Negotiation. n. A process or act of conferring with another or others to arrange some matter by mutual agreement.

*The New Shorter Oxford English Dictionary*
Thanks to Dr. Penny Lee
For her excellent supervision of this work.
ABSTRACT

Over the last twenty years, researchers in the field of second language acquisition (SLA) have produced a considerable body of work which is referred to as “negotiation of meaning” research. This research has resulted in some worthwhile gains for SLA pedagogy. However, the present study identifies a shortcoming in this body of work as a result of the limiting theoretical approach and consequent shortcomings with respect to the question of how negotiation of meaning actually affects learning. In this study, the theories of Russian psychologist Lev Semyenovitch Vygotsky (1896-1934) are used as a basis for a more wholistic exploratory approach to the study of negotiation of meaning in learner language and a consequent redefinition of the term. The study involved examining recorded language data from adult non-native speaker (NNS) dyads, as well as one native speaker (NS) dyad carrying out a jigsaw task.

The major finding was that participants worked together to build meanings and assist each other in the completion of the task through a variety of strategies. As such, this provided a basis for a redefinition of the term “negotiation of meaning” as well as an examination of the role of negotiation of meaning in its redefined sense in the learning process. Second language researchers in the field of “negotiation of meaning” research have generally defined the process in terms of the repair of breakdowns in understanding. However, the present study suggests that a more useful definition for pedagogical and theoretical purposes would affirm that
negotiation of meaning is a naturally occurring, context driven collaborative process between any interlocutors, and that when it takes place in a learning context, learning may be evident both in the course of negotiation and as a result of negotiation.
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CHAPTER 1 - INTRODUCTION

1.0. Introduction

This study is divided into six chapters. The first chapter introduces the main themes and theoretical standpoint. In addition it gives a background to the study and the aims of the investigation.

Chapter Two is a literature review in three parts. The first section of the literature review is a critique of the so-called “negotiation of meaning” research in second language acquisition (SLA). The main criticism is of the narrow use of this term. “Negotiation of meaning” in previous research has been regarded as a functional conversational strategy used to repair breakdown in interaction and consequently achieve comprehensible input (e.g., Gass and Varonis, 1985). Such incidences of repair have been isolated from the greater interaction process. It is argued in the literature review that negotiation of meaning is better regarded as a constant and social process, rather than as an occasional utterance. This assumption that negotiation of meaning is a process is based on Vygotskian theory which places language and thought in the social arena. Furthermore, “negotiation of meaning” research that is discussed here has not been able to show how negotiation can actually facilitate learning. Thus the aim of the study is to investigate “negotiation of meaning” in its fullest sense, and to discover its role in the second language learning process.

The second section of the literature review is a discussion of the work of the Russian psychologist Lev Semenovich Vygotsky (1896-1934). His work is relevant to this study on SLA because it provides a social interactionist view of “negotiation of
meaning” which contrasts with the narrow use of the term by previous SLA researchers. In particular, it directs attention to the nature of learning that occurs in the negotiation process. The theoretical core of Vygotsky’s work is that developmental cognition is socially activated through language. This can be extended to SLA theory in that learning a new language also involves cognitive processes that are activated through language. What is investigated in this study is whether or not these processes are evident in negotiation of meaning contexts.

The final section of the literature review gives an overview of recent Vygotskyan SLA research that has departed from previous tradition by examining how learners learn through interaction. Because language is integral to cognitive processes, by looking at the language used, these Vygotskyan researchers have been able to show learning actually in progress. The present study aims to take this new development further by investigating the role of negotiation of meaning in its fullest sense in the learning process.

Chapter 3 provides a description of the methods used to collect data with explanations for these methods chosen. The study is based on one using language data from students learning Spanish as they work on a task (Brooks and Donato, 1994). The same task is used, but whereas the 1994 study had learners negotiating in their first language (L1) (English), in the present study learners from different L1 backgrounds negotiate through the task in English as the target language.

Chapters 4 and 5 discuss the findings in two parts. Chapter 4 shows the detail of interlocutors’ negotiation of meaning behaviour, demonstrating its ongoing nature in
the course of the interaction. A redefinition of the term “negotiation of meaning” for
the SLA research context is offered on the basis of the findings reported in this
chapter. Chapter 5 examines the role of the process of negotiation as it is redefined in
the second language acquisition process.

Chapter 6 discusses the pedagogical implications of the study, with emphasis on the
emergent nature of learning and the influence of context in facilitating that learning.

1.1. Background To The Study.

"Negotiation of meaning" research examines the actual language used by learners
carrying out activities for the presence of linguistic features that are considered to
indicate negotiation between interlocutors. Most research in this area has been
conducted in the field of Applied Linguistics, and SLA research within that field,
usually in the context of English as a Second or Foreign Language (ESL/EFL)
teaching. Negotiation between learners has been viewed as part of the process of
learning a second language, with particular significance in the creation of
comprehensible input for the learner, or for "how learners achieve comprehensibility
of message meaning" (Pica, 1994:495). Researchers have mostly examined a limited
range of strategies to this end. These are strategies such as questioning and
confirmation checking which have been viewed as distinct from other strategies such
as giving opinions, or even greeting others, aspects that are not directly related to
comprehension of lexical items but nevertheless keep the flow of interaction going.

"Negotiation of meaning" research has involved techniques such as counting and
mapping the incidences of these strategies. Its main value has been in demonstrating
the benefit of pair and group work in language teaching pedagogy. It has neither
attempted nor been able to show actual learning in process through negotiation, in
spite of the fact that the actual rationale for such research is to improve teaching
practice.

During the last 15 years or so, the field has begun to broaden with the use by some
researchers of a Vygotskyan framework (e.g., Frawley and Lantolf, 1985; Ahmed,
1994; Swain and Lapkin, 1998; Ohta, 2000) that places language and meaning
development primarily in the social arena. Although the term “negotiation of
meaning” is not often used in this body of research, negotiation of meaning is
understood in the Vygotskyan framework as a process that interlocutors undertake
actively as they build intersubjectivity (Rommetveit, 1985) in a conversation. As such
it is more than the use of strategies such as questioning and confirmation checks
alone, although these make a contribution to the larger process. Furthermore, talk in a
learning context, when examined in the light of Vygotskyan theories of thought and
language, is important, not only because it demonstrates knowledge of meaning, but
because it can show learning, as a social phenomenon, actually in progress.

The relevance of traditional “negotiation of meaning” research in the second language
classroom has mostly been in task design and in supporting the role of group work in
the communicative classroom. However, the pedagogical importance of negotiation of
meaning is highlighted when one views the learning process as socially activated. The
role of peers in the learning process when students are engaging in group activities
becomes more significant. In addition, Riggenbach (1999) has argued that, in
understanding how we negotiate meaning and the strategies involved, teachers are
able to assist students to achieve “strategic competence” and ultimately socio-
linguistic competence. The degree to which this is possible is also of interest in this
study.

1.2. Purpose of The Study.

This study is based on the Vygotskyan understanding that thought processes are
socially activated through language. As such it aims to investigate the language of
non-native speaker (NNS) participants undertaking an activity in a learning context in
order to discover what strategies they are using to negotiate meaning and whether or
not learning processes are evident in the way learners use language in negotiation. In
addition, the aim is to determine whether the term “negotiation of meaning” can be
made more harmonious with the concept of meaning as socially created through the
activity of talking. Therefore the overarching research question is: Are the definitions
of the term “negotiation of meaning” used by second language acquisition researchers
useful in explaining the nature of the whole process demonstrated in learner/learner
interaction in the course of classroom problem solving and task completion?

In seeking to answer the greater question, more specific questions are also posed:

- How is “negotiation of meaning” defined in the relevant research literature?
- What communication strategies are included in the standard definitions?
- Do these definitions and strategies limit research parameters?
- If so, in what ways can the definition of “negotiation of meaning” be modified
to extend research?
- What implications would any modifications have for pedagogical practice?
In the following chapter research relating to issues around the term 'negotiation of meaning' is discussed as a background to a study that seeks to answer the questions above.
CHAPTER 2 - REVIEW OF THE LITERATURE

2.0. Introduction.

In this chapter relevant literature is discussed in three parts. In the first section, the development of negotiation of meaning research is discussed. Researchers have conducted quantitative studies of the amount of negotiation in learner exchanges with isolated utterances considered as negotiation “strategies”, and in some cases developing models to explain incidences of negotiation. Although this body of work acknowledges that acquiring a language is a communicative process, and therefore examines learners in the social context, the main function of negotiation of meaning is considered to be to achieve comprehensible input and output – considered by many researchers to be requirements for optimal language learning. The main point of criticism of this work is that within this body of research a very narrow definition of negotiation is used, narrowing it to a few predictable strategies. In addition, it will be shown that focusing on specific strategies in discourse and isolating them from the whole communicative interaction cannot show the actual process of learning as it is played out in speaking.

In the second section of the literature review, a theoretical basis is given for broadening the use of the term “negotiation of meaning” beyond counting isolated utterances to encompass a linguistic and cognitive process that not only negotiates meaning, but can reveal learning in progress. To this aim, the work of Russian developmental psychologist Lev Semyonovitch Vygotsky (1896-1934) that is considered relevant to the study of language learning is introduced. Although he is known as a psychologist, particularly in the area of child education, his theory of how
cognition develops links the use of language in social settings with cognitive
development. He argued that the way language is used in the social setting tells us
something about cognitive processes. It follows that studying language use in a
learning situation can potentially tell us something about how we learn, since learning
is a cognitive process. This is particularly relevant with regards to acquisition of a
language because since learning to use that language is likely to be activated socially,
the learner builds competence through use.

Following the discussion of Vygotsky’s theories, researchers in the area of SLA who
have utilized Vygotsky’s theories are discussed, and how their ideas are useful as a
basis for extending negotiation of meaning research is shown. In this body of work, as
in Vygotsky’s own work, the relationship between thought and language is considered
to be a socially derived and interconnected process. Vygotskian ideas have been
appropriated for SLA research in the West since translations of his work have become
increasingly available and there has also been a move away from quantitative to
qualitative research in the SLA field (Lantolf and Appel, 1994a). Vygotsky influenced
researchers have mostly aimed to investigate aspects of the language learning process
as social and active phenomena, and therefore as creative and context driven. Because
of the social nature of this process, much is made of the role of peers in learning, and
how they feature in the stages of linguistic and cognitive development. Through
examining language in learning situations, Vygotsky influenced researchers have been
able to illuminate the actual process of learning in SLA situations.
2.1 Negotiation of Meaning Research

A large body of SLA research has examined the role of communicative tasks as the facilitator of what has been called "the negotiation of meaning" (Garfinkle, 1967). Despite looking at language in a communicative context, this concept of negotiation of meaning places thought and language into a framework which relies on the metaphor of the mind as a conduit (Reddy, 1979). Furthermore, many of these researchers over the last twenty years have used the term "negotiation of meaning" to refer to specific functional linguistic strategies such as questioning and confirmation checking. Consequently there are a number of quantitative studies that count the number and kind of these strategies to draw conclusions about how interlocutors negotiate meaning, or create models of negotiation patterns which are intended to show the role of the negotiation of meaning in the production of comprehensible input. As a result, there has been little attempt by the "negotiation of meaning" investigators to show how learners might actually learn through negotiation.

The use of the term "negotiation" in a linguistic context was initiated by sociolinguists such as Gumperz (1964, 1970) and Garfinkle (1967). Negotiation was considered to be part of the process by which speakers "cooperate to sustain the conversation and establish understanding" (Scarcella and Higa, 1981:410), and was considered significant for what it revealed about social roles. Gradually the term was adopted by SLA researchers attempting to examine the role of comprehensible input in learning.

Once SLA research had appropriated the term, its meaning became rather narrow. This is because its use was grounded in early studies which focused on the production of comprehensible input for the language learner. In the late 1970s and early 1980s it
was argued by Krashen that optimal input to support an increase of linguistic competence is just a little beyond the current level of competence (Krashen, 1980). Therefore, the main way to ensure the provision of comprehensible input by speakers was thought to be in showing lack of understanding by the hearer through strategies such as questioning.

The earliest research (for example, Hatch et al, 1975; Chaudron, 1978 in Long, 1981) was done in the area of NS/NNS interaction, mostly in English, and the NNS was always considered to be the novice. The NS, as a response to indications of lack of understanding, was expected to engage in modified target language, or "foreigner talk" which the learner could understand. Long (1981) initially referred to this kind of adjustment in discourse as "interactional modification" and the research involved the counting of incidences of linguistic "devices" used by the NS to "facilitate comprehension and participation by the NNS (Long, 1981:264). These devices were clarification checks (e.g. Do you mean...?), comprehension checks (e.g. Do you understand?) and clarifications (e.g. I mean...) (Chaudron, 1978, in Long, 1981). The following definition of negotiation of meaning from Gass and Varonis (1985:151, original emphasis) became typical of the early use of the term:

Negotiation exchanges [are] nonunderstanding routines which we operationally define as those exchanges in which there is some overt indication that understanding between participants has not been complete. We exclude from this definition exchanges that constitute a misunderstanding which goes unrecognized by the interlocutors.

Today, negotiation of meaning research is still focused on what the NNS does to
achieve comprehensible input, or what the other speaker, either NNS or NS, says to
that end and whether or not language acquisition is affected. However, researchers
have neither shown concrete benefits of the negotiation of meaning to language
learning beyond the positive influence of group work, nor have they shown how
learning takes place. This situation was left unchallenged until Vygotskyan
researchers such as Frawley and Lantolf (1985) and Brooks and Donato (1994) began
to expand the use of the term to include the focus on learning.

In the following section, the development of “negotiation of meaning” research is
discussed in two strands: the studies that have sought to establish labels for
negotiation of meaning behaviour and maps of negotiation of meaning occurrences
that achieve comprehensible input, and those that have looked at the role of
negotiation in the production of comprehensible input.

2.1.1. Negotiation of Meaning Strategies and Models.
Since negotiation of meaning was originally seen as the way to achieve
comprehensible input for the NNS, it was assumed in the early stages of negotiation
of meaning research that it was the NS who would make any modifications that were
required in a dyadic conversation situation. Consequently, modified input produced
by the NS was equated with “foreigner talk” (Ferguson, 1971, in Long, 1981), and
the features of foreigner talk were appropriated as labels for negotiation. Several of
these labels have endured and are considered by many researchers as instances of
negotiation. Long (1981) gives them as: confirmation checks, comprehension checks,
clarification requests and repetitions. These strategies were, and still are, usually
considered to be in interrogative form. Long points out that foreigner talk research
was predominantly done on English, and English speaking cultures tend to value interrogatives highly as a way of "compelling" answers and thus "sustaining the interaction" (p265).

One of the earliest methods of labelling strategies used by NS to produce comprehensible input for NNS was that of Long (1983), who looked at the modifications NS made. He called the modifications "strategies" and "tactics". Strategies, by his definition, involve the ways NS avoid conversational trouble with NNS, for example, selecting "salient" topics and checking the NNS comprehension. Tactics are used for repairing trouble. This includes tolerating ambiguity and requesting clarification, again only by the NS. In considering only the work done by the NS, Long's use of the term "negotiation of comprehensible input", which suggests mutual engagement in the process by both interlocutors, is thus a misleading one. This omission fits with the more teacher fronted, less communicative classroom which was still widely observable at the time, despite the trend towards communicative teaching which had begun to gain impetus by the mid 1980s.

An alternative model of strategy use in learner interaction, building on that of Long, came from Gass and Varonis (1985) and Varonis and Gass (1986), who formulated a model for mapping "negotiations of nonunderstandings" (1986:73) in NS\NNS, NS\NS and NNS\NNS conversations. In contrast to Long (1983), they placed more responsibility on the role of the NNS in signalling the lack of comprehension. Gass and Varonis mapped the indications of breakdown in understanding and repair of meaning, labeling each stage. Their basic model had four stages: the trigger (T), the indicator (I), the response (R) and finally the reaction to the response (RR). An
example of these categories in an interaction is as follows:

(1) 1. I'm living in Osaka (T)
     2. Osaka? (I)
     1. yeah (R)
     2. yeah, Osaka, Osaka (RR).

(Varonis and Gass, 1986:78)

The initial utterance triggers the misunderstanding indicator, which in turn provokes a response to acknowledge the lack of understanding and confirm what was said. The reaction to the response, which the researchers considered optional in any clarification exchange, helps the interlocutors to return to the initial topic. Varonis and Gass called the trigger, which causes the breakdown in coherence, a "pushdown" because the conversation ceases to be impelled forward when it occurs. The RR as a resolution enables the conversation to "pop up" again to the main topic of discourse. However, despite acknowledging that negotiation manifests in "a variety of forms" (Gass and Varonis, 1985:160), the researchers failed to demonstrate the actual process of meaning negotiation outside breakdown in understanding. They were not, in other words, able to show from their data how new meanings are built up through mutual collaboration by interlocutors. While they were able to describe what typically happens in the event of nonunderstanding, they did not go further to consider the implications of such events for language acquisition beyond the achievement of comprehensible input.

In addition, in their research, Gass and Varonis (1985) and Varonis and Gass (1986) found that NNS in conversation with other NNS had greater opportunity to engage in negotiation than with NS. In response to this finding, Pica and Doughty (1985) investigated the linguistic features of comprehensible input in two kinds of situations: those fronted by a NS teacher, for example, a small group situation lead by a teacher,
and those with only NNS participants in group work. The researchers used decision making discussion tasks that required the participants to agree on, for example, the best candidate for a job. They considered that open-ended tasks such as those used would give "truly communicative data" (p116). Pica and Doughty counted units of language from the clause to morphemes. On the clause level they identified and labeled "T Units”, which are defined as main clauses (which could also have subordinate clauses) (Hunt, 1970, in Pica and Doughty, 1985) and noted whether they were grammatical or ungrammatical. Fragments or phrases were also labeled, as well as single lexical responses, or interjections. Their focus was on grammaticality of input, the amount of input, and the negotiation of input by all participants.

Pica and Doughty (1985) considered the negotiation of input to occur when routines were used to repair misunderstandings. Modification of language by the original speaker in response to indications of nonunderstanding by the hearer was seen as the primary means for achieving this repair. The researchers gave these repair strategies Long’s functional labels and added some of their own. Their complete list included clarification requests, confirmation checks, comprehension checks, repetition of oneself or the other and of lexical items or semantic concepts (including rephrasing), completion of the other’s utterance, and correction of the other’s utterance. The researchers theorized that there would be greater accuracy by the NNS learners in the NS teacher-fronted groups, and that the all-NNS groups would produce more negotiation activity than those fronted by a teacher.

In fact Pica and Doughty (1985) found that the NNS produced equally ungrammatical language in both group situations. They also found that “conversational adjustments
such as comprehension and confirmation checks and clarification requests” (Pica and Doughty, 1985:130) were more characteristic of learners participating in the teacher-fronted activities, although they were not common in either group type. Completions and corrections were more prevalent in student-only groups, with no NS teacher present. Both types of groups, however, were found to use self and other repetitions extensively.

While the linking of grammatical accuracy with negotiation strategies is useful in telling the researcher how learners achieve comprehensible input, it is difficult to quantify how, or even if, negotiated meaning is reached. Furthermore, counting incidences of various repair strategies alone in a given situation is not necessarily a reliable predictor or indicator of the amount of actual negotiation likely to occur in other situations. Nevertheless, it is interesting to note that Pica and Doughty (1985) allude to the fact that their results were affected by certain variables related to the classroom context and the personalities of the participants. This suggests that they were aware that context was important to the negotiation of meaning process although the researchers did not examine this aspect in any detail.

Pica and Doughty (1985) were not able to draw definitive conclusions about the benefit of communicative tasks for accuracy; despite hypothesizing that NS language in teacher fronted groups would produce more accurate utterances. However, like Gass and Varonis (1985), they were able to confirm that, generally, NNS group situations gave students a greater opportunity to negotiate meaning, in part because they could function in the roles of both addressor and addressee, and because there was greater chance for self-repair.
Conversely, Ehrlich, Avery and Yorio (1989) found that frequency of the use of negotiation of meaning strategies does not depend so much on whether a speaker is NNS or NS, but on the style of interaction, and that the use of negotiation strategies does not necessarily lead to the achievement of comprehensible input. Ehrlich, Avery and Yorio (1989) investigated NS/NS and NS/NNS dyads undertaking a one-way information gap drawing task. This is a task in which one participant has all the necessary information for the other participant to complete the activity. For example, one participant describes a picture and the other has to draw it without looking. Ehrlich, Avery and Yorio produced a model for the procedure involved in undertaking such a task. First the participants orient themselves to the object on the page that they must describe. Then the participant who is giving the information gives it an identification (e.g. “It’s a sunflower”), followed by a description of the object. Some people describe the object in great detail, while others give only a brief description. The researchers called these people respectively “embroiderers” and “skeletonizers”. They found that skeletonizers had more success at negotiating meaning to produce comprehensible input for the hearer because the breakdown in comprehension was easier to trace since it occurred closer to the first introduction of the topic, or, according to the researchers, higher up in the “discourse tree”. Conversely, embroiderers were less able to find where the breakdown had occurred so had to retrace their discourse steps in more detail.

Ehrlich, Avery and Yorio also found that “skeletonizers will abandon negotiation of meaning when the items being described are not crucial to the identification of objects” (1989:408). For example, in an instance where an NS was trying to explain
the meaning of the word "fin" to an NNS partner in order help him to draw a fish, the
NS abandoned the first attempt to explain when it became apparent that the NNS had
not understood, and shifted focus to another part of the drawing:

(2) NS: on top/ sorta like a shark’s fin but not pointed/ you know like
NNS: how can I do that?
NS: uh just uh/ how would I describe it/ it’s the/ in this drawing it’s parallel
to the body/ it’s close to the body/ it’s just like a (laughs)/ this is really
weird
NNS: can you say again?
NS: (long pause) It’s got a nice tail...

(Ehrlich, Avery and Yorio, 1989:407)

On the other hand, according to Ehrlich Avery and Yorio, an embroiderer will
continue to attempt to clarify meaning, or extend the negotiation, as the following
example shows, where the NS persisted with the initial line of explanation until he or
she realized an earlier term was causing the communication breakdown:

(3) NNS: what is top of the stem?
NS: the stem is the line you drew going up the middle
NNS: middle?
NS: yeah/ you know the line you drew that ends/ it’s what a flower stands
on/ it’s like the trunk of a tree or the stem of a flower/ well the very top
of it/ where the stem is the highest/ the beginning of the stem
NNS: stem?
NS: you don’t know what the stem is?
NNS: no

(Ehrlich, Avery and Yorio, 1989:409)

While these researchers put the onus on the NS to repair the discourse because they
held the information the NNS needed, the utterances of the NNS also need to be
considered as part of the negotiation of meaning process in the way they provoke
responses from the NS. In excerpt 2 above, for instance, the NNS seems to have had a
greater understanding than the NNS in example 3. Certainly he or she is able to
indicate lack of understanding more proficiently than the NNS in the second excerpt.
That participant appears to have understood very little, merely responding with the last word he or she has heard in each NS utterance. Therefore it is left to the NS to realize that there has been a breakdown in understanding and react to that breakdown. Again it is the contextual aspects, including who the interlocutors are that determine what language is used and how the discourse is built, indicating that negotiation needs to be considered as a mutually guided process in learner interaction with other people.

The research by Ehrlich, Avery and Yorio (1989) was, however, unusual in that the NS participants were not people involved in teaching English. They had also had very little contact with NNS. Many previous studies had involved NS such as ESL teachers who were accustomed to moderating their English for NNS. While both contexts produce language that can be considered natural in the context in which it occurs, the research situations are still not typical of real classroom interaction. This is significant when one considers that the general overarching aim of negotiation research is to examine the effect of communicative classroom activities on acquisition.

In response to the on-going consideration of the role of negotiation in language acquisition, Foster (1998) considered it was necessary to look at the language of negotiation actually taking place in the classroom setting, rather than in a context specifically set up for research as in the studies above. She conducted her research using different task types to investigate their influence on the number of opportunities they gave for production of the target language and “through conversational adjustments, to manipulate and modify [the target language]” (1998:1). Such activities involve negotiation of meaning, which Foster defined as “checking and clarifying problem utterances” (1998:1) and like earlier studies relates to the production of
problem utterances” (1998:1) and like earlier studies relates to the production of comprehensible input. She also looked for comprehensible output (Swain, 1985) that was produced by the NNS. Comprehensible output, which is language that is modified by the NNS, as an outcome of negotiation of meaning, will be discussed in the next section. Foster’s NNS population were from a mix of language backgrounds and were Intermediate level part time ESL students. All her recordings were made during the course of regular lessons. She grouped her students in dyads for two tasks and in groups of four or five for two other tasks. Two of the tasks were two-way or jigsaw activities, in which participants had to share their own information to build a shared picture, while the other two were tasks in which students had to plan something together. The sources of the tasks were textbooks regularly used in class, in order to maintain the normal lesson environment.

Like earlier researchers, Foster counted units of language in investigating the amount of negotiation of meaning. However, rather than looking for “T Units” she sought “c-units”. These she defined as “utterances which are meaningful though not necessarily complete” (1998:8), and which may be of value more for pragmatic reasons than as grammatical units. Each of these was called a “negotiation move”. Within this framework Foster isolated confirmation and comprehension checks and clarification requests as specific examples of negotiation activity. In addition, to measure modified output as an outcome of negotiation, she added four extra categories of grammatical units; semantic, morphological, phonological and syntactic modifications.

As would be expected in a normal classroom situation, Foster (1998) found that some students did not participate, letting others do the talking. Many also did not indicate
their lack of understanding when it occurred. She explained this as being a common strategy for learners of a new language – feigning understanding to keep the flow of the dialogue going. Foster also found that incidences of modified output in response to indications of lack of understanding were very low; out of 87 negotiation moves only 20 produced modified output, the chief kind of which was semantic.

Foster’s explanation for the low level of negotiation activity in her study was to say that the obligation to transfer information, as in the tasks she used, was not a reliable facilitator of negotiation and modified output; rather it was the dyadic grouping that “was better at getting students to talk” (1998:17). Her conclusion was that despite the implications of the findings of earlier studies, negotiation for meaning is “not ‘alive and well’ in the classroom” (1998:19). By way of a solution Foster suggested that negotiation routines needed to be taught and practised in the classroom, or, as in the work of Swain (1998) that is discussed later, negotiation can be promoted in the use of error correction tasks.

Foster (1998) assumed that an absence of negotiation units showed there was no negotiation of meaning. This was particularly evident with quieter students. She therefore concluded that “contrary to much SLA theorizing,... negotiation for meaning is not a strategy that learners are predisposed to employ when they encounter gaps in their understanding” (p.1). However, such a view seems limited as making meaning is an essential process between interlocutors, whatever their competence, and feigning understanding or remaining silent are part of that process.

Foster’s (1998) approach towards the negotiation of meaning in language learning,
like that of those researchers already discussed, sees it essentially as a functional routine like complaining or apologizing and emphasizes the importance of this function in the production of comprehensible input and output for the interlocutor who demonstrates lack of understanding. Therefore, individual utterances within longer language routines have once again been taken in isolation as being representative of negotiation of meaning. However, the major flaw with this approach is that it does not acknowledge either the influence of task context features on language use, nor the fact that isolated utterances tell the researcher very little about whether agreement on meaning has actually been reached in a conversation as a whole. Furthermore, successful communication is not merely a matter of understanding the words in the conversation. Even speakers in their first language will fail to get the intended message when they understand every word, and in learning a new language every word in an utterance may be understood, but even a quite mundane meaning not grasped. A further problem is that these findings fail to demonstrate the benefits of negotiation of meaning in the learning environment. The most obvious overall finding in the research discussed above is that students do know how to repair breakdowns in coherence. Nevertheless, the role of negotiation of meaning in the production of comprehensible input has been the focus of research in this field since its beginning.

Furthermore, treating negotiation as a functional aspect of discourse with categorial definitions is contentious because, as Hatch (1992) and Coulthard and Brazil (1992) have pointed out, labeling units and processes in discourse definitively is extremely difficult since the conversational context, or the goal of the study producing the definitions, are never exactly the same in any set of situations.
2.1.2. Comprehensible Input and Output

The formulation of models that labelled strategies and mapped occurrences of negotiation of meaning in interactions has been a significant aspect of negotiation of meaning research. A further significant aspect has been findings regarding the role of comprehensible input and output. Early negotiation of meaning research found that comprehensible input was achieved through negotiation, and in turn there was some benefit to language acquisition. One of the earliest studies was that of Scarcella and Higa (1981) who found, in a study into the effect of age on the production of comprehensible input, and therefore language acquisition, that lack of opportunities to negotiate, or seek comprehensible input, disadvantaged learners. Their study was in response to research at the time that showed that older learners were able to acquire a second language at a faster rate than younger learners in the earlier stages (Krashen, Long and Scarcella, 1979, in Scarcella and Higa, 1981). The study involved Mexican NNS children and adolescents who had been in the USA less than six months.

In undertaking a block-building task, the NS modified their language to such an extent that it became too simple for the young NNS. The researchers concluded that the older participants were unable to judge the linguistic proficiency of their younger partners. Therefore the children had little chance to negotiate, in the sense of seeking comprehensible input, and lacked the social skills to change the situation. The researchers noted that in many instances the child NNS was virtually silent. Conversely, they found that in adult NS/adult NNS, or adult NS/adolescent NNS dyads doing the same activity, the NNS were much more active negotiators in the conversation because of the more “optimal” input provided; that is, the input was just
within the range of their comprehensibility. Scarcella and Higa concluded that lack of negotiation may result when input is either too simple or too difficult, and that it is likely to be associated with less than optimal language acquisition in younger learners.

Scarcella and Higa's (1981) definition of negotiation of meaning was broader than those that came later. They described it as:

...the "work" involved in helping one another communicate, for example, by jointly expressing messages, filling in lapses in the conversation, indicating gaps in understanding, and repairing communication breakdowns. (p410)

Despite the acknowledgment of the shared role of interlocutors in negotiation that this definition suggests, Scarcella and Higa looked at the language of the participants in isolation in the same way as the researchers discussed in the previous section. For example, instead of examining the process by which the speakers "worked" together, Scarcella and Higa (1981) reported the utterances participants made, for example, the adolescent NNS used questions and expressions such as "Huh?" to show lack of comprehension. There was no attempt to place these utterances within the context of the language around them, or to ascertain whether meaning was in fact negotiated as an outcome of working together.

Throughout their discussion, the authors provided data to show that the NNS children were very passive conversational partners when paired with adult NS. Scarcella and Higa give the following example of a typical excerpt from the NS adult/NNS child data:

(4) Ja (adult): Now can you put that one there? Okay, push down on that so it snaps on. Push down on your side and I'll push down on mine. Got it? Okay.
What's next now? This is the third green one? We’re up to here. *(pointing)* A white one. Let's see. Right there... *(Scarcella and Higa, 1981:420)*

Clearly, in this case, the participants are taking the experience as a learning situation with the adult coaching the child. Scarcella and Higa remark on the extensive use of imperatives by adults as in example 1 above. However, little can be said about the actual presence of negotiation since the whole process of carrying out this task is not shown by the researchers, the passage being taken out of context. There is also no indication of whether or not meaning was successfully negotiated, and what the role of the NNS might have been in “working” on that meaning.

As we saw in the previous section, more recent research has moved away from the paradigm that gives the main responsibility to the NS to modify comprehensible input. For example, in opposition to the assumption by Scarcella and Higa (1981) that NS would modify their language for an NNS interlocutor, Flanigan (1987/88) found that the use of modified input by NS children for NNS children was not common, but argued that the language acquisition rate of those NNS was not affected. However, Flanigan does not elaborate on how acquisition was measured beyond referring to successful “academic language proficiency”, as judged through classroom participation, as opposed to “social communicative skills” (p32). Her assessment of both forms of proficiency was based on observations of children over a three-month period in one kindergarten class, one second grade class and one fourth grade class, with periodic audio and video taping of participants for closer language examination. In addition Flanigan looked closely at one child from each level to assess how they typically negotiated for comprehensible input and how this in turn was related to their language acquisition. She found that each child functioned quite differently in their
use of strategies in peer conversations with NS, and that the academic and informal contexts produced different strategies in each child. The kindergarten NNS child who was studied in depth tended to rely on "imitation, repetition, word and sound play and formulaic chunks" (Flanigan, 1987/88:37) as strategies for eliciting comprehensible input from others. By contrast, the second grader that was studied did not engage in much talk with peers, instead interacting mostly with her teacher, asking questions and responding when she knew the answer. She enjoyed controlled language activities. The fourth grader was less comfortable with teacher fronted activities, instead engaging with her peers, and in certain contexts taking the lead role in negotiating meaning with her NS friend. However, Flanigan reports that each of these children showed that they were acquiring English at an appropriate rate despite their different strategies for the negotiation of comprehensible input. Although Flanigan’s findings tend to support the prevailing belief of the time that group work facilitates language acquisition, she failed to show how the "negotiation" strategies that she identified, which could possibly be more accurately named "classroom learning strategies", were linked to that learning, and how these strategies might have facilitated it.

In summary, whereas Scarcella and Higa (1981) argue that the NS will modify his or her language to provide comprehensible input for the NNS, Flanigan (1987/88) argues that in fact the NS will not necessarily modify language to provide comprehensible input through negotiation of meaning. These opposing findings indicate the difficulty in reaching conclusive results when negotiation of meaning research assumes that the onus is likely to be on only one participant in the conversation to establish comprehension or meaning. Furthermore, making assumptions about the linguistic
proficiency (and ultimately language acquisition) of NNS while engaged in conversation with NS can only illuminate one aspect of the total picture of SLA development. The NNS in such cases are generally forced to conform to NS cultural conventions, particularly when the relationship is that of adult and child as in the Scarcella and Higa study, when, as the researchers themselves point out, the Mexican children probably had no experience of interacting with western middle class adult strangers such as those who took the NS participant roles in their data collection. In such situations the NNS may even be expected to perform in a context that is inconsistent with their own culture (Baldo, 1988).

While focusing on the language of individuals, Scarcella and Higa (1981) and Flanigan (1987/88) not only overlook the broader issue of contextual parameters relating to setting and personalities that help to structure the negotiation of meaning, but also how utterances react with each other. Each new situation generates its own language. Additionally, Hall (1995, in Lantolf, 2000c) has remarked that while talk in the language classroom can be comprehensible, it is often not “meaningful” or relevant to the true-life context for the learner, and therefore its potential to aid development is limited.

As long ago as 1985, however, Gass and Varonis (1985) had investigated the effect of context (situational and/or social role) on an interlocutor’s “behavior as a negotiator of meaning” (p149) in NNS/NNS conversations. Their assumption, in keeping with those of other negotiation of meaning researchers at the time, was that misunderstanding in dialogue was resolved through negotiation to achieve comprehensible input. They looked at how different task types affected negotiation.
They used one-way information gap tasks, which are activities where one person has all the information and the other none. In addition, Gass and Varonis used a two-way task, in which each participant has different information that they must share to complete a jigsaw activity. In this case Gass and Varonis (1985) had the participants separately listen to different information about a bank robbery and then get together to decide who the culprits were.

Gass and Varonis (1985) found that that task type did indeed affect how often the participants negotiated meaning with each other and the kind of strategies they used. The one-way task produced more negotiations, or indications of breakdown in comprehension from the hearer because the speaker had all the information. Conversely, because in the two-way task there was more shared information, there was less breakdown in understanding. In their study, by pairing NNS, Gass and Varonis were thus able to investigate more equal interaction patterns than had been demonstrated in previous studies using NS/NNS, and were therefore able to give fuller attention to other variables apart from that of the NS having to produce comprehensible input. Even so, ultimately their study merely clarified how interlocutors achieved comprehensible input in order to successfully carry out tasks without showing negotiation as an ongoing process or showing how learning might take place as an outcome of negotiation of meaning between interlocutors.

Furthermore, assuming that negotiation is only present in the hearer’s seeking to clarify information misses the joint aspect of reaching a shared meaning. In claiming that in a one-way task the hearer does the negotiation since he or she must obtain clear and useful information, the researchers neglected the role of the speaker in reaching that shared meaning.
The role of the NNS as an active participant in negotiation was seen as more relevant once the importance of producing “comprehensible output” (Swain, 1985) as well as receiving comprehensible input in language learning was established. This was as a result of the work of Swain, whose research is also discussed further below with that of other Vygotskian researchers, since in more recent years she has made a contribution to that body of research as well as that discussed in this section. Swain (1985) was concerned that students who had studied French in an immersion stream for seven years, and had therefore received consistent comprehensible input, had not fully acquired native-like French. She made the point that in the immersion classroom situation, these students had had little opportunity to engage in two-way negotiation of meaning, since typically the target language was used mostly by the teacher. Students had, over seven years, established “strategies for getting their meaning across which [were] adequate for the situation they [found] themselves in” (Swain, 1985:249), that is, in their classroom, so although they did produce utterances in French, these were limited, and the students were not pushed to examine grammatical features or work on their accuracy. Swain concluded they needed to be pushed while still learning the language to find alternative ways to make themselves understood, or to be actually negotiating meaning in a variety of contexts beyond the familiar. She argued that tasks were needed that would require them to focus on the production of accurate language. In this shift of focus from input to output, Swain argued that the benefits of the production of comprehensible output to SLA are that students could test hypotheses they might have about the language and this would force them to focus not only on the message but also on accuracy of form, resulting in balanced acquisition of that language. The way was opened to examine the learning process through the
production of output by the learner. Furthermore, Swain extended the definition of negotiation of meaning to include “the notion of being pushed toward the delivery of a message that is not only conveyed, but that is conveyed precisely, coherently, and appropriately” (1985:249).

Once the role of comprehensible output (as well as input) was argued to be important in language learning, negotiation of meaning researchers began to investigate the role of negotiation of meaning in the achievement of comprehensible output in learner language. For example, in response to Swain’s (1985) findings that comprehensible output was necessary for successful language acquisition, Pica, Holliday, Lewis and Morgenthaler (1989) investigated how NS influenced the production of comprehensible output in the context of different task types. They looked at three different task types: a one-way information gap task, a two-way jigsaw task, and an open-ended discussion without specific topics or precise information. Their research population consisted of ten Japanese of low and mid intermediate level English proficiency interacting with one of ten NS. Pica et al started with the hypothesis that the NNS would modify their language in response to NS indications of lack of understanding of the intended meaning, thus producing comprehensible output. In order to examine the comprehensible output the researchers counted different types of linguistic units produced by both the NS and NNS when they experienced a breakdown in understanding, using the model formulated by Gass and Varonis (1985) discussed above (Trigger, Indicator, Response, Response). They found that the NS did indeed indicate lack of understanding through clarification requests, or by giving a confirmation of what they thought the NNS had said. For example:
The researchers also found that task type was not as great an influence on the use of negotiation strategies as the signal type given by the NS. They concluded that the NS language input therefore had an important role in the production of comprehensible output by the NNS. However, like the research by Gass and Varonis (1985) into the effect of task type, Pica et al (1989) found that the one-way information gap task in which the NNS had all the required information provided the best context for the NS to signal a misunderstanding and therefore to provide a better opportunity for NNS modification. The researchers concluded that task type is only one parameter of negotiation, which is “an outcome of ... a host of inter and intra personal variables as well” (p84). However, the exclusive focus on the influence of task type and the methodological technique of isolating the incidences of different negotiation strategies meant that little attention was given by the researcher to the actual process of negotiation and learning through negotiation.

Interestingly, in her 1988 research, in seeking to describe NNS comprehensible output and whether, in negotiation of meaning as a response to breakdown in understanding, the NNS produced more target-like language than otherwise, Pica had already found that negotiation of meaning was not necessarily a matter of modifying input or output. She had investigated the adjustments made in conversations between NS and NNS, expecting the NNS to make modifications to their language when the NS indicated lack of understanding. Instead, she found that the NNS did not try to produce comprehensible output by modifying their language; it was the NS who made the modifications, just as in the earlier research. The NS were, in effect, continuing to
modify input although the research had been designed to monitor production of
comprehensible output by the NNS. Nevertheless, the dialogue excerpts Pica includes
in her 1988 article show that the NNS did in fact play a significant role in helping the
NS to understand their intended meaning by adding information, as the following
example shows:

(6) NNS
(1) and they have the chwach there
The chwach—I know someone that-
What does it mean?
Like um like American people they always
Go there every Sunday, you know—every
Morning that
There pr that — the American people get
Dressed up to go to um chwach

NS
the what?
yes?
oh to church- I see

(Pica, 1988:47)

This extract shows that it is more the concepts than target like language that assist the
NS to follow the NNS meaning because it is the meaning that is being negotiated, not
the language form. Traditional negotiation of meaning research does not look beyond
breakdowns in understanding between the interlocutors. Furthermore this excerpt also
demonstrates how the NNS is "learning out loud": testing hypotheses about how
'church' can be defined at the same time as providing clarifying information to help
her interlocutor understand what she is saying. It is particularly interesting that, in
spite of the focus on comprehensible output this process is not discussed by the
researcher.

Pica (1988) has thus shown an example where the onus was on the NS to understand.
Language use in social contexts at any given moment is always asymmetrical since
one participant has the responsibility of expressing meaning while the other must decipher what might have been meant at any point in the conversation (Rommetveit, 1985). However, conversation is not simply a matter of making language input and output comprehensible. While these aspects are important, it is the joint construction of knowledge from, for example, questions and responses that are the basis for mutual comprehension. (Swain and Lapkin, 1998). This is a process (Ohta, 2000). The generally contradictory results of negotiation of meaning research have come about, in part, because of the lack of recognition of contextual variables and the uniqueness of each interaction, along with the lack of appreciation of the importance of the equal roles of interlocutors in working together to understand each other in an ongoing process. Furthermore, the examination of exchanges in isolation misses both this process aspect of conversation and the necessary cooperative nature of dialogue.

Recently the idea of input and output as essential parts of language learning has been extended by Swain, taking into consideration the aspect of cooperative efforts to understand. She has called the dialogue which contains comprehensible input and output a "collaborative dialogue" (2000). The traditional idea that negotiation of meaning is primarily a process employed by interlocutors to achieve comprehensible input or produce comprehensible output during breakdowns in understanding has been rejected by Swain as too limited. She considers that such a view misses the collaborative knowledge building aspect. Furthermore, she also notes that no study has yet shown that improved comprehension achieved through negotiation actually leads to learning. This may be considered to be because looking at utterances in isolation, with examining comprehensible input and output as the aim, fails to show the process of how comprehensibility is achieved and whether the novice retains the
forms. For negotiation of meaning research to be maximally useful in providing implications for teaching, it needs to be placed in a much wider framework than the studies discussed here.

The research reviewed in this section suggests that negotiation of meaning has been defined too narrowly, even by researchers interested in both input and output. In addition, other researchers have interpreted the same strategies in interactions differently. For example, Aston (1986, in Ellis, 1994:262) has pointed out that “negotiations” do not always indicate problems in the exchange, but rather can be “a ritual of understanding or agreement”.

However, a recent and encouraging line of research seems to be addressing the need to broaden the framework for investigation of the negotiation of meaning. In response to findings by researchers such as Gass and Varonis (1885) and Pica et al (1989) that information gap activities facilitate more negotiation because of the need for “precise production”, Nakahama, Tyler and van Lier (2001) have further investigated negotiation in the language of NS/NNS dyads carrying out two kinds of tasks. The research participants were required to work on a two-way task in which they had to establish what the differences were in their pair of pictures. Following this they took part in an unstructured open-ended conversation in their pairs.

Nakahama et al (2001) isolated “negotiation of meaning cycles” based on sequences of repair in conversation. The researchers used a model formulated by Doughty (1996a, in Nakahama et al, 2001) in which the utterance that is not understood is called a “trigger”. The hearer’s request for clarification, or indication that there has
been a breakdown in understanding, is called a “signal”. Following this the speaker gives a “response” and the hearer then gives a “reaction”, thus completing a cycle of repair.

The researchers examined the data “in order to identify different ways in which repair negotiation took place” (p384) by particularly looking at the element that “triggers” negotiation of meaning interaction. They found that while the structured information gap activity produced a higher amount of repair negotiation, defined in terms of negotiation of meaning cycles, the open conversation provided a greater variety of repair negotiation activity. They also found that the negotiation in the information gap activity tended to relate to isolated lexical items, whereas the negotiation in the open conversation was more likely to be related to global understanding.

Through examining the language produced by participants while carrying out the open conversation, Nakahama et al (2001) were able to extend the notion of strategies used in negotiation to pragmatic features. For example, in the following example, they claim that Sumiko uses silence in line 457 to indicate nonunderstanding, and that this use of silence is therefore a legitimate negotiation strategy in this context:

(7) 456. Rita: What does your floor look like?
457. Sumiko. Mm…[2-second pause]
458. Rita. Mine has lines that go a bunch of different directions
459. Sumiko. Um…the lines…[incomprehensible]

(Nakahama, Tyler and van Lier, 2001:395)

In this excerpt there is no overt indication of lack of understanding. However, according to the researchers, this is a negotiation cycle since some repair was carried out. In line 457 Sumiko indicates a breakdown in understanding by her hesitance.

According to the researchers this is as much a signal of lack of understanding as a
direct question. In response to the hesitation, Rita elaborates on her previous utterance in an attempt to create comprehensible input for Sumiko.

Because of the use of negotiation to achieve shared meaning, the researchers conclude that conversation activities do “have the potential to offer substantial learning opportunities at multiple levels of interaction” (Nakahama et al, 2001:378). In addition, and most significantly, they suggest that negotiation of meaning does in fact go “beyond instances of repair to include other interactional phenomena” (p382).

In the following section, the work of Vygotsky is proposed as a theoretical basis for broadening the approach to negotiation of meaning further beyond “repair”. Vygotsky saw language as the mediator of a cognitive process that occurs when people interact (Vygotsky, 1978). This cognitive process links the internal and external worlds of all interlocutors (Ellis, 1985 in Edmondson, 1991:188) and so language can show how this linking is progressing, or how a shared reality is being established. Therefore, in examining negotiation of meaning, the whole process of building meaning through language should be studied, not simply isolated incidents in the completion of a task and related to the production of comprehensible input and output. Vygotsky considered that “a dynamic display of the main points making up [any psychological] processes’ history” (Vygotsky, 1978:61) should be considered to examine change. Therefore, in SLA research, much more than merely the use strategies to repair breakdowns in understanding such as clarification requests needs to be examined to establish what is involved in speakers understanding one another. The discourse as an ongoing process should be considered. Furthermore, meaning is not easily compartmentalized; several conversational turns or a whole conversation may be
necessary to reach a shared meaning, and may contain a multiple of meanings.

2.2 Vygotsky

Vygotsky developed his theories about thought and language in reaction to two main influences. One was the Soviet political setting of the time. His theories had their origins in Marxism; he wanted to produce an explanation for the development of thought and language that was harmonious with the prevailing theory that cooperation through work was the ideal way for a society to develop, with the tools of work as the mediators of development. Also relevant was Darwin's revolutionary theory that there was an evolutionary continuity between animals and human beings, and that, while the higher animals were also able to use tools, humans were able to use them to master and change nature to serve their own purposes (Cole and Scribner, 1978).

Scientists at the time drew conclusions about the development of the human intellect through studying chimpanzees. Because chimpanzees could use tools but not speak, researchers such as Koehler (1921) and Buehler (1927), whom Vygotsky directly criticizes ([1934], 1962), did not make the connection between "speech and practical intelligence" (Vygotsky, 1978:24) which Vygotsky was making at the time. He responded to these researchers by arguing that speech and the use of symbolic signs is a specifically human characteristic. Once they are "incorporated into any action, the action becomes transformed and organized along entirely new lines" (Vygotsky, 1978:24). The tool of speech is effective in both individual and societal development, according to Vygotsky.

Vygotsky also reacted against European psychological studies of the day into the relationship between the inner and outer worlds of human beings. Cole and Scribner
explain that the opposing approaches of Wundt, who studied consciousness through introspection by analyzing its "constituent elements" or "simple sensations" (p3) and that of the behaviourists who preferred to examine externally perceptible behaviour in other people, led Vygotsky to respond with a more holistic or unified approach than that of either the "introspectionists" or behaviourists. He felt that both their approaches relied on a "stimulus-response framework" (Vygotsky, 1978:59) rather than examination of the process linking the stimulus and response. He also objected to the study within these schools which "analyzes verbal thought into its components, thought and word, and studies them in isolation from each other" (Vygotsky, [1934] 1962:3) as though they lead "separate lives" (p 4), even looking at the single isolated sound as a unit of analysis. He considered that such an approach has little connection with the study of human speech, since it fails to consider the psychological properties peculiar to speech. In other words, many living things make sounds, yet they are not considered speech without the intelligence component that allows for creative language production. He argued that all aspects of thought and language are inextricably linked together in the whole and are subject to contextual change.

The value of using Vygotsky as the basis for an investigation into study of language use is founded on the premise of a relationship between thought and language since he saw these as inextricably linked as a process mediated by external objects and the language itself. Furthermore, a primary aspect of the examination of language in a Vygotskyan framework is the focus on interpersonal dynamics rather than individual activity since he also saw language and thought as socially engineered activities.
Vygotsky reduced the concepts of language and thought to a system of inner and outer worlds, which differed, however, from the theories of Western psychologists of the time such as Jean Piaget (1896-1980), whom he directly challenged. Piaget proposed a fixed relationship between the two worlds, but the relationship Vygotsky proposed is described as a mediated process, because inserted between the external aspect and the psychological operation is the “intermediate link or psychological tool” as mediator (Vygotsky, 1960). He considered the mediator to be “the sign, or word, as the means by which we direct our mental operations, control their course, and channel them toward the solution of the problem confronting us” (Vygotsky, [1934] 1962:58). This is a psychological analogy with the use of, say, a hammer on a job as the tool which mediates or assists change in materials through the direction of the human being. In addition, the relationship between the inner and outer worlds is not fixed since the mediator has influence (Vygotsky, [1934] 1962).

Furthermore, in response to Piaget, who considered speech to be an internal process emerging relatively late on the social plane, Vygotsky saw speech as, first and foremost, a social function emerging very early in first language development. As development continues, the child learning his or her language divides social (and therefore verbal) speech into two functions: “egocentric and communicative speech” (Vygotsky, [1934] 1962:19). In this social activity, meaning is also being negotiated. Eventually concepts go from being inter-psychological, or social and collaborative, to intra-psychological, or inner and personal. Through this process the interlocutors ultimately build the “sense” of words both on a personal and social level (Vygotsky, 1934). Looking at this process of transfer of speech from the inter to intra-psychological worlds by examining the language used, according to Vygotsky, reveals
Being so dependent on social context for mediation means that the meaning of words is very fluid, indeed, "the sense of a word...is the aggregate of all the psychological facts emerging in our consciousness because of this word...[which] readily changes its sense in various contexts" (Vygotsky, 1934:42). Vygotsky does not deny that there is a stable meaning, but argues that meaning be regarded as the very core understanding of the word by the speaker, whereas sense arises from context. On the other hand, a nonsense word, for example, without a social sense is "a word without meaning [and therefore] an empty sound, [and is] no longer part of human speech" (Vygotsky, [1934] 1962:5). Once speakers begin to use a word, a concept will come into being in association with the word, but this is impossible without some mediating action; people "agree" it has a certain sense in particular contexts.

In learning their first language children begin with "pseudo concepts" (Vygotsky, [1934] 1962:66), which stabilize as they mature. Vygotsky remarks that children may recognize a word as a familiar sound but not the concept, and so sometimes have difficulty learning to use that word. Furthermore, children are inclined to over generalize meanings at first during the process of learning to use words in accepted cultural contexts.

The evolution of concept formation and the ability to use concepts accurately is related to what Vygotsky calls "higher psychological processes" (1978). This involves voluntary control and conscious realization of thoughts, and originates in the social arena through contextual mediation. Before the higher processes develop, according
to Vygotsky (1978), there is the very early "elementary function", which is without voluntary control and conscious realization, originates in the individual and is without social mediation. Babies are born with this latter faculty while the former (higher processing) develops. He argues that although children can have sufficiently developed higher mental functioning, the systematic teaching or drilling of concepts is useless because they must be acquired experientially through social mediation (Vygotsky, [1934] 1962). While adults can pass on the stable meaning of a word to a child, they cannot pass on their mode of thinking with its full "structural, functional and genetic peculiarities" (Vygotsky, [1934] 1962:68). Although his discussions were in the field of science teaching, this reasoning can be extrapolated to general pedagogy and language learning.

The formulation of concepts as they move from the inter to intra-psychological planes through social mediation is seen by Vygotsky as part of cognitive development, and he therefore draws implications for pedagogical theory. Since development is socially dependent, he sees the optimal learning condition for younger children as being guided by another already knowledgeable person through social interaction. He calls this the novice/expert relationship, with the guiding taking place in the "zone of proximal development" (ZPD) (Vygotsky, 1978). The expert will set psychological goals for the other as a means of assisting their achievement, while coaching them through to that achievement by the use of "scaffolding". Vygotsky called the gap between the novice's knowledge and the goal, the ZPD or level of potential development. This potential development is as important as actual development, since the required competence is there in "embryonic" form (1978:86), although it requires a social context to be activated and hence made operative. However, using the concept
of the ZPD as a pedagogical tool does not mean it is possible to assign competence at a certain level (including linguistic competence) when competence is defined as what the speaker knows rather than how he or she uses that knowledge, since we can only look at how the learner behaves at the time.

Vygotsky’s theory about the process of thought and language development in children includes an object-focused stage when the learner is unable to decontextualize language (Vygotsky, 1978). He argued that if regulation of thought, and thus language, with the help of the object does not help carry out a task, the child will often turn to an adult for help. The adult helps to guide the child’s thinking processes and actions since that adult is an “expert” who “has the ability to perform the task strategically” (Frawley and Lantolf, 1985:20). Consequently, at this stage the child is able to carry out tasks with the help of another person within the ZPD. Following this stage, the developing child is able to self-regulate and perform tasks without the help of anyone else, indeed, eventually, without the help of speech at all. According to Vygotsky “the history of the process of the internalization of social speech is also the history of the socialization of children’s practical intellect” (1978:27, original emphasis).

In the process of learning to regulate his or her own thoughts, according to Vygotsky, the child also begins to internalize the language of thoughts. The initial vocal egocentric speech is, according to Vygotsky, eventually transferred to non-vocal “inner speech” (Vygotsky, [1934] 1962). Although egocentric speech seemingly dies out as inner speech grows along with self-regulation and higher mental functioning, it is only the vocalization that diminishes. Vygotsky describes inner speech as “thinking
in pure meanings" ([1934] 1962:149), and it is here that the sense as opposed to meaning of words stabilizes. Vygotsky defines “sense” as “dynamic, fluid” and “the sum of all psychological events aroused in our consciousness by the word”. “Sense” is therefore acquired through the context the word appears in. Conversely, “meaning” is stable and can be likened to a dictionary explanation of a word. ([1934] 1962:146).

Egocentric speech remains, however, and therefore may surface again through vocalization from time to time.

The Vygotskian model is sometimes called the “socio-historic” approach to the relationship between thought and language in acknowledgement of the historical and social influences in the individual and the culture (Lantolf and Appel, 1994a). There has been some criticism in the literature of Vygotsky’s emphasis on these external social aspects and relatively scant consideration for the internal field (eg Wertsch, 1985). For example, although Vygotsky considers there is a “natural” or internal line of development, which shows itself as “practical intelligence” in the infant (1978), Wertsch (1985) considers his model to be flawed in this regard. He explains that “the natural line of development may operate in relative isolation in early childhood” after which it is “integrated with the cultural line in a process of “emergent interactionism”” (p43). However, once the socio-cultural features begin acting on the internal processes, Wertsch says that Vygotsky apparently forgets the role of the internal. Vygotsky does not really address what it is that the social processes actually act on, or how the natural line of development might affect the social forces. This is possibly because of the Marxist origins of his theories, which, above all, valued social cooperation. He did, however, acknowledge that there are affective and intellectual parts of consciousness: “endowments”, or “the living motives, interests and attractions
of the thinking human” (Vygotsky, 1934a, in Wertsch, 1985:189) which are part of the linguistic and cognitive development of the individual. However, he considered these to be affected by society, rather than having effects on that society. In simple terms, Vygotsky tends to discount the nature aspect of the nature/nurture dichotomy: “It is not nature, but society that above all else must be considered to be the determining factor in human behaviour” (Vygotsky, 1960a, in Wertsch, 1985:26). Consequently, contrary to his desire to use a holistic approach to his subject, Vygotsky’s theories do not offer a complete explanation for individual reactions to contextual influence in social speech.

Nevertheless, Vygotsky’s description of language and cognition as parts of a socially activated process that is mediated by signs gives a sound basis for studying language in the social context. His wholistic approach helps to build up a comprehensive picture of the activity of learning.

2.3. Vygotskyan SLA Research
In contrast to the traditional “negotiation of meaning” research that has already been discussed, Vygotskyan SLA research recognizes the process of language and cognitive development as shared and dynamic and dependent on mediation (Schinke-Llano, 1993; Swain and Lapkin, 1998). Based on the recognition of the process aspect of language and thought development, there is a growing body of work which examines the language of second language (L2) learners in group learning contexts, taking Vygotsky’s theories of first language (L1) development to the SLA arena. Looking at language in this manner has benefited SLA research in several ways. Observing the movement of concepts from the outer, or social world, to the inner
world through examination of the language used by learners, can provide evidence of
cognitive development and therefore trace the actual learning process to a useful
degree. Furthermore, the emphasis on the social nature of learning necessarily admits
the influence of context on the production of language. Traditional “negotiation of
meaning” research, however, has not been able to study the learning process in this
way because researchers examine utterances in relative isolation, with consideration
of only limited contextual features.

With the aim of explaining second language learner discourse, the original
Vygotskian concept of the process of cognitive development moving from the inter to
intra-psychological planes through mediation by spoken language has been further
developed by Frawley and Lantolf (1985) in relation to SLA. They examined the
language of low and high level NNS as well as child and adult NS to compare their
discourse strategies while carrying out the same task, which required the telling of a
narrative on the basis of pictures. Frawley and Lantolf observed the process of
internalizing learning in the NNS and the child NS, and described it in terms of
“stages of regulation”. These stages follow Vygotsky’s explanation of the early
development of thought and language in a child’s L1. Here Frawley and Lantolf apply
them to second language learners, arguing that the strategies used in L1 development
remain available for use in later learning. Frawley and Lantolf consider that learners
recover strategies that helped them learn their L1, such as the use of egocentric
speech, through a process of “continuous access” to these ingrained childhood
strategies, which surface in the adult as “private speech” (1985:22). In attempting to
gain “self regulation” in the L2, speakers “externalize their knowledge” (p26). The
researchers found that the use of external references as an indication of “object” and
“other” regulation had reduced with more advanced learners as they moved closer towards being able to fully self regulate in the context.

Frawley and Lantolf (1985) demonstrated that NNS, at a basic level of language proficiency, were generally “object regulated”, using the task to help them control the language used, and also “other regulated”, using their speaking partner in a similar way. Participants at a basic level of English proficiency, and the child NS, explicitly labeled characters when describing a pictorial narrative; for example, naming a boy in a series of pictures. According to the researchers, this helped these participants to “ground” themselves in mediating images provided by the pictures, i.e. to use these “objects” to regulate their thinking. In addition, in the same task, these participants approached each frame in the series of pictures as separate rather than as part of a narrative since they were unable to decontextualize the language relating to each frame to give an overall narrative. Furthermore, there was extensive use of the present continuous by these students. Frawley and Lantolf explained this as evidence of greater use of object regulation since, again, the speakers were not able to distance themselves from the task as the mediator of their language, seeing each frame as immediate. They could not at this stage express the narrative as a continuum, instead explaining the activity in each frame as an isolated event happening now.

Use of “other regulation” was also shown by Frawley and Lantolf (1985:29) in the language of those participants at a basic ESL level, in utterances that appealed to their partner for help. For example, the utterances “do you want to...”, “you want me to say...” and “I tell you where he is or...?” all show the speaker requesting information about how to organize the discourse. The speaker in these cases is not sufficiently
self-regulated to decide internally on their strategy for discourse construction. The process of reaching self-regulation was thus evident to some degree in the use of language to attempt to control the task.

Evidence (Frawley and Lantolf, 1985:28) was also given by the researchers for attempts by the more advanced learners to self-regulate, such as use of the word “apparently” in the statement: “I see, uh, apparently a young boy”. Frawley and Lantolf explain that, coming directly after the words “I see”, which function as an attempt to assert the speaker’s own perspective on the task and thus control it, “apparently” means “it seems to me”. This therefore indicates that the speaker is telling himself what he is thinking, and so attempting to self-regulate out loud. This kind of verbalization is again an example of “private speech”, or speech which has “social origins” but “takes on cognitive functions”, very much like Vygotsky’s “egocentric speech” (Lantolf, 2000:11). Private speech is one piece of evidence of the learning process as the speaker develops inter-psychologically through verbalizing. Later it becomes speech that is completely internal, or Vygotsky’s “inner speech”.

Frawley and Lantolf (1985) found that the more advanced learners were also often completely self regulated, or able to think, and therefore express, ideas abstractly as they worked on the task, not needing to verbally “ground” their thoughts in anything. These participants tended to use more general descriptions than the less advanced learners. Furthermore, the advanced learners, like the adult NS, were able to talk about the series of pictures as a continuous narrative. Unlike the less advanced participants and the child NS, they did not need to think so much about what they were saying frame by frame but could view the narrative as a whole. More advanced
NNS also generally used the simple past tense in telling the narrative, thus, according to the researchers, attempting to distance themselves from the object as mediator, and again, this is seen as an attempt to self regulate. Evidence for complete self regulation, as in the NS, was given in terms of use of the atemporal present, for example, “And somebody” walks up…”, “And then he says…”, and “And the bully walks”.

(1985:30) According to Frawley and Lantolf, this indicates that the speaker is neither trying to distance him or herself from the task as mediator, as when the past tense is used, nor viewing the narrative frames as entirely immediate, reflected in the use of the present progressive. Instead the atemporal present tense is both immediate and distant.

Frawley and Lantolf do not address the likelihood that the present continuous is learnt very early on in the ESL classroom, and would be extensively heard and practised in a variety of functions by students; whereas the atemporal present as a narrative tool is taught very late in the process, if at all. Students are unlikely to hear it extensively, or get much practice with it in the classroom, particularly in speaking. In other words, the participants used language forms that were most familiar, rather than others that they might not have had access to. They may simply have used the present continuous because of its familiarity, meaning they did not have to think about which verb tense they would use and were able to concentrate on other aspects of the task, particularly if it was difficult. This may be similar to students who, although quite advanced in writing and controlled speaking, will constantly use only the simple present and past when speaking fluently. Use of grammatical forms as indicators of self regulation or otherwise requires caution, since other factors also may have influence, such as the difficulty of the task, and the language forms that the learner has been exposed to.
In fact, the researchers also found evidence that the adult NS in their study were at times not completely self-regulated when the task became difficult. For example, the use of affective markers was seen in all participants as a strategy to control the task. Phrases such as "OK", "Oh my God", and "yeah" were used by the advanced NNS as means of object regulation, but such utterances were also evident in the NS language, although perhaps in more sophisticated form. For example, "Oh! I guess..." and "OK, I assume..." (Frawley and Lantolf, 1985:40) indicate the speakers' need to address themselves, or use private speech in order to gain control of the task.

The idea that the linguistic level of the participant is a significant determiner of the kind of regulation that speakers use has been challenged by Ahmed (1994). He considers that object and other regulation also depends on the difficulty of the task. In his research into the use of regulation strategies in NS/NS and NS/NNS dyads, he found that NS and NNS tend to employ the same regulation strategies but in different situations; object regulation is not the exclusive strategy of the novice. A NS will employ object regulation in a very difficult task, while a NNS will use object regulation for a relatively easy task that is linguistically difficult for them to manage.

Ahmed's 1994 article involved close examination of the discourse of two dyads that were drawn from his larger PhD study conducted in 1988. One dyad consisted of NS/NNS, while the other consisted of two NS. The participants had to solve a well-known visual puzzle involving a goat, a wolf, a cabbage and a man. The man has to carry the goat, wolf and cabbage across a river by boat, but in a certain sequence so that the wolf would not eat the goat and the goat not eat the cabbage. The solution is
given in seven illustrations of the stages of the maneuver which the participants must put in the correct order. Ahmed (1994) considered self-regulation would be evident in "the ability to relate the events at the macrolevel of understanding" (p163), or in an understanding of how the pictures related to one another in what is a difficult task even without the addition of having to use an L2. Ahmed found that even the NS had to resort to object regulation, as seen through their language, to help them carry out the task.

Ahmed found that the object regulation strategies of both the NNS and NS were displayed in choice of verb tense and aspect. For example, as Frawley and Lantolf (1985) had also found, use of the progressive indicated a need to relate to the picture frames individually in order to "discover" rather than "narrate" the solution, (Ahmed, 1994:164, original emphasis). However, in contrast to Frawley and Lantolf, Ahmed found that NS also used the past tense as an object regulation strategy rather than for self-regulation. For instance, in the narrative his participants related, one participant, "NS2", used both the present progressive and the past in describing one of the frames, both apparently as tactics to create a sense of immediacy. The picture showed the cabbage on the right bank and the man transporting the goat towards that bank. NS2 says:

(8)  
   i.   NS2: [Interrupts] He already brought the cabbage. Now...he’s  
   j.   bringing the goat [Looks at picture a]  

(Ahmed, 1994:165)

In line I, NS2 focused on the cabbage, while in lines i-j ("now...he's bringing the goat") she focused on the man. Ahmed claims she responded to two different stimuli in the one picture, which she viewed as an isolated frame. Later on, when NS2 and her NS partner had solved the problem, they both used the atemporal present to narrate
the story, showing, according to both Frawley and Lantolf (1985) and Ahmed (1994), that they no longer needed to “work out” the solution and had achieved self-regulation. Ahmed argued that the choice of language in attempting to self-regulate appears to be context driven, and therefore the relationship between language form, (in this case verb tense and aspect) and its function (regulation) is dynamic. This brings into question Frawley and Lantolf’s (1985) claim that tense and aspect have fixed functions in the process of reaching self-regulation and suggests that “in terms of regulatory behaviour, there is no absolute distinction between a NS and a NNS” (Ahmed, 1994:170).

In addition to these findings, which show that use of regulation varies according to context as well as linguistic competence, McCafferty (1992) has found that other, object and self-regulation strategies also vary depending on cultural background. His subjects were 15 ESL students of various Hispanic backgrounds and 15 of various Asian backgrounds. The proficiency levels of students varied from low-intermediate to advanced. They were required to “construct a narrative” around a series of six sequential pictures depicting an incident involving a hat seller and five playful monkeys. McCafferty used Frawley and Lantolf’s (1985) definition of “private speech” as speech that is “self-directed” in some way in order to help participants carry out a task and achieve self-regulation and is part of the process of moving concepts from the inter to intra-psychological plane as the speaker learns. As object regulation this included apparently errant forms of tense and aspect which were similar to those found by Frawley and Lantolf, and strategies such as labeling, counting and commenting on aspects of the narrative. For example, McCafferty says some of the subjects labeled the hat seller “John”. Some counted through the monkeys
as they attempted to self-regulate by using the “facts” in the pictures as regulators. For example:

(9) 1) There’s an old man sitting at a tree. And on the tree-one, two, three, four-five monkeys...

(McCafferty, 1992:183)

McCafferty also noted metacommments such as “the monkeys are cute”, which had no relation to the telling of the narrative, and qualification markers such as “He’s probably waiting for the monkeys” as incidences of object regulation since they were expressions of the speaker’s “own immediate temporal awareness and not to the internal temporal relationship of events in the narrative” (McCafferty, 1992:184). He also included sighs, laughter and exclamations in object regulation behaviour, when they seemed to indicate that the speaker felt he or she did not have a complete grasp of some part of the task.

McCafferty’s examples of other regulation included examples such as questions seemingly directed at the researcher (“Just tell a story about the picture?”), and those utterances that were more obviously self-directed such as the following example:

(10) “He fell asleep and the monkeys fell down – how do you say- fell down to…”

(1992:184)

Self-regulation was considered by the researcher to be evident in utterances that showed the speaker’s sense of being in control. For example, ”Five monkeys are playing with the man – no - the man is angry” demonstrates the speaker’s awareness of her own inaccuracy.

McCafferty found that the Hispanic participants used more “other” regulation strategies than the Asian learners. His conclusion was that different cultures have
different attitudes to autonomy and independence, and therefore other and self-
regulation, particularly in problem solving situations. He considered that there may
therefore be more pressure in Asian cultures to operate autonomously than in the
Hispanic cultures involved in his study. Furthermore, McCafferty (1992) also refuted
Frawley and Lantolf’s (1985) idea that NNS are predictable in their use of object-
regulation since he found variation of the frequency and use of strategies for object
regulation within the NNS population he studied. Such a finding is relevant in a
Vygotskyan framework where language is considered to be generated significantly by
the socio-cultural context of conversations. This aspect is particularly relevant to the
learning environment in an ESL classroom which involves participants of different
cultural and linguistic backgrounds.

The work of Frawley and Lantolf (1985), Ahmed (1994) and McCafferty (1992) that
is described above shows how different contextual features such as cultural
background, linguistic proficiency and difficulty of task all influence linguistic
behaviour. This is to be expected if one views thought and language as socially
mediated activities, and thus, acknowledges that each new circumstance produces
language particular to the context it occurs in.

In their 1994 paper, Brooks and Donato built on Frawley and Lantolf’s (1985) idea
that particular grammatical forms mediate as object regulation at different stages of
language development. They showed that whole utterances rather than single
grammatical forms functioned as object regulation. Utterances in this role ultimately
help the speaker to come to terms with the task, in that they often represent examples
of “metatalk”, defined as talk about the talk used to undertake the task. Brooks and
Donato’s initial interest was in examining this metatalk for what it reveals about learning, since, they claimed, teachers tend to mistrust it, considering it breaks away from the task at hand and, if available, usually employs the shared L1. However, they were able to show evidence of learning in progress in the metatalk used in their study. In addition, Brooks and Donato showed how speaking “creates a shared social world” (1994:273) by revealing joint task work as an ongoing communicative process rather than a series of brief exchanges.

The participants in Brooks and Donato’s study were eight pairs of third year high school students. They were all English speakers doing a jigsaw task in Spanish, and the researchers found that they frequently resorted to English to decide together how to use the Spanish. For example: “Ah, solamente, that’s a good word!” This utterance is an example of metatalk, which, in turn, suggests metacognitive activity, and, like private speech, is apparently addressing no one but the speaker herself. The authors also considered this to be an example of object regulation because it enables the speaker to make sense of their approach to the task, or object.

Another example of metatalk as object regulation is given in the following excerpt:

(11) S1 092 oh un momento
093 el semicircular faire um
094 no not faire that’s French
(general laughter)
095 um el semicircular derecha de el um de el [botom]
096 which way does it face?
097 down right?
S2 098 arriba
S1 099 arriba?
S2 100 si
S1 101 oh, we’re all screwed up!
S2 102 okay hold it
103 um no dere-no arriba

(Brooks and Donato, 1994:267)
In line 093 SI shows that he is having difficulty with the task and begins to use metatalk to try to regain control, until in line 101 he overtly expresses his frustration over the way things are progressing in English. However, in line 102, S2 takes control and enables them to continue with the task. According to Brooks and Donato this is an example of object regulation as a jointly constructed process, carried out through the use of metatalk. They make the point that, despite the metatalk being in the L1, it facilitated L2 production, and effectively “mediates one’s relationship with the new language” (Brooks and Donato, 1994:268).

Brooks and Donato (1994) also gave evidence of metatalk in the way the participants oriented themselves to the task. They considered this aspect of significance both for the metacognitive behaviour and the joint process involved. Following is an example of one dyad in the process of establishing how they will work through the grid pattern of the jigsaw task they have been given. First SI stops the discussion and excitedly tells S2 she has worked out the way to establish reference points on the diagram:

(12)  S1  177 -oye oye oye! (said excitedly)  
    S2  178 no no  
    S1  179 no no no look!  
       180 -veo veo veo (said excitedly)  
       181 un numero uh de  
       182 uno dos tres cuatro cinco seis siete ocho nueve diez  
       183 like that  
    S2  184 what?  
    S1  185 de izquierda de a derecha, si?  
       186 yo comprende?  
    S2  187 izquierda la derecha? (=what do you mean by that?)  
    S1  188 okay  
    S2  189 hold on  

(Brooks and Donato, 1994:268)

At first S2 does not realize that S1 is suggesting they count through the boxes from left to right and top to bottom. S1 has reached her own understanding of how to orient
themselves to the task. Eventually, S1 is able to orient her partner in the same way as the following excerpt shows:

(13)  
S2 250  ha! Ha!
S1 251  in the whole thing
S2 252  (?) your boxes
253  okay okay okay
S1 254  si, yo
255  tu tienes?
S2 256  en en ha!en
S1 257  in the whole “shlamolia” [said in a tone indicating frustration]
S2 258  I know what you’re talking about okay okay okay

(Brooks and Donato, 1994:269)

Although S1 guides the orientation process, S2 has an active role as his signaling lack of understanding regulates the course of the interaction. Later on S2 begins to use S1’s system of numbering, and therefore it can be argued that in this process of establishing a joint orientation, as shown in the excerpts above, the participants have actually negotiated meaning, or, according to Brooks and Donato, have “established intersubjectivity” (1994:269), which in this case amounts to the achievement of joint object regulation as well.

In a subsequent study, Brooks, Donato and McGlone (1997) found that the use of metatalk and private speech by language learners in information gap task situations decreases with successive tasks of the same kind, indicating that learners benefit from group learning activities as a means of achieving self-regulation. The researchers investigated whether or not learners of Spanish were actually internalizing the processes they were jointly constructing through the use of metatalk. They found that over a series of five similar jigsaw tasks the use of oral problem solving language decreased and the completion of the tasks became quicker. Brooks, Donato and
McGlone concluded that metatalk in English about the Spanish needed to complete the task therefore has a developmental and consequently pedagogical benefit.

The usefulness of looking at metatalk for evidence of cognitive processing and, hence, learning, has also been investigated by Swain (1998). She defines it as “a surfacing of language used in problem solving, (or) language used for cognitive purposes” (p7) which, when examined, shows learning in progress. This is because, according to Swain, students are noticing their language, reflecting on its use, and forming and testing hypotheses about how the language is used and each aspect is a part of learning. All this is done out loud, through metatalk, and is therefore open to inspection.

For instance, Swain (1998) investigated the language of Grade eight French immersion students undertaking a dictogloss task. This is an activity which promotes student reflection on language forms. A short text is read at normal speed while students take notes, after which they must work together to reproduce what they have heard in writing. Swain considers that having to write particularly facilitates metatalk as students have to work together to achieve accuracy, whereas when speaking, fluency rather than accuracy is the usual aim.

Swain (1998:9) calls incidences of metatalk “language related episodes” (LRE). The following excerpt is given as an example of an LRE about the use of the word *reveille-matin* (alarm clock). Rick has already used the word correctly several times in the dialogue before this incident:

(14) Turn 70 Rick: Or what about...jacqueline se leve a cause du...du reveille. - ...yeh, qui sonne
(Or what about... Jaqueline [the girl in their story] gets up because of the... of the alarm... yeah, that rings)

Turn 71 Kim: OK. Or you can say, du reveille-matin, or du sonnement du reveille-matin.

(OK. Or you can say, of the alarm clock, or the ring of the alarm clock.)

Turn 72 Rick: No, reveille-matin qui sonne.

(No, alarm clock that rings.)

Turn 92 Rick: Sur la rev-... reve-matin

(On the alarm clock.)

Turn 93 Kim: Sur le reveille-matin pour arreter le sonnement.

(On the alarm clock to stop the ring.)

Turn 94 Rick: Reve-matin?

(alarm clock?)

Turn 95 Kim: REVEILLE-matin

(Alarm clock.) [Stresses component meaning “wake”]

(Swain, 1998:9)

Not only is the actual learning process evident in this incident of metatalk, but Swain also shows that learning did indeed take place through pre and post-activity testing.

Before the activity, in a written test, Rick used the incorrect form (reve-matin), but after the LRE produced above he used the correct form (reveille-matin) in later written work. Swain found that when research participants were tested specifically on language forms they had discussed in this way and when they had been able to establish the correct form in discussion with their peer, most of the time the form was produced correctly in their post-activity test.

According to Swain, the main significance of metatalk in SLA for the researcher is in helping him or her to establish how the learner is learning. In this case the example shows that “new knowledge has been created through a search of (the student’s) own existing knowledge” (1998:6). In fact Swain argues that “metatalk may be one pedagogical means by which we can assure (sic) that language acquisition processes operate” (p7) when learners are engaged in making meaning because it provides the link between meaning, form and function. This further demonstrates the usefulness of SLA research in a Vygotskian framework since understanding more about the process
to improved pedagogical practices. In the case of Swain's research, findings have shown that teachers especially need to build opportunities for student metatalk into language learning activities, particularly those grounded in written task requirements.

The work already discussed regarding metatalk can be considered to contain both negotiation of meaning and "negotiation of form" (Long, 1991, in Donato, 1994:43). This is partly because the tasks required focus on form for successful completion. Swain (1998:5) has pointed out that in order to focus on form, students "must be engaged in the act of "meaning-making". The overarching aim of the speakers is to reach a mutual understanding. For example, in except 13 above, while Rick and Kim work on linguistic form, they effectively build a collective meaning in their conversation which enabled them to establish the correct linguistic form.

However, Donato (1994) had already shown that even without the requirement for accuracy of form, speakers have their own learning goals which influence language production. He observed this in the building of scaffolds in the relationship between novice and expert. The possibility of peer assistance in pair and group work can particularly show the mutual effects of learners on each others' learning (Donato, 1994), and hence the role of negotiation in socially activating the learning process. Students engaged in joint tasks will work cooperatively to control the production of the message and consequently, the completion of the task, as in the examples given above, but they will also engage in coaching of peers.

In an activity in which university students learning French were required to complete a task as best they saw fit, Donato (1994: 39) illustrated "how students co-construct
a task as best they saw fit, Donato (1994: 39) illustrated “how students co-construct language learning experiences in the classroom setting” and bring learning into the social arena, specifically through helping each other. The participants were taped over one hour in which they planned the staging of a domestic scenario. They were specifically asked not to write out or memorize their dialogues, although they could use notes. As the learners in this study shared English as a first language, Donato examined both how their metatalk built a linguistic scaffold for the completion of the task in French and how it helped them to internalize the co-constructed knowledge. He found that while attempting to conduct the task in French, participants often reverted to English, using strategies such as telling each other what they would say in French, or reminding each other of the word or phrase they needed. This word or phrase then often surfaced in the actual French used as the task progressed. Donato argues that, in the case of this study, the language produced was not because the task required accuracy, since it was open-ended, but as a result of the “internally generated goals and subgoals of the learners themselves” (1994:44).

Those students who were expert at any point in the task built a scaffold which assisted the others to carry the task forward. Donato gives an example of this in the use of the past tense of the reflexive verb “to remember” (souvenir). Through twelve utterances the students constructed together the correct form of the verb by combining their knowledge:

(15) A1 Speaker 1. …and then I’ll say...tu as souvenu notre anniversaire de mariage...or should I say mon anniversaire?
A2 Speaker 2. Tu as...
A3 Speaker 3. Tu as...
A4 Speaker 1. Tu as souvenu... “you remembered?”
A5 Speaker 3. Yea, but isn’t that reflexive? Tu t’as...
A6 Speaker 1. Ah, tu t’as souvenu
In this example, the role of expert was not fixed as in the adult/child interactions discussed by Vygotsky, again demonstrating how a socially activated process such as learning is governed by context. All the participants were able to offer scaffolding for the others to build the correct form. In this way, as is evident in their discourse, the participants were able to draw on their old knowledge to jointly construct new knowledge, by means of the process of negotiation of both form and meaning.

The building of scaffolds in group SLA situations through the taking on of novice/expert roles has also been shown to activate development within the zone of proximal development (ZPD). Ohta (2000) has shown that even in peer group situations the expert is able to give assistance within the zone, demonstrating how language learning is most often socially derived. She audio and video taped two learners of Japanese in a role-play task, a translation task and an interview. One of the participants was more advanced than the other. Ohta’s analysis focused on incidences of peer assistance and evidence of “appropriation” of language structures given as assistance. She concluded that the effectiveness of assistance depends on factors such as: “the nature of the task, the expertise of the peer, the goals of the participants, and the developmental levels of the learners” (p 76).

De Guerrero and Villamil (2000) have found that even in a clearly delineated novice/expert relationship, scaffolding may be offered by both participants. The
researchers looked closely at the process of scaffolding within the ZPD in an all-male dyad of intermediate ESL college students, both native speakers of Spanish. The task involved correcting student writing and the dyad was deliberately set up to ensure clear novice/expert contrast between the participants. As the task progressed, however, the participants reached such a state of intersubjectivity that the relationship became much more symmetrical. The researchers report that through the expert's coaching within the ZPD of the novice the "emergence of the (novice's) self regulation" was witnessed (p65). Furthermore, the two participants were then able to combine their knowledge to learn new forms, each providing scaffolding for the other as required.

Like Ohta's (2000) research, and that of De Guerrero and Villamil (2000) into the ZPD, all the research carried out in a Vygotskian framework that has been discussed above examines the social context as the learning context, and examines discourse for evidence of the learning process. The research has shown that in a learning context speakers will use their language to assist with regulation of their thoughts through grammatical constructions and the use of private speech and metatalk. These strategies reveal the movement of concepts from the inter to intra-psychological plane, and thus the essentially social nature of learning, which is activated by social activities such as group work. The research has also demonstrated the social nature of learning by revealing how students in the roles of novice/expert build discourse through scaffolding and use the ZPD to assist one another.

2.4. Conclusion.

In this section the relevant literature has been discussed. Two general conclusions can
be drawn. The first is that learning is a process that is activated socially. In the research by Brooks and Donato (1994), Donato (1994), Swain (1998), Ohta (2000) and De Guerro and Villamil (2000), the data given to show learning reveals this process occurring. This is in opposition to the traditional "negotiation of meaning" research discussed earlier in this chapter which views single utterances or brief exchanges as constituting the meaning that is negotiated in SLA. Therefore, rather than viewing negotiation of meaning as a series of individual strategies that are useful in learning a language primarily because they may be useful in encouraging comprehensible and output and repairing breakdowns in coherence, and where each exchange in itself is a "negotiation", there is grounds for broadening the definition of negotiation of meaning to relate to the ongoing process that takes place when people work together to understand each other. In fact, the word "negotiation" suggests a much more active and shared relationship between speakers than has been assigned them in the traditional negotiation of meaning research discussed in this chapter. Negotiation of meaning in this fuller sense is a cognitive activity mediated by language, other speakers and cultural artifacts. In this process interlocutors grapple with each other's meaning to establish a shared meaning or state of intersubjectivity. Their talk must be coherent while determining how the dialogue unfolds. Negotiating meaning is not a brief incident, but a constantly moving process which is present in every interaction. Without negotiation there can be no intersubjectivity or "taking of the other person's perspective" (Lantolf, 2000c:85).

Furthermore, again in a Vygotskyan framework, because negotiation is a cognitive process, examining this process in a learning context can show evidence of learning. This can be seen in strategies such as the use of metatalk, private speech, and peer
coaching in the ZPD.

The second significant conclusion that can be drawn from all the research presented here is that the influence of context is evident. Taken as a whole, the research points to many different contextual features, with resulting divergent language produced. These contextual features have included task type (e.g. Pica, Holliday, Lewis and Morganthaler, 1989), whether the interlocutors are NS or NNS (e.g. Flanigan, 1987/88), age of the interlocutors (e.g. Scarcely and Higa, 1981), culture of the interlocutors (McCafferty, 1992), aim of the task (Swain, 1998), discourse style of the interlocutors (Ehlrich, Avery and Yorio, 1989), and developmental level of the learners, both in age (Frawley and Lantolf, 1985) and linguistically (e.g. DeGuerro and Villamil, 2000).

With these major considerations in mind, the following chapter presents the design for a research project to investigate the nature of negotiation of meaning in a context that is both unique in terms of participants and setting, but also familiar in that it utilizes the work discussed above.
CHAPTER 3 - RESEARCH METHODS AND ANALYTICAL TECHNIQUES

3.0. Introduction.

In this chapter the data collection methods and rationale are given and the method of analysis is discussed with examples given of how both the features of negotiation and the Vygotskyan principles were identified and differentiated in the discourse transcriptions.

The present study uses a qualitative exploratory approach to examine the discourse of learners carrying out a problem solving pair work task in their new language, English. It uses a Vygotskyan theoretical base and is modeled on research by Brooks and Donato (1994).

As outlined in the literature review, the aim is to examine strategies used for negotiation of meaning in a Vygotskyan framework and to find out if observable processes of negotiation taking place between learners of a language assist with and provide evidence of learning as has been shown in work discussed in Chapter Two (e.g. Frawley and Lantolf, 1985; McCafferty, 1992; Ahmed, 1994, Donato, 1994; Swain, 1998). Vygotsky considered that “any psychological process ... is a process undergoing changes before one’s eyes” and “under certain conditions it becomes possible to trace this development” (1978:61). Looking at the discourse in progress allows the researcher to determine whether there is evidence of this “psychological
Although negotiation here is seen as being beyond the narrow definition of the traditional "negotiation of meaning" work discussed in the first part of Chapter Two, the labels given by these researchers to negotiation strategies are useful for the analysis in this dissertation. For instance, functional forms, such as comprehension requests, are noted as part of a range of strategies used for negotiation. However, as discussed in Chapter Two, negotiation of meaning is not considered here to be observable in isolated utterances or exchanges, but rather in a collaborative process of reaching a shared meaning. These strategies are thus part of a broader range of strategies that, in a Vygotskian framework, are determined by the context of any exchange. Consequently, the identification of negotiation strategies here is not done on the basis of a restricted number of categories, as in the "negotiation of meaning" body of work, but rather, as each consecutive utterance is analysed in the ongoing context of what has taken place up to that point. In addition, unlike the traditional "negotiation of meaning" researchers, negotiation is not considered to be exclusive to the repair of breakdown in discourse and the achievement of comprehensible input and output, but as an ongoing process present in any interaction.

Like the research of Gass and Varonis (1985) and Varonis and Gass (1986), however, and the Vygotskian researchers discussed in the previous chapter (eg Frawley and Lantolf, 1985), the pairing of NNS with each other is considered just as relevant and legitimate as the pairing of NS/NNS and NS/NS dyads as a basis for observing the production of negotiated meaning. Furthermore, given the aim of this research to investigate strategies used to negotiate meaning beyond those aimed at achieving
comprehensible input for SLA, one pair of NS is also included in the design, following the example of Ahmed (1994)

3.1. Data Collection Methods

The collection of data for the present study involved several steps. The process was carried out over two sessions, the first of which was a preliminary to the collection of the actual research data that is discussed here. In the preliminary session the participants received some teaching of vocabulary related to a one-way task they then carried out in pairs as a practice exercise. As they worked on the task they were taped so that they could review what they had done after the activity. In the following session the participants received no teaching, instead carrying out a two-way jigsaw task in the same pairs. This was also taped, and produced the language data that were then transcribed and used in the present study.

The design of this research is influenced by the work of Brooks and Donato (1994) who conducted research with a group of students learning Spanish at high school (see Chapter 2). The main difference is that Brooks and Donato’s group was able to use English, their first language, in metatalk from time to time, as they progressed through the task in Spanish. However, the NNS students who participated in the research presented in this dissertation did not have any shared language but English, so all talk in the activity had to be done in English, adding to the linguistic difficulty of a sometimes conceptually difficult task.

A second difference from the Brooks and Donato study is that the NNS who participated in this study were given the preliminary session by the researcher in
which they were taught vocabulary they might need for the research task, and were given a practice activity, whereas the Brooks and Donato study did not include practice.

Finally, unlike the study by Brooks and Donato, the NS dyad was included, carrying out the activity in their first language. They were included in the study in order to investigate whether negotiation strategies are exclusive to NNS, since negotiation of meaning has been seen as related to the achievement of comprehensible input and output, or present in NS discourse as well.

3.1.1. The Tasks

Participants involved in the study carried out two different tasks: one in the preliminary session and a second in the session in which the research data were collected. Both tasks required the passing on of information from one person to the other in order to complete a diagram, although the preliminary task only required passing information one way, whereas the actual research task required sharing information in order to jointly construct a diagram, as in a jigsaw task.

These kinds of tasks were considered appropriate since information-sharing tasks are regularly used in language classrooms so the general procedure was familiar to students. Furthermore, research discussed in chapter 2 found that jigsaw tasks were effective in facilitating interaction (Gass and Varonis, 1985; Pica, Holliday, Lewis and Morganthaler, 1989). However, the aim was not to consider how effective the task type was at promoting interaction, but rather to give the participants tasks that, if used correctly, would necessitate the giving and receiving of accurate information.
Participants had to be clear about each other’s meanings. The language that the interlocutors produced in the process of completing the task could then be examined for the way it facilitated the outcomes and built intersubjectivity.

The preliminary task was chosen because it was a suitable introduction to the actual research task, in that the overall concept and vocabulary used would be similar. It was also easy and as such would prepare participants for the more difficult activity. The research task involved the language of spatial placement and shapes, so in the first session the participants were given an activity that utilized this vocabulary. Participants in each pair had different diagrams which they did not show the other (Figure 1). The participants took turns to describe their diagram to their partner, who drew what he or she was told without being shown. Successful completion by the hearer produced a picture similar to the original.
Student A

Step 1. Describe this design to Student B. Student B will draw it.

Step 2. Listen to Student B. Draw the design.

Student B

Step 1. Listen to Student A. Draw the design.

Step 2. Describe this design to Student A. Student A will draw it.

Figure 1. Practice Task (Source: Kehe and Kehe, 1994)
In the second session participants used a jigsaw task taken from Brooks and Donato (1994) (Figure 2). Although the second task again involved placing shapes on a page, the task was more difficult than the earlier one since it was more complex and involved the use of a grid, so that participants had to be clear about where on the grid they were working. Also, the shapes were more various than those in the preliminary task, and the second task also included letters. In addition some of the shapes cross over the lines of the individual boxes on the grid. Participants had to transpose one set of diagrams on to the other so that both ended up with the same image. This involved describing what is in each box, uniting their information, and trying to develop strategies to complete the task efficiently. As in the first activity, participants were not allowed to look at the others’ diagram. (see Appendix 1 for completed activity). The participating NS were not given the practice task, but carried out the second task only.
Figure 2. Task for Data Collection. (Source: Brooks and Donato, 1994)
3.1.2. The Participants

There were two sources of participants who provided data for the research. The first body of data was collected from a group of thirteen adult learners in a class in the Adult Migrant Education Labour Market Program for Literacy and Numeracy in Perth. The second source of data were two adult male speakers of English as their first language.

The NNS participants were people who had been sent to the program by Centrelink, the government department that administers the payment of unemployment benefits, for two main reasons. Either they had to meet requirements to receive an unemployment benefit by studying, or their language level was considered insufficient to gain employment. Although the program was aimed at literacy and numeracy, most participants were entirely literate in their first language, but needed more English development in one or more of the four macro-skills (listening, speaking, reading, writing). However, some had already been speaking English fluently for many years without much progression towards accuracy. Several had numeracy difficulties. The participants had varying experience of English and time in Australia. The group also included some refugees who may have suffered torture and trauma, which may have affected aspects such as the ability to work effectively with others or to retain information. (See Appendix II for consent form)

The participants were all members of a class of thirteen students. This group was chosen by the researcher as a source of suitable participants because of their overall proficiency level. All participants had achieved speaking levels of 2-3 on the Australian Second Language Proficiency Rating Scales (ASLPR), or were at
Intermediate to High Intermediate level on the general ratings used in the TAFE environment. This level was required to ensure they had sufficient vocabulary and grammatical competence available to complete the task. According to the Australian Second Language Proficiency Ratings (DIMEA, 1984), ASLPR Speaking level 2 is defined as the speaker being “able to satisfy routine social demands and limited work requirements” (p47). ASLPR Speaking level 3 is defined as the speaker being “able to speak the language with sufficient structural accuracy and vocabulary to participate effectively in most formal and informal conversations on practical, social and vocational topics” (p50).

The class had been together on a continuous enrolment basis for two terms and had had the same two teachers on a two-day/ three-day basis throughout the term. However, the researcher was not one of those teachers. The people in the class appeared to be relaxed with each other and enjoyed the social as well as learning aspects of their class.

The NNS were put into five dyads and one triad, which was necessary because of the odd number of people in the class. The groups were set up by the class teacher who took them on the days when the research sessions were carried out. Each person was with a NNS from a different cultural and linguistic background. Since the research was conducted in The Adult Migrant Education Service (AMES) this was not a problem as classes often have up to ten or more different nationalities. Care was also taken to put compatible students together.

The single NS dyad consisted of two men, both of whom were highly literate in
English, and had a high level of technical skill. One was a cartographer and the other an environmental scientist.

3.1.3. The Preliminary Session

The class normally met every weekday morning from 9.00 to 12.00. The research was carried out between 10.00 to 12.00 at two of these sessions on consecutive Wednesdays, and the class teacher was not present. The students were told that the preliminary session was a practice for the actual activity and that they would be taught the language they might need for both sessions. From the researcher’s point of view, this practice was to ensure the participants understood the jigsaw approach to the task and were comfortable working together and with a tape recorder. It also ensured that they had the basic vocabulary to carry out a spatial task. Since the research task was more difficult, this pre-teaching was intended to give all the participants the means to carry it out without undue discouragement, and to give them a sense of continuity with the normal learning environment, in that they were gaining something from the activity. A further aim was for the researcher to establish a degree of rapport with the participants to help them to trust her and feel comfortable about the task.

In this preliminary session, the participants were first taught specific vocabulary of shapes and spatial placement. These were:

- Horizontal, diagonal, vertical lines.
- Top left hand corner- center- bottom right hand corner.
- Triangle, square, rectangle.
- Curly, straight, zigzagged lines
After this introduction the class were given the simple one-way information gap task as discussed above (Figure 1). Before they started the activity, the groups were put in separate rooms, including empty classrooms, the library and interview rooms, by the researcher. Because of space constraints, one dyad and the only triad were given opposite ends of their home classroom. In each area a classroom-sized tape recorder with inbuilt microphone had been set up in the middle of a table with chairs opposite each other at the table. The participants were told to start the recorder when they were ready to start the activity and to leave it on. The researcher checked at least once on each group to ensure they were all carrying out the activity and recording it, but otherwise the groups were left to carry out the task in private for most of the time.

After completing the preliminary activity the participants were invited to listen to themselves on tape, which they all did. This was done in order to “demystify” the research process and help build up trust with the researcher. Furthermore, in being encouraged to listen to themselves, the aim was again to maintain a sense of a learning environment for the participants, although no formal teaching was carried out around this activity of listening to themselves. The participants were simply encouraged to see if they could pick their own mistakes. The first session was not transcribed and not used as research data since it had been included purely to ensure the students were in a position to carry out the later task.


A week after the preliminary session the students returned, to work in the same groups and the same rooms to carry out the research task. Before they went to their respective areas, and while still together as a class, the problem solving task sheets shown in
Figure 2 were given out. Students were told they had to work together by sharing information to complete their diagrams. They were told that they would have to ask each other questions about what was on their diagram, and not to look at each other’s paper. Their understanding of the requirements was checked by the researcher before they started by asking them if they were clear about what was to be done but no demonstration was given. The participants were told explicitly that the object of the research was not to find out how proficient they were but to study how they used the language to talk to each other, which included how they got started and established what to do.

The researcher checked each group silently three times once they had started working. If they wanted to engage her in conversation this was discouraged but not disallowed. The participants were again audiotaped with a classroom sized voice recorder placed between them, from the time they started the task. While they were asked not to turn the recorder off and on once the activity was under way, the students were left to their own devices to complete the task and there is some evidence in the recorded data of the recorders having been turned off occasionally in some dyads. The students were given the option of listening to themselves after the taping session but all declined, undoubtedly on account of the time, since their regular 12.00 noon finish time had been reached and they wanted to go home.

In addition to the NNS dyads, the NS dyad was also taped carrying out the same activity in the researcher’s home. This pair was not given the practice activity so the jigsaw task concept was new to them. However, they were given the same instructions as the NNS, although with more sophisticated language. The NS were told they had
one half each of a composite drawing and through sharing information they had to complete their own half, without looking at the other. Like the NNS dyads they were left to establish their strategies without the presence of the researcher. Their interaction was taped as they carried out the task.

The NS were given the same task in order to see how they negotiated meaning when compared with the NNS, whether other Vygotskyan features such as novice/expert coaching were present, and whether they displayed "continuous access" (Frawley and Lantolf, 1985) to childhood strategies. However, this was not intended to be primarily a comparative work. The intention of the study is to examine the language of negotiation, particularly between NNS, and most specifically in a learning situation. In this way the results are of relevance to SLA pedagogy.

3.2. Analysis

Twenty to thirty minutes of conversation was recorded by each dyad. These conversations were transcribed using conventional orthography. Reduced, irregular and colloquial forms were transcribed as they sounded to the researcher (e.g. "squol" for square, "boxe" for box, "corz" for because, and so on), and overlaps and silences were indicated. Overlaps were shown with three dots as in the following example, where Speaker 1 is overlapped, or interrupted by Speaker 2, who in turn is overlapped again by Speaker 1:

(16) Speaker 1. in, in...
    Speaker 2. close to the left hand corner...
    Speaker 1. in the bottom right hand corner.

Silences were shown with the word "pause" in brackets, as in the following example:

"Oh yes, and then (pause) um, you go left". Long pauses were indicated as: (Long
pause). Other relevant sounds were also indicated in brackets, such as the participants whispering, or tapping the desk. Paralinguistic features were not considered. This was because the aim was primarily to investigate the actual words used in negotiating meaning.

During the transcription phase, two groups were eliminated. The data from the triad could not be used because the recording was not clear enough to be transcribed and the data from one dyad proved to be unsuitable when it was found that they had turned the tape off when discussing strategies or solving problems. Consequently, no useful data was recorded.

After transcribing the taped interactions, the discourse of both the NS and NNS was examined in order to determine: a) what strategies were used to negotiate meaning, and b) whether evidence of learning could be determined in what was said, using the Vygotskyan framework discussed in Chapter Two.

The maintenance of coherence in the recorded discourse may be taken as the main indicator of comprehension and agreed meaning (Gumperz, 1982). In this research, how the participants established and maintained that coherence is of primary interest because the main focus of research attention is on the value of negotiating meaning for the achievement of mutual understanding and consolidation of language learning. Many strategies were employed by speakers to involve themselves in what is being said as well as propel the conversation forward. Coherence in discourse also allows some degree of intersubjectivity, when interlocutors share a perspective (Lantolf, 2000c). Achieving intersubjectivity is not easy, and requires ongoing negotiation of
The features of negotiation included all the categories discussed in Chapter two, including confirmation and comprehension checks, and also strategies that caused the discourse to progress in a coherent manner and helped to draw the interlocutors together to complete the task. These strategies included ignoring, interrupting, filling in for the other, and so on, as detailed in the next chapter.

Specific strategies of negotiation of meaning were assigned as the negotiated meaning unfolded through the dialogue. In order to identify the various strategies used the dialogues were examined utterance by utterance to see how the speakers established a collaborative or agreed meaning. Each utterance was considered for what function it served in the process of reaching an agreed meaning, and ultimately in completing the task. However, functional labels were not assigned in isolation; more importantly, strategies were determined on the basis of the context of the utterances around them, in other words, how they "provoked" or were "provoked by" other utterances. In the process of negotiating meaning, each utterance was considered both as a response and causing a response. In that process of mutual responsiveness, once the participants had achieved an agreed meaning, as indicated through confirmation that they were satisfied they had understood each other sufficiently, an episode, or "cycle" of meaning negotiation was considered to be complete. Use of the word 'cycle' builds on Nakahama et al.'s 2001 concept that was discussed in Chapter Two of an incident of repair involving four turns being cyclic. In the present study, cycles of agreed meaning may involve many turns, and not be related to repair of a breakdown in coherence. However, they are nevertheless cycles, in that, like those of Nakahama et
a conclusion is reached by the interlocutors.

Once the negotiation processes had been identified in the data, the Vygotskyan features discussed in Chapter Two were then identified within the negotiation of meaning cycles. These were utterances functioning as object, other and self-regulation, including metatalk, and indications of novice/expert relationships that utilized the ZPD, particularly through the use of scaffolding. These Vygotskyan aspects of the interaction help to show how learning, like making meaning, is a social phenomenon, with the language reflecting the cognitive process, as discussed in Chapter Two.

The method of analysis described above builds on the work of the traditional negotiation of meaning researchers in that it uses the same labels for negotiation strategies, but identifies them as part of a process rather than as isolated exchanges or utterances. Furthermore, additional strategies are also identified. In approaching the discourse as an ongoing process, this analysis extends the work of Vygotskyan researchers such as Brooks and Donato (1994), Swain (1998, 2000) and Ohta (2000) who have already analysed conversations as collaborative activities. However, their work has specifically examined the constitutive roles of utterances as evidence of cognitive processes in learning contexts. The present study, on the other hand, looks at the role of utterances as mediators in the process of negotiating meaning and the consolidation of concepts on the intra-psychological plane.

As an added focus of attention in a problem solving task context, the use of language to orient the participants to the task itself was also studied because of the task's role as
a mediator of negotiation activity. Achieving mutual orientation through negotiation enabled the participants to use the task as a mediating tool. As noted in Chapter 2, Ehlrich, Avery and Yorio (1989), in a task-solving activity, noted three stages that their participants used: Orientation of the object on the page, identification of the object and description of the object. Orientation refers to the way the interlocutors reach understanding about how they will spatially and chronologically work through the task. For example, they may decide to use left to right, up and down, or other spatial references. This is significant in a task such as the one used here because of the grid pattern, which proved to be the main challenge for the participants in establishing and maintaining a cooperative approach. However, once the participants established the best way to complete the task, they could focus on the sub-elements within the activity.

Each dyad was assigned a number from 1-5. The discourse excerpts included in the following chapters are labeled according to the number of the dyad as well as the number of the excerpt. Within each excerpt, every utterance is assigned a number according to its order in the discussion.

In reporting, the task activity is referred to as a “grid”, which is made up of individual “boxes”. The boxes contain “diagrams”. In addition, for clarity of discussion, the boxes are numbered from 1 to 24 for reference, going from left to right and top to bottom, as shown in Figure 3.
Following is an example taken from Dyad 4 showing how they progress through one point in the activity and negotiate meaning as they go. The negotiation strategies are labeled in normal print, with the culmination of each stage of negotiation indicated by the words: AGREED MEANING. The Vygotskyan categories, where identified, are indicated in bold.

(17)

<table>
<thead>
<tr>
<th>Step</th>
<th>Participants</th>
<th>Negotiation Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Jung He. OK so, so ah, start from the little bit bottom of the center, center in the bottom, start one triangle from there to cross to next...</td>
<td>Framing markers in attempt to self regulate. Rephrase to correct orientation</td>
</tr>
<tr>
<td>2.</td>
<td>Bozo. Diagonal...</td>
<td>Interruption to show understanding and add information</td>
</tr>
<tr>
<td>3.</td>
<td>Jung He. Next diagonal to lefte hande</td>
<td>Repeat word to confirm and take up use of specific term (AGREED MEANING)</td>
</tr>
<tr>
<td>4.</td>
<td>Bozo. Yeh</td>
<td>Self correction to orientation</td>
</tr>
<tr>
<td></td>
<td>Oh sorry, right hand corner...</td>
<td>Interrupt to confirm comprehension</td>
</tr>
</tbody>
</table>
In this excerpt Jung He and Bozo can be seen to build a joint picture through four cycles of negotiation of meaning, involving a series of strategies including interruptions, repetition and confirmations. Through these interactions they
cooperatively move the meaning along from seeing single lines (Line 2 diagonal, L9, horizontal) to constructing a completed shape (L14: put together). Jung He provides a scaffold for Bozo by segmenting instructions so Bozo can complete the diagram. Bozo’s confirmation utterances encourage Jung He to break the information into segments. In this excerpt Jung He is the expert because she has the information and coaches Bozo to some degree, although he is evidently aware of the process, following her easily, as his confirmations show. Their utterances dovetail together in agreement through mutually confirming understanding, as the participants each achieve sufficient agreement to complete the diagram and move on to the next one in line 15.

The new approach to analyzing the interaction demonstrated in the example above proved useful in extending negotiation of meaning research and providing a means for examining the evidence for the learning process, as the following chapters presenting the research findings show.
CHAPTER 4 – NEGOTIATION OF MEANING STRATEGIES:
FINDINGS AND DISCUSSION

4.0. Introduction

In this chapter the dyads are introduced. Following that, the findings on the process of negotiation of meaning in the discourse of the participating dyads are presented. First the negotiation of meaning strategies identified by traditional negotiation of meaning researchers are shown in the data. In the second section of this chapter, a range of strategies beyond those determined by the traditional researchers is discussed. Evidence of these strategies was found in the discourse data, and they are considered to be part of the negotiation cycles that were present. When studied in context, these strategies are found to be part of a more global process of reaching an agreed meaning, and are not considered significant in isolation. It will be seen that the negotiation strategies used by the participants include a variety of functional utterances. These are all related to maintaining discourse coherence and establishing intersubjectivity, rather than, as has been claimed by the traditional negotiation of meaning school, to achieve comprehensible input and output for the interlocutors.

The negotiation strategies were considerably varied although the NS and NNS did not differ significantly in the range of strategies they used.

During the transcription process, two of the NNS groups were eliminated from the research data: the only triad because the quality of the recording was too poor to use, and one dyad, because they recorded only their instructions to each other, without any other interaction. Four of the NNS dyads, as well as the NS pair were used in the discussion of the language data. The dyads, in which each participant has been given a pseudonym, were briefly as follows:
Dyad 1: Zdravko: Former Yugoslavian male, (aged approximately) 60
(NNS) Jin: Korean female, 40

Dyad 2: Margarita: Portuguese female, 50
(NNS) Mirsad: Former Yugoslavian male, 40

Dyad 3: Ali: Iraqi male, 40
(NNS) Radislav: Former Yugoslavian male, 30

Dyad 4: Jung He: Korean female, 40
(NNS) Bozo: Former Yugoslavian male, 40

Dyad 5: Mike: British male, 40
(NS) Paul: Australian male, 40.

4.1. The Use of Negotiation of Meaning Strategies by the Participants

In this section the strategies used by the participants to negotiate meaning are discussed. The first phase of analysis involved examination of the data to determine the degree to which the following traditional negotiation of meaning strategies were used by the participants: confirmation checks, clarification requests and comprehension checks (Foster, 1998). As in the research discussed in Chapter Two, these strategies were found to surface in the negotiation of comprehensible input when there was a breakdown in understanding. However, it was also found that these negotiation strategies were embedded in a larger more global context in which the
interlocutors were engaged in reaching an agreed meaning. This aspect of the negotiation of meaning process is discussed in the second section.

It was also found that not all confirmation checks, clarification checks and comprehension checks (typically realized as questions) were used to obtain comprehensible input or repair communicative breakdowns related to learner language, which will be evident in the examples presented below. These strategies were also found to be related to attempts by the participants to achieve accurate representations of the diagrams.

In the strategies used to negotiate meaning to complete the task, there were similarities and differences that surfaced between participants. These strategies and the extent of their use did depend on participant’s role in the dyad, their linguistic and cultural background, personality, and their level of English. For these reasons, while there were a range of common strategies used by all the participants, including the NS, there were individual differences.

4.1.1. Traditional Negotiation of Meaning Strategies.

The strategies for negotiation of meaning that are most generally identified by researchers are confirmation checks, clarification requests and comprehension checks. They were also found in this research data.

4.1.1.1. The Use of Confirmation Checks by Participants.

According to Foster (1998), confirmation checks are used by a speaker to check if he or she has correctly understood what the other interlocutor has said. Of the three traditional negotiation of meaning strategies identified in the language of the five
dyads, confirmation checks surfaced least frequently in the dialogues. When they appeared, they were almost exclusively used by the participant who was receiving information to assist him or her to complete a diagram on the grid in front of them. This finding is in keeping with research discussed in Chapter Two that has shown that the receiver of information negotiates more since he or she has to ensure an accurate understanding (e.g., Gass and Varonis, 1985; Pica et al. 1989). The data from Dyad 2 supported these findings that the high incidence of confirmation checks is related to the hearer's need for accurate information, and therefore a clear comprehension of the message. Margarita and Mirsad abandoned the diagrams given in the boxes on the grid. Instead they invented diagrams for each other and gave random instructions to their partner without concerning themselves with accuracy or detail. Without the requirement for accuracy they did not often seek clarification or confirmation of their understanding, and frequently did not repair breakdowns in understanding.

Overall, it was found that the speakers used confirmation checks for two main purposes. Firstly, confirmation checks were used by the stronger speaker when in the role of receiver of information to check the meaning of the weaker speaker, who invariably lacked the fluency to express his or her intended meaning clearly. Other examples show the weaker speaker checking that he or she has followed clearly.

The following excerpt is an example of the weaker speaker in Dyad 3, Radislav, seeking confirmation that he has understood Ali's meaning.

(18) 27. Ali.  Down, one rectangle
28. Radislav.  Down?
29. Ali.  Down, and, you put circle in the center, small circle
30. Radislav.  In the center, just one circle, OK? In the center

Dyad 3, Excerpt 1 (D3.1)
In this example, Radislav asks for confirmation in line 28 that he has followed Ali’s instructions by repeating Ali’s word. Ali confirms his meaning and adds further information in line 29. Once again, in line 30, Radislav asks for confirmation that he is doing the correct thing according to Ali’s instructions. This kind of negotiation strategy was common in the data of Dyad 3, as Radislav constantly checked he had understood the instructions.

More commonly, confirmation checks were strategies used by the stronger speaker to check his or her understanding. In the following example, again from Dyad 3, Ali, as the receiver of information, and also the stronger speaker, checks with Radislav that O and B are in fact letters:

(19) 16. Radislav. And, le, middle of the, O, middle in the square, O and B
17. Ali. What the squ, what the letters O and B?
18. Radislav. Yeh, and P, O and P
19. Ali. OK

(D3.2)

In line 17 Ali asks Radislav for confirmation that he means the letters O and B. This confirmation check does not only produce comprehensible input for Ali; through this negotiation episode, Radislav also realizes he has pronounced the second letter incorrectly. Consequently he then goes on to re-pronounce the letter P, this time with emphasis in order to clarify his meaning (L18). Ali’s subsequent response confirms that he has followed Radislav’s meaning.

Another example of a confirmation check comes from Dyad 1. Zdravko and Jin are working on the final box in the grid which contains a house (Box 24). Zdravko has already shown that his vocabulary is weak and, as in many other examples, he uses telegraphic utterances and is unable to elaborate on the detail of the diagram. Instead
he uses the image of a town house, perhaps in an attempt to provide a closer
description:

(20)  20. Zdravko. We have a, aah, house
    21. Jin. You have a house
    22. Zdravko. Yeh, house, house eh, town house
    23. Jin. Town house
    24. Zdravko. Yeh, town house, town house, and we, we...
    25. Jin. I have draw town house?
    26. Zdravko. Yeh, yeh, town house

(D1.1)

In line 25 Jin asks for confirmation that Zdravko means her to draw the town house.

Both example 18 and 19 show the stronger speaker checking confirmation not of their
understanding of the linguistic content, but of the task requirements.

The native speakers also used confirmation checks several times. Again, in the
following excerpt, the receiver of information seeks to confirm his understanding of
the instructions. However, rather than being unsure about the linguistic component, as
in examples 18 and 19 above, the NS sought confirmation of comprehension to ensure
accuracy. Just as the NNS negotiated in relation to the meaning of simple vocabulary,
the NS negotiated regarding more complex descriptions, as the following example
shows:

(21)  31. Mike. And how far up does it go approximately?
    32. Paul. About mmm close to the center of 1C
    33. Mike. OK, well you know what I’ve got in 1C, I’ve got
      actually ay triangle, right, OK, which is, which the base
      is um on the level of where that line comes in sort of
      thing. If you can just imagine, where that line stops in
      1C...
      34. Paul. Your triangle starts...
    35. Mike. Starts, OK...
    36. Paul. And that’s the center? It’s in the center?
    37. Mike. Yeh it has to be in the center, so if...
    38. Paul. How far does the pointy bit go from the top?

(D5.1)
In line 36 Paul asks for a check to confirm that he has followed Mike’s instructions correctly regarding the position of the triangle in the box. Paul has pieced together the diagram as they have negotiated the meaning and wants to confirm that his assumption that the line is centered is correct. Mike confirms this in the following line.

These examples are representative of confirmation checks as a whole that were found in the data. In these examples the NNS used confirmation checks to achieve both linguistic clarity, or comprehensible input, and clarity of information. The level of linguistic proficiency had influence on how confirmation checks were used. For example, in excerpt 20, the onus is on the stronger speaker, Jin, to confirm her comprehension of concepts that her partner has difficulty expressing clearly, whereas in example 18, Radislav, as the weaker speaker, has the responsibility of checking his own understanding. The NS used confirmation checks in order to assist with accurate representation of the diagrams.

4.1.1.2. The Use of Clarification Requests by Participants

Clarification requests, which are defined as utterances in which the speaker requests further information regarding what they have just heard (Foster, 1998), were found frequently in the data. Like confirmation checks they were most evident in the language of the receiver of information, who had to ensure he or she received sufficient comprehensible input to accurately complete the diagram. However, rather than seeking clarification in the limited way attributed to participants in past experiments, close examination of the data revealed that the function of such requests is to seek increments of additional information for the receiver of information.
The following example in line 40 is typical of the use of clarification checks to elicit greater detail of information:

(22)  39. Radislav.  Draw one triangle
40.  Ali.  Yeh, small or big?
41. Radislav.  This is medium size
42.  Ali.  Medium size
43. Radislav.  Between, yeh
44.  Ali.  That’s it
45. Radislav.  Exactly, yeh

(D3.3)

In line 40 Ali seeks extra information concerning the size of the triangle Radislav has asked him to draw. After Radislav’s response (L41), Ali confirms in line 42 that he understands by repeating the word “medium”. Following this Radislav gives further information (L43) regarding the triangle, and then from line 43 to line 45 they apparently complete the diagram to their satisfaction.

A similar example is given in the following excerpt in which Bozo asks Jung He for extra information to clarify the kind of line to be drawn:

(23)  46. Jung He.  Then, on the right hand corner on the bottom, do one straight…
47.  Bozo.  Vertical?
48. Jung He.  Line, on the, from bottom
49.  Bozo.  Vert, vertical?
50. Jung He.  Yes, oh
51.  Bozo.  OK

(D4.2)

Bozo interrupts Jung He in line 47 before she has completed giving her instructions, to ask for clarification regarding the line (il: “Do you mean vertical?”) Jung He ignores Bozo in line 48 so he asks again for extra information (L49). In line 50 Jung He confirms Bozo’s understanding and in line 51 Bozo confirms that he has followed her meaning.
The NS dyad also used clarification requests to negotiate meaning. Like the confirmation checks, these functioned to assist them in achieving greater precision for their diagrams. The following example from Dyad 5 shows how the greater level of sophistication in their language, as native speakers, helps them to be more accurate. It is important to note that the example has been preceded by 39 utterances related to the accurate depiction of the triangle and the surrounding diagram:

(24) 52. Mike. Yeh, and you gotta, and it’s probably two of those widths that I told you away from each side
53. Paul. Yeh
54. Mike. OK?
55. Paul. So, it’ll be, um does that make it a true rectangle?
56. Mike. Um, I would say it’s an isosceles triangle, cause it’s practically, the the base is longer than the two, then it’s definitely isosceles OK, so the base is longer than the actual two...
57. Paul. Yep, two side ones
58. Mike. Yeh
59. Paul. OK, alright

(D5.2)

In line 55, in the form of a clarification request, Paul asks about the nature of the triangle. Although he uses the word rectangle, Mike is following his meaning sufficiently that he shows no confusion in line 56 and elaborates on his description of the triangle. Paul responds by interrupting (L57) to confirm he is in agreement and then in lines 58 and 59 the two indicate that they have achieved mutual understanding in relation to the triangle.

In the three examples given above, the clarification requests are not related to the repair of discourse. However, in Dyad 1, Zdravko does use clarification requests in the negotiation process specifically to achieve comprehensible input, as the following example shows:
Zdravko’s request for clarification in line 61 is typical of his negotiating style throughout the Dyad 1 data. Because his linguistic proficiency is weak he frequently asks Jin to repeat segments of information to assist his comprehension. In line 63, after Jin has repeated her utterance, Zdravko indicates that he is following her meaning.

Interestingly, as well as being the most common traditional negotiation strategy that was observed in all the data, clarification checks was the only strategy relating to the achievement of comprehensible input that surfaced in the data of Dyad 2. Although Dyad 2 invented the contents of their boxes and were not concerned about accuracy, they still sought to clarify each other’s meaning from time to time. This indicates that clarification requests may be the easiest of the three strategies to use. Although these strategies have been identified as ones that are used generally by NNS, their use may in fact be related to language proficiency and task requirements.

In the examples given above, as with the confirmation checks, the clarification requests are related both to the achievement of comprehensible input, as in example 25, and to the achievement of accurate representations, as in examples 22, 23 and 24.

4.1.1.3. The Use of Comprehension Checks by Participants

Traditional negotiation of meaning researchers define comprehension checks as a speaker’s query as to whether or not his or her utterance has been understood (Foster,
In the data presented here, comprehension checks were found amongst all the participants, but were not common. They usually came from the holder of information.

The only examples in the data of the use of comprehension checks amongst either the NS or NNS were tag questions such as “OK?” and “right?”. The use of these strategies also was dependent on the personality of the speaker. For example, in the NS dyad, Mike, who tended to give carefully measured descriptions and be more concerned with accuracy than his partner, often checked his partner’s comprehension. Because of this attention to detail, the NS dyad used comprehension checks most often. The following example shows both participants checking the comprehension of the other at a particularly difficult point in the negotiation.

(26) 64. Paul. OK, start again, you got a square, right?
65. Mike. Got a square
66. Paul. Square
67. Mike. Oh hang on, can I ask you questions first?
68. Paul. OK
69. Mike. So you’ve got this three-sided square, OK?
70. Paul. Three-sided square
71. Mike. OK. This square is (pause) got a side missing.

In line 64 Paul asks Mike if he is following his instructions. Mike confirms this by repeating Paul’s utterance (L65). Following this they change roles and in line 69 Mike uses the same strategy to check his partner’s comprehension. Paul indicates that he is following Mike in line 70.

Another similar example comes from NNS Dyad 3 in line 68:

(27) 64. Ali. Down, and, you put circle in the center, small circle
65. Radislav. In the center, just one circle, OK? In the center
66. Ali. Less than this, small, like this one
67. Radislav. Yeh
In this example, in line 65 Radislav checks his own comprehension with Ali, who is the informant. In line 66 Ali clarifies his instruction, apparently by showing Radislav either the actual circle, or an example of the circle he must draw. Radislav responds with a confirmation of his understanding (L67), and Ali follows in the next line by asking Radislav if he understands, with the comprehension request: “OK?”. Ali then goes on to continue his instructions as he apparently feels their meaning has been satisfactorily negotiated.

Like the other strategies discussed in this section, the use of comprehension checks was related to the achievement of clarity of both language and information, rather than, as has been claimed, being exclusively for the repair of nonunderstanding.

In addition, a further finding from the data presented above in examples 18 to 27 is that although there was apparently a low incidence of traditional negotiation strategies present, much other language activity is taking place between the interlocutors. Contrary to findings discussed in Chapter Two (e.g. Foster, 1998), lack of confirmation checks, clarification checks and comprehension requests does not indicate a lack of negotiation. In the examples given, the traditional negotiation of meaning strategies are only single utterances, or building blocks, in the process of establishing a collaborative discourse. In addition, as the examples above show, not all the occurrences of these strategies are related to the achievement of comprehensible input. This is because negotiation of meaning is a much greater part of conversation than just a strategy to repair breakdown and achieve comprehensible
input in NNS discourse. In the following section other strategies will be shown to be part of the process of negotiation.

4.1.2. Negotiation of Meaning as a Process.

As described in Chapter Three, each utterance in this study was examined for its role in establishing and maintaining coherence. Consequently, the traditional negotiation of meaning strategies that are discussed above were found to be part of a larger language activity in which both local and global meaning was being collaboratively established. Reaching an agreed meaning was found to be a process that concluded with mutual confirmation by the interlocutors that they had achieved that agreement. Reaching agreement was also found to be an active, negotiated, social process in which every utterance has a strategic role.

Furthermore, as was shown above, the traditional negotiation of meaning strategies were found not to be used exclusively for the achievement of comprehensible input in a second language context. In fact, because of the influence of context, no strategies that were found in the data were used in exactly the same way each time; the same strategies could have completely different functions when used by one participant, and different personalities used similar strategies differently. Many strategies were used in conjunction with each other.

Some of the strategies that were found have already been identified by the traditional negotiation of meaning researchers. These are: clarification requests, confirmation checks, comprehension checks, repetition of oneself or the other, rephrasing, and completion and/or correction of the other's utterance (Pica and Doughty, 1985).
However, in contrast to earlier studies, these strategies were found not to be exclusively about repair of "nonunderstanding", or always be in question form. The strategies that were identified in the data include the following:

- Questioning
- Self repetition
- Repetition of interlocutor's words
- Segmentation (breaking utterances into smaller segments)
- Confirming
- Describing
- Instructing
- Showing partner diagram, either as informant or receiver of information
- Interrupting
- Ignoring
- Rephrasing own words
- Stressing words
- Leaving unfinished utterances
- Self correcting
- Correcting interlocutor's words
- Feigning understanding
- Predicting/completing interlocutor's utterance

The most common strategies used by the participants to assist in the process of achieving collaborative agreed meaning were describing and instructing. These strategies were, of course, related to the specific nature of the task, where participants were required to instruct their partners in what to draw or write. The role of describing and instructing is significant to the whole process of reaching an agreed
meaning since it tended to be these kind of utterances that provided the items whose meanings were locally negotiated. For example, in excerpt 19 above, in line 16, Radislav describes to Ali what he should draw, and Ali then begins to ask questions to gain a clearer picture. In excerpt 23, line 46 above, Jung He instructs her partner to “do” a straight line.

In the following sections, the next four most commonly occurring strategies are discussed. These are: a) Questioning, b) Segmentation, c) Interrupting, and d) Repetition, both of oneself and the interlocutor’s words. These strategies will be shown to be embedded in the greater process of reaching an agreed meaning. In addition, because the examples that are used contain a variety of strategies, when other strategies are present that are not more fully discussed, they are noted in italics.

In addition, one extra strategy that was only seen in the NS data is discussed. This strategy is: Humour

4.1.2.1. Questioning

Questioning was employed extensively by all participants. Those questions that clearly arose in the context of seeking comprehensible input were given the same labels as those used by earlier researchers (e.g., Long, 1981; Foster, 1998) and have been discussed above. However, in contrast to findings reported by previous negotiation of meaning researchers of second language learners’ strategies (e.g. Pica, 1994), the participants in the current study did not use questions primarily to achieve comprehensible input, although this was one aspect. Three additional and clearly distinct types of requests were also identified in the current study: 1) to obtain specific
information, 2) to obtain specific vocabulary and 3) to initiate a new phase of the interaction.

1) To obtain specific information. The following example is taken from Dyad 3. Ali asks Radislav, who is the informant, for specific information to help him complete his diagram.

(28) 69. Ali. I see
70. Radislav. And, err
71. Ali. What this, same one?
72. Radislav. 6, 6, rectangle
73. Ali. Down one
74. Radislav. Yeh...
75. Ali. Which one, right one or left one?
76. Radislav. In the middle of...
77. Ali. Left one
78. Radislav. Yeh
79. Ali. Left one, what we put?
80. Radislav. Err, one number
81. Ali. Yes
82. Radislav. Err, it's dollars
83. Ali. Mm
84. Radislav. Four hundred ten
85. Ali. Yes
86. Radislav. Four hundred ten, and comma, fifty
87. Ali. Mm, mm, fifty, what you got now?

(D3.5)

Throughout this excerpt, Ali questions Radislav to obtain specific information. His first question in line 71 asks if they are still working on the same box or if they have moved on. Radislav responds by giving the number of the box in line 72, using self-repetition, and then Ali confirms that he is following Radislav by expressing his understanding of the direction as moving down a box (into Box 21). Radislav confirms this in line 74. In the following line (75) Ali again asks for specific information to help him place the diagram. His question in line 75 regarding the right or left is related to an earlier confusion they had about direction. In line 77 Ali interrupts Radislav as he realizes Radislav's focus is on the left. Once they are mutually oriented to the grid pattern, in line 79 Ali again asks specifically for the
relevant information. Interspersed by confirmation signals from Ali, Radislav gives
the requested information until in line 87, Ali indicates that he is satisfied that the
diagram is completed by asking for the next set of information relating to another
diagram on the grid.

We can see that Ali and Radislav have completed the process of negotiating a mutual
understanding on the contents of Box 21 through a variety of interacting strategies.
Radislav did not simply tell Ali in one straightforward, and rather long utterance,
what he should draw, with Ali quietly carrying out his instructions. Instead the
interlocutors carried out an extended process of interacting to build a collaborative
meaning. Ali’s final utterance in this excerpt indicates the negotiation in relation to
this particular element of the task has been concluded, thus ending the negotiation
cycle.

2) To obtain specific vocabulary. These kinds of questions were exclusive to the
NNS, although the NS did assist each other with vocabulary by offering synonyms.
The NNS, however, asked each other directly for vocabulary, particularly those
related to spatial concepts that had been taught in the practice session. The following
element is from Dyad 1:

(29) 88. Jin. What you got in third square?
89. Zdravko. Third square, I haven’t, ah, anything, ah, corz straight, ah. How does it say? Um.
90. Jin. Up is it, up, vertical, up?
91. Zdravko. No, haha (embarrassed laugh) ah (pause) how does it say?
92. Jin. Horizontal
93. Zdravko. Horizontal, no, vertical
94. Jin. Vertical, up
95. Zdravko. Vertical, vertical

(D1.3)
In this example Zdravko asks Jin in line 89 for a word he cannot remember. Jin responds with a question in which she repeats the word “up” three times. This may be to check for herself whether vertical does in fact mean ‘up’. In line 91, while still confused, Zdravko repeats his question. In response Jin suggests ‘horizontal’ in line 92. Still unsure, Zdravko repeats her term and quickly realizes ‘vertical’ was the right word, and so corrects himself. Jin responds in line 94 by repeating her earlier utterance (L90) to confirm that Zdravko has the correct concept. In line 91 the negotiation cycle is completed with Zdravko’s confirmation through self-repetition that he has found the word he needed.

3) To initiate a new part of the interaction. This questioning strategy had two functions related to beginning a new part of the interaction. It was used to determine where on the grid to start, or who should take their turn.

The following example is taken from Dyad 2. Throughout the activity, Margarita was particular about achieving an even distribution of turns, as shown here:

(30) 96. Mirsad. Yeh um (pause), Margarita could you draw me, could you draw in square ah, could you draw me table, ah, table in square number 12 and number 8.
97. Margarita. 12 and 8.
98. Mirsad. Yeh
99. Margarita. A table (long pause) OK. Mirsad, could you draw me in the to, err, bottom right corner, could you draw me a happy face (long pause) umm, it’s my turn? No, your turn.
100. Mirsad. Yeh, my turn, um, ah, Margarita, Margarita could you draw, ah, one big letter.

(D2.1)

This negotiation cycle begins with Margarita confirming through repetition in line 97 that she has followed Mirsad’s instructions. Mirsad then confirms that Margarita has the same understanding as he does (L98). After Margarita has drawn the table in her
box, she issues her next set of instructions (L99). The subsequent pause is so long that Margarita then asks whether or not it is her turn, deciding it is Mirsad’s. In line 100 Mirsad confirms he is in agreement with her and immediately begins giving his next instruction. In this interchange Dyad 2 have successfully negotiated to an agreed meaning about who should take their turn.

The three types of questions discussed above, as well as those used by the traditional negotiation of meaning researchers (confirmation checks, clarification requests and comprehension checks), were the most common type of all negotiation strategies employed, particularly those seeking missing information. One reason for this is because questions were able to be used by everyone, from telegraphic use (31), to grammatically accurate use (32), to longer, grammatically accurate utterances (33):


(32) 102. Ali. But, what we do? (D3.7)

(33) 103. Zdravko. Do they help you now? (D1.4)

Question forms are taught early in the acquisition of English, and since the *Wh* words replace vocabulary, the user of the question form puts the onus on the hearer to provide the appropriate information. Consequently the participants may have been confident to use these forms as a strategy in negotiating their collaborative outcome.
Furthermore, the visual nature of the task made these Wh forms easy to use. The participants were able to rely on the task as a tool to help establish meaning, since they did not have to describe abstract concepts, but visible representations that were on the grid. Conversely, Yes/No questions were rare because they are closed; the inquirer has to have a certain amount of information, and control wider vocabulary to use in the question. For this reason the NS dyad used this kind of questioning much more frequently. It is easier to ask, "What shape is it?" than, "Is it square/round/rectangular?" and so on. By contrast, the onus is on the respondent to provide the vocabulary and advance the negotiation of meaning when given a Wh question.

Yes/No questions were most commonly used as confirmation checks by the NNS. For example in the following excerpt, Bozo repeats Jung He’s statement with rising intonation to elicit a simple confirmation and additional clarifying information:

(34) 104. Jung He. On the right hand corner
105. Bozo. On the right hand corner?
106. Jung He. Yes, in the top right hand corner.

(D4.3)

The evidence from this exchange is that Bozo does understand the instruction, but wants confirmation of this understanding. Jung He is able to provide this, and to add additional information. This exchange also gives Jung He the opportunity to self-correct, altering the preposition ‘on’ in line 104, to the more correct ‘in’ in line 106. In the function of confirmation checks, Y/N questions are usually used elliptically by the participants. (Eg. “diagonal?”) This is easier and more conversational and native speaker-like than using complete sentence forms.
4.1.2.2. Segmentation

Another common strategy used in facilitating negotiation of meaning was segmentation, which, for the purposes of this study has been defined as the breaking of utterances into smaller segments. This strategy was used by both the NS and NNS and functioned as a way to make information easier to follow and process.

Segmentation was done by both the receiver of information, and by the informer at the request of the hearer. For example, as the following excerpt shows from Dyad 1's interaction, as Zdravko took instructions from Jin to complete a diagram, it was necessary for Zdravko to stop his partner when her utterances were about to become too long for him to process. For instance, in response to his first question in line 108 seeking a repetition of some of the information she has already given, Jin then goes on to give the information in small segments.

(35) 107. Jin. First square, my bottom right hand corner to...
108. Zdravko. Yeh (pause) which corner?
109. Jin. My bottom right hand corner
110. Zdravko. Yeh
111. Jin. To the my left hand top corner
112. Zdravko. Da
113. Jin Line, draw the line diagonal
114. Zdravko. Yeh
115. Jin Diagonal
116. Zdravko. Yeh, and
117. Jin. And letter P on my
118. Zdravko. Right
119. Jin. Right hand
120. Zdravko. Right hand
121. Jin. Right hand side

(D.1.5)

Within this passage, the weaker partner, Zdravko, elicits the information from Jin in segments through the use of questioning and repetition. It is clear he is then able to follow her meaning as he gives confirmation signals such as "yeh" (L108, 110, 114, 116). By line 118 he is following her so well he uses prediction to guess that she will
say “the right side”. Through this segmentation strategy, together they achieve a negotiated meaning that helps Zdravko complete his diagram.

Segmentation tended to be particularly noticeable in the data as the stronger speaker coached the weaker through a process, as the above excerpt also shows. While Zdravko elicits the segmentation, Jin provides appropriate sized utterances for her partner. Indeed, segmentation, like confirmation checking, was a frequent strategy used in response to the needs of the receiver of information, and most frequently for the weaker participant in terms of language proficiency.

Segmentation was also used, however, by the NS to increase clarity. Like the NNS the segmentation was initiated by the participant who needed the information to complete a diagram. In the following excerpt Paul rushes through his instructions, overloading Mike with more information than he can process at once:

(36) 124. Paul. Alright now the third one’s more difficult. I’ve a line extending into ah to 1C. It’s coming from ay um, coming from um... well the line extends down into 2C with the end of that line halfway or a third of the way down it’s got a thick black line. Together what’s in 1C and 2C looks like ay um ah croquet stick sort of intercepted halfway along the handle. Understand that? Or a tack sitting on the ground with its pointy bit sitting up in the air (rising intonation)

125. Mike. Can you just go to 2C, 2C
126. Paul. Yeh
127. Mike. This black sort of, it’s sort of like a long rectangle is it?
128. Paul. Yeh, that’s right, a skinny rectangle
129. Mike and it’s about two thirds up in the...
130. Paul. In the, in the middle

We can also see that Mike, who is seeking the information, does the actual segmenting himself, indicating to Paul what he has understood to that point. Paul responds with confirmations to show in their negotiation of meaning they are
following each other. The NNS participants also used segmentation in this way at times. In the following excerpt from Dyad 3, Ali is the informer and Radislav provides his own segmentation as he checks that he is following Ali’s instructions:

(37) 131. Ali. Yeh, yeh, yeh (pause) that’s it. We go for the last third of big square. You start in the second part of fourth on the left hand put diagonal from up corner to the down (pause) corner

132. Radislav. Aah, second
133. Ali. Yeh
134. Radislav. And left, top left
135. Ali. Yeh, you put it in...
136. Radislav. Top, top corner, I have, this is (unclear)

(D3.8)

In this example, in lines 132 and 134 Radislav provides his own segmentation of Ali’s instructions. Both times Ali confirms Radislav has understood the instructions (L133 and 135). Then, in line 136, as Ali provides additional information, Radislav interrupts to indicate he is following clearly, by telling Ali he has the diagram in his own box as well (Boxes 8 and 12). At this point this cycle of negotiation is completed. As the above examples show, segmentation by either the giver or receiver of information was useful in furthering mutual understanding because it enabled the participants to be clear about the other’s meaning, then to confirm that agreement.

4.1.2.3. Interruption

Interruption was used by all participants, but more frequently by those who seemed to be having no difficulty following the proceedings. For instance, in Dyad 4, Bozo often used interruption to express his impatience as Jung He pondered over her instructions. For example:

(38) 137. Jung He. OK, next turn in the...
138 Bozo. middle
139. Jung He. Y, yes in the thirde in the box in the row, third in the boxe, OK, in the center, making big pointe, bid pointe,
and then, OK, further to...

140. Bozo. left side
141. Jung He. Left hand side...

(D4.4)

As well as expressing impatience, as was evident in his tone of voice, in this example Bozo also shows Jung He through interruption that he is following her very well and that she probably does not need to be so detailed in order to achieve a mutual understanding (L140). In the NS dyad, there was a similar difference in personalities, where Mike was slower and more ponderous in his general approach to the task while Paul seemed less concerned with detail. In the NS dyad, as in example 20 above, interruption was used in a similar way by Paul to that shown in example 38 by Bozo.

In Dyad 3, Ali, who found the task much easier than his partner Radislav, would frequently interrupt Radislav to help him with vocabulary items or to break his indecision. For example, in excerpt 39, in line 143, Ali interrupts Radislav, who seems to be struggling with what word to use:

(39) 142. Radislav. Between, horizontal, yeh between little circle and right,
right, right, err...
143. Ali. corner
144. Radislav. Corner.

(D3.9)

However, when Radislav felt in control of the task, he also was able to interrupt. In excerpt 40, Ali is giving instructions:

(40) 145. Ali. Yeh, would you draw (unclear) I think, on this side
146. Radislav. Draw right...
147. Ali. On this one, like this
148. Radislav. Yeh
149. Ali. OK, which is...
150. Radislav. Like house

(D3.10)

In this example, in line 146, Radislav first demonstrates his understanding of Ali’s instructions by giving the side he thinks Ali has obviously pointed to. Ali interrupts
him in line 147 by showing Radislav something else to assist him in placing the
diagram. Radislav confirms he is following in line 148, and then in line 150,
Radislav, who appears to be growing in confidence regarding this particular diagram
and its placement on the grid, interrupts his partner to give his own interpretation.
Paradoxically, while at this stage the participants appear to be reaching an agreed
meaning, shortly after this excerpt, they realize they have a breakdown in
understanding over which is right and which is left. However, as these examples
show, interruption is one strategy in the greater negotiation process.

4.1.2.4. Repetition.
Repetition was another common strategy used to establish agreement about meanings.
However, like other aspects of the negotiation process, it was used in different ways
by different individuals. Participants repeated themselves or what their partner had
said, often rephrasing what was said. Sometimes segmentation was used in question
form to check the meaning of a word or phrase. However, repetition was most
commonly used to confirm comprehension as in the following example:

(41) 151. Margarita. So, to write, say again
152. Mirsad. Yeh, big square
153. Margarita. Big square
154. Mirsad. - Yeh?
155. Margarita. Yes

(D2.2)

In this straightforward example of negotiation, Mirsad repeats his instruction at
Margarita’s request in line 152. Margarita repeats the instruction in line 153 to
confirm her understanding, although in line 154 Mirsad checks her comprehension
himself by asking her if she has understood (Yeh?). Margarita then confirms her
comprehension in line 155, completing the negotiation process.
Another use of repetition is demonstrated in the following extract. In a strategy typical of his style of negotiation, Zdravko uses repetition in the absence of appropriate vocabulary:

(42) 156. Jin.  Break the line?
157. Zdravko.  No, no, no (urgently)
158. Jin.  No, no?
159. Zdravko.  This, this, good, good, good

(D1.6)

In line 156, Jin is unsure of Zdravko’s meaning. Zdravko responds by using stress as he repeats “no”. Jin tries again, and apparently she grasps Zdravko’s meaning with the assistance of him showing her his paper as evidenced in Line 159, (This, this) because Zdravko then confirms her understanding (good, good), and hence the achievement of an agreed meaning.

Another example from Dyad 1 shows Zdravko using repetition in the form of a question to elicit clarification of the term “budda” (LI 62). However, in this case the strategy was not successful in facilitating the achievement of a clear shared meaning, although Zdravko allows the process of negotiation to continue by feigning understanding in line 160:

(43) 160. Zdravko.  Mmm, Korea, Korea. Do you understand small Japanese, no? Japan?
161. Jin.  I used to speak Japanese a little budda
162. Zdravko.  A little budda?
163. Jin.  Yeh, but I come to Australia, try to learn to speak English…
164. Zdravko.  Yeh

(D1.7)

In the first utterance shown here Zdravko repeats and rephrases by using the word root “Japan” to check that Jin has understood him. In his second utterance he is apparently confused by her pronunciation as the audible confusion indicated in his question shows on the tape (L160). However Jin does not notice this and continues,
effectively repairing the breakdown in coherence without apparently realizing the breakdown had occurred. Zdravko may of course have known that by “a little budda” she meant “a little bit o”, but other evidence of his low language proficiency level and limited exposure to English suggests this was unlikely. Throughout the discourse rising intonation was a strategy he sometimes used to confirm understanding rather than question meaning, and Jin’s response seems to respond as though Zdravko has confirmed understanding (L161). Zdravko is then forced to feign understanding, or respond to what he does understand, in the interests of keeping the conversation going (L162). In this way feigning understanding can also be considered a negotiation strategy, and here it effectively completes the negotiation phase.

The NS were not inclined to use repetition as frequently as the NNS, favouring a curt “yip” to indicate comprehension, although repetition is sometimes present. For example:

(44) 165. Paul. Yeh, towards the right
166. Mike. The right, yeh, OK.

(D5.5)

However, repetition of the self or the other was more commonly used by the NNS.

Self-repetition was less common than repetition of something that the other had said, and was usually associated with the speaker being unsure, as example 45 demonstrates:

(45) 167. Radislav. You must write, ah, you must write line between ah, top, between this is middle, between top, top line and it, between top line and lit, little circle
168. Ali. OK

(D3.11)
In this example the use of repetition is not only a negotiation strategy since Radislav uses it to reinforce his own understanding. His utterance receives a confirmation of understanding from Ali, suggesting that negotiation can serve both a private and public function for speakers. This excerpt shows that an agreed meaning has been reached (L168) at the same time as Radislav is formulating concepts for himself.

4.1.2.5. Humour

Because of the classroom context and the difficulty of both the linguistic and task demands, all the NNS dyads took the research activity very seriously. However, the NS were less constrained and had more fun. The one negotiation strategy they used that did not appear at all with the NNS was humour. The appearance of this strategy was also related to the fact that they already had several years shared history in a variety of contexts, whereas the NNS, apart from not having the linguistic resources to engage each other with humour, had only known each other for a comparatively short time. In addition, humour can be culturally exclusive, and the NNS were purposely paired up with people from other cultures. As the following examples show, Mike and Paul were able to diverge from the task with humour without breaking the coherence of their interaction:

(46) 169. Mike. OK. This square, is it wholly, not wholly, no, is it…
171. Mike. Religious (laugh)
172. Paul. What? There’s a certain something about it (laugh)
173. Mike. (laugh) It hasn’t got a halo above it!
174. Paul. Yeh
175. Mike. Right, um, wholly, is it wholly in ah D2?

(D5.6)

(47) 176. Mike. OK, what I’ve got, is, I’ve got your bottom, your bottom line…
177. Paul. you leave my bottom out of this…
In excerpt 46 Paul interrupts Mike in line 171 to make a pun on his use of the word ‘wholly’. Mike then repeats Paul’s word ‘religious’, indicating he follows his partner’s witticism, and then in line 173 even adds to the joke. In line 175 Mike indicates he is returning to the task with the word ‘right’, and again asks his original question. In excerpt 47, Mike diverges in a similar way to example 46, as he plays on the word ‘bottom’.

Humour, like the other strategies discussed here has a role in the greater negotiation of meaning process carried out in order to complete the task. Furthermore, as example 46 shows in particular, humour involves the speakers in a “sub-level” of negotiation, as they collaborate to negotiate the meaning of the jokes, apart from the task. In the research by Ehrlich, Avery and Yorio (1989) discussed in the literature review, it was found that “skeletonizers”, or participants in an information gap activity who did not give elaborate descriptions, had more success at negotiating meaning than those participants who gave very detailed descriptions. The researchers reasoned that this was because the “skeletonizers” did not concern themselves with irrelevant detail and consequently had more success at identifying any breakdowns in understanding. Those who gave very detailed descriptions and had less success at negotiation (“embroiderers”) were shown by the researchers to involve themselves in what can be considered to be many “sub-layers” of negotiation. Mike and Paul in fact were able to engage in deeper layers in their negotiation without experiencing a breakdown in coherence.

In the findings of the present study, the fact that humour as a negotiation strategy was
only used by the NS suggests that they alone felt able to diverge temporarily from the
task at hand into other layers of meaning. The NNS, on the other hand, showed no
attempts to either give detailed descriptions or diverge from the task at hand.
Furthermore, their utterances were much shorter than those of the NS. The only
exception amongst the NNS was Dyad 1. In the middle of the task Zdravko directed
the conversation to personal issues, apparently as a break from the demands of the
task. However, this personal conversation went on for five minutes before the
researcher restarted them on the task. As such it constituted a complete divergence
from the task rather than an element of "embroidering" or elaboration.

4.2. Conclusion.

All the strategies discussed above are functional in that they are employed by the
interlocutors for a purpose. The overarching function of each is to build the
negotiation of meaning process in the discourse and in doing so keep interaction
coherent and continuous, in order to complete the task. Each utterance provokes
another, which builds an ongoing process of negotiating meaning. What these
findings emphasise is the limitations of thinking of negotiation of meaning as
represented entirely in isolated exchanges and utterances such as conformation checks
and clarification checks. As the examples given in this chapter show, contextual
components such as setting, personality and linguistic competence all help to
determine how individuals negotiate together for agreed meaning. Although the
additional strategies identified and discussed in this chapter significantly expand the
repertoire available to interlocutors, there are no doubt many more not identified in
this current data set. The essential point is that the strategies given here help to
demonstrate that negotiation of meaning is an ongoing process in interaction that is
made up of a variety of strategies that serve different functions in the discourse. These functions do include the achievement of comprehensible input and output.

On the basis of evidence presented in this chapter, we can tentatively redefine negotiation of meaning as the ongoing process in any interaction by which the interlocutors achieve agreement on meaning so that the interaction can proceed. Negotiation of meaning seen from this expanded point of view is necessarily a social activity. This contrasts with those definitions discussed in Chapter Two in two ways. Firstly, negotiation of meaning is not seen here to be exclusively in isolated exchanges or utterances, but is an ongoing process. Secondly, negotiation of meaning is not only about the repair of breakdowns or “nonunderstandings” for the achievement of comprehensible input for L2 learners. Rather, it is a social activity present in any conversation. In the following chapter we will explore these findings in relation to Vygotsky’s theory that learning is also a process activated through social interaction, and learning in progress can be seen in that interaction ([1934], 1962; 1978).
5.0. Introduction

As has been shown in Chapter Four, negotiation of meaning in the fullest sense of the term is the ongoing process by which interlocutors reach agreed meaning. It has been shown that the process consists of a greater variety of strategies that help to keep an interaction progressing than have been examined by earlier "negotiation of meaning" researchers. In this chapter, that process of negotiation is examined for other features that occur in interactions in a learning context. In particular, those features of communication identified by Vygotsky and other researchers as showing evidence of learning in progress are discussed. These are the incidences of metatalk, scaffolding in the novice/expert relationship and attempts to self regulate.

5.1. MetaTalk

As already discussed in Chapter Two, metatalk is "talk by the participants about the task at hand and the discourse that constitutes the task" (Brooks and Donato, 1994:266). It is language that actually controls the task since it is strategic in nature, and shows object regulation, as speakers attempt to regulate their thoughts by externalizing their cognitive processes. As such, metatalk regulates thinking and, therefore, learning when learning is the goal. It will be shown that the context of being in a learning situation for the NNS participants in the present study was the largest influencer of the kind of language produced. In the examples presented below,
three kinds of metatalk are shown with the last one being specifically related to learning.

Metatalk had three main roles in the dyadic interactions: to establish orientation to the task, to determine the roles of the interlocutors and to facilitate learning.

5.1.1. Orientation to Task.

The use of meta-talk is closely connected with establishing orientation to a task since participants have to agree on how they will approach the task and negotiate agreed meanings for the language they use. For instance, when approaching the task, the participants had to consider how they would orient themselves to the grid pattern. Orientation to the task was the foundation for the way they negotiated and maintained coherence throughout the exercise. There are many examples in the data where linguistic incoherence did not cause breakdown, or if it did it was quickly repaired, because the participants were mutually oriented to the task at hand.

For efficient completion of the research task, each dyad had to establish where in the grid they would start and from there, which direction they would continue in (e.g., left to right, top to bottom). They also had to establish how they would name the boxes within the frame of their orientation, for example, first, second, third box, or box one, two, three, and so on. This orientation process is similar to that described by Ehrlich, Avery and Yorio (1989) in relation to a similar information gap task in Chapter Two. According to those researchers, as participants carried out their task they first established which direction they would move in. Participants in that case also named the location of each box before moving on to describe the diagram within the box.
Like the negotiation strategies discussed in the previous chapter, the way participants negotiated their orientation to the task and the system of orientation they agreed on varied between dyads. For example Dyad 1 approached the grid as 24 boxes and worked through them ordinally, calling them first, second, third, and fourth, line by line, from the top to the bottom. Within the boxes they identified top, bottom, center and the corners. There was no recording of how Dyad 1 initially established their system of reference for the grid, however, as example 48 demonstrates, they were able to follow each other confidently within their shared orientation.

(48) 180. Zdravko. Blank, yes, in mine second square is blank too
181. Jin. My third square
182. Zdravko. Yeh
183. Jin. Top middle
184. Zdravko yeh
185. Jin. Is a rectangular
186. Zdravko. Yeh
187. Jin. All coloured in rectangular
188. Zdravko. Yes, I have too. And third square...
189. Jin. Third square
190. Zdravko. yeh
191. Jin. I have (pause) my left corner
192. Zdravko. Yeh, left corner
193. Jin. Yeh, left corner point little triangle

(D1.8)

The example above contains two cycles of negotiated meaning. From line 181 to 188 the participants negotiate regarding the contents of the "third square" (Box 7), and form line 188 to line 194 they negotiate meaning regarding the contents of Box 3. These negotiation cycles show frequent confirmation of agreed meaning regarding orientation as the speakers progress through the boxes. For example, in line 182 Zdravko confirms that he understands which box Jin is referring to. In line 184 he again gives confirmation of understanding, this time regarding the placement of the diagram within the box, and finally in line 186 he confirms his understanding of Jin's
description in line 185 of a rectangle. However, in line 188 Zdravko asks Jin for the second time what she has in her third square. The first mention of the third square in line 181 is Box 7, which contains the rectangle, and the second use of the third square is obviously Box 3, which contains the triangle. Jin and Zdravko have moved backwards from the second line up to the top line of the grid, but because of their mutually agreed orientation system, they do not experience a breakdown in coherence.

Dyad 2, on the other hand, were not initially using a shared system of orientation, and neither did they record any discussion of how they would establish a system for orienting themselves on the grid. Margarita began by asking Mirsad to draw in "the top left corner" (Box 1), as the following example shows:

(49) 195. Margarita. OK (pause) Could you please draw me in ah, top left corner, um (pause) a triangle
196. Mirsad. Triangle (long pause)
197. Margarita. OK. Now you ask me
198. Mirsad. Um, can you write me, ah, second square
199. Margarita. Yes
200. Mirsad. Ah (pause) fifty thousand dollars
201. Margarita. Fifty thousand
202. Mirsad. Yes
203. Margarita. Yes
204. Mirsad. OK
205. Margarita. Ah, Mirsad, could you draw for me in the third corner, a circle, ah, th, third square on the top line, a circle

(D2.3)

Mirsad responds to Margarita's first instruction (L195) with repetition of the word "triangle" to confirm his understanding (L196). However, when Mirsad issues his first instruction for Margarita in line 198, he uses a different reference system to the one she has already used, calling the box the "second square" (L198). Margarita first confirms her understanding of both Mirsad's choice of the second box (L199), and
then confirms his instructions to write in a monetary amount (L201, 203). In line 205 Margarita begins to describe Box 3 as the "third corner", but corrects herself to use the same ordinal system of reference that Mirsad has used for the boxes. She also extends this reference to include which line the box is in.

Margarita continues to alternate between referring to the boxes as in a series from one to twenty four, and using other reference points such as the corners, as in example 50 below:

(50) 201. Margarita. OK, could you, could you please draw for me in the second mm from the top, left corner, aah, can you dr, write letter U

202. Mirsad. OK, ah, Margarita, could you write, umm, could you write in nine, err, square number nine. (D2.4)

As this example shows, although they do understand each other sufficiently well to work together, they are still not mutually oriented, using different systems to direct their placements. This is probably partly because Mirsad did not control the spatial placement language that Margarita was able to use, such as 'second from the top' and 'second last square'. However, five utterances after excerpt 50, and on her next turn to give an instruction, Margarita again adopts Mirsad's simpler tactic:

(51) 201. Margarita. Now, Mirsad, could you mm draw for me in the second, no, in the sss (to herself), one, two, three, four, sixth square, could you please draw me a triangle. (D2.5)

This example shows Margarita's mental process as she aligns her orienting system with Mirsad's, counting the boxes with the use of metatalk. These two participants subsequently continued to count the boxes in this way throughout the task. In the excerpts given above we can see how they indirectly negotiated and established the system of orientation they would use as they negotiated the meaning of the depiction
of the individual grids. After they had established their system of orientation, the data shows they jumped around the overall diagram apparently without any systematic plan for proceeding.

The mutually, if unconsciously, negotiated orientation of the Dyad 2 participants, enabled them to use this random approach without any breakdowns. For example, their joint orientation helped Margarita to carry out the following confused instruction:

(52) 202. Mirsad. Yeh. Margarita please ah could you write, no, could you draw me one diagonal line from square number three to six and belong, belong ah di diagonal, ah vertical line, ah, draw one line, w, w, w, (stutter) draw me one ah, one um, small triangle.

Margarita did in fact follow this instruction as best she could, as was clear from her completed grid, without asking for clarification. She drew a vertical line from Box 3 to Box 6 with a triangle below this line in Box 6.

Dyad 3 also initially began the task without recording any discussion about how they would orient themselves, and then realized their need for mutual orientation as example 53 shows:

(53) 203. Ali. Up right, put nothing, ss, second
204. Radislav. Second
204. Ali. Yeh, up right
205. Radislav. Excuse me, what is (unclear), I forget, what is...
206. Ali. Horizontal
207. Radislav. Yes, ah, horizontal
208. Ali. What you say, second one?
209. Radislav. What horizontal (unclear)
211. Radislav. It’s the same or different paper? Different
212. Ali. This is different paper
213. Radislav. Yeh
214. Ali. But, what we do? I describe something, or?...
215. Radislav. You must give me information about and I must...
216. Ali. You write
217. Radislav. Yeh

(D3.12)

Ali begins in line 203 by giving Radislav instructions to put nothing in the "up right" and without waiting for confirmation of understanding moves on to explaining the contents of the next box. However, Radislav seems to be distracted by a vocabulary problem in line 205. It is apparent that the participants have not yet achieved a coherent orientation; Ali continues to try to establish the placement of the diagram while Radislav attempts to clarify the vocabulary. Eventually in line 211, Radislav tries to clarify their mutual confusion by asking whether they have the same versions of the grids. Ali responds by confirming the papers are different (L212), and Radislav then confirms their agreement of meaning in line 213. Following this, Ali makes a further attempt to clarify the task requirements by asking directly what they have to do in line 214. In response to Radislav's explanation in line 215, Ali interrupts to indicate he has understood his partner. In line 217 Radislav completes the phase of negotiation by confirming he also has understood the goal of the task.

Dyad 3 then begin to negotiate concerning a system for orienting themselves to the task, as shown in example 54 below:

(54) 218. Ali. OK, OK, this is up right, second
219. Radislav. Yeh
220. Ali. (unclear)
221. Radislav. Yeh
222. Ali. And one down
223. Radislav. One down
224. Ali. One square down, another square down
225. Radislav. Yeh

(D3.13)
This example shows that Ali determined the initial orientation. He establishes that they will work first from the right top corner (L218) and downwards from there (L222, 224). The movement from right to left was likely to be natural for Ali as his first language was Arabic, which is written from right to left. However, the orientation to left and right seemed to create difficulties from the outset for Ali and Radislav.

The difficulty with left and right continued throughout the dialogue, sometimes leading to breakdowns in coherence such as that in example 55:

(55) 226. Ali. Right rectangle in the corner
227. Radislav. Right rectangle in the corner (very softly) (unclear) (pause) oooh, what is wrong? (long pause) err, what is mistake? Another?
228. Ali. Down in the right four rectangle
229. Radislav. Four?
230. Ali. Yeh, down in the right
231. Radislav. Four, rectangle

(D3.14)

Radislav evidently has difficulty following Ali’s instructions in this example, although Ali does not seem to be aware of the reason for the problem. He continues to repeat the same instructions for his partner.

Shortly after excerpt 55 occurs, the following exchange takes place:

(56) 232. Ali. This one supposed to be right, you take, you’re going to the left, mm (unclear), top left in the corner (pause) no, no, no
233. Radislav. No? where?
234. Ali. (unclear) we make (unclear), left is (pause) we start from the...

(D3.14)

In excerpt 56 above, Ali attempts to clarify right and left, after suddenly realizing in line 232 that the source of their difficulties in successfully negotiating meaning is the
orientation to direction. After more confusion, Ali finally attempts to clarify this misconception, as the following example shows:

(57)  235. Ali. Yeh, what we start now? I said right one, that mean this right (sound of tapping) not this (sound of tapping) this one is right, your right, this is right hand.

(D3.15)

Subsequently the participants managed to clarify the problem with orientation to left and right to some degree, although they continued to be cautious as to how they used these reference points, and several times explicitly negotiated their use as example 58 shows:

(58)  236. Ali. Which, aah (pause) right or left?
237. Radislav. Yeh, and er, left from right
238. Ali. Right, left
239. Radislav. Right, left...
240. Ali. From me, as right
241. Radislav. Yeh
242. Ali. For you was right, that’s the way.

(D3.16)

Although Dyad 4 appeared to be the most evenly matched pair in linguistic proficiency of all the NNS, they experienced some serious breakdowns in coherence as a result of their failure to follow their agreed plan for orientation to the task. Jung He first suggested the way they could orient themselves to the task, and Bozo added his ideas for a jointly constructed plan as the following excerpt shows:

(59)  243. Jung He. What about we making all boxes
244. Bozo. OK
245. Jung He. Twenty four, twenty four?
246. Bozo. One two three four five six row
247. Jung He. mm, so all twenty four.
248. Bozo. OK, yeh
249. Jung He. Twenty four rectangular in...
250. Bozo. First, second, third, forth, fiveth, sixth, I ask you, ah, I ah, OK, um, in the second row from the top
251. Jung He. Mhmm
252. Bozo. It is here, first um...
In excerpt 59 we can see that Bozo and Jung He agree to work through the boxes from one to twenty four, starting from the top left hand corner, and in lines 253 to 254 they reach agreement that they will call the boxes 'rectangles'. However, Bozo then moved on to use descriptions such as: “first rectangle from the right”, instead of naming the boxes from one to twenty four as they had agreed. He also proceeded to rush through his instructions and did not follow a systematic procedure, instead choosing random boxes to describe to Jung He. Jung He was able to do little more than seek clarification and confirm understanding. It was not surprising that significant breakdowns in coherence occurred, such as in the following example:

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>253.</td>
<td>Jung He</td>
<td>Rectangle</td>
</tr>
<tr>
<td>254.</td>
<td>Bozo.</td>
<td>Rectangle, from the left, that one</td>
</tr>
<tr>
<td>255.</td>
<td>Jung He</td>
<td>mhmnm</td>
</tr>
</tbody>
</table>

(D4.5)
row from the bottom (pause) second rectangle from the left (pause) you put sqol, squol, cicle, cicle.

(D4.6)

In the excerpt above Bozo goes from describing the contents of Box 10 (L256) to Box 24 (L256-272), and finally to Box 18 (L272). Jung He has great difficulty obtaining clarification from her partner regarding the description of the house in Box 24. In line 256 the participants stop the tape, suggesting they may have tried to clarify the description of the diagram without recording their interaction, however, this does not apparently help Jung He, who persists in seeking clarification from Bozo after the tape is turned on again. There is no evidence that this breakdown was fixed, since Bozo hurries on to the next diagram in line 272 without response from Jung He.

Eventually, 42 conversational turns after excerpt 60 begins, Bozo suddenly instructs Jung He to “tell me”. She tries again to establish a clearer orientation, as example 61 demonstrates:

(61) 273. Jung He. OK. First of all making six, er, twenty four rectangular boxes, big in the square
274. Bozo. Yeh
275. Jung He. And then, division, divide for twenty four rectangular in there so in the first of the top of the first in the column there is nothing
276. Bozo. Mhm
277. Jung He. In the second in the row, in the firste column, top of the first column
278. Bozo. Then
279. Jung He. Is nothing…

(D4.7)

This is the first use of the word ‘column’ and is in opposition to ‘row’ (L277). Jung He continues to work through the rows systematically, redoing in some cases boxes that Bozo had rushed over. She continues in this way for quite some time until Bozo takes over the instructing role again, but this time using her system of orientation.
Like Dyad 1, Jung He and Bozo eventually reached an agreed system of orientation to the task through discrete negotiation of meaning.

Dyad 5, the NS, decided on a coordinate system to mutually orient themselves to the task as soon as they began, as example 63 shows:

(62) 280. Mike.  Well I reckon what first we gotta do...
   281. Paul.    Yeh...
   282. Mike     is actually get some sort of coordinate system
   283. Paul.    Alright
   284. Mike.    So, along the top shall we have ABCD and E, ABCD
   285. Paul.    Yeh
   286. Mike.    OK? I'm gonna write them in ABCD, alright? And then
                 123456 going down on the left hand side
   287. Paul.    Yep
   288. Mike.    So we can actually refer to...
   289. Paul.    Yep
   290. Mike.    To what we've got...

(D5.8)

The use of this alpha-numerical system meant that the partners began with an explicitly defined and negotiated framework for referring to the task and giving other instructions. They also referred to the sections within the boxes as 'corners' or 'quadrants'. Mike and Paul did not show evidence of confusion about where they were working, although one breakdown in orientation was recorded when Mike inadvertently gave instructions for 4A (Box 13) when they were focusing on 3A (Box 9). Once the error was realized they were able to quickly reorient themselves, as the following example shows:

(63) 292. Mike.  Say if you started in the bottom left hand corner of 4A, right?
   293. Paul.    It's 3A
   294. Mike.    Oh, 3A?!! Oh!! I's going 4A, sorry!
   295. Paul.    Yeh
   296. Mike.    Shall we do 4A?
   297. Paul.    Oh, let's do 3A first
   298. Mike.    Alright then, 3A is, there's nothing

(D5.9)
In this example Paul corrects the coordinate point that Mike has been using incorrectly (L293) since Paul asked him 27 turns earlier to tell him what he had in 3A. Mike, using the Student A paper, began to explain his half of the umbrella picture in Box 13, and Paul attempts to follow his description. Only when Mike repeats the coordinate in line 292 above, does Paul realize the breakdown has occurred.

In summary, as the above examples show, all the participants had different ways of orienting themselves to the task, but for each dyad the global orientation to the task was as relevant to the negotiation of meaning as any of the functional strategies discussed in Chapter 4. Mutual orientation aided participants considerably in building collaborative concepts, and ultimately in completing the task. Eventually all the participants reached an agreed meaning for orientation because it assisted them greatly in carrying out the task and achieving agreed meanings.

According to Brooks and Donato (1994), the procedure used to establish orientation to a task by interlocutors tends to be idiosyncratic, and, indeed, the participants in the present study showed considerable difference in the way they established and maintained orientation. For example, as already discussed, Dyad 1 numbered the boxes from one to four, row by row. Dyad 4 decided to start from the top left box and number them all from one to twenty four, while Dyad 5 used a system of coordinates that combined the rows and columns. Brooks and Donato consider that the presence of such a variety of approaches supports the idea that teachers do not need to specify which approach students should use when they are participating in activities similar to the one used here. They further explain that the metatalk used to establish orientation
is not incidental, but is one aspect of the activity of learning to use the L2 in a realistic context.

The evidence in the data presented here is that the participants had to engage in constant negotiation of meaning cycles to establish and maintain orientation to their joint task. These cycles occurred in and around the negotiation of meaning cycles regarding other aspects of the task. This negotiation for orientation was both overt, as in example 59 above, in which metatalk is the strategy used to negotiate orientation, or implicit, as in example 50. Each system of orientation was used successfully, as long as the participants did not deviate from it, or work through the activity in a particularly random manner. However, when a breakdown did occur, the benefit of being mutually oriented to the task was evident in the way participants could quickly repair the misunderstanding. Therefore, in carrying out the task, as Brooks and Donato (1994) have stated, the participants gained experience in negotiating and maintaining shared meanings in a realistic context.

5.1.2 Metatalk to Determine Interlocutor Roles

Besides helping participants to orient themselves to the activity, metatalk helped to keep the activity proceeding through the assignment of roles of informant or receiver of information, and as such, is also a negotiation strategy. All the participants showed acknowledgement of turn taking and in most cases ensured that they shared the participation roles. The following example from Dyad 1 is typical of the kind of metatalk used to change roles:

(64)  292.  Jin.  You could ask me one, second line, you could ask me second line, yes
       293.  Zdravko.  We have, um, diagonal
       294.  Jin.  No, no, you, could you ask me
In this example Jin suggests to Zdravko in line 292 that he take a turn as the receiver of information while she acts as the giver of information. However, Zdravko does not understand her complete statement and begins to describe his second line so Jin suggests a role change again in line 294. The negotiation cycle is then completed in line 295 as Zdravko first confirms he has followed her meaning, and then gives her an instruction.

The even distribution of turns appeared to be the main aim of Dyad 2, rather than carrying out the task as directed. Throughout the dialogue there are utterances such as: “I ask you or you ask me?” and “Now you ask me”. Margarita was particularly concerned about this even distribution of roles, as the following excerpt demonstrates:

We can see in the example above that Margarita is ensuring that they alternate turns as the informant. She checks whose turn it is in line 296 and again in line 306. The
use of metatalk related to turn taking in the data from Dyad 2 indicates that even without strict task guidelines, talk about the task or the language used is required. In this way, participants have to be active in their new language beyond using predictable routines such as questioning or strategies focused on by traditional negotiation of meaning researchers. Margarita and Mirsad are constantly negotiating their turn taking roles through the use of metatalk.

The NS also used metatalk to change informant/receiver roles in the activity.

However, the NS changed roles to repair breakdowns in coherence, rather than to ensure an even distribution of roles. In the following example, after Paul had been trying to explain what Mike had called “a tricky one”, their progress comes to a halt in L307 when Mike suggests they leave the difficult diagram. (Boxes 8 and 12):

(66) 307. Paul. OK, start again. Square, right hand side of the square goes…
308. Mike. shall we leave that one?
309. Paul. No, no, we gotta get it, I’m determined
310. Mike. I’m getting lost
311. Paul. OK, start again, you got a square, right?
312. Mike. Got a square
313. Paul. Square
314. Mike. Oh hang on, can I ask you questions first?
315. Paul. OK
316. Mike. So, you’ve got this 3 sided square, OK?

(D5.10)

Mike asks in line 314 if he can take a more active role as the receiver of information by asking specific questions about the diagram. He continues to ask questions regarding the diagram until he tries to change his own role to that of informant. Paul does not allow him to do this as excerpt 67 shows:

(67) 317. Mike. Ok, well I, what I’ve got
318. Paul. No, let me finish this one, cause that was the simple bit
319. Mike. Oh no
320. Paul. (laugh) (cough) OK, you take a line from the top left hand corner of the square
In line 326 Paul relinquishes control as informer to his partner. Despite trying to collaboratively complete the diagram by sharing information, Mike and Paul take 110 turns after excerpt 66 to come to the mutual realization that the completed diagram could be described as an envelope.

One value of an information gap task such as the one used by the participants in this study is its collaborative nature. The task requires equal sharing of information. The excerpts given above show examples of metatalk about the roles of the interlocutors which both initiates and sustains the interaction. Like metatalk for orientation to the task, this kind of metatalk can be regarded as essential to the negotiation process as a whole and here is practised by the participants in an authentic communicative situation.

5.1.3. Metatalk to Facilitate Learning

The degree to which metatalk was used to facilitate learning in this study seemed to depend on the participants' perceptions of the reason for the activity. For instance, some of the NNS participants seemed to see the activity as a chance to reinforce the vocabulary they had learnt in the practice session the week before. For this reason the metatalk they used that showed learning in progress was vocabulary related. In addition, there was considerable evidence of learning being deliberately or unwittingly peer assisted through the negotiation process.
This peer assistance can be seen in example 29 above, in an episode of metatalk used to facilitate learning, Zdravko can be seen working through his perceptions with the help of Jin.

In this negotiation cycle where the participants negotiate regarding an item of vocabulary, particularly through explicit questioning, evidence of Zdravko's emerging learning can be seen as Jin prompts him to recall the knowledge he already has. At first, in L89 he cannot find the word he wants and appeals to his partner who offers 'vertical' as the solution. He rejects this, while perhaps giving himself time to try to recall the word himself, and then, as if needing to hear the antonym to help him decide which word he really wants, asks for her help again (L91). Once Jin suggests 'horizontal' he tries this and immediately realizes 'vertical' is the word he needs. Jin confirms the meaning for him in L94, and by L95 he is clearly satisfied he has the right word. In this incident we can see how metatalk about elusive vocabulary items through the process of negotiation of meaning, brings the vocabulary to the consciousness, and, in doing so, consolidates learning.

A common characteristic of all the incidences of metatalk in which learning was revealed as taking place, was later use of a newly learnt or reinforced word, indicating successful learning. In the following negotiation cycle, Ali helps Radislav with the recall of vocabulary from the practice session:

(68)  327. Radislav.  What is it? Ah, I forget now, what is it?
328. Ali. Horizontal?
329. Radislav. Yeh, horizontal is ah line
330. Ali. Yeh, and this one rectangle
331. Radislav. Rectangle?
332. Ali. Yeh
333. Radislav. Ah, rectangle.
Here Radislav is able to confirm the use of ‘horizontal’ as an appropriate term, and Ali then takes the opportunity to teach him the word ‘rectangle’. In L331 Radislav repeats the term with rising intonation as he seems to mentally consider whether he recognizes the word. After Ali confirms Radislav’s use of the word ‘rectangle’ in line 332, he appears to be reminded that he already knew the word, and the negotiation cycle is completed in line 333. Later on there were many incidences of Radislav using the word ‘rectangle’ in contrast to the word ‘square’, and showing consolidation of learning and increasing confidence with the new vocabulary items.

In another example from Dyad 1, Jin helped Zdravko to discover the difference between a dot and a point, with a point being defined as smaller than a dot. In a similar way to excerpt 29, Zdravko worked through the knowledge he had, combining it with Jin’s. They then digressed from the task and had a long conversation about unrelated things. Over 400 turns later the following exchange took place:

(69) 334. Zdravko. Yeh, in middle of circle we have a, a small, n, n, small um point, no, dot
335. Jin. Yes dot
336. Zdravko. Yes, good

In this negotiation cycle Zdravko shows that, while he is still in the process of learning the vocabulary, (in that he is still hypothesizing about, or testing that knowledge), he has retained the distinction between a point and a dot that was established earlier in the conversation.

A similar thing occurred concerning the use of fractions, when Zdravko hypothesized about how they are expressed in English:
At the beginning of the exchange he obviously has the knowledge about how to express fractions, since he gives this one correctly (L337). However, it seems he begins to doubt whether he was correct, so tries to say it another way (L343), having thought about it after line 341. Jin directly corrects him and we can see Zdravko reinforcing the lesson for himself as he repeats the fraction with her, even stressing the ‘over’ (L349), which was the original point of difficulty. Much later on, towards the end of the recording, Zdravko used the phrase “one over six”, although only once, and without hesitation, showing he had retained what he was in the process of learning earlier about how to express fractions in English.

Jin also demonstrated the use of metatalk to facilitate learning, and this time Zdravko was able to help her. She had apparent difficulty with the letter J. Since the voiced affricate /dz/ does not occur in Korean (Nam-Kil, 1987), Jin had to form it consciously with her partner’s help. In so doing we can see her learning in progress:
As Jin begins to concentrate on what she is saying, ‘jay’ becomes ‘zay’ (L352) and ‘gee’ becomes ‘zee’ (L354). Zdravko continues to give her the correct pronunciation and in L356 she tries different phonemes, perhaps attempting to make a deliberate contrast for herself. After Zdravko finally succeeds in getting her to pronounce the letter (L358), she reminds herself again of the pronunciation of /dz/ (L360), until in line 362 she finally reconfirms the pronunciation of ‘jay’. Jin’s speech gives an indication of the cognitive processes involved in achieving the correct pronunciation of the letter J. In the process of achieving the learning outcome through negotiation of meaning, Jin sorted through sounds she knew to clarify which one she must use.

Not all the incidences of metatalk showing learning in process were as successful for the learner as the above examples. For instance, the following example from Dyad 3 shows that Radislav seemed to want to discuss a new word, but Ali ignored him:

(72)  363. Ali. Mm, mm, fifty, what you got now?
364. Radislav. And what, what is it?
365. Ali. Mmm, that’s a dot
366. Radislav. Dot?
367. Ali. But this is not from the, I think this is word from down, this is just from the one they copied.

In line 366, through use of rising intonation, Radislav seeks clarification from Ali about the word ‘dot’. Ali responds in line 367 by suggesting that the dot is a mark that has inadvertently appeared with the photocopying, and therefore is not relevant to their attempts to complete the task. The irrelevance of the dot may be the reason why
Ali does not give an explanation to his partner. This is in contrast to example 68 above, in which Ali deliberately attempted to reinforce the vocabulary that was relevant to the activity.

The reinforcement by the participants of forms that have been recently taught is consistent with the studies discussed in Chapter 2 by Donato (1994) and Swain (1998), where students were reported as discussing the language they had been encouraged to target. For example, Swain’s (1998) research participants discussed the use of the reflexive French forms they were trying to use during an activity immediately following a lesson on reflexives. By contrast, there was no particular focus on grammar in the current study, in either the practice or actual data collection session, so it was not surprising that the participants did not engage in any metatalk about the grammatical content of their language. Instead, those who did discuss the language they were attempting to use talked about the vocabulary that had been taught in the practice session. A further reason is that, as Nakahama, Tyler and Van Lier (2001) found, in information gap tasks the participants focus more on individual lexical items rather than more global concepts as in open conversation.

Some dyads did not engage in deliberate learning tactics such as those discussed above. For example, Dyad 2, who did not follow the rules of the task, but made their own pictures, did not engage in metatalk to deliberately facilitate learning. The images they used were very straightforward and simple and they did not use the activity to practise the vocabulary from the earlier session. Furthermore, the NS did not demonstrate learning through their metatalk, since, although the task had its difficulties, it did not require new skills for either participant. These results suggest
that in cases when the participants perceived the activity as an extension of the learning environment, they deliberately facilitated reinforcement of learning for themselves or for each other. In other words, in the examples given above, learning can be seen to be socially activated through negotiation of meaning in collaborative contexts.

5.2. The Role of the Novice/Expert Relationship in Learning.

In all the dyads that participated in this research the novice/expert relationship was constantly demonstrated. This was not only because in pairs in a language learning situation one interlocutor tends to have greater competence at any time, but also because in a jigsaw or two-way task such as the one used here, one participant always has information the other needs. This feature is also a characteristic of everyday conversation. Any interaction is asymmetrical since the speaker has the current authoritative meaning while the hearer has the responsibility of aligning their own interpretation with the speaker's intended meaning (Rommetveit, 1985).

The most prevalent feature of the novice/expert relationship in this study was in the provision of scaffolding or step-by-step guidance for the accurate completion of certain sections of the task, and the provision of peer assistance within the zone of proximal development (ZPD). In the use of these strategies the participants co-constructed knowledge. It was interesting to note that step by step guidance was used as much by the NS as the NNS, leading to the conclusion that it is an appropriate approach in any problem solving negotiation, regardless of interlocutor proficiency. On the other hand, Dyad 2, who did not follow the activity guidelines, and carried out the task in a simplified manner, did not use guidance or scaffolding at all. They used
simple images without specifications to fill in the boxes (e.g. A happy face), rather than the more complex ones provided in the research task, and were not concerned with accuracy or detail. Consequently, as they negotiated with each other to finish their version of the task, they did not need the support of scaffolding through a novice/expert relationship.

The following is a typical example of scaffolding to guide the completion of a section by the NS, in which Mike, as the holder of information, acts as the expert:

(73) 368 Paul. Oh, OK, so you’ve got an L
369: Mike. Yeh, well I’ve got an, an also yeh, that’s right, I’ve got an L
370. Paul. I’ll just draw it in
371. Mike. Well a backwards L, yeh
372. Paul. Yeh a backwards L, dyslexic L
373. Mike. Also I’ve got that same line that you had, the one going from the top left hand corner...
374. Paul. ahaa...
375. Mike. down to the middle of the bottom side
376. Paul. Alright
377. Mike. But I’ve also got another line
378. Paul. Yep
379. Mike. Which runs from the bottom, the middle of the bottom
380. Paul. Yeh
381. Mike. So (unclear)
382. Paul. Yeh, it runs that runs into D2
383. Mike. So when we draw those two in we’ve got it looks like an envelope
385. Mike. OK

(D5.12)

In this example, in the negotiation cycle from line 373 to 385, in which the participants negotiate regarding the image in Boxes 8 and 12, we can see how Mike segments the information for Paul to form a scaffold. Through this negotiation strategy Paul is able to work step by step as Mike guides him. Success is evident when Mike declares that the result is like an envelope (L384) and this is confirmed by Paul in line 384 at the completion of the cycle.
In Dyad 3 Ali was consistently in the role of expert. In the following excerpt, Ali has the information and Radislav takes instructions from him as follows:

(74) 386. Ali. Yeh, you start with your right, second with the right second down rectangle in the corner (sound of tapping) yeh there is put line up, from down to up, one

387. Radislav. (unclear)
388. Ali. Corner...
389. Radislav. Oh, between ah, triangle and err...
390. Ali. triangle and the small rectangle (pause) that’s right, second, you got small circle, you got it already an ’zed
391. Radislav. Small circle?
392. Ali. Yeh, an’ zed, finish the zed all, take horizontal close the box yeh take the other side, yeh an’, that’s it. We go third rectangle down in the right hand of the corner (pause) yeh
393. Radislav. Yeh
394. Ali. We put horizontal first in the tyop...
395. Radislav. in the t...?
396. Ali. Yeh, and that’s it.

(D3.18)

Line 398 particularly shows Ali guiding Radislav through a series of moves to successfully “close the box” with horizontal lines. It is evident in this interchange that Ali can see what Radislav is putting on his sheet, and Ali offers encouragement with phrases such as “that’s right” (L390) and “that’s it” (L400 and 390). While this was not intended to be a feature of the problem-solving task, it does, nevertheless, provide a clear example of an interlocutor in “expert” mode.

Dyad 1 also showed evidence of the novice/expert relationship occurring through the use of scaffolding. In the following example Jin provides scaffolding for Zdravko:

(75) 397 Jin. First square my bottom right hand corner to...
398 Zdravko. Yeh, which corner?
399 Jin. My bottom right hand corner
400 Zdravko. Yeh
401 Jin. To the my left hand top corner
402 Zdravko. Da
403 Jin. Line draw the line diagonal
In this negotiation phase, Zdravko indicates he understands Jin’s instructions with confirmation signals after each segment of instructions. His final confirmation in line 408 is a prediction of what Jin will say, thus indicating he has successfully completed the diagram (Box 5) with the help of her scaffolding.

In contrast to Ohta’s (2000) finding that NNS are sensitive to their partner’s ZPD, it was not necessarily true amongst the participants in the current study. Of the NNS, Ali and Jin were the most successful users of assistance within their partner’s ZPD. Both displayed considerable sensitivity to their partners’ linguistic and information requirements. However, in the following excerpt, Jin was not able to process the complete message so had to provide her own segmentation, since Zdravko, who was the holder of information and, as such, the expert in this exchange, mostly just repeated the whole piece of information each time she indicated she needed help, instead of offering alternative wording or guidance in the form of scaffolding:

(76) 410. Zdravko. In mine second square I have a number of dollars
411. Jin. number of dollars?
412. Zdravko. dollars, yes, number dollars. It’s one hundred and three dollars point ninety five.
413. Jin. one hundred three dollars
414. Zdravko. one hundred and three dollars
415. Jin. one hundred
416. Zdravko. and three dollars point ninety five
417. Jin. mmm dollars
418. Zdravko. point 95 cents...yes
419. Jin. point 95 cents.
Zdravko does not segment the information appropriately until the end of the negotiation cycle in line 418, when he picks up with the “cents” information immediately after Jin indicates she has the “dollar” information (L417).

By contrast, for a very similar instruction from Box 21, as the holder of information, Jin provides a scaffold for her partner, demonstrating considerably more sensitivity to her partner’s ZPD:

(77) 420. Jin. I have dollar
421. Zdravko. What?
422. Jin. I have dollar
423. Zdravko. Dollar
424. Jin. Yeh, four hundred
425. Zdravko. Four hundred
426. Jin. And ten dollars
427. Zdravko. Four hundred and ten dollars
428. Jin. Dollars, and fifteen
429. Zdravko. And fifteen cents?
430. Jin. Yes
431. Zdravko. Fifteen, fifteen cents
432. Jin. Fifteen cents

(D1.15)

In the initial part of this negotiation cycle (L420 to 423) Zdravko shows some difficulty understanding Jin’s pronunciation, which she does not seem to respond to. However, subsequently Jin provides scaffolding for her partner regarding the contents of the box they are talking about. In excerpt 76 above we can see Jin providing her own segmentation. As Zdravko gives her information she utilizes the part she can process even as Zdravko continues to repeat larger segments of information. Conversely, in excerpt 77 Jin provides the scaffold for Zdravko; she appears to appreciate his need to have the information provided in small segments. For example in lines 424 and 426 she breaks the dollar amount into two segments. The appropriate size of those segments means she does not need to repeat any information. Instead, Zdravko repeats the information she gives him, and then builds on it. Findings here
suggest that sensitivity to the ZPD may not always be demonstrated, or, sensitivity to the ZPD of others may be a skill that can be learnt.

In summary, the emergence of the novice/expert relationship in a problem-solving context is significant as one aspect of the social nature of learning as it occurs through the ongoing process of negotiation of meaning. Interlocutors assist each other to achieve the goal of the task through use of guided support and scaffolding, as well as utilizing the ZPD.

5.3. Attempts at Self Regulation.

Language that indicated the speaker was trying to achieve self regulation was another feature of the process of negotiation of meaning in a learning context that was found in the data presented in this study. As discussed in Chapter 2, when a speaker has incomplete control of some aspect of a task, including the required language to negotiate that task, he or she attempts to take that control by directing his or her activity through an object or another person. Once complete control is acquired, and the person no longer needs a “surrogate” to help him or her act, he or she is considered to be self-regulated (Vygotsky, 1978). The cognitive process underlying the strategy of attempting to become self-regulated is revealed in the language produced. Rather than being evidence of “imperfect” learning or lack of competence, such language shows that the learning is still in progress, and concepts are moving from the inter to intra-psychological planes (Frawley and Lantolf, 1985; Vygotsky, 1987). Like the participants in Frawley and Lantolf's 1985 study, those in this investigation also showed attempts to self-regulate in the language they used.
Furthermore, these attempts at self-regulation can be seen as essential in the broader objective of negotiating meaning.

According to Frawley and Lantolf (1985) attempts at self-regulation may be evident in certain uses of verb tense and aspect, or other aspects of linguistic structure.

Attempts at self-regulation also occur in private speech; that is, speech that originates socially but takes on a private function and is self-directed. This includes whispering to oneself and the use of framing utterances that indicate a boundary of an utterance (Sinclair and Coulthard, 1992) and hesitation phenomena (also Ahmed, 1994; Brooks and Donato, 1994; McCafferty, 1998; Lantolf, 2000). In the present study, participants attempted to self-regulate by using private speech in the form of hesitation phenomena, particularly in the use of self-repetition and framing utterances (e.g.: OK, Now), and whispering to themselves.

The most common form of attempts to self-regulate was the use of hesitance, particularly through repetition. Not all instances of self-repetition represented attempts at self-regulation, but those times when the speaker built on his or her own statements, often using rephrasing, hesitance, and filler words (e.g.: um, aah), showed attempts to control the language for the task. These features indicate the speaker is trying to control the required language, and consequently the completion of the task through the externalization of knowledge in private speech. For example, Radislav, in the following excerpt, constantly stops and restarts his instructions:

(78) 433. Radislav. You must write, ah, you must write line between ah, top between this is middle, between top, top line and lit, between top line and lit, little circle.

(D3.19)
Radislav attempts to gain control of his delivery of the message by segmenting it into manageable portions, repeating parts of it, and rephrasing certain parts. Another example from Radislav shows a similar pattern:

(79) 434. Radislav. And ah, and a, another, you must write, er wri, er write and next and next one is (unclear) thir, third err rectangle in the last, second last line, this is last one of, last one in this from the end, second last.

435. Ali. Yeh, second last...

436. Radislav. second last, last one in second last, one, one, in the middle of this square, err, um, one little circle, in the middle of the square, and err, diagonal, this, this the same square.

Radislav apparently has considerable difficulty controlling the language necessary to provide Ali with a description, thus he is attempting to self-regulate, or gain that control through considerable hesitance.

In the following example taken from Dyad 2, Mirsad shows the same kind of hesitancy as Radislav:

(80) 437 Mirsad. Yeh, Margarita please ah could you write, no, could you draw me one diagonal line from square number three to number six and belong, belong ah di, diagonal, ah vertical line, ah draw one line, w, w, w, draw me one ah, one um, small triangle.

While Mirsad starts out confidently with the first part of the instruction, in the second half he repeats himself, rephrases and stutters as he attempts to gain control of the language.

Attempts to self-regulate were not peculiar to the NNS in this study. While they had difficulty with the language, both the NNS and the NS had difficulty with certain aspects of the task. The NS were especially concerned about accuracy, so this made the sharing of information difficult and frustrating for them at times. As Ahmed also
found (1994:170), "in terms of regulatory behaviour, there is no absolute distinction between a NS and a NNS".

The NS also tended to use hesitance to attempt to self-regulate in their interaction.

The following example is from Paul:

(81) 438. Paul. Alright now the third one’s more difficult. I’ve got a line extending into ah to 1C. It’s coming from ay um, coming from um (pause) well the line extends down into 2C with the end of that line halfway or a third of the way down. It’s got a thick black line. Together what’s in 1C and 2C looks like ay um ah croquet stick sort of intercepted half way along the handle. Understand that? Or a tack sitting on the ground with its pointy it sitting up in the air (rising intonation).

(D5.13)

Paul repeats himself as he attempts to find appropriate language to describe the image (It’s coming from ay um, coming from um). As he does so he hesitates with ‘um’ and a pause. In this way he is able to gain time to reformulate his ideas and gain control over the message, or achieve self-regulation.

In all the examples given above, the evidence of attempts to self-regulate is supported by the presence of hesitance words such as “ah”, “er” and “um” as speakers attempt to self-regulate. Paul and Mike (D.5) were able to use more sophisticated filler words, as native speakers, such as “sort of” in example 90 above.

This same phrase appears in the following excerpt:

(82) 439. Mike. OK, well you know what I’ve got in 1C, I’ve got actually ay triangle, right, OK, which is, which is the base is um on the level of where that line comes in sort of thing. If you can just imagine, where that line stops in 1C…

(D5.14)

Also in this example, Mike uses the framer words “OK” at the beginning of the instruction to indicate he is attempting to take charge of the task. According to Frawley and Lantolf (1985) this kind of utterance is intended for no one but the
speaker and is used to help with regulation since framing utterances assist the speaker to assert control over the task requirements, including the language. However, the use of “right” and “OK” in the middle of the excerpt, does not have the same function; the speaker is asking for confirmation of understanding from his hearer.

Framing utterances were used extensively throughout the language data, although like all aspects of language in context, some participants favoured this means of regulation more than others. Margarita, in particular, used “OK” and “Now” frequently to frame the interaction and remind herself she was in control of the activity. For example:

(83) 440. Margarita. OK, now, Mirsad, could you draw me in the to, err, bottom right corner…

(D2.11)

Another example of attempts at self-regulation was the use of private speech in the form of whispering to oneself. For instance, in the following example, Radislav uses private speech in an attempt to be self-regulated in the mental processes required. The private speech is shown in italics and indicates the voice level of the speaker dropping considerably:

(84) 441. Radislav. Second, aone, two (pause) second and ah, and ah one two three four, fourth, fourth rectangle.

(D3.21)

In this example, Radislav apparently has difficulty identifying the “fourth rectangle”, so, after some hesitation and repetition at the beginning of this utterance, he counts quietly to himself.

In the next example of private speech, Radislav initially appeals to Ali to supply the relevant vocabulary, but then addresses himself as he tries to recall the word:
Despite Radislav’s self-addressing strategy, Ali provides the answer in line 443, whereupon Radislav reinforces the word ‘rectangle’ for himself. This incident of addressing the self occurs in this negotiation of meaning cycle in which the participants reach an agreement about the term ‘rectangle’. It has a role in the negotiation process, since, although Radislav is addressing himself, Ali offers a response.

In Dyad 2 Margarita also used private speech to help her attempts to self-regulate as the following two examples show:

(85) 442. Radislav. And, ah, what is it, I forget, this is square, and what is, *this is...*

443. Ali. Rectangle

444. Radislav. Rectangle, OK (pause) and second, err, and second rectangle

Despite Radislav’s self-addressing strategy, Ali provides the answer in line 443, whereupon Radislav reinforces the word ‘rectangle’ for himself. This incident of addressing the self occurs in this negotiation of meaning cycle in which the participants reach an agreement about the term ‘rectangle’. It has a role in the negotiation process, since, although Radislav is addressing himself, Ali offers a response.

In Dyad 2 Margarita also used private speech to help her attempts to self-regulate as the following two examples show:

(86) 445. Margarita. could you draw for me in the second, no, in the sss on two three four sixth square...

(87) 446. Margarita could you write for me in line fi, mmah, 16, could you draw...

She needed to work through the numbers in each of these examples to reach the desired outcome as she was unable to calculate mentally. Her strategy was to whisper to herself. These examples of private speech are accompanied by hesitation, which also indicates that the speaker is having difficulty. The achievement of self-regulation is not yet complete for Margarita and she addresses herself audibly.

The NS also showed several examples of private speech in which the speaker addressed himself. The NS private speech was related to the degree of accuracy they aimed for. Following are examples from Mike:
These examples again are combined with other regulatory behaviour such as hesitation phenomena (umm, ah) and framing utterances (oh), which indicate the difficulty the speaker is having with the whole explanation.

All the examples of private speech show one aspect of learning in progress as the speakers return through a process of "continuous access" (Frawley and Lantolf, 1985) to developmental strategies they learnt as children. Addressing one’s self is a form of regulatory behaviour through which the speaker verbally self directs since he or she finds it easier to act with speech. Speakers are effectively teaching themselves. These strategies surface naturally in a communicative context, even though they are self directed, since learning is activated socially.

Attempts to self regulate that were found in the data presented here were mostly present in negotiation strategies such as self-repetition and the use of framing utterances. However, Frawley and Lantolf (1985) and Ahmed (1994) demonstrated that use of particular verb tense and aspect were evidence of object and other-regulation as speakers tried to self-regulate. The tasks that these researchers used involved narrative telling, which requires a focus on verbs and chronological events. However, because the task in this dissertation involved describing difficult diagrams, and therefore a focus on lexical items, it is not surprising that attempts by the speakers
to achieve self regulation were evident in features other than verb use, suggesting again that context is extremely important in determining language choice.

5.4. Conclusion.

In this chapter the presence of features predicted by a Vygotskian framework has been shown. The first was metatalk, or talk about the task or the language used to carry out the task, rather than language that is specifically part of the activity, for example, giving instructions about what to draw. Secondly, the evidence of the novice/expert relationship, particularly in the use of scaffolding was discussed, and finally the attempts by speakers to self regulate are shown from the language data. All of these aspects are significant in that they reveal something of the learning process as it occurs in the process of negotiating meaning. The social nature of learning can also be seen in metatalk, scaffolding and in the language of object and other regulation, since these aspects are social activities. Furthermore, in each case it is the social context and the shared nature of the activity that gives rise to the various strategies.

In addition, as Vygotskian SLA researchers have already shown (e.g. Frawley and Lantolf, 1985; Brooks and Donato, 1994; Swain, 1998), the developmental stages that Vygotsky identified can be observed in the speech of adults learning a second language, as those in this study, and indeed of adults carrying out a difficult task in their first language. Furthermore, as Frawley and Lantolf also point out, return to earlier developmental stages in the context of cognitively difficult tasks is achieved through a process of "continuous access". (Frawley and Lantolf, 1985) This was observed as participants were able to retrieve strategies they developed in childhood to help themselves in the challenging context of completing the jigsaw activity.
The participants in the research discussed in this dissertation reacted in various ways to the contextual stimulus, thus, how individuals used language to mediate the activity varied. The two major influences on linguistic behaviour were the attitudes of participants to the task, and the degree of difficulty of the task for individuals.

For example, some individuals approached the task as an opportunity to reinforce earlier learning, whereas others did not see learning as a goal. Some tried to achieve accurate depiction of the diagrams on the grid while others were satisfied with approximate depictions. Margarita (D.2), for example, apparently did not consider accuracy the main aim of the activity, and consequently did not persist with strategies such as scaffolding to this end. Mike, conversely, saw accuracy as a major aim, so used scaffolding for his partner. However, both Margarita and Mike used framing utterances as a means of regulatory behaviour. Bozo, on the other hand, appeared to want to rush through the task and used the least amount of regulatory behaviour of all the participants, including the NS. All approaches are equally important in negotiating the meaning in context, for they are necessary for the dialogue to proceed coherently in order that the activity be carried out successfully. They also provide rich evidence of the cognitive processes of the speaker.

This is a small study which only draws conclusions about the language of a small group of people in Perth. However, the view of negotiation of meaning as a much fuller and more complex phenomenon than has been admitted by traditional negotiation of meaning researchers is applicable to any interaction. So too is the examination by researchers of learning processes evident in language applicable in
any learning situation. Consequently, the facilitation of classroom conditions to optimize learning through negotiation deserves more examination in itself. In the next chapter the pedagogical implications of these research findings will be briefly discussed.
CHAPTER 6 – CONCLUSION AND PEDAGOGICAL IMPLICATIONS

6.0. Introduction

The major finding of this investigation is that the participants used a variety of strategies to reach agreed or negotiated meaning as they carried out a problem-solving task. The extent of these strategies was found to be far greater than has traditionally been thought and as such provides grounds for a new definition of “negotiation of meaning”. Furthermore, negotiation of meaning was shown to be an ongoing social activity. As the participants engaged in this social activity, there was evidence in their language of learning being activated by the interactive context of the task. The learning was evident in metatalk, peer coaching in the novice expert relationship, and in attempts to become self-regulated. In this chapter, the implications of these findings for SLA pedagogy are discussed.

6.1. Influence of Context.

Because of the social nature of learning that was evident in these findings, contextual features of the discourse situation could be seen to have a major influence on the negotiation of meaning behaviour. These contextual features include the personalities of the individuals and the setting for the problem-solving activity. Together, these aspects seemed to determine how participants viewed the purpose of the activity, and, hence, how they approached the task and, ultimately, what strategies they used to negotiate meaning as they carried out the task.
Probably because the investigation was conducted in the participants' normal instructional setting, the findings suggest that the majority of the NNS participants considered they were in a learning environment, and that learning was the aim. This perception appeared to foster the use of learning strategies. In the data there was evidence of peer coaching and metatalk relevant to this aim. For example, in example 29, Jin coached Zdravko on the use of the words ‘horizontal’ and ‘vertical’, which were explicitly taught in the practice session the week earlier. The campus setting is likely to be a major reason for this, but also the nature of the task and the preliminary teaching session.

The findings of this study also confirm the idea that learning is a collaborative activity (Vygotsky [1934], 1962; Swain, 2000). The peer group work was an important feature in the learning context. The language used suggests that the participants attempted to solve problems and negotiate meaning. Consequently, individual strengths were able to flourish. Because of the learning context, there is evidence that participants saw their partners as helpers in the learning process, and therefore requested assistance on occasion. However, not only did those who asked for assistance learn, such as Zdravko in example 29 quoted above, but the expert in these learning situations was also able to test his or her knowledge and build on what she or he already knew. The benefit was not only in having to understand what the other was saying, but also in having to make one's self understood. Therefore, the production of both comprehensible input and output was confirmed to be a significant aspect of meaning negotiation in both the overarching process of reaching agreed meaning, and in the episodic sense focused on by traditional negotiation of meaning researchers.
The confirmation that the participants learnt collaboratively and without the assistance of a class teacher is supported by Vygotsky's (1978) notion that knowledge building is a natural and lifelong outcome of interaction in a suitable context. In addition, the knowledge-builders bring their individual and social histories into that context, which has an influence on the co-construction of knowledge. The participants could be seen to be utilizing old knowledge as they jointly build new knowledge. Thus, knowledge is not “stored” and “imparted”, but is constantly shifting with social activity.

While the participants benefited from the explicit teaching of the practice session, it was the more challenging and exploratory nature of the research task that facilitated learning. Therefore group work in the classroom can in itself provide a sufficient context to facilitate learning if the sense of being in a shared learning environment is maximized. The learning environment was to some extent self-perpetuating for the participants of this study, as some clearly wanted to extend those facets they had learnt in the practice session. They looked for an aim in the activity that was consistent with the learning context, hence they practised the vocabulary they had learnt. The metatalk about the vocabulary both demonstrated they were learning and helped them to do so.

Because the results of this research show that learning can occur in a collaborative setting through the negotiation of meaning, particularly when the perception of the participants is that learning is the goal, the language teacher has an obligation to provide a conducive environment for such collaboration with genuine activities that encourage risk taking, and to offer assistance within the ZPD of her students. However, she must also trust students to continue negotiating the learning process
together. The willingness of students to learn independently of the teacher can be explained when one considers the social nature of learning, which, as we have seen, is activated through language. Fostering a collaborative environment gives students a natural context for learning.

6.2. The Task

The findings of this study suggest that, as Gass and Varonis (1985) found, the main benefit of an activity such as the jigsaw task used in this study is in insuring a relatively even distribution of speaking opportunities. In addition, as discussed above, the task facilitated a collaborative environment which enhanced the learning context. The study also supports Donato’s (1994) finding that a task can generate the goals of the participants.

Furthermore, the task design was also significant in that the outcome was not open ended. Having an obligatory outcome insured that students were forced to use specific forms, and also had to clearly understand each other. Consequently they were forced to negotiate. This kind of self-stretching is likely to facilitate the development of negotiation strategies. By contrast, Dyad 2, who made up their own diagrams and did not try to stretch themselves, showed much less creative and fluent language than the other groups who attempted to complete the task according to the guidelines.

In addition, a structured task such as that used in this study is an appropriate means of facilitating practice in target language forms. Like Swain and Lapkin’s (1995) and Swain’s (1998) French immersion students who worked collaboratively on target grammatical forms in activities that followed specific teaching of those forms, the
participants in the present study also worked together on what they perceived as the specific target language items. Through negotiation of meaning they were forced to think about the language they were using. For example, in excerpt 70, Zdravko noticed his use of fractions. He then went on to hypothesize about the correct way to express fractions by trying an alternative method as he worked to further his learning.

Another important aspect of the task was its difficulty. There was evidence that participants found it difficult both conceptually and linguistically. Even the NS experienced some difficulty. For this reason, through a process of "continuous access" (Frawley and Lantolf, 1985), strategies for learning that were utilized in earlier cognitive development surfaced as participants attempted to self-regulate. Therefore, a suitably challenging task can actually promote the use of learning strategies that remain accessible throughout life. In addition, a challenging task that involves genuine problem-solving can mean that inquiry rather than learning is the goal for the participants, with learning as the natural outcome.

However, it is not necessary to use a structured task to facilitate negotiation, or indeed learning, since, as is claimed here, negotiation is a collaborative process present in any interaction as interlocutors work to maintain coherence and establish a state of intersubjectivity. However, the practising of negotiation strategies as in this activity has ramifications for communicative contexts outside the classroom. Having to understand the other's message in order to successfully carry out the activity mimics the asymmetry of everyday conversation and consequently develops pragmatic aspects and the building of intersubjective perspectives.
Negotiation of meaning is realized in strategies such as those discussed in Chapter 4, and cannot be taught, since it is so variable. However, through activities such as the one used here, development of a range of appropriate negotiation strategies can be supported in the classroom. In addition, the learners have the chance to utilize cognitive strategies they already know in their first language in their new language. As Brooks and Donato (1994) point out in relation to the same task used in this study, the student gains “practice” for later communication dilemmas.

6.3. Language in Learning

The findings presented here show that learning can occur through collaborative knowledge building as interlocutors negotiate meaning. It is significant that learning occurred and coherence was maintained, despite considerable error of form. The presence of error is therefore not necessarily disruptive to negotiation of meaning, particularly when the task acts as the mediator for negotiation and learning. Furthermore, error is part of the process of acquiring competence in the language, or, in Vygotskyan terms, error is a sign the learner is trying to gain self-regulation (Frawley and Lantolf, 1985). This research, like that of Brooks, Donato and McGlone (1997) shows that error can be a building block in the process of going from the inter- to intra-psychological planes. Language teaching, therefore, is not just about teaching students to produce accurate utterances (which are important), but to facilitate the opportunity to control tasks in the new language and develop the necessary “strategic competence” to do so (Riggenbach, 1999).
6.4. Conclusion.

The findings of this study demonstrate how learning an L2 is an active social process facilitated by the context, which is a combination of the socio-historic aspects of the interlocutors' lives and personalities as well as the physical setting. As such, all personalities and inputs are relevant to the learning context, and it is negotiation of meaning in the broader sense that propels the process. Learning outcomes emerge from social interaction, as seen in the language of the participants, and peers are significant in the learning process. Learning is not an aim that is reached at the end of the learning activity. The most important contextual features that need to be present are the willingness of the participants to learn and a task that is sufficiently challenging.
REFERENCES


Department of Immigration and Ethnic Affairs (DIMEA) (1984) Australian Second Language Proficiency Rating Author:Canberra


APPENDIX I: Completed Task for Research Data Collection
(Source: Brooks and Donato, 1994)
APPENDIX II: Consent Form

INVESTIGATING HOW ENGLISH LEARNERS MAKE MEANING

I am doing a Masters Degree at The University of Western Australia finding out how people learning English make meaning together in their new language. I would like to tape you and a classmate talking as you work together on a task. I will look at the words you use and how you make sentences. It does not matter how “good” your English is. I am not interested in that. Your name will not be used.

This research will help me become a better teacher and I hope will be fun for you.

You will be taped twice doing different but similar tasks where you have to complete pictures with your partner. These tasks are similar to others you have done while you’ve been learning English. You are welcome to listen to yourself afterwards. You may drop out at any time. If you do I will not use your tape.

If you have any questions, please contact me:
Elizabeth Bennett
Ph: 9221 5537 (work)
AELP Program
5th Floor, 251 Adelaide Terrace.

If you would like to take part please read and sign the form below. Thankyou for your participation!

________________________________________________________________________________________

I have read the information above and understand it. I would like to take part in the activity. I understand I can drop out at any time. If I do my tape will not be used.

I would like my speaking to be used in the research, written about and published, but I understand that no name or any information that might identify me will be used.

________________________________________________________________________________________

Your signature. ___________________________ Date.

________________________________________________________________________________________

Researcher’s signature ___________________________ Date.

What is your first language? ___________________________