamics, though, may be addressed by ongoing peer response training, which will be discussed in the next chapter.

9   CONCLUSIONS AND IMPLICATIONS

This chapter will summarize the major findings of the current study, address limitations, and discuss implications and future directions. It will also consider the specific contributions that this study may make for the fields of SLA and L2 writing.

9.1   Summary of results

Results from the first research question (what are the patterns of interaction during peer response in an L2 writing classroom?) show that all four patterns of interaction (collaborative, expert/novice, dominant/passive, and dominant/dominant) identified by Storch (2002) were present in data from the current study. Storch's framework analyzes social interaction during pair work by examining students' *mutuality*, or the degree to which they engage with each other's ideas, and *equality*, or the degree to which they share control over the direction of the task. Ten students in a freshman composition course for non-native or bilingual speakers participated in peer response sessions, talking about two papers per session, across three sessions, with two pairs missing one session each (resulting in twenty-six transcripts). A single pattern of interaction was identified for each of these twenty-six transcripts, where one transcript consisted of the peer review conversation about one student's paper. The collaborative pattern was the most common, occurring in ten of the twenty-six peer response conversations. This predominance of the collaborative pattern is in line with most other studies that have used the *patterns of interaction* framework (e.g., Storch, 2002, Watanabe and Swain, 2007, Zheng, 2012). The next most common pattern was the expert/novice one, occurring seven times, followed by the dominant/passive pattern (five transcripts) and the dominant/dominant one (four transcripts).

While the features of each pattern of interaction identified in peer response transcripts in the current study were similar to those present in other studies that have used the framework,

stimulated recall interviews conducted with individual students after each peer response session allowed me to deepen my understanding of how students position themselves during peer response. Among the factors that students mentioned which may be associated with the patterns of interaction they adopted were: level of comfort with their partner (with regards to both the social relationship and the act of delivering feedback), their perceived language proficiency relative to their partner, their beliefs about the benefits of giving and receiving feedback, and the degree to which they understood the feedback they received. Stimulated recall interviews also revealed that fully understanding pair dynamics based only on a reading of transcripts is sometimes not possible, which underscores the benefits of this protocol for research on the social dimension of peer response and other paired tasks.

With regards to the second research question (are some patterns of interaction associated with better revision outcomes than others?), three different analyses of revision outcomes (the amount of feedback delivered and the percentage that was used in second drafts, the amount and specific type of revisions that were made, and gains in score on an analytic rubric from first to second draft) suggest that some patterns are indeed associated with more favorable revision outcomes than others. Collaborative writers had the highest scores on second drafts, and these writers also used much of the feedback they received to make substantial revisions in their second drafts. Novice writers also experienced positive revision outcomes; these writers showed the most improvement from first to second draft based on the rubric scores, and also used the highest percentage of the feedback they received to make the largest amount of revisions. Passive writers fared less well than collaborative and novice ones, as the second from lowest performing group according to all three revision analyses. Finally, dominant writers had the poorest revision outcomes on all analyses: they used a small amount of the feedback they

received, made the fewest revisions, and demonstrated the smallest gains in score from first to second drafts.

The third research question asked whether *patterns of interaction* changed over the course of the semester, or remained stable. No clear pattern of stability or change emerged, and findings in this area should be interpreted with caution because two pairs missed a peer response session, so that they only worked with their partner two times. There were findings, however, related to shifts in patterns of interaction that may be further explored. One participant who positioned himself as a novice during the discussion of one of his papers (which was a shift in role from other peer response sessions) revealed that, similar to other novices in the current study who questioned their writing ability, he lacked confidence in his draft for that peer response session. Another participant adopted a dominant role (shifting from a passive role), and this may be related to the emotionally charged topic of her paper. It thus seems that students' appraisals of their written work and their personal opinions about the topics they choose may be an influencing factor in pair dynamics during peer response.

One other pair moved from an expert/novice dynamic to a collaborative one, and both participants stated they became more comfortable with giving direct, constructive feedback to a peer after the first sessions. Although the other two pairs remained consistent in terms of patterns of interaction, participants in these pairs echoed the pair that shifted to collaboration in noting that the task of giving and accepting feedback became more comfortable over the course of the semester. Finally, all ten participants suggested in stimulated recall interviews that they valued working with the same partner for three different sessions. Among the reasons for this feeling were that consistency allowed them to become familiar with their partner's writing style, to identify their partner's areas of strength and weakness, and to develop a friendly relationship.

The way that students chose their partners is perhaps also relevant here; all students chose partners who were sitting in close proximity to them, and students in this class tended to sit in the same seat for each class period. Some of these students had already begun to develop a personal relationship with their peer before the first peer response session, stating that they had chosen to sit next to this person because they shared a language or cultural background.

9.2 Limitations

While the social dimension of peer response has been identified in the L2 writing literature as a crucial element for understanding the success or failure of these groups (e.g., Zheng,1995), we should exercise caution not to over-state the effect that *patterns of interaction* may have on revision outcomes. Participating in peer response is a complicated task that is influenced not only by participants' social interactions, but by factors such their cognitions, their literacy practices outside of the classroom, their cultural and first language backgrounds, and the writing task itself (Villamil and deGuerrero, 1996). Likewise, social dynamics are far from being the sole influencing factor in students' revision practices. They are also impacted by classroom instruction and by their own developing writing skills. One factor in particular, language proficiency, may be a confounding variable in the current study. Although this study does not include a standardized measure of writing proficiency, collaborative participants' first drafts were scored higher than the other three groups. It may be the case, then, that these students are able to achieve successful revision outcomes not only because they work collaboratively, but also because their drafts are stronger to begin with, and because they are able to use their writing skills to be judicious in the revisions that they make after peer response sessions.

In addition, the classroom-based case study approach used in this study lends it ecological validity, but it also limits both the interpretation and generalizability of some of the

findings. The instructor in this course asked students to complete peer response three times, but not all writing tasks were the same. The first assignment was a summary-response paper about a book which all students had read, the second a summary-response paper about a research article each student identified individually, and the last, a persuasive research paper. Because it can be argued that each writing task is more cognitively demanding than the last, grouping all results for these three tasks together may mask any task effects that could be influencing students' patterns of interaction and revision outcomes.

Also, the relatively small number of participants, and the fact that two pairs missed class sessions when peer response occurred and thus could not be included in the analysis, affects the strength of the descriptive statistics reported. Examining revision outcomes by pattern of interaction role leads to unequal group sizes, and one role is represented almost entirely by just one student (dominant reader). We should exercise caution, then, in interpreting statistical differences in revision outcomes among groups. Finally, the peer response and revision practices described in this study are situated within the distinct culture of the classroom examined, and we should not assume that results are necessarily generalizable to other settings.

9.3   Implications

Some findings from the current study may influence both future research on patterns of interaction and classroom practices for peer response in L2 writing. The *patterns of interaction* framework seems to be valid and reliable across various kinds of tasks, and measurements of revision outcomes used in the current study may guide future studies. Pedagogically, L2 writing teachers who wish to use peer response should be encouraged by the results of the current study, and may consider approaching training for peer response in a different way than has been described in the L2 writing literature.

9.3.1   Theoretical and methodological implications

The *patterns of interaction* framework was developed and applied in paired tasks that are different from peer response. On one hand, they are more structured than peer response, because there is a strict definition of task completion; students are done with the task when, for example, they finish reconstructing a text (e.g, Storch, 2002), or completing a dictogloss task (e.g., Kim and McDonough, 2008). Task completion is more of a fuzzy construct in peer response, both during the feedback session itself and during the revision process; students decide when they have finished based on personal decisions rather than arriving at the end of a task. In addition, SLA researchers who have used this framework, when measuring language learning outcomes, have used a narrow view of what constitutes improvement. The most common way to measure learning outcomes in these kinds of studies is examining transcripts for instances of correctly resolved lexical or grammatical LREs during pair work (e.g., Watanabe and Swain, 2007; Watanabe, 2008; Kim and McDonough 2008, 2011); Researchers have also developed tailored post-tests to determine whether students retain knowledge of the specific LREs that occurred during their pair work (e.g., Watanabe and Swain, 2007). As has been discussed throughout this dissertation, measuring improvement after peer response sessions is more difficult, because revisions occur outside of the task itself, and improvement in writing can be measured in various ways.

Another way that using the patterns of interaction for peer response is different than applying it in other kinds of pair tasks lies in the way that students negotiate the direction of the task, which is represented by the dimension of *equality*. In pair tasks that have been used in prior SLA studies, all students approach the task with a blank slate, and there is no pre-determined sense of student roles; students co-construct the task. In peer response, however, student roles are

partially dictated by the task itself: one student is a writer, and the other a reader. If we assume that the reader in peer response is necessarily the one who controls the direction of the task by discussing his or her impressions of the first draft according to the peer response guidelines, we would expect to see only the patterns with lower equality. In these patterns, dominant/passive and expert/novice, one student (dominant or expert) exerts more control over the direction of the task. In the current study, it was indeed the case that when these patterns occurred, the student with more control over the task was the reader. The two patterns with higher equality, though, collaborative and dominant/dominant, were also present in the current study. In these two patterns, students shared control over the task when the writer directed the reader to areas of the draft rather than wait for feedback (collaborative pattern), and when the two students disagreed about the way the peer response session should proceed (dominant/dominant). Although it was enhanced by drawing on stimulated recall interviews, the fundamental elements of the patterns of interaction framework worked well for describing pair interaction in the current study.

It seems, then, that the concepts of mutuality and equality are useful ones for describing pair dynamics not only in paired tasks where students co-construct the end product, but also for ones like peer response, where student roles are more pre-defined and the end product is an individual rather than a joint one. The framework needs to be used in more settings to fully make the claim for its utility, but second language writing researchers interested in describing pair dynamics in a structured manner might follow Zheng's (2012) lead and further explore peer response from a patterns of interaction perspective. The strength of this coding scheme lies in its clear operationalization of the kind of peer interaction that sociocultural theorists believe leads to language learning. By considering pair work in terms of mutuality and equality, we can begin to gather more empirical evidence for the theoretical tenets of a sociocultural view of language

learning, describing this process of building knowledge through social interaction as it occurs in natural settings (e.g., writing classrooms). The current study suggests that using a sociocultural lens is particularly appropriate for peer response, because during this process, successful students negotiated not only feedback on writing but also tended to the social relationship with their partner.

In addition to using the *patterns of interaction* framework in a new setting, I have also identified *patterns of interaction* in peer response data using a different methodological approach than previous researchers. The method used to identify patterns in this study involved dividing transcripts into episodes, coding each episode, and then assigning a code to each transcript using a seventy percent threshold (a transcript's *pattern of interaction* must be present in at least seventy percent of the episodes). Other studies (e.g., Watanabe and Swain, 2007; Kim and McDonough, 2008) have used a more holistic approach, assigning the *pattern of interaction* that most closely describes the interaction as a whole. Because pair dynamics can shift over the course of one conversation, and the *patterns of interaction* scheme can be seen as subjective, I recommend replicating the bottom-up approach used in the current study. In this way, we can gather further reliable data on how *patterns of interaction* during pair work might affect learning outcomes.

9.3.2   *Pedagogical implications*

There is growing evidence in the L2 writing literature that training students to participate effectively in peer response leads to the delivery of more substantive and constructive comments (see, e.g., Min, 2005, 2008). Based on these two studies, Min recommends a multi-step peer response training sequence that involves various in-class activities where students are trained to adopt collaborative stances during peer response. Min's process also involves individual

conferencing with the writing instructor, where students use transcripts or recordings to reflect

on the extent to which students are following the prescribed method of asking questions and

giving comments to their partners. As Min notes, this procedure seems to be effective, but it

does involve considerable investment of time in a writing classroom setting (especially when

considering instructor and student conferences outside of the class session). Min is also insightful

in suggesting that teachers who wish to incorporate peer response in their classrooms should be

prepared to make a commitment to devoting time and resources for training students, and that

this effort will pay off as students become better able to deliver and receive feedback.

Training was not a focus in the current study, but implicit in the data is strong support for

ways to help students interact collaboratively and revise successfully. Based on the findings of

the current study, especially by drawing on stimulated recall interviews, I suggest incorporating

an element of student self-reflection throughout peer response training and the sessions

themselves. This additional feature of peer response might provide students with some of the

benefits of individual conferencing when meeting with the instructor outside of class is not

feasible, as well as encourage students to consider their own thoughts and beliefs about peer

feedback. In the current study, some participants gained valuable insight about their participation

in peer response through the stimulated recall interviews. One student decided that he sounded

"mean" on the recording and stated that he would like to change his delivery of feedback, and

others identified areas where they assessed their participation in peer response as helpful for their

partner.

These findings underscore Min's assertions that leading students through training

procedures is not sufficient to ensure that they approach peer response in the way that instructors

might prefer; students also need guidance to remain adherent to peer response guidelines once

they begin the process. It is unlikely, though, that writing instructors would be able to provide this assistance individually, as conferencing and stimulated recall interviews do. Asking students to reflect on their peer response sessions, in terms of both the manner in which they deliver comments and the suggestions that they give, may be a way to achieve the goal of ongoing support without requiring time outside of class. This might be done by asking students to listen to a recording of their session, or to examine their written comments, soon after the feedback session occurs. If this were not possible, students might write or talk about general reflection questions that ask them to think about their assessment of peer response sessions, and identify any areas they might like to change in the future.

Data in the current study also suggests that self-reflective practices as an element of peer response coaching would address a neglected area of this process. Some students in the current study expressed that as second language writers, they did not believe they were qualified to give feedback, and also that their partners may be less than competent in this area as well. While L2 writing researchers have examined student beliefs about and attitudes toward receiving peer feedback (e.g., Rollinson, 1994; Mendonca and Johnson, 1994; Tang and Tithecott, 1999) to my knowledge, no L2 writing theorists or researchers have recommended incorporating this element into peer response training. It seems important for writing teachers to encourage students to examine their beliefs about giving and receiving feedback from a peer before any training begins. In this way, writing instructors who wish to use peer response in their classrooms might be better able to meet students where they are in terms of their receptivity to peer feedback, and adjust training procedures accordingly.

Several students in the current study expressed a belief that they are not good peer reviewers due to language proficiency or writing ability. At the same time, these students did

provide some helpful comments to their partners. It might be necessary, then, for writing

teachers to help students build confidence in their abilities as peer reviewers, or to demonstrate

the effectiveness of receiving peer feedback for improving content and organization of their

papers. This kind of self-reflection might occur throughout a course where peer response is an

ongoing practice, allowing students to examine change in their beliefs where possible. Omitting

this step before training students to be effective peer responders seems to assume that students

believe in the effectiveness of peer response. If students have negative attitudes about peer

feedback, though, the most thoughtfully designed training procedures may fall on deaf ears.

Because the current study is a small-scale one with a limited number of participants, we cannot

assume that the ideas expressed by participants are universal. It does seem, however, that

incorporating an element of self-reflection throughout the peer response process, and inquiring

about student beliefs, might allow writing instructors to better ensure that the time put into

training for and carrying out peer response is well spent.

9.4   Final thoughts and future directions

In a special issue of the Journal of Second Language Writing about the interfaces

between SLA and L2 writing, Ortega calls for researchers interested in the connections between

these two fields to address elements which may broaden the scope of this small but growing

research area (2012). Among these elements is the idea that experimental writing tasks should

not be limited to the ones that have historically been used in SLA studies, but should be

expanded to include those that are more ecologically valid. She suggests that "fairly contrived"

(p. 412) tasks such as jigsaw, dictogloss, and text reconstruction may not be useful in examining

the interfaces between SLA and L2 writing because they do not mirror the kinds of writing tasks

that L2 learners are actually engaged in, both in classrooms and real-world settings. Only by

respecting the fact that "the content, purposes, and demands of writing matter" (p. 412) can we fully explore the connections between these two fields, which, although inherently related, have largely developed independently.

Examining the task of peer response from a sociocultural theory lens that has been used by SLA researchers is one way to begin to merge these two perspectives in an ecologically valid way. Although peer response is what Ortega would call "school-sponsored writing" (p. 412) and thus still relatively limited in terms of its representation of literacy practices, it is still more authentic than the pair tasks mentioned above, because, at least within the culture of the writing program where I collected data, teachers view it as an integral part of students' writing development. They ask students to participate in this task because they believe that giving and receiving feedback is a worthwhile enterprise for L2 writers. Students, as well, are invested in this activity, especially if we consider the dimension of demands that Ortega mentioned. In a process-based writing classroom, the demand upon students is that they capitalize on this process to progressively improve their writing, and peer response is one way they can achieve this goal.

Throughout the design and implementation of the current study, I drew on the strengths of the literature and methodologies of both SLA and L2 writing. The rich L2 writing literature on peer response, pushed me to consider social interaction as just one of the myriad factors that influence students as they work together to improve their writing. Another influential aspect of the L2 writing tradition was its tendency to adopt approaches such as case study, which allow for thick description of participants' experiences, situated in their individual context. From a sociocultural SLA perspective, I was influenced by the integrity of experimental designs that clearly operationalize what language learning looks like in natural data. The *patterns of interaction* coding scheme allowed me to examine pair dynamics in peer response in a way that

relied not on my own intuition or emergent coding that is particular to the context, but on a framework that had already been validated in more experimental settings Using an existing coding scheme rather than identifying emergent themes, however, is not without its drawbacks. With these patterns as an a priori focus, it was logical that I would identify them in my data. There may have been other aspects of the peer response session, however, that would have also helped me to understand different revision outcomes. With a rich data set such as the one in the current study, it may have also been fruitful to approach with a general question about the association between interaction during peer response sessions and revision outcomes, and use open coding to identify emergent themes.

In the future, we need to continue to investigate the relationship between social interaction and peer response outcomes in more narrow ways as well as broader ones. From a qualitative research paradigm, more case studies that describe in rich detail the writing classrooms where peer response occurs will allow us to more fully understand the sociocultural dimension of this practice. This approach, especially when employed in longitudinal studies, has the potential to reveal new insights about areas that seem to have been neglected in peer response research that attempts to connect social dynamics to revision outcomes. These include the interplay between the institutional and classroom culture and peer response practices (including the role of the instructor in framing and supervising the task), the beliefs and attitudes about peer feedback that students bring to the classroom and the ways that these may evolve over time, and the potential impact of social interaction in peer response on students' writing and revising practices on future writing tasks.

In addition to studies that describe the social dimension of peer response in ways that are context-specific, we need more large-scale studies that would allow us to generalize about

features of the social dimension of peer response that are associated with favorable revision interaction patterns and revision outcomes, which would allow us to make statistical inferences in a way that was not possible in current study. Because coding transcripts for patterns of interaction is labor-intensive and may preclude large-scale analysis, researchers might begin to identify linguistic indicators of different pair dynamics in peer response. A corpus-driven approach investigating linguistic features such as personal pronouns, stance markers, or hedging devices, for example, could potentially yield results that would allow for computational assistance in identifying differences among peer response pairs in terms of their social interaction. These groups of different patterns of social interactions, and the associated measures of writing improvement, might then be compared using statistical measures. Taken together, I believe qualitative and quantitative approaches like the ones suggested above would allow us to continue to explore the social dimension of peer response in a way that answers the call for the integration of L2 writing and SLA traditions.

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APPENDICES

Appendix A   Summary-response paper description

Summary-response is a type of writing that allows you to practice several skills that are important to good writing: summarizing ideas, making connections between external authorities and personal experiences, and expressing your own ideas and opinions. Summary-response papers also provide practice in using academic form to accomplish these tasks. Each summary-response paper will be based on either an assigned reading or a reading of your choice from assigned chapters in our text. **Your paper should contain three <u>balanced</u> paragraphs as outlined below. It should be 1 ½ to 2 typed pages, double-spaced, with 1-inch margins.**

The summary-response paper has three parts:

1) The first paragraph is a **<u>summary</u>** of the main ideas expressed by the author. This does not require much detail, but essential ideas and key examples should be mentioned. You will be evaluated on the format, completeness, and conciseness of the summary and your skill at paraphrasing another's words. You must use reminder phrases throughout your summary.
   USEFUL EXPRESSIONS
   > In the article, (article title), the author asserts that…
   > > (alternative verbs: *states, claims, declares, insists*, etc.)
   > According to the writer in (article title),…
   > Based on the author's experience,…
   > The author also claims that…

2) The second paragraph explains or describes some **<u>connection</u>** you make between the author's ideas and your own experience. It may also compare or contrast the author's ideas with those of another author that you have read. This paragraph should provide enough information to explain why you are making this connection. Include a concluding sentence to bring back the connection to the article. You will be evaluated on thoughtful, organized expression of the connection.
   USEFUL EXPRESSIONS
   > The ideas in this article remind me of…
   > As I considered the author's argument, a story/incident/event came to mind…
   > A similar idea about (topic) is expressed by (author) in (article, book, etc.)
   > This topic brings to mind another article by (author). In this article, …

3) The third paragraph expresses your own **<u>opinion and evaluation</u>** of the original topic AND the author's presentation of this topic, such as the author's writing style or vocabulary choice. You might synthesize information from the first two paragraphs, but you should not simply repeat what was already presented. You should use first person when expressing this opinion.
   USEFUL EXPRESSIONS
   > The author's arguments are… (persuasive/compelling/well-founded/
   > > unconvincing/weak/faulty/inadequate, etc.…) because…
   > I agree/disagree with the author's views about … because …

The assertions in this article are, in my opinion, correct (or incorrect). I have this opinion because…

Appendix B   Persuasive research paper description

ENGL 1102
The Research Paper: Persuasive writing

<u>Assignment Details</u>

You will research and report on a topic that you wish to persuade your position to someone (You should have already established your topic and hopefully it relates to your last two Summary Response papers)

   a. For **the Annotated Bibliography** you will prepare a list of sources which details your research.
   b. For **the Research Paper** you will explain and discuss the topic that you've chosen in a persuasive manner (to be discussed in class next week)

   Your purpose is to (a) educate your readers about your topic and (b) persuade them to share the conclusions you reach based on your research and presentation of the opposing sides.

In order to convince your readers to share your viewpoint on the topic, it is important to demonstrate your understanding of key issues on BOTH sides of the topic. Your paper should also very clearly include your position on the topic.

Include citations from at least **six** credible library sources: print or database. One source can be an interview. (If you interview, include interview questions and notes as an appendix to your paper.) Include a reference page that lists the sources you referred to. Use APA documentation style. **When you use information from a source, you must paraphrase, summarize, or quote <u>and</u> cite the source. If you do not cite, you are plagiarizing—a serious offense. In academic writing, you should paraphrase and summarize more than you quote.

Part I. For the first part) of this assignment, you will create an ***annotated bibliography.*** This   annotated bibliography will consist of summaries of six
research sources that you have chosen to read for your research topic.

The annotated bibliography (AB) will have the following due date:
   - Thursday, April 4th 2013

Part II. For the second part of this assignment you
Will use the sources in your annotated bibliography to write a coherent research paper
on your topic. This paper will be at least 4 pages in length. The reference page is not
counted as part of the page requirement.
The Research Paper will have the following due dates:
   - Tuesday, April 16th 2013: Rough draft due for peer review

- Thursday, April 18th – 23rd, 2013: Individual conferences with Cassie (by appointment)
- Thursday April 25th, 2013: Final Draft of Research paper

What is an annotated bibliography?

An annotated bibliography is a paper that gives a collection of research sources for a given topic, and includes an academic summary of each one. This part of the research paper is the actual "research" portion. It will require that you conduct research on your topic, find a variety of articles, **read them**, and then choose the ones that will best suit your topic. You are required to have at least six (6) research articles in your bibliography, but you can include up to ten (10).

Why are we writing an annotated bibliography?

The bibliography helps us focus on research skills before actually writing a full-length research paper. While strengthening your reading skills and comprehension of the research, creating an annotated bibliography will also strengthen your summary writing skills and use of objective academic language.

The following example uses the APA format for the journal citation:

Goldschneider, F. K., Waite, L. J., & Witsberger, C. (1986). Nonfamily living and the erosion of traditional family orientations among young adults. *American Sociological Review, 51*(4), 541-554.

The authors, researchers at the Rand Corporation and Brown University, use data from the national LongitudinalSurveys of Young Women and Young Men to test their hypothesis that nonfamily living by young adults alters their attitudes, values, plans, and expectations, moving them away from their belief in traditional sex roles. They find their hypothesis strongly supported in young females, while the effects were fewer in studies of young males. Increasing the time away from parents before marrying increased individualism, self-sufficiency, and changes in attitudes about families. In contrast, an earlier study by Williams which I will cite in my paper shows no significant gender differences in sex role attitudes as a result of nonfamily living.

How do I begin the research?

When we have chosen topics, we will work together in groups to find at least two (2) articles that would work for each topic. You can start by reading these articles, and you will have time in class to discuss them during the following session. In your research, you can start with Google Scholar, or you can begin with a library database search.

What is most essential as we begin the research?

Essential to creating the annotated bibliography is finding good, solid sources for your topic. You should take time to research and scan articles before you spend time reading them carefully. You will end up discarding many articles that won't fit your research question!

Also essential to this stage of the research is reading your research and understanding it. Use class time wisely to maximize your research strategies.

Appendix C   Tips for being a successful peer responder

ENGLISH 1102

TIPS FOR BEING A SUCCESSFUL PEER REVIEWER (taken in part from Stanley (1992)

In order to get the most out of the peer review process, you should try to communicate your comments effectively. The following are some strategies that you can use.

POINT THINGS OUT

Point to particular words or phrases and ask questions about them if they aren't clear or don't make sense. (i.e. What is the purpose of this sentence, in your opinion?)

GIVE ADVICE

After you point out a particular word or phrase, make suggestions about how you would change them. Sometimes it is also helpful to explain WHY (i.e. The audience may not understand this word; the rubric says "xxx").

REACT

Tell your classmate what you think they've done well. "Your first few sentences are really good!".

TIPS FOR THE WRITER

If you as the writer have specific questions about some portion of your paper, ASK!!! If you are unsure that you've used APA citation correctly, ASK!!! If you think a sentence is unclear, ASK your peer he or she thinks!!!

Appendix D   Peer response guidelines: summary-response paper

ENGL 1102
Peer Review of Summary Response

Your Name: _____

Your Partner's Name: _____

Directions:

Read your peer's research paper, focusing on the questions below ("Peer Review Questions"). Make notes in the margins of the peer's paper, or on this sheet, to remember what you want to tell him or her.

* If you agree to be recorded, please raise your hand now so Audrey can turn on your recorder.

Once you have finished reading and writing, have a conversation. First talk about your responses to the peer review questions for one paper, and then move to the other.
° When you are the reader:
Explain your responses to the peer review questions to the writer. Do not simply read your notes, but try to tell the writer in your own words what you think. Allow him or her to ask questions.
° When you are the writer:
Listen to your peer reviewer and respond to his or her feedback. Ask questions if you do not understand.

Peer Review Questions:

1. **Summary**
   - Does the summary contain no opinion, just main details about what the writer chose to summarize (a place, an interesting event, a character, a family, an anecdote from the story)?

   - Does the summary introduce the book generally, and then move on to the chosen area of focus?

   - As a reader, is there anything else you'd like to know about this section?

2. Personal Connection

- Does the writer personally reflect? Does he or she recall a person, place, or thing that reminds him/her of the summary? Does he or she discuss another book or reading that reminds him/her of the summary?

- Is there a topic sentence in this section that transitions from the summary portion to the connection portion?

- As a reader, is there anything else you'd like to know about this section?

3. Critique

- Does the writer give a personal opinion about WHAT or HOW the author wrote?

- Is this section focused? Does it discuss one or two things to critique?

- Is there a 1-2 statement conclusion that summarizes the critique and closes the entire paper?

- As a reader, is there anything else you'd like to know about this section?

Appendix E   Peer response guidelines: persuasive research paper

Directions:

Read your peer's research paper, focusing on the questions below ("Peer Review Questions"). Make notes in the margins of the peer's paper, or on this sheet, to remember what you want to tell him or her.

* If you agree to be recorded, please raise your hand now so Audrey can turn on your recorder.

Once you have finished reading and writing, have a conversation. First talk about your responses to the peer review questions for one paper, and then move to the other.
° When you are the reader:
Explain your responses to the peer review questions to the writer. Do not simply read your notes, but try to tell the writer in your own words what you think. Allow him or her to ask questions.
° When you are the writer:
Listen to your peer reviewer and respond to his or her feedback. Ask questions if you do not understand.

Part I
Read the introductory paragraph.
a. What is the topic of the paper?

b. Is this an interesting beginning? Does it give readers a reason to continue reading?

c. Underline the thesis statement of opinion. Is the thesis statement a clear reflection of what happens in the rest of the paper?

d. Is the author's position on the issue clear?

Part II
!!!! Write notes in the margin of the paper and be ready to explain your opinions to your partner. !!!!

1. **Background Paragraph**

(If no background paragraph, draw a line through this section).
   a. Do you think the information included in this paragraph was necessary?

   b. Do the sentences and ideas flow well (use of cohesion, transitions, connectors, etc.)?

   c. Have correct citations been included in this paragraph?

2. **Body Paragraphs**
   a. What organization format does the author use? In other words, do they motivate their paper with the opposition, go back and forth between viewpoints, etc.

      Do you agree with this choice? Would the other format work better for this topic?

   b. Does each paragraph begin with a topic sentence that relates to the thesis statement?

      If you have a question about a topic sentence, place a big "?" next to it.

   c. Does each paragraph have at least two effective supporting points related to the topic sentence? If not, in the margin of the paper, write that additional support might improve the paper.

   d. If included, does the author sufficiently refute each con point? Are you convinced by the arguments the author presents? Give suggestions.

   e. Are the writer's arguments for his/her position based on logic and not emotion? If not, write a note in the margin.

   f. If the writer includes a quotation, does the writer also explain the quotation in his/her own words?

3. **Citations**
    a. In each body paragraph, it should be very clear where information comes from -- either by *citation* or *reminder phrases*. Read through the body paragraphs and be sure you can tell where each fact comes from. Indicate any unclear points by writing "source?" in the margin.

    b. Does each in-text citation include name, date, (and page number for quotations)? Circle any that do not.

    c. Are citations with attribution language formatted correctly (e.g., According to X, X states that, X reports that)? Circle any that are not.

    d. The first time an author or other expert is mentioned, there should be a mention of that person's credentials. (For example, "Jim Smith, a life-coach and employment specialist, explained that…"). Websites and organizations can be described in a similar manner (e.g. "The Centers for Disease Control, a U. S. government agency that monitors public health issues, reports that...") Underline the credential for each author, expert, or organization cited. If there is not any credential, put a "?"by the citation.

4. **At the bottom of the draft, write one thing you like about the paper.**

Appendix F   Recruitment script

I am a researcher interested in how students complete peer response, and what revisions they decide to make afterwards. You will complete peer response three times as a requirement for this course. If you would like to participate in my study, you would agree to let me record you and your partner's peer response session during class. I will not share this recording with your teacher, and it will not affect your grade in any way. If you participate, you will also give me permission to get copies of your first and second drafts for these three writing assignments. Finally, during the two days after the peer response sessions, you will schedule a time that is convenient for you, and meet me for an interview. The interview will last about an hour, and we will talk about your peer response session and the revisions you made afterwards. I will not share the interview with your teacher, and it will not affect your grade. If you participate, most of these things will happen during class time. You do need to commit, however, to meeting me for the interviews outside of class. Thank you for your consideration and please let me know if you have any questions. I look forward to working with you if you decide to participate.

Appendix E   Informed consent form (peer response sessions)

Georgia State University
Department of Applied Linguistics & ESL
Informed Consent

Title: Interaction in peer response dyads: The relationship between pair
                                          dynamics and revision outcomes

Principal Investigator: Dr. YouJin Kim

Student Principal Investigator: Ms. Audrey Roberson

I.   <u>Purpose</u>:

You are invited to participate in a research study. The purpose of the study is to investigate how talking with a classmate about your writing might help you improve. You are invited to participate because you are a student in an ESL writing course where you talk about your writing with classmates. A total of 24 participants will be recruited for this study. Participation will require three forty minute sessions (during your regularly scheduled writing class) of your time during three class periods.

<u>II</u>.   <u>Procedures</u>:

If you decide to participate, you will (1) be recorded while you talk with a classmate about your writing, (2) provide Ms. Roberson with copies of your first and second drafts of the writing you discuss. Additionally, you may choose to participate in 3 one-hour interviews outside of class time where you discuss your participation in peer response. You may choose to participate in the audio recording and providing papers portion of this study (1 and 2), but not the interview portion (3). During the peer review activity, you will be asked to read a peer's writing, and to give him or her spoken feedback on a set of peer review questions. During this conversation, Ms. Roberson will place a small digital recorder on the table between you and your partner. If you participate in the interview, you will meet with Ms. Roberson at the Department of Applied Linguistics and ESL, and she will audio record the conversation.

Ms. Roberson will attend the three class sessions when peer response occurs. If you choose to participate, she will distribute, turn on, and collect digital recorders. She will also make a copy of your writing. Your writing will be examined by raters who are graduate students in the Department of Applied Linguistics and ESL. These scoring procedures will be used for the purpose of data analysis for this study, and the raters' scores will not affect your grade for the writing course. Names will be removed from essays, so that raters will not have access to any identifying information about you.

III.   Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV.   Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about how ESL writers use spoken feedback from their peers to make improvements in their writing.

V.   Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may turn the audio recorder off at any time and choose not to provide Ms. Roberson copies of your writing at any time. You may choose not to participate in the interview at any time. Whatever you decide, there will be no effect on your grades in this writing class.

VI.   Confidentiality:

We will keep your records private to the extent allowed by law. Only Ms. Roberson will have access to the audio recording of your peer review session and your interview, and to your writing. For a brief amount of time, your name will be connected to your recording and your papers so that you can receive class credit for participating in the peer response activity. However, after that time, your name will be replaced with an ID number. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board and the Office for Human Research Protection (OHRP)). We will use a pseudonym (fake name) rather than your name on study records. Your transcribed audio recordings, interviews, and papers will be stored on Ms. Roberson's password-protected computer and in her locked file cabinet, respectively. Written transcriptions of audio recordings and interviews will be stored on the computer for six months and then will be deleted. Your name and other facts that might point to you will not appear when we present this study or publish its results. Some findings will be reported and summarized in group form. Other findings may be reported with short written excerpts of your conversations and/or your writing. If this occurs, a pseudonym (fake name) will be used in place of your name.

VII.   Contact Persons:

Contact Dr. YouJin Kim <404.413.5188, eslyjk@langate.gsu.edu> or Ms. Audrey Roberson at <404.413.5197, aroberson10@gsu.edu> if you have questions, concerns, or complaints about this study. You can also call if you think you have been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, offer input, obtain information, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII.   Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio recorded, please sign below.

_____   _____
Participant   Date

_____   _____
Principal Investigator or Researcher Obtaining Consent   Date

Appendix G Informed consent form (stimulated recall interviews)

Georgia State University

Department of Applied Linguistics & ESL

Informed Consent

Title: Interaction in peer response dyads: The relationship between pair
                               dynamics and revision outcomes

Principal Investigator: Dr. YouJin Kim

Student Principal Investigator: Ms. Audrey Roberson

   II. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate how
talking with a classmate about your writing might help you improve. You are invited to
participate because you are a student in an ESL writing course where you talk about your writing
with classmates. A total of 24 participants will be recruited for this study. Participation in this
part of the study will require three one hour interviews (60 minutes total). The interviews will

take place at a scheduled time of your convenience, in a private room in the Department of Applied Linguistics and ESL.

II.   Procedures:

If you decide to participate in this part of the study, you will agree to have three one hour conversations with Ms. Roberson about your interaction with your partner and the ways in which you revised your paper after those conversations. During this conversation, Ms. Roberson will place a small digital recorder on the table so that the conversation can be recorded. The interviews will take place after your have talked with your partner about your writing, and made revisions to your paper based on your partner's comments. Ms. Roberson will ask you to talk about (1) how you experienced the conversation with your partner; and (2) why you decided to make the revisions. Participating in this interview will in no way affect your grade for this writing course, or your instructor's feedback on the paper you discuss.

III.   Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV.   Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about how ESL writers use spoken feedback from their peers to make improvements in their writing.

V.   Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may choose to leave the interview at any time. You may choose not to participate in all three interviews. Whatever you decide, there will be no effect on your grades in this writing class.

VI.   Confidentiality:

We will keep your records private to the extent allowed by law. Only Ms. Roberson will have access to the your interview. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board and the Office for Human Research Protection (OHRP)). We will use a pseudonym (fake name) rather than your name on study records. Your transcribed interviews will be stored on Ms. Roberson's password-protected computer. Written transcriptions of the interviews will be stored on the computer for six months and then will be deleted. Your name and other facts that might point to you will not appear when we present this study or publish its results. Some findings will be reported and summarized in

group form. Other findings may be reported with short written excerpts of your interview. If this occurs, a pseudonym (fake name) will be used in place of your name.

VII.   Contact Persons:

Contact Dr. YouJin Kim <404.413.5188, eslyjk@langate.gsu.edu> or Ms. Audrey Roberson at <404.413.5197, aroberson10@gsu.edu> if you have questions, concerns, or complaints about this study. You can also call if you think you have been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, offer input, obtain information, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII.   Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio recorded, please sign below.

_____   _____

Participant   Date

_____   _____

Principal Investigator or Researcher Obtaining Consent   Date

Appendix H   Stimulated Recall Protocol

What we're going to do now is listen to your conversation, and look at your revised draft. I am interested in what you were thinking while the conversation was going on. I am interested in your thoughts about giving feedback during the peer response session, and also your thoughts about using your partner's feedback to revise. I can hear what you were saying, and I can read your draft, but I don't know what you were thinking. So what I'd like you to do is tell me what you were thinking, what was in your mind at the time you were talking.

I'm going to play the conversation. You can pause it at any time you want. So if you want to tell me something about what you were thinking or feeling during peer response, you can push pause. If you want to tell me about how you used your partner's comments to make revisions, you can push pause. We can look at your revised draft. If I have a question about what you were thinking, I will push pause and ask you what you were thinking. If you want to tell me about making revisions in your second draft, you can do that. I may also ask you questions about your revisions.

Appendix I   Guiding Questions for Researcher Classroom Observation

- What instructions (verbal and written) does the instructor provide about peer response procedures?
- What questions (if any) do students have about peer response procedures, both before and after the sessions?
- What does the instructor do while students are completing peer response activities? To what extent does he/she interact with and guide students?
- What instructions (verbal and written) does the instructor provide students about what to do after peer response sessions?
  How does the instructor explain what students should do with peer comments

Appendix J: Transcription Conventions

T:	Teacher
S 1:	Student 1
S 2:	Student 2
(1.5)	The number in brackets indicates elapsed time in tenths of a second
…	Three dots indicate a pause of about one second, two dots represent a slightly shorter pause
–	Dash indicates a short pause
Foo-	An abrupt cut-off of the prior word or sound
[	Indicates the place where overlapping talk starts
]	Indicates the place where overlapping task stops
Why	Underlining indicates speaker emphasis
?	Rising intonation, not necessarily a question
Yes,	A comma indicates a continuing intonation
End.	A full stop indicates falling intonation
° no °	Degree signs indicate quieter (lower volume) talk
Yea::r	Colons indicate lengthening of the preceding sound; the more colons, the greater the extent of the lengthening
(hhhh)	Laughter
(sea)	Unclear or probable item

Adapted from Ellis & Barkhuizen (2005)

Appendix K: Training packet for raters of student drafts

<u>Overview of Dissertation</u>

- Abstract

Peer response occurs when pairs of students provide feedback to each other about their compositions, and each writer considers these suggestions when making revisions. A popular approach in academic writing classes for second language (L2) learners of English (Ferris, 2003), peer feedback is also supported by a sociocultural theory of language learning (Liu, 2002), where writers who use each other as resources are aided in their own writing development. Despite its popularity and the theoretical argument for peer response, not all peer responders are successful. Students may not provide helpful comments to each other (Leki 1990; Liu, 2002), interact in a collaborative way (Leki, 1990; Nelson and Murphy, 1992, 1994; Liu, 2002), or use their peer's comments during revision (Connor and Asenagave, 1994; Tang and Tithecott, 1999).

Although several studies have suggested that when students do adopt a collaborative stance in peer response sessions, they have better revision outcomes (Lockhardt and Ng, 1995; deGuerrero and Villamil, 2000; Hyland, 2008), L2 writing scholars note that this collaboration has been loosely described in the literature, and that the connection between oral interactions and revision choices should be considered in a more rigorous way (Ferris, 2003). This dissertation, "Interaction in peer response dyads: the relationship between pair interactions and revision outcomes", explores why some students benefit from peer response more than others. To further examine the role that patterns of social interaction play in this context, this study addresses the following research questions:

- Research Questions

  1. What are the patterns of interaction during peer response
  2. Are some patterns of interaction associated with better revision outcomes than others?
  3. Do these patterns of interaction change over the course of a semester?

- Data Sources

  1. Transcriptions of peer response interactions in a writing classroom

  2. First (pre-peer response) and revised (post-peer response) writing assignments for 10 participants and 3 writing assignments (30 sets of first/revised drafts)

  3. Transcriptions of stimulated recall sessions with individual participants

Research Tasks for Assistants

You will be completing 2 different tasks to help me analyze research question #2:
1. Rating pairs of drafts (a first draft and a revised draft) using an analytic rubric
2. Identifying and classifying kinds of revisions in second drafts using a revision taxonomy
    I have completed these two tasks already; yours will be a second rating.

Task #1: Rating Pairs of Drafts

- Rubric (see page 6 for a copy)
  4 analytic categories: organization/unity, development, structure, vocabulary
  5 possible points in each category
  20 points highest possible score

- Score sheet (see page 7 for a copy)
  Fill in you name as "Rater 2"
  Fill in category scores and total score for draft 1, then draft 2
  Unfold the rating sheet to see my scores
  Fill in the "Totals" table: average rater 1 and rater 2 scores for each draft, then calculate score gain (Example: if the average score for draft 1 is 15, and the average score for draft 2 is 17.5, the score gain is +2.5)

- Rating tips
  o Score draft 1 first, then use it as a reference when scoring draft 2 (consider the extent to which revisions in draft 2 affect category scores)
  o It's possible for the second draft to lose points in some categories (when the first draft is underdeveloped or unfinished, the expanded text in draft 2 may have language errors that effect the structure and vocabulary scores)
  o There may be no change or only a small change in rating from draft 1 to draft 2
  o Use the writing prompts for each assignment (summary-response for assignments 1 and 2; see page 8, and research paper for assignment 3; see page 9) to help you score the drafts for organization and development

Task #2: Identifying Types of Revisions

- For this task you will use a taxonomy of revisions to classify the kinds of revisions made on second drafts:
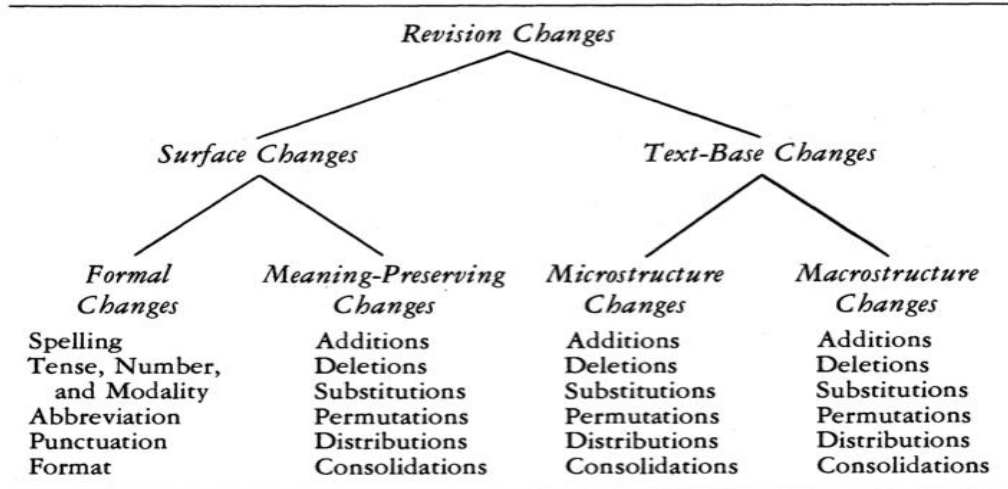Faigley and Witte's (1981) Taxonomy of Revisions

Figure 1. A Taxonomy of Revision Changes

	Surface Changes		Text-Base Changes	
Formal Changes	*Meaning-Preserving Changes*	*Microstructure Changes*	*Macrostructure Changes*
Spelling	Additions	Additions	Additions
Tense, Number, and Modality	Deletions	Deletions	Deletions
Abbreviation	Substitutions	Substitutions	Substitutions
Punctuation	Permutations	Permutations	Permutations
Format	Distributions	Distributions	Distributions
	Consolidations	Consolidations	Consolidations

- Analyzes effects of revision changes on **text meaning**
- 2 types of revisions:
    - affect meaning (text-based)
    - do not affect meaning (surface)
- Meaning = "concepts in the extant text, as well as those concepts that can be reasonably inferred from it"
- Taxonomy is based on "whether new information is brought to the text, or whether old information is removed in such a way that it cannot be recovered through drawing inferences"

- Surface changes: **do not bring new information** to the text, **and do not remove old information**
    - Formal changes: copy-editing
        - Spelling
        - Tense, number, and modality
        - Abbreviations
        - Punctuation
        - Format
    - Meaning preserving changes: **paraphrase the concepts** in the text, but **do not alter them**
        - Additions: raise to the surface what can be inferred
            - You pay two dollars → you pay a two dollar entrance fee
        - Deletions: reader must infer what had been explicit
            - Several rustic looking restaurants → several rustic restaurants
        - Substitutions: trade words or longer units that represent the same concept
            - Out of the way spots → out of the way places

- Permutations: rearrangements, or rearrangements with substitutions
    - Spring time means to most people → springtime, to most people, means
- Distributions: writer revises what has been compressed into a single unit so that it falls into more than one unit
    - I figured after walking so far the least it could do would be to provide a relaxing dinner since I was hungry → I figured the least it owed me was a good meal. All that walking made me hungry
- Consolidations: opposite of distributions; elements in two or more units are consolidated into one unit
    - And there you find Hamilton's Pool. It has cool green water surrounded by 50-foot cliffs and lush vegetation. → And there you find Hamilton's Pool: cool green water surrounded by 50-foot cliffs and lush vegetation.

- Text-based changes: **meaning changes** that **add new content**, or **delete existing content**
    - Macrostructure changes: major revision change; would **alter the summary** of a text
    - Microstructure changes: meaning changes that **would not alter the summary** of the text

- Revision taxonomy worksheet (see page 10 for a copy)
  Fill in your name in the "Rater #2" slot
  Review each of my codes for revisions, and fill in "AGR" if you agree, or enter a new code if you do not
  Changes in second drafts are highlighted: new content is underlined, and deleted content is marked with ∅

- Revision code tips
  Citation formatting changes are coded as P (punctuation)
  For new content in second drafts, each new sentence is assigned a code
  Don't hesitate to assign revisions a different code than I did; I'm still revising this taxonomy so your input is important!

	Organization / Unity	Development	Structure	Vocabulary
1	Some organization. Relationship between ideas not evident. Absent or unclear thesis.	Lacks content. Few examples and details.	Almost all simple sentences. Attempts at complicated sentences impede meaning. No embedding.	Meaning inhibited by limited range of vocabulary.
2	Organization present. Ideas show grouping. May have general thesis.	Underdeveloped. Examples may be inappropriate/ineffective. May use main points as support for each other.	Mainly simple sentences. Attempts at embedding may be present in simple structures with inconsistent success.	Somewhat limited command of word usage. Frequent use of circumlocution. Often uses informal language.
3	Clear introduction, body, and conclusion. Topic sentences present but may lack focus. Narrowed thesis. Relationship between ideas present.	Partially underdeveloped. Logic flaws may be evident. Some areas under-supported and generalized. Repetitive.	Some variety of complex structures. Clause construction and placement somewhat under control. Errors may occasionally impede meaning.	Meaning seldom inhibited. Adequate range and variety. Little use of circumlocution. Infrequent errors.
4	Appropriate paragraphing and focused topic sentences. Narrowed thesis, but essay may digress from it. Hierarchy of ideas generally present and effective.	Acceptable level of development. Logic evident. Mostly adequate supporting ideas. May be repetitive.	Sentence variety evident. Frequent successful attempts at complex structures. Meaning generally not impeded by errors.	Meaning not inhibited. Adequate range and variety. Mistakes almost never distracting. Appropriately academic.
5	Definite control of organization. Uses transitions between parts of essay. Focused thesis that directs organization of essay.	Each point clearly developed with variety of convincing types of evidence. Ideas supported effectively. Clear and logical progression of ideas.	Successful variety of sentences and complex structures. Manipulates syntax with attention to style. No errors that impede meaning.	Meaning totally clear. Sophisticated range and variety. Attempts at original, appropriate word choices.

Participant Number _____

Assignment number (circle one)   1   2   3

Rater 1 Name _____

	Draft 1	Draft 2
Organization (5)		
Development (5)		
Structure (5)		
Vocabulary (5)		
Total (20)		

Rater 2 Name _____

	Draft 1	Draft 2
Organization (5)		
Development (5)		
Structure (5)		
Vocabulary (5)		
Total (20)		

Totals

	Draft 1	Draft 2
Rater 1		
Rater 2		
Average		
Score Gain		

Summary-Response Prompt (Assignments 1 and 2)

4)   The first paragraph is a **<u>summary</u>** of the main ideas expressed by the author. This does not require much detail, but essential ideas and key examples should be mentioned. You will be evaluated on the format, completeness, and conciseness of the summary and your skill at paraphrasing another's words. You must use reminder phrases throughout your summary.

5)   The second paragraph explains or describes some **<u>connection</u>** you make between the author's ideas and your own experience. It may also compare or contrast the author's ideas with those of another author that you have read. This paragraph should provide enough information to explain why you are making this connection. Include a concluding sentence to bring back the connection to the article. You will be evaluated on thoughtful, organized expression of the connection.

6)   The third paragraph expresses your own **<u>opinion and evaluation</u>** of the original topic AND the author's presentation of this topic, such as the author's writing style or vocabulary choice. You might synthesize information from the first two paragraphs, but you should not simply repeat what was already presented. You should use first person when expressing this opinion.

Research Paper Prompt (Assignment 3)

You will research and report on a topic that you wish to persuade your position to someone

You will explain and discuss the topic that you've chosen in a persuasive manner (to be discussed in class next week)

> *Your purpose is to (a) educate your readers about your topic and (b) persuade them to share the conclusions you reach based on your research and presentation of the opposing sides.*

In order to convince your readers to share your viewpoint on the topic, it is important to demonstrate your understanding of key issues on BOTH sides of the topic. Your paper should also very clearly include your position on the topic.

Participant Number _____

Assignment number (circle one) 1 2 3

SURFACE CHANGES		TEXT-BASED CHANGES	
Formal Changes	**Meaning-preserving changes**	**Microstructure changes**	**Macrostructure changes**
Spelling (Sp)	Additions (S-Ad)	Additions (Mic-Ad)	Additions (Mac-Ad)
Tense, number, modality (T)	Deletions (S-Del)	Deletions (Mic-Del)	Deletions (Mac-Del)
Abbreviation (Ab)	Substitutions (S-Sub)	Substitutions (Mic-Sub)	Substitutions (Mac-Sub)
Punctuation (P)	Permutations (S-Perm)	Permutations (Mic-Perm)	Permutations (Mac-Perm)
Format (F)	Distributions (S-Dis)	Distributions (Mic-Dis)	Distributions (Mac-Dis)
	Consolidations (S-Con)	Consolidations (Mic-Con)	Consolidations (Mac-Con)

Rater 1_____ Rater 2_____

Draft 1	Draft 2	Revision Code	Rater 2: AGR or new code