THE OPERATION OF REPAIR IN L2 LEARNER CONVERSATION, GROUP WORK AND CLASSROOM DISCOURSE

VOLUME I

Yue E Li

Doctor of Philosophy

ASTON UNIVERSITY

November 1992

ASTON UNIVERSITY

THE OPERATION OF REPAIR IN L2 LEARNER CONVERSATION, GROUP WORK AND CLASSROOM DISCOURSE

YUE E LI Ph. D 1992

SUMMARY

The present study is an empirical investigation into repair in spoken discourse, specifically focusing on L2 learner conversation, group work and teacher-fronted classroom interaction. The core of the investigation concentrates on identification of the problem type, classification of repair strategies and examination of interaction in the repair process.

A comparison between Conversation (CS), Group Work (GW), and Teacher-fronted Classroom Interaction (CR) suggests that more repair is undertaken in CS. The results of the study suggest that the fundamental differences between CS, GW and CR are of two types: in the frequency of repair and in the nature of the repair itself. It has been found that other-initiation for production problem repair occurs mainly in CR, other-completion is characteristic of GW and self-repair is most frequent in CS.

Factors affecting the occurrence of repair in CS, GW and CR are related to content and social and communicative features of context.

Importantly, the study shows the frequency of repair in GW falls between that of CS and CR in most of repair strategies. This result leads support to the argument that group work can assist L2 learners to develop their communicative competence.

It is suggested that the analysis of the repair process in CS, GW and CR can be useful in throwing light on the intricacies of spoken discourse in general and can be exploited by applied linguists for both theoretical and pedagogical purposes.

Key Terms

Repair
Classroom discourse
Group work
Repair categories
Correction
Interaction

ACKNOWLEDGEMENTS

I am greatly indebted to a number of people without whose help this thesis would not have been completed.

First of all, I am most grateful to my supervisor, Keith Richards, whose useful suggestions, incisive comments and constructive criticism have contributed greatly to the completion of this thesis. I own him special thanks for his tremendous assistance in developing the framework for analysis and in having gone through the draft versions of this thesis several times.

My sincerest thanks to Dr. John Fletcher, John Skeleton and Peter Chang's family for their constant encouragement and support throughout the course of this research, to Andrew J. Clark for his assistance in formatting the data, and to Dylon Gibbons for his considered advice on statistical presentation of the analysis. I would also like to thank Miss Andrea Young and Helen Kelly for their care when my morale was low.

I would also like to thank "The Great Britain-China Educational Trust", and the "Hammond and Leche Trust" for their financial assistance in a very critical period.

I am also grateful to the teachers and students concerned for their cooperation in the process of data collection.

Finally, I would express my thanks to my family who have shown patience and understanding through the entire period of this work. The biggest thanks must go to Mr He-ping Li, my long suffering other half, and my daughter, who have hardly lived with me for the last four years.

LIST OF CONTENTS

CHAPTER FIVE: ANALYSIS

LIST OF TABLES

LIST OF DIAGRAMS AND FIGURES

LIST OF ABBREVIATIONS

SJS:	Schegloff, Jefferson and Sacks
NS:	Native speaker
NNS:	Non-native speaker
TRP:	Transition relevance place
CS:	Conversation
GW:	Group work
CR:	Teacher-fronted classroom interaction
L1:	First language
L2:	Second language
TL:	Target language
IL:	Interlanguage

TRANSCRIPTION CONVENTIONS

T:	Teacher
S1. S2. S3....	Identified student
S:	unidentified student
S2?	probably student 2
Ss:	several or all students simultaneously
[	overlapping or simultaneous utterances
=	when there is no interval between adjacent utterances
[.] [..] [...]	indicating normal pauses: [.] indicates one tenth of a second; [..] indicates one quart of a second; [...] indicates half a second; [2.0 secs]
::	lengthened syllables
<u>You</u>	emphasis
CAPS	marked prominence through amplitude
(( ))	explanation of what is happening (non-verbal)
( )	unclear or probable items
[ ]	phonetic transcription
,	continuing intonation, unseparated from the preceding word
.	falling intonation, not necessarily the end of a sentence
?	rising intonation, not necessarily a question
< >	enclosed utterance faster than surrounding discourse
^	attention to particular feature (eg. non-standard pronunciation) within words

CONTENTS OF VOLUME TWO

APPENDIX THREE: LIST OF AUDIO-TAPES

(Attached to Volume two)

	Side One	Side Two
CASSETTE 1	CS 1+ CS2	CS2+CS 3
CASSETTE 2	GW 1+GW2	GW 3 - GW6
CASSETTE 3	CR1+CR2	CR3

CHAPTER ONE
INTRODUCTION

1. 1 Introduction

The studies on repair in talk, in the past, have been the concern of linguists, sociolinguists, ethnographers and educationalists. Linguists take an interest in the linguistic problem and the relation between repair and language structure; sociolinguists are interested in who does repair, and what the organizational patterns of repair are; ethnographers are interested in repair as a feature of ordinary activity in everyday discourse; educationalists are interested in what kinds of repair are of benefit for language teaching and language learning, and in what ways language teaching can be improved.

The model used in the previous studies for analysis of conversational repair has been developed by Schegloff, Jefferson and Sacks (SJS) (1977), and based on three components: trouble source, initiation, and repair. Four types of repair trajectories are formulated in the model, according to who is responsible for each of the three components. The studies of conversation in Native speakers (NS) (SJS 1977, Moerman 1977, Besnier 1982), Native speaker/Non-native speaker (NS/NNS) (Day, Chenoweth, Chun and Luppescun 1984, Gaskill 1980) and NNS (Schwartz 1980) have shown that self-repair is the preferred trajectory. Comparative studies between different forms of discourse have examined the difference or similarities in terms of preference for a certain trajectory. Such research is important to show the relation between trouble source, trouble producer and repairer. However, although the four trajectory model is powerful it is too broad to generate a detailed description of the repair operation, since the model does not fully explain what the interaction processes of repair are, how the structure of repairs is related to the general structure of interaction, and what the major

factors which affect repairs in different discourses are. A breakdown of the repair interaction process is necessary in order to explain fully how it is operated and what affects repairing. The aim of this study is firstly to examine the nature of the trouble source and the organisation of repair, extending the notion of conversational repair by examining such talk within a communication framework, though the four trajectory model will be referred to as necessary. Secondly, three types of interaction: conversation (CS) between L2 learners, group work (GW) between L2 learners and teacher-fronted classroom interaction (CR) are used in this study. The similarities and differences between three types of interactions will be presented, based on the results of the analysis in this study. Thirdly, group work is specifically chosen to be studied, as the literature of GW studies has argued that GW is a type of interaction which can involve participants in genuine communication, this being considered a favourable condition for language acquisition. However, in terms of repair, GW has not been investigated before. By examining repair structure in GW and contrasting it with repair in CS and CR, the study addresses the issue of whether GW does provide a favourable context for language acquisition.

1.2 The rationale of the study of repair

Research into repair is an essential part of the study of the structure of spoken discourse. Without an understanding of the repair process the description of the structure of a spoken discourse may not be complete, since problems occur in all kinds of talk, and repair is the way to maintain the interaction. An investigation into the structure of repair is not adequate unless it takes the structure of interaction into consideration. By examining the "trouble source" in the spoken discourse and how they are put right one

can gain an insight not only into the specifics of repair but also into the more general overall organization of a speech event.

Repair is a technique available to solve the problems which arise in the process of interaction. Thus conversational repair is a communication phenomenon which helps to sustain social interaction by allowing conversants mutually to handle problems which arise as they communicate. Understanding of the structure of any speech event together with its difficulties enables one to propose measures that might minimise those difficulties.

Overall, the study of repair may improve our knowledge and practice of effective communication as well as providing insights into the nature of conversation:

> "The organisation of repair is the self-righting mechanism for the organization of language use in interaction. If language is composed of systems of rules which are integrated, then it will have sources of trouble related to the modes of their integration (at the least). And if it has intrinsic sources of trouble, then it will have a mechanism for dealing with them intrinsically. An adequate theory of the organization of natural language will need to depict how a natural language handles its intrinsic trouble. Such a theory will, then, need an account of the organization of repair." (SJS 1977: 381)

In addition to these general reasons for the study of repair, the process of repair itself forms a part of negotiation which it has been argued is important for language acquisition:

> "Repairing, as one of the mechanisms of feedback on interactive applications of this interim system, is likely to be an important variable in language learning...If this is so, we may ask ourselves if repair, apart from being

> necessary for communication to take place, may have specific learning value, i.e. is a useful input."
>
> (van Lier 1988: 183)

The arguments about "comprehensible input" are based on Krashen's (1981, 1982) language learning theory. Following this, Long (1980), Long and Porter (1985), Pica and Doughty (1986), Doughty and Pica (1985), Pica (1987), Brown (1991), Gass and Varonis (1985), examine the comprehensible input in terms of certain features of the interaction, which are part of the repair process[1]. It seems clear that understanding the repair process assists in understanding the process of language acquisition.

The analysis of repair, starting with the nature of the problem and extending to its solution, also provides us with useful and helpful information on language teaching itself. It can, for example, provide information about students' present interlanguage (IL) situation in terms of their performance. It can also provide insights into the strategies used in different situations by the same group of participants. The characteristics of CR in terms of repair, for example, may indicate ways of improving language teaching. The characteristics of GW can indicate whether it is in a position to assist students to develop their communicative competence, as previous studies have claimed (Long 1984, Pica 1987).

1.3 The problem with the analysis of repair

A cursory reading of the literature on research into repair reveals that a number of problems remain. Firstly, repair strategy is too often considered to be a synonym for error correction or treatment. Different studies examine different components of repair based on research interests; as a result, the outcome of research are sometimes confusing and contradictory. Secondly, the four trajectories are too broad, and do not reveal the detailed features in

the interactional operation of the repair process; it is rather an analysis of the segmental features of the interaction. The four trajectory model does not explain the real differences between different discourse types, except for indicating different preferences. Thus what affects repair is not easy to identify. Thirdly, even within the four trajectories the same repair trajectory has been found to play different roles in repair work. Without distinguishing the type of problem, it is difficult to identify the function repair plays in a particular context. This ambiguity obviously limits the conclusions which can be drawn from analysis. Fourthly, the results in the previous comparative studies of CR with CS are of limited use, since their comparisons are based on the data from various sources (most often SJS's data are used as basis for comparison). It is therefore difficult to draw any implications from this research for language teaching or language learning. Various factors which affect the use of repair strategies have not been considered and very little exploration has been done into the possible implications from research for repair in CR practice. Finally, repair structure is more complex than the four trajectories described, and involves questions of not only who initiates and who repairs, but also the nature of the interaction structure itself, the goal of interaction and the relationship between participants. Research on repair needs a broader approach than just the analysis of sequential organization. The present study attempts to get closer to tackling the problem discussed in this section.

1.4 Objectives of the study

The starting point for this study is the widespread belief that repair trajectories or models for the description and analysis of discourse are too broad to fully explain the operation of the repair process. They do not lead to a

significant improvement in our understanding of what actually goes on in repair processes.

There are several reasons why NNS discourse has been chosen. NNS discourse is a fertile area for the investigation of problematic talk, because much of NNS discourse results in some sort of difficulty or problem. However, there are other more powerful considerations, as van Lier points out:

> "In particular, further research should involve a comparison of repair in L2 classroom with repair in L2/L1 encounters outside classrooms. It is only by such research that the importance for acquisition and for adequate communication of different repair procedures and trajectories can be investigated." (1982: 446)

Candlin, in his preface to van Lier's book (1988, p, xii), has this to say:

> "If, as van Lier maintains, repairing is a characteristic classroom activity, it will surely be useful to examine what the features and functions of repairing are in such non-classroom environments. Oblique from other contexts we may come to estimate the peculiar character of classroom language and also be more able to judge as a result what it can uniquely contribute to classroom purposes. Such a comparative study would provide illumination to current debates on the merits of instructional and non-instructional language learning and also assist teachers to organize their classroom activities in terms of their real-world communicative potential."

The comparison between NS/NNS in teacher-fronted classroom interaction and NNS conversations and group work may have the potential

for revealing similarities and differences in their structure of interaction in general and in the repair process in particular.

Based on these three types of interactions, the purpose of this investigation is three-fold. Firstly it examines repair by identifying the problem type according to the nature of the trouble source — be it in production or understanding. These two types of trouble source are subdivided into different categories according to where the trouble source and repair lie and what repair devices are used. This approach distinguishes the study from other types of analysis in previous studies, which examine only repair and ignore the nature of the problem and the operation processes of repair. Secondly, the similarities and differences between the three types of interactions are analysed, and the results are interpreted in terms of interaction structure. In this way, the factors affecting repair strategies in different types of interactions are explained and legitimate repair trajectories to each of the interactions are described. These similarities and differences, it is hoped, will show us to what extent classroom interaction constrains or helps students' performance, and what role group work plays in these comparisons. Thirdly, the implications of results are discussed in relation to language teaching, with special interest in use of GW in classroom interaction.

1.5 Methodology

This study is an empirical one, based on the data recorded from three "natural" interactions. "Natural" refers to the collection of data with no predetermined plan for what is going to be obtained from the data, without any preconceptions of the kind of participation involved.

This research starts with no predetermined models or categories for analysis, without setting up any hypothesis to be tested. The research process

begins with looking for patterns of repair from the data, restoring patterns to the data for analysing, and modifying the models developed from the process. The process has been repeated several times, ending with the model presented in Chapter 4, which is not necessarily perfect itself; "repairing" is needed. Instead of selecting factors which are supposed to affect the repair beforehand, the factors which are associated with repair emerge from the process of analysis: they are interaction structure, the goal of interaction and the relationship between the participants.

1.6 Outline of the thesis

Chapter 2 presents a review of the literature on the studies of three types of interaction — Conversation, Group work and Classroom interaction — in terms of their linguistic and organisational structure, particularly those studies relating to repair, which includes NS conversation, NS/NNS conversation, NNS conversation and L1 and L2 classroom interaction.

Chapter 3 discusses the problem concerning the methodology of research on spoken discourse, and describes the methods and techniques used in data collection and material used for the study. This chapter lays out the procedure for analysing the data in this study.

Chapter 4 presents the framework for examining the repair in terms of problem types and organisational structure. It demonstrates the complexity of the repair process. It sets up the criteria for identifying the problem type and the repair process. It links the repair trajectories with different kinds of problem repair and different techniques to be carried out.

Chapter 5 presents a detailed investigation of repair, focusing on the analysis of the production and understanding problems of repair in these three types of interaction. The frequency of repaired production problems and understanding problems are presented, and organisational patterns are

demonstrated. The differences and similarities between these three types of interactions in terms of frequency of occurrence are presented.

Chapter 6 discusses the results from this study, to see how the interaction structure is organised in terms of the repair process and what the characteristics of repair in each of the interactions are. It compares the results in terms of four repair trajectories to illustrate that the results from this study can be used to explain the repair process clearly and adequately by unfolding the four trajectories in more detail.

Chapter 7 presents a summary and conclusion of all the chapters and the general and more specific findings of the study. It also includes suggestions for further research.

Note:

1. The categories treated as "comprehensible input" in Pica (1986) and Long (1980, 1985) are: comprehension check, clarification request, confirmation check, self-repetition and other-repetition. Those categories are the devices used in understanding repair. Repair work as shown in this study includes more ways used in solving problems in communication.

CHAPTER TWO

A REVIEW OF THE RELEVANT LITERATURE

2. 1 Introduction

The study of "repair" in talk has attracted attention over the last ten years. The research on repair extends beyond an investigation of repair itself and includes consideration of the "triggering of problems" as well as the process leading to repair. All this is examined in terms of production and understanding which occurs during on-going communication.

Mention of repair is made in the seminal paper by Sacks, Schegloff and Jefferson (1974) on the subject of turn-taking in conversation, but the first paper which specifically addresses the problem was published three years later (Schegloff, Jefferson and Sacks 1977). In this, the authors examine repair in terms of three sequential steps: trouble source, repair initiation and repair outcome. Following their study there has been much research undertaken along these lines. Some researchers have investigated repair in the conversation of native speakers (Schegloff, Jefferson and Sacks 1977, Moerman 1977, Besnier 1982), some have examined the talk between native speakers and non-native speakers (Day, Chenoweth, Chun and Luppescun 1984, Gaskill 1980), while others have focused the analysis of conversation among non-native speakers (Schwartz 1980). This has been adapted in the analysis of classroom discourse in both L1 and L2 (van Lier 1982, Kasper 1985, McHoul 1990, Micheal 1990, Papaefthymiou-Lytra 1989), although other professions beside teaching have also been investigated (eg, medicine, West 1984).

The above studies examine repair from various perspectives in different settings and using a variety of approaches. The findings of the

studies yield different products. Some describe the repair in terms of linguistic features, some look at the phenomenon from a sociolinguistic point of view, some analyse it in terms of organizational features, others examine repair from information structure at discourse-level. These studies are highly interesting and relevant to the present investigation.

The major task of the present chapter is, firstly, to review the relevant studies, starting from the definitions they provide, the research approaches they adopt to undertake the research, and the characteristics of different settings which they identify. It also aims to show in what ways the present study can throw light onto these issues, relating this to earlier work on conversation, classroom discourse and group work.

2. 2 Definition, comments and distinctions between error correction and repair

2. 2. 1 What is repair?

The first task that a study of repair in interaction must face is a clear delimitation of the domain in which repair operates. In a literal sense, to repair means, according to the *Longman Dictionary of Contemporary English,* a) "to mend", b) "to put right". According to the *COBUILD Dictionary* "A repair is something that you do to mend a machine, a piece of cloth, or other thing that has been damaged or is not working properly." It is possible to identify two general meanings of the term: one is that when something is broken or damaged it needs repair; the other is that when something is not working properly, either because something has gone wrong or does not operate properly, it needs repair.

In conversational analysis it is used in both: it refers to the situation when production of speech does not goes smoothly and when the production

of speech goes wrong or there is a problem in the understanding of the speech.

The term "repair" is used by Schegloff, Jefferson and Sacks to refer to natural conversation (1979 quoted in van Lier 1982: 418) as follows:

> "By the term repair we mean to be addressing problems, or dealing with a collection of occurrences in ordinary conversation, very heterogeneous in their appearance, which have initially in common that by them problems of speaking, hearing and understanding *the talk* are addressed. I put the emphasis on the talk in order to make it clear that it's not any problem of understanding, for example, that we mean to be capturing with the notion of repair. For instance, I do not... understand Einstein's famous formula $E=MC^2$. If I turned to a physicist at UCLA and told him that I did not understand it and he subsequently explained it to me, I would not take it that I had engaged in repair. That is, he would be addressing a problem of understanding that I had, but he would not be addressing the problem of understanding the talk in the conversation. Thus our notion of repair is dealing with problems of speaking, hearing, and understanding *the talk*."

The above definition given by Schegloff, Jefferson and Sacks explains that what repair in interaction covers is not a particular subject participants have problems with, it is rather the talk itself. And as Schegloff points out later, more specifically:

> "By 'repair' we refer to the efforts to deal with trouble in speaking, hearing, or understanding talk in interaction." (1987: 210)

This distinguishes what repair is and what repair is not in terms of the analysis of spoken interaction.

This definition is also close to that offered by van Lier in the context of L2 classroom interaction:

> "In this general sense repair can be defined as the treatment of trouble occurring in interactive language use." (1988: 183)

Kasper has also underlined its importance in this context:

> "Repair, defined in this paper as modification of trouble sources which have manifested themselves in the discourse, is an important activity in FL learning and communication, both in educational and non-educational contexts." (1985: 200)

Van Lier and Kasper define repair in terms of what it achieves. I refer to this as the "actional dimension", because it refers to what action repair performs. This action refers to adjustment or modification, not just to replacement or correction.

The definition given by Shimanoff (1977) in describing different repair strategies used in both planned and unplanned discourse is as follows:

> "For the purpose of this paper we define repair as an attempt to pre-empt, eliminate and/or "fix" the trouble source." (1977: 123)

Here Shimanoff emphasises the functional aspects of repair. The function that repair plays in the interaction is an attempt to prevent, minimise or "fix" the trouble.

Schwartz reaches the following conclusion in his study of NNS learners' interaction:

> "In conclusion it seems that repair is a process of negotiation, involving speakers conferring with each other to achieve understanding." (1980: 151)

The definition supplied by Schwartz describes the process when the repair is undertaken. He takes account of the participant's consideration of his/her interlocutor's reaction while they are talking.

As we can see from the above statements, there are different definitions offered for repair. It has not been my intention here to criticize them, merely indicate a difference in focus. However, in all cases, the analysis is based on the assumption that the "trajectory" of any specific instance of repair is important. The concept of a repair trajectory is particularly relevant when the relationship between repair and correction is examined.

2. 2. 2 Repair and error correction

There are different views about the distinction between repair and error correction. The difference lies in their different focuses and different research interests.

Scholars who have examined speech in terms of error correction have traditionally focused on classrooms and been concerned with error types and treatment (Lucas 1975, Allwright 1977, Chaudron 1977, Fanselow 1977, Hendrinkson 1978, Courchene 1980, Salica 1981). Among other issues, the researches have been concerned with the following: descriptions of corrections in the language classroom, attempts to determine which types of corrections are most effective in eliciting correct responses, evaluations of students' and teachers' attitudes towards correcting strategies, and the analysis

of the types of error which get corrected. Classroom discourse has also been examined linguistically, in terms of phonology, syntax, lexis, and discourse. When one of these aspects is "damaged" it is repaired. The similarity of this to one of the dictionary definitions offered earlier is interesting. A key feature of this type of research is its selection of discrete elements for analysis. Because it is not concerned with the unfolding interaction, it has not concerned itself with non-linguistic aspects influencing repair, such as language deficiency, or memory lapse. Researchers have come to examine such phenomena under the more general heading of repair. As van Lier notes:

> "Repair can potentially cover a wide range of actions, including statements of procedural rules, sanctions of violations of such rules, problems of hearing and understanding the talk, second starts, prompting, cluing and helpings, explaining and correction of the errors."
>
> (1982: 417)

Schegloff, Jefferson and Sacks (1977: 363) have merely made the distinction between repair and error correction in their study of natural conversations as follows:

> "The term 'correction is commonly understood to refer to the replacement of an error' or mistakes by what is 'correct'. ..... Accordingly we will refer to 'repair' rather than 'correction' in order to capture the more general domain of occurrences. Self- or other CORRECTIONS, then, are particular types in a domain more generally formulated by a distinction between self- and other-REPAIR. We will refer to that which the repair addresses as the 'repairable' or the 'trouble source'."

In Schwartz's (1980: 138) words:

> "Repair encompasses the concept of 'correction' that is, the replacement of error by what is 'correct'. But repair in naturally occurring conversation can also occur when there is no audible error and an audible error does not always result in correction."

The position taken up by these writers is that repair is a generic term and correction is only one type of repair. I will not consider definitions of error since a number of these have been offered and the basis of the distinction being made here is the nature of the interaction itself rather than features of discrete elements within it. For the purpose of this argument, "error" and "mistake" can be used interchangeably. In error correction activity, of course, there must be an error, then error correction can take place (though it may sometimes be neglected). Repair, on the other hand, can occur even without error. It appears whenever there is a trouble source, or more specifically whenever adjustment in interactive language use is necessary. A more important aspect of this distinction is that the aim of correction is to make something correct or right, while the function of repair is more broadly to make something appropriate, or more broadly still, workable in a certain context.

However, not all researchers seem to have the same concept in mind, when they use these two terms. For example, in Day, Chenoweth, Chun and Luppescu's (1984) study they consider corrective feedback and repair to be quite separate. They refer to corrective feedback, as all other researchers define it (Chaudron; Schegloff; van Lier) as replacement of error, while repair refers to the response to a breakdown in the conversation not due to an error.

Another view of the difference between error correction and repair is held by McHoul (1990), who refers to overall ternary sequences: trouble source - initiation - correction as repair, or more technically repair trajectories. In this

technical sense, repair is not qualitatively distinct from correction. Rather, repair is a general sequential phenomenon of which correction as such forms an essential part.

To construct a typology of repair phenomena is by no means a straightforward matter. We can see from the above arguments that there are three distinct points of view about error correction and repair, and it is important to identify which perspective one is adopting. Although treating repair and correction as separate phenomena offers a clearly defined position, there are good reasons to question the validity of the distinction. The bases for distinguishing between repair and corrective feedback (which has been suggested by Day, Chenoweth, Chun, and Luppescu 1984) is that of communication breakdown. Unfortunately the authors' own examples of this clearly serve to indicate how difficult it is to define:

Ex 2.1 (in Day, Chenoweth, Chun, and Luppescu 1984: 24)

1 NNS: ...then you say what number is it=
2 NS : =what letter
3 NNS: wh- what letter, yeah what letter is it

Ex 2.2 (in Day, Chenoweth, Chun, and Luppescu 1984: 24)

1 NNS: dith_ death
2 NS: death
3 NNS: death, death

Ex 2.3 (in Day, Chenoweth, Chun, and Luppescu 1984: 30)

1 NS: Four petals.
2 NNS: Yeah and two: um ((pause))
3 NS: Leaves.
4 NNS: Yeah, two leaves, Yeah.

Ex 2.4 (in Day, Chenoweth, Chun, and Luppescu 1984: 30)

1 NNS: How do you say that?
2 NS: The handle?
3 NNS: The handle.

Superficially, in examples 2.3 and 2.4 there is communication breakdown; the NNS cannot continue his speech. In examples 2.1 and 2.2 the NNS continues his speech but has made mistakes. But questions can be asked:

1) If communication breakdown includes the situation where the speaker stops to search for a word or phrase as these two examples show, this seems to narrow the meaning of communication unacceptably.
2) Communication breakdown could be said to occur even though talk continues. For instance, in example 2.1 the use of 'number' could lead to serious misunderstanding and eventual failure to get message across.
3) Even if their distinction between corrective feedback and communication breakdown is accepted, what are criteria for defining them?
   a) Is it defined based on talk stops? or
   b) change of topic?
4) Adjacency pairs are central to the structure of conversation. In 2.4, the NNS question is a first pair part, which asks for a second pair part. Therefore it is odd to claim that this is a breakdown.

The argument against McHoul's position that repair has a particular trajectory and correction will feature in this is that it is unduly restrictive because there are cases where correction does not occur, eg, cooperative searches for appropriate word or phrases. So either the model is inadequate or we have to interpret correction very broadly. If we are going to interpret it more broadly, why not simply say, as Schegloff, Jefferson and Sacks do, that correction as one type of repair? There seems to be no good reason for not doing this.

The present study, therefore, will follow Schegloff, Jefferson and Sacks in treating error correction as one type of repair and accepting that repair covers a number of domains such as the unavailability of a word when needed, misarticulations, malapropisms, failure to hear or to be heard, trouble on the part of the recipient in understanding, incorrect understandings or misunderstanding by recipients and various others. The difference between this study and that of Schegloff, Jefferson and Sacks is that this investigation will be based on this but go beyond the sequential organization of repair which they identify; it will look into the nature of the problems (production and understanding) the source of the problems (language, content or procedures), and ways to undertake repair, examining these in terms of their interaction structures.

2. 3 Approaches to the analysis of repair

Having discussed at some length the term 'repair' and argued that it embraces 'correction', it is necessary to discuss different approaches to research into this interactional feature.

Scholars from various fields have an interest in repair from different aspects. Linguists take an interest in the linguistic problems and the relationship between repair and language structure; sociolinguists are interested in who does repair, and what the organizational patterns of repair are; educationalists look for the effects that different repair strategies have on the learning process; ethnographers are concerned with the organizational patterns that exist in the repair in different settings. In following section I will examine these approaches in detail.

2. 3. 1 The linguistic approach

There are three main trends within the linguistic approach to repair. Firstly, there is the trend of studies concerned with linguistic problems repaired in the interaction. Secondly, there is the trend of studies whose main concern is the relationship between repair and change of language structure. Thirdly, there is the trend of study whose main concern is repair at a discourse level.

2.3.1.1 The linguistic approach to the problems and correction

Interest in the language problems occurring in interaction starts in language teaching. The main questions asked are as follows: What type of language errors feature in students' talk? Who should do the correction? When, where and how should it be done? What attitude do both teachers and students have concerning the above questions? Different studies have been carried out addressing these questions.

The pioneer in the study of error correction was Chaudron (1977) who has developed a model for error corrective feedback on learners' performance. He bases his model on content classroom interaction in French immersion classes for English speaking students in Canada.

Chaudron's model is a synthesis of Sinclair and Coulthard's descriptive system at the rank of move. In this discussion there are two points which are directly relevant to the present study. One is his criteria for identifying error, the other is the distinction between different types of error.

The criteria set up by Chaudron for identifying error include an objective evaluation of linguistic or content errors according to linguistic 'norm' or evident mis-constructural of facts, and any additional linguistic or other behaviour of students being reacted to negatively or with an indication

that improvement of the response was expected. These two are very important, and demonstrate Chaudron's willingness to consider error both objectively and in the light of the immediate reaction to it. In the other words he takes the context where the utterances are produced into account.

In his analysis of the reaction to error Chaudron makes an important distinction between "features" and "types". "Features" are those linguistic or discursive markers which are either "bound" to large utterances or which exist only by the fact that two adjacent utterances bear a relation to each other. Thus features cannot stand alone. "Types" on the other hand, are self-standing, unbound utterances; the relationship to surrounding utterances will, however, determine their specific nature and information potential.

In this study the trouble source will be identified objectively and retrospectively; any gross grammatical mistakes (including incompletions) will be regarded as potential trouble sources, while the reactions of participants will be used as a further basis for identification. The second relevant point drawn from Chaudron's study is the set of criteria he uses to distinguish the different type of error: "feature" and "type". These criteria (adapted) will be used to identify different trouble sources in this study.

Chaudron divides the treatments of error into 30 categories. He has found that repetition with change or with expansion or emphasis increases the chance of success. This assessment is at first sight convincing, but in fact it is not a simple matter to limit the range of any response in this way. For one thing, corrective feedback may lead to more or less active involvement in classroom interaction, which is important to language learning (Seliger 1976) or, as Mehan (1974) points out, to the usefulness of the learner(s) awareness of, and productive involvement in the corrective exchange transaction, and which therefore needs to be taken into account. In addition, such categories provide a dubious basis for claims about the effectiveness of different types of feedback.

In Fanselow's study (1974) and the study by Cathcart and Olsen (1976), who use different models, for example, different results on the effectiveness of the error correction were obtained. Thus results from various studies should be interpreted cautiously.

Another aspect which should be borne in mind is that Chaudron analyses the error treatment based on the teacher's behaviour. Interactions take place with two participants at least. An exclusive focus on the utterances of one participant — the teacher — is inadequate for effective conversational analysis. Separation of segments from the context of their occurrence undermines to the interpretation of any findings.

Finally, a consideration of the 30 categories Chaudron proposed, some of them with examples attached to the explanation, some without, suggests that these 30 categories were formed subjectively rather than from the data analysis process.

Fanselow's study, like Chaudron's, focuses on the linguistic problems occurring in the classroom; it looks at the error types and correction features. The categories proposed by Fanselow are different from Chaudron both in terms of quantity and quality. Chaudron's consists of 30; Fanselow's is composed of 16. In Fanselow's study both the teacher's and the students' utterances are examined. He analyses error correction in two stages. One is initiation and the other is correction. The general error types identified by Fanselow are the same as those in Chaudron's study: grammatical, syntactic, lexical and discoursal. Fanselow has found that grammatical error receives the least treatment; more correction is distributed to content errors.

Both Chaudron's and Fanselow's studies focus more on classifying treatment types than on identifying the error type. Another study which analyses the trouble source in terms of their linguistic aspect is that of Cathcart and Olsen (1976). Their study is based on the teacher's and students' preference for correction, but it is founded on questionnaires which ask

respondents to state their preferences and not as an analysis of the evidence of classroom interaction. The authors found that students thought pronunciation and grammar errors were the most important to correct, with pronunciation slightly more important than grammar. Five types of grammar corrections were preferred by most of the students: comparing the error with model, explanation, repeating the cue, partial model, and expansion of error.

Chaudron (1988: 141) offers the following summary of studies on the subject of linguistic problems and their treatment (Table 2.1).

Table 2.1: Summary of studies of linguistic problems and their treatment

Type of error	Salica (1981)a	Courchene (1980)	Chaudron 1986)b	Fanselow (1977)	Lucas(1975)c NS	NNS	Median
Phonological							
% of total	d	32	29	28	28	32	29
% treated	—	41	54	7	67	61	54
Grammatical							
% of total	75	56	42	53	63	55	56
% treated	51	46	50	76	36	47	49
Lexical							
% of total	11	11	3	12	9	3	11
% treated	67	97	75	94	97	92	93
Content							
% of total	6	3	19	—	—	—	6
% treated	85	100	90	—	—	—	90
Discourse							
% of total	9	—	8	7	—	—	8
% treated	94	—	61	95	—	—	94

a Does not include phonological errors.
b Collapsed across both observation times.
c Separated by teacher type because significant difference found.
d Dashes indicate that the category was not evaluated; percentages (% of total errors) thus total 100 for each column.

We can see that previous studies have mainly discussed error types and error treatment. The basic questions asked very often by researchers are: Should the teacher do the error correction most of the time? What type of error should be corrected? However, the purpose of this study is to examine

the repair process. Although this may throw light on issues relevant to the questions it will not address them directly.

In this section discussion focuses on identifying the problem of language forms and their treatment. However, repair will affect the language structure, so it is necessary to examine what happens to the language structure when repair occurs.

2.3.1.2 Language structure and repair

The above discussion looks at the problems which exist in the language forms in spoken discourse and the ways in which these problems are treated. In this section the relationship between repair and language structure will be focused on. This is a rich area to research since repair affects the language structure and discoursal structure. We can see this clearly from following examples:

Ex 2.5 CR2=134

1 T: Does it answer WHEN he- when did he stop?

Ex 2.6 GW1=91

1 S2: Well, that doesn't mean, [.] (that) means we have no chance to
2 [..] have a relationship with her [.] and and this is [.] this is not
3 good [.] uh: quality you see,

Ex 2.7 GW1=75

1 S2: This is a kind of person who shouldn't be anxious, [.] He
2 should [..] I think he should uh exert some effort or show [..]
3 some kind of uh patience.

The above examples show that repair and language structure are closely related to each other. In example 2.5 the teacher changes indirect speech into direct speech. In example 2.6 S2 changes a negative sentence into a

positive one. In example 2.7 S2 changes a main clause into a subordinate clause. However, there are few studies which have paid much attention to these features. The only study which examines repair along these lines is Schegloff (1979). The basic issues he addresses in his research are as follows:

1) Repair operations affect the forms of sentences and the ordering of elements in them, quite apart from the sheer fact of their occurrence in sentences doing so.
2) There are structural pressures, derived from those types of discourse organization we term "turn-taking" and the "organization of sequences," that tend to concentrate repair in the same turn as contains what is being repaired and, within that turn, in the same sentence (or other "turn-constructional unit").
3) Formal arguments are possible to show that repair is, in principle, relevant to any sentence.
4) The phenomena of repair that occur in sentences are orderly and describable.

Schegloff has found the relationship between repair and syntax emerges both within a sentence and between sentences. Within the sentence repair occurs frequently in the following five different environments.

1) Expand a noun phrase by inserting a descriptor or "modifier".
2) Convert what is starting to be a sentence into a subordinate clause.
3) Convert a question into an assertion.
4) Convert a Wh-type question to a yes-no type question.
5) Re-order the elements of projected talk, inserting into a current sentence what might have been planned for a later one.

Though Schegloff's study is rigourous, there are more detailed questions that need to be answered. How frequently do these and other

features occur? To what extent if at all, is the repair/language structure relationship affected by different interactional contexts? This study will try to suggest answers to the above questions.

2.3.1.3 Discourse analysis and repair on information structure

Discourse-level repair, which has been examined by Remler (1978), consists of two parts. One is examining the repair from the source of the problem: identity and relevance. Identity misunderstandings reflect the problem of reference identity of a thing or idea. Relevance misunderstandings reflect problems in seeing the relationship between elements once they have been established in speakers' minds. The other is analysing the focus of the repair: information structure repair, information link repair and illocutionary force repair. Information structure repairs are those which arise when the speaker presents new information as given. Information link repairs occur when the listener shares the identities of referents with the speaker, but does not completely understand how certain bits of information in the utterance are related to other information on various levels of the topic structure. Illocutionary force repair signals listener misunderstanding of the purpose behind a speaker's utterances.

Although this analysis of repair from a linguistic point of view is interesting, it is limited to specific aspects. In order to discover the full picture of repair in spoken discourse it is necessary to look at it from a different perspective. The following section will concentrate on repair from a sociolinguistic point of view.

2. 3. 2. The sociolinguistic approach

Sociolinguists are interested in who takes turns to speak, who initiates repair when a problem occurs and how communication is maintained in

spoken discourse. Studies concerning these questions have been undertaken in both L1 and L2 natural conversations, in L1 and L2 classroom discourse, and in other institutional settings.

2.3.2.1. Natural conversation in native language

The primary distinctions Schegloff et al. (1977) make in examining conversational repair from their structural organizational framework, revolve around "self" and "other". Self-repair involves repair by the speaker of that which is in need of repair, while the other-repair is reserved for repair made by anyone but the speaker of the troublesome utterance. When the authors address the operation of these organizations they distinguish between "repair initiation" and "repair outcome". The former refers to the "reparative segment", and the latter refers to completion of the "reparative segment" (whether with success or with failure). So the basic repair structure consists of three steps: the production of the trouble source, the initiation of the repair and its completion. Both the initiation and repair can be fulfilled by either the trouble source or the other party. Thus they have proposed 4 types of repair trajectory.

1) self-repair issuing from self-initiation

Ex 2.8 GW1=85

	1	S1:	Well, I think that Jenny Williams should take this [..] because
	2		she is well educated, [.] a:nd uh as she got an A level and she
—>	3		speaks French, sorry Spanish, [.] beside [..] she is engaged to be
	4		married. ...

2) self-repair issuing from other-initiation

Ex 2.9 CS2=662

	1	S4:	O.K. [...] Yeah, only for Christian, to marry sometimes, [.]
	2		O.K., but the [.] the government, O.K. [.] have a: agreement
	3		with the the church, O.K. [.] with the for, [.] don't do [.] uh
	4		birth control,
—>	5	S1:	Do you still have a agreement to government?
—>	6	S4:	Not agreement, an assignment, O.K.

3) other-repair issuing from self-initiation

Ex 2.10 GW3=243

	1	S1:	This is going to be very awkward (laughing). So how are we
	2		going to raise the new [.] capital? [...] Are we going to invest
	3		our own money or [..] will we for example we can [.]
—>	4		how to say when you want to [..] offer new shares [.]
	5		[in market
—>	6	T:	[We ca:n float the new issue,
	7	S1:	But [.] [this is, this is shares or:

4) other-repair issuing from other-initiation

EX 2.11 (Zahn 1984:57)

	1	D:	And look it's written by a Hungarian.
—>	2	O:	It's written by a Hungarian? ((unintelligible))
	3	D:	Is Joe here?
—>	4	O:	No, it's not a Hungarian, that's Pole.

These four trajectories are very important in establishing a pattern and structure for repair, which provides some insight into the process of how two parties confer with each other and in which place they assume it proper to repair in a certain context. In their empirical analysis, Schegloff, Jefferson and Sacks have found that in a natural conversation self-initiation and self-completion of repair are preferred. Schegloff, Jefferson and Sacks use the term

"preference" not to refer to the motivations of the participants in a conversation, but to sequence and turn-organisational features of conversation. This operational preference refers to a higher frequency of occurrence of self-repair than other-repair in conversation.

Basing their claims on the opportunities for self-repair provided by the sequential organisational properties, Schegloff, Jefferson and Sacks offer three reasons for such preference. In natural conversation:

1) opportunities for self initiation come before opportunities for other initiation;
2) for those repairables on which repair is initiated, same turn and transition-space opportunities for self-initiation are taken by speakers of the trouble source;
3) the course or trajectory of same turn initiated repairs regularly leads to successful self-repair in the same turn ie, before the position for other initiation.

Schegloff, Jefferson and Sacks (1977: 377) summarize the situation as follows:

> ".....self-initiated repair yields self correction, and opportunities for self initiation come first, OTHER-INITIATION REPAIR ALSO YIELDS SELF-CORRECTION."

The work of Schegloff, Jefferson and Sacks has made a considerable contribution to our understanding of how repair operates in natural conversation among native speakers.

However, Schegloff and his colleagues did not provide frequency data concerning the relative occurrence of self- and other-initiations or self- and other-repairs, although mention of ranking from most preferred to least preferred patterns are made. More importantly, in these analyses they did not

attempt to look beyond sequential organization as an explanation for their findings. Though their analysis of sequencing is quite fine-grained, their emphasis on conversation as sequences of turns does not do full justice to features which may be particularly relevant in a pedagogic context. As we will see in Chapter 4, self- and other-repair trajectories are closely related to the nature of the trouble source itself and the responsibility and capability of the participants. Without a consideration of social and communicative aspects repair cannot be fully understood. In addition, the problem with four trajectory analysis is that it does not consider the multi-functional nature of repair. The following example illustrates this point:

Ex 2.12 (Gass 1985:75)

1 ULJ: Yeah, How long ...will you be, will you be staying?

2 120J: I will four months

3 ULJ: Four months?

—> 4 120J: Stay four months here until April

Here line 4 can be interpreted as either self correction of "I will four months" in line 2 or confirmation of ULJ's "four months" in line 3 .

Finally, SJS's model does not consider the function of silence, which plays important role in terms of repair in the interaction.

Among those who have studied L1 natural conversation are Moerman (1977) and Besnier (1982). They examine the repair trajectories which operate in the conversation among Thais and Tuvaluan, with similar results as far as the four types of repair patterns are concerned. This indicates that the repair operation system works similarly in various languages. As Moerman says:

> Since Thai is historically unrelated to English and since a northern Thai [Moerman's data is from Northern Thailand] village is social-culturally quite different from

> America, the detailed systemic and massive parallels between these two corpora support a claim that the domain described by Sacks, Schegloff and Jefferson is conversation — without respect to the language, nation, class or culture in which it occurs." (1977: 875)

As far as repair trajectories are concerned, the findings of these three studies show that repair in spoken discourse is not necessarily closely related to language differences and culture. As far as repair trajectories are concerned, language and cultural differences seem not to effect the repair patterns. Based on this claim, the present study analyses three activities in which students from different language backgrounds take part.

2.3.2.2. Conversation between native speakers and non-native speakers

Day, Chenoweth, Chun and Luppescun (1984) aim to investigate repair patterns in conversation between native speaker and non-native speakers. Their study is based on 20 NNS conversations with NS in two different situations, one "natural" (no restriction on topics) conversation, and the other focused on external activity (games).

In their analysis they focus on two patterns. One is NNS-initiated NS-completed repair. The other is NS-initiated NNS-completed repair. In NNS initiated NS-completed repair they have found that NNS use two ways to initiate a repair. One is word searching which is very common in NNS talk. NNSs know what meaning they are seeking, but they do not know how to express it in the target language, or they may have learned the word before but be unable to recall it on the spot. The other type is a request for help. This can be made either by direct appeal or by using rising intonation. Both types of problems with NNS are due to their inability to express themselves. This might be more crudely described as a production problem.

In NS initiation and NNS completing repair, Day, Chenoweth, Chun, and Luppescu have found that there are two methods used by NS. One is a clarification request, the other is a confirmation check. By clarification request they refer to the situation when the NS tries to call the attention of the NNS to the trouble source in the hope that s/he can do the repair on his/her own. This shows that other-initiation here for the repair to the trouble source is not a problem of understanding by the NS, but a production problem on the part of NNS located in a prior utterance. The purpose of the NS initiation is to make the NNS repair what s/he has said.

The authors claim that the purpose of a clarification check is to "clear up trouble source". Therefore, they do not focus on the trouble source; instead it seems that they treat this as a problem of NS's understanding of NNS utterances. I will suggest that other-initiation plays different roles in spoken discourse.

The authors divide corrective feedback into two types, which they label "on-record" and "off-record". "On-record" corrective feedback refers to utterances which have only one interpretation, and "off-record" corrective feedbacks refers to utterances which are ambiguous and are open to more than one interpretation. They found in their study that on-record corrective feedback occurs when a NS, in response to an NNS's error, supplies corrective feedback with declaratory intonation. The NNS responds, often by repeating, or simply acknowledging the feedback, perhaps using it in an incomplete sentence. Off-record corrective feedback appears in one of two forms: question or statement. When it is as a question it plays the role of a confirmation check (however, not all confirmation checks are off-record corrective feedback); when it is given as a statement it appears with declaratory intonation.

The framework Day, Chenoweth, Chun and Luppescun proposed here is fine-grained. It is relevant to L2 classroom discourse, although the settings are different. There may be different patterns and the repair may have

different functions to play in the on-going communication, but they have one thing in common: one participant is competent, and the other is not. It is common for the less competent speaker to initiate a repair which the other speaker then completes. An interesting feature of this is that face work (see Goffman 1981, Brown and Levinson 1978) is suspended. In this study face work will not be discussed in detail partly because it is not central to the purpose of the investigation and partly because the cultural mix of interactants would necessitate careful and detailed analysis. However, the distinction between on-record and off-record feedback will be referred to where appropriate. Other studies of NS/NNS interaction (Gaskill 1980, Gass and Varonis 1985), are less relevant to this investigation. The common view about repair in conversation between NS and NNS is that there are more other-initiated self-repairs and other-initiated other-repairs than are found in natural conversation between NSs. It is also expected that there will be more problems which will occur in conversation between NNSs and a great variety of ways which will be used to solve these problems. It is worth examining NNS spoken discourse to see whether this expectation is justified.

2.3.2.3 Non-native speaker discourse

The work of Schwartz (1980) examines how L2 learners repair their speech in conversation among themselves. Schwartz (1980) says:

> "Conversations between L2 learners are often characterized by error and problems of understanding."
> (1980: 139)

> "L2 learners are faced with an additional burden to interaction — the imperfect command of the language of communication." (1980: 138)

As we can see, L2 Learners face more problems and a bigger range of problems than native speakers. However, it is important to emphasise that L2 learner conversation is different from classroom discourse. In classroom discourse there is a teacher who is supposed to be responsible for helping and the students can rely on the teacher to repair their utterances. In conversation among all L2 learners they are all "not-yet-competent speakers", they have to find their own ways to maintain communication and they can help each other. It is interesting to find out how they manage to solve problems while they are talking.

Schwartz (1980) examines repair strategies in NNSs conversation, using data from two conversations, each with 6 non-natives speakers. The students were selected from 3 proficiency levels. In his analysis he employs the basic division into self-initiated repair and other-initiated repair, but what makes his work particularly interesting is that he examines why the initiation and repair have been undertaken in one way rather than another. For example, in self-initiated repair he points out:

> "However, any interaction with another person involved attempting to understand and to be understood. This means that the speaker must frame and redo concepts which are potential trouble sources for the auditor. In this way the speaker negotiates what he says, keep in mind the requirement for understanding on the part of the auditor." (1980: 141)

Schwartz touches the key point of why repair is interactionally significant, why speakers "redo" their utterances. The speaker not only tries to match what s/he says to what s/he intends to say but also takes the auditor's requirements into account.

Another contribution Schwartz has made in research on repair is that his examination embraces extralinguistic as well as linguistic features. Many

researchers have commented on the importance of extralinguistic aspects, but few have turned their attention to this, presumably because it is not easy to find patterns and describe them. Schwartz has found that in self-initiated repair there are various ways to signal the problems and different operation procedures of repair. The signals consists of lexical and non-lexical ones. The lexical ones are the expressions like "I mean", "you know", and non-lexical ones are "cut-off", pauses and "uh". In addition there are extra-linguistic devices, such as eye gaze, and head movement. The repair operations consists of word replacement, reordering and word searching.

In other-initiated repair he found that usually the speaker of the trouble source will repair his or her own speech when the other person initiates repair, resulting in other-initiated self-repair. But sometimes it also results in other repair, when the other speaker gives the trouble source speaker a number of chances to repair his or her own speech, as may be the case with the L2 learner, who is not always capable of accomplishing repair. In this situation the other will undertake the repair. This is worth noting because it explains at the same time why other repair occurs more in L2 learner discourse: it is not merely related to sequential organizational features. Although several researchers mention the different patterns which may exist in not-yet competent speakers, there is no one who tries to account for these. Capability is something which should be considered as an element which will effect the repair patterns. Another important discovery Schwartz made in his study is that in other-initiation the question word may be used to query an entire proposition when the trouble source is not clear. Here is an example from his study:

Ex 2.13 (Schwartz 1980: 146)

1 Humid: How did you spend there?
2 Mari: Hmm?
3 Humid: How long did you spend there?

For L2 learners this is a very important part of learning:

> "Negotiations are important in the operations of other initiated repair, in that both the speaker and the other person must go through several interactive process to locate the trouble source and then to repair it."
>
> (Schwartz 1980: 148)

This other-initiation may query the entire proposition first in order to work out where the trouble is, because sometimes it is not easy to recognize exactly where the difficulty lies. With the help of this procedure the trouble source initiator can either do self repair immediately, or repeat what s/he said if s/he is unable to identify the problem in his/her speech, if it is a hearing or understanding problem. The interlocutor may then try again to find the specific trouble source. In this case more exchanges are needed to finish the repair work. This illustrates another feature of repair, ie, recursive patterns. One conclusion reached by Schwartz is that in L2 learner discourse other-initiated self-repair and other-initiated other-repair occur more frequently than is the case in NS interaction. The study has also found that there are more recursive and embedded repair patterns than in NS discourse, due to the fact that participants are not-yet-competent in the language. Learners in the language classroom are also not-yet-competent, but the context is different, so it is necessary now to examine that context.

2.3.2.4. Classroom discourse

Erickson (1982:162), talking about classrooms in general says:

> ".....lessons are speech events characterized by the presence of frequent cognitive and interactional troubles and repair work."

van Lier points out the difference between CS and CR by saying:

> "In classrooms, of course, such principles or strategies may not operate in the same as in general conversation, since it is part of the teacher's instructional role that s/he notes and deals with error, and this may allow for more overtness and directness." (1982: 420)

van Lier points out two important aspects which distinguish the classroom from general conversation. One is who is responsible for discovering the problems and handling them, the other is the different ways the problems are dealt with. One of basic questions asked by van Lier is whether we can "find empirical evidence for a basic difference between didactic and conversational repair in the L2 classroom in the kinds of trouble source addressed and in the ways of dealing with them".

Kasper (1985: 202) also argues that:

> "An analysis of repair in educational contexts has to take account of the socio-interactional constraints exerted by the school as an institution, by the goals teachers and pupils are proposed to acquire and by the resulting actional and interactional patterns."

Kasper's statement offers reasons why repair work in the classroom is different from that of general conversation.

Another researcher, McHoul (1990), argues from the different roles played by teacher and students in the repair process that in the classroom it is the learner who has the trouble, and the teacher who resolves it.

The above statements point out that repair work in the classroom will be different from that in general conversation, in terms of who has problems, who is responsible for dealing with problems and how the problems are dealt

with. In the following section three studies in L1 and L2 classrooms will be examined to highlight the similarities and differences which exist between classroom discourse and natural conversation.

2.3.2.4.1 L2 classroom discourse

The framework developed by van Lier on repair in the L2 classroom starts by comparing the orientation of repair between general conversation and the L2 classroom, which is helpful, since we are able to see the characteristics which are peculiar to the classroom. His comparison is based on two distinctions, the first between "conversational" and "didactic". By didactic repair van Lier refers to kinds of repair work in classroom discourse which are specifically pedagogic in nature, while conversational repair refers to repair work in all face to face interaction and this addresses problems of the talk. van Lier does not suggest that in classroom discourse repair is all pedagogically oriented, while in conversation all repair is conversational, it is matter of frequency. While one dimension embraces conversational and didactic repair, the other covers the distinction between "conjunctive" and "disjunctive". This is clearly illustrated in the following diagram:

Diagram 2.1 Features of repair in L2 classroom
(van Lier 1988: 190)

He argues that the framework of these four types of repair and the movement from 1 to 4 illustrate two things:

> ".....firstly, increasing status- or role-marking or inequality, and secondly, increasing likelihood of threat of face." (van Lier 1988: 190)

The distinction he has made here is very important in terms of his approach to analysis. He considers repair work in conversation and in the

classroom in terms of its social context, ie, in terms of social factors, such as roles in the interaction and face work which will effect the repair patterns. This means that he is interested in more than simply the sequence of repair independent of any explanation of the factors related to this. In his framework, van Lier emphases the differences between classroom and conversation repair in terms of way it is addressed, rather than in terms of type of trouble that is addressed. This reflects his interest in the ways used to repair the problems, rather than the problems themselves. Repair, he argues, is designed either to help, enable and support, or evaluate, challenge and contest. It may be true that there are different types of trouble sources characteristic of certain contexts, and the methods of repair used in a particular context are closely related to the specific problem. Although van Lier emphases both sequential and contextual importance in repair research, he bases his analysis on the sequential organization. He has found that in the L2 classroom:

a) same turn self-repair occurs frequently both in teachers' utterances and students' utterances.
b) self-initiated other-repair occurs in two forms. One is the case where a student initiates a repair by using a request for help, in which case it is the teacher to whom the request is addressed, the other is that student self-initiation occurs in the forms of "try-marking", ie, the student provides a candidate item to wait for confirmation or feedback.
c) Self-repair is absent in the transitional relevance place.
d) Third turn self-repair does not occur.
e) Other-initiation/self repair occurs most frequently. (This is confirmed also by McHoul's study.)
f) Other-initiation/other-repair occurs with high regularity.

He has also noticed that the type of activity affects the repair — repair frequency; for example, self-repair occurs more in group and pair work where students intend to produce long and complicated utterances. However, the studies which have been undertaken did not pursue an investigation along this line.

One study which did follow van Lier's on repair in L2 classrooms is Kasper's (1985), but this follows predictable lines. It analyses the repair along organizational patterns, concentrating on who does the initiation and repair. The study focused on the different phases[1] in a lesson, with the aim of identifying the differences between language-centered phases and content-centered ones. In his analysis he distinguishes repair strategies used by teachers and students. Thus there are eight categories, instead of the four which have been proposed by others.

In the language-centered phase he has found:

1 Trouble-sources occur in learners' utterances.

2 They are identified by the teacher.

3 They are repaired either by the same or, more frequently, by another learner (delegated repair).

4 The repair-completion is confirmed by the teacher.

The first two findings focus on who is responsible for trouble sources and who is responsible for handling trouble sources, and his conclusions are similar to these of McHoul. However, it seems that the criteria he uses for identifying the trouble source may be different from some other researchers. As shown earlier, most researchers consider that false starts, reformulation and insertions in the sentence which has been produced should be treated as signals for repair. This cannot be Kasper's position since he does not allow for teacher error and it is clear that even fluent native language speakers may

make false starts because of a slip of tongue, or reformulate their speech as a result of inadequate preparation or out of consideration for interlocutors. Finding number 4 indicates that the structure of repair in Kasper's model can be explained as follows: trouble source, initiation, repair, and confirmation. This is closely related to the classroom IRF pattern identified by Sinclair and Coulthard (1975).

In the content-oriented phase Kasper found that:

1 unlike the case of the language-oriented phase, self-initiated and self-completed repair is preferred by both learners and teacher, with teacher's self-repair frequently pedagogically motivated (although he provides no qualification to support this claim);
2 as in the language-centered phase, other-initiated and other-completed repair of learners' utterances are strongly represented;
3 as in conversational repair but unlike the language-centred phase, interruption of the content-oriented phase is avoided when linguistic trouble-sources are repaired;
4 as in the language-centered phase, the learners do not initiate other-repair of their utterances but appeal for assistance instead.

The findings in the content-oriented phase show that different phases of classroom activities are characterized by different features and patterns. Self-repair trajectories there more closely resemble those in conversation than these in language-centered activities. Appealing for assistance is also a common feature of the L2 classroom. These findings indicate that different activities lead to different types of repair, which are closely related to the goal of the interaction.

The above discussion on the research of repair occurring in the L2 classroom demonstrates that there are differences in terms of the frequencies

of the four trajectories in conversation and in the classroom. And even within the classroom different activities will affect repair patterns. The discussion also suggests that the structure of repair in the classroom may be similar to the IRF pattern identified by Sinclair and Coulthard (1975). Unfortunately, there is no direct comparative study which has been carried out to verify this claim.

As mentioned earlier in this section, there are two types of language classroom discourse. Having examined repair in the L2 classroom, it is worthwhile at least to consider salient features of repair in the L1 classroom.

2.3.2.4.2 L1 classroom discourse

McHoul's study (1990) examines repair trajectories in L1 classroom discourse. His study is based on geography lessons in Australia high schools and the author presents his findings in 18 categories (a detailed description can be found in McHoul article 1990: 374-375). His main interest lies on the "kind of repair sequence where teachers use the strategy of indicating unacceptable student answers without providing direct corrections as such". What McHoul has found in the L1 classroom is that other-initiated self-repair is predominant over other trajectories. He has found that cluing, comments, prompting and requestioning are major initiation devices in L1 classroom discourse. These initiations are quite different from initiation in conversation. In a natural conversation initiation addresses a genuine problem in the interaction process. It is operated accidentally and cooperatively. In classroom discourse, initiation addresses pseudo-problems and is produced deliberately and antagonistically. Here McHoul raises two important issues: one relating to different types of problems which can be identified, the other to different purposes for repair.

McHoul notices that other-repair does occur more frequently in the L1 classroom than in natural conversation, and it occurs in a *particular sequential environment*. It occurs when there is a pronunciation problem rather than an informational one, and it occurs when there is a problem with the topic development instead of a substantive one. At the same time, McHoul notices that other-initiation occurs in the form of modulation, (other researchers have identified this as explicit vs implicit (Chaudron 1977)), overtly-realized vs covertly-realized (Papaefthymiou-Lytra 1989). All these forms indicate that there are different ways to initiate a repair. Modulation is a method used in other-initiation to show "downgrading" on a confidence/uncertainty scale.

The problem with his idea of modulation lies in the difficulty of distinguishing the difference between modulation and a confirmation check which is used as an initiation device indicating that the hearer is not certain about what s/he heard. The following examples illustrate the difficulty:

Ex 2.14 (McHoul 1990: 368)

1	T:	(Whatsota) terms d'ya use
2	Rich:	People per square mile
3	T:	People per square mile? or::: now we (you know= we need)
4	():	=Square kilometre=
5	Rich:	kilometres
6	T:	=Per square kilometre

Ex 2.15 CR1=24

1	S:	Swim, they swim ashore,
2	T:	Swim?=
3	S:	=Swim,
4	T:	Possibly, we hope they don't have to swim, what are their other alternatives?

One way of tackling this problem is to pay attention to the sequential organization of the interaction. These two examples can be presented sequentially as follows:

1	TS				
	Confirmation Check			Modulation	
2	T:	repeat TS?	2	T:	Repeat TS? (+ "opportunity")
3	S:	confirmation	3	S:	Repair
4	T:	Continuation from 1			(option: T, repair S, repair ±confirmation

Figure 2.1. Sequential organization of confirmation and modulation

As this figure demonstrates, although the first two turns are the same, options at the third turn are different. A confirmation check allows for confirmation or rejection of the repeated item and is typically realized as a question-answer adjacency pair operating as an insertion sequence. Modulation invites repair along lines of acceptable to the speaker so it is not typically realized as a question-answer adjacency pair. In addition, repair can be effected by a speaker other than the initiator of the trouble source, and re-initiation can occur following an unaccepted repair.

This can be explained if we can identify the problem as one of production or understanding. If it is a production problem the initiation will be modulated in order to provide an opportunity for self-repair. It is seen as pseudo-uncertainty about what is heard. If it is an understanding problem the initiation as such will be regarded as an understanding check. It is genuine

uncertainty on the part of the hearer about what s/he heard and it is followed by confirmation (see Chapters 4 and 6 for criteria of identification and discussion). This can be clearly illustrated in classroom discourse, where the teacher knows exactly what should be said. If an utterance from a student is not as s/he expects s/he will use modulated form as an initiation, indicating that there is a problem in his/her utterances which need repair. If the teacher really does not understand what the student said the modulation form s/he uses is understanding check.

The above three studies highlight differences, in terms of frequencies of the four trajectories, between classroom discourse and general conversation. There are more studies examining repair in L2 classroom (eg, Papaefthymiou-Lytra 1989, Zahn 1984) and it is not possible to examine them all, though some general conclusion can be drawn. On the whole, in the classroom self-initiated repair in students' utterances occurs more frequently in the form of appealing for assistance. Self-initiated repair in teachers' utterances occurs in the form of reformulation to provide a structure which is familiar to the students or in the use of a new structure for deliberate pedagogical purposes. Cluing and prompting are common devices used by the teacher for other-initiation. Other-initiated self-repair is a predominant feature among the four trajectories, and other-repair may occur in particular environments.

As we have noted, that there are different criteria used in identifying the four trajectories (Kasper does not consider false starts or changes of structure as trouble sources). Thus the findings relating to the same speech exchange system from different studies must be interpreted cautiously, and comparisons drawn in these studies between general conversation and classroom interaction have to be considered carefully (eg, van Lier 1982, Reynolds 1990). It is better to compare the difference between these two

activities performed by the same participants and using the same criteria to identify the problem and repair process.

Who initiates repair and who does the repair are the main focuses in previous studies in this subject. The difficulty with this analysis, as I have indicated, is that sequential analysis in these fairly broad terms does not explain the different functions the initiation and repair play in terms of interaction. The following examples illustrate this clearly:

Ex 2.16 (van Lier 1982: 431)

1	T:	uhuh so how does he do his job?
2	L:	he's good=
3	L:	=he's good
*4	T:	yes he does his job...
5	L3:	very good I=
*6	T:	=he does his job
7	L:	((unint))
*8	T:	he does his job...
9	L:	((unint))
10	T:	yes he does his job <u>well</u>

Ex 2.17 (Papaefthymiou-Lytra 1984: 7)

1	T:	When were you born, John,
2	John:	In Greece.
*3	T:	No, when, not where.
4	John:	Nineteen seventy six.

Ex 2.18 (Papefthymiou-Lytra 1984: 7)

1	T:	What was on television? Tell me the programmes
2		on T.V. last week. No no, don't look what was on
3		television? Anything? Any programme? Right ,
4		Apostolos.
5	A:	The twelve//
*6	T:	Not the time, just the programme. what was the
7		programme?

Ex 2.19 (SJS 1977: 368)

1 A: Why did I turn out this way.
2 B: You mean homosexual?
3 A: Yes.

Ex 2.20 (SJS 1977: 369)

1 B: How long y'gonna be here?
2 A: Uh-not too long. Uh just till uh Monday.
*3 B: Till- oh yih mean like a week f'm tomorrow.
4 A: Yah.

Ex 2.21 (Varonis and Gass 1985: 77)

1 ULJ: Are you a student in your country?
*2 NOS: In my class?
3 ULJ: In your country.

In the above examples turns with * are all categorised as other-initiation in the analyses so far discussed. A cursory examination will reveal that their functions are different in terms of their purpose. In examples 2.16, 2.17, and 2.18 the initiator knows what should be there. The reason for the initiation is to provide an opportunity for the trouble producers to repair their own speech. In examples 2.19, 2.20, and 2.21 the initiators have a problem in understanding the previous utterances themselves. They need explanation or clarification of the problems they have. In the light of this difference it seems worth drawing a distinction between problems which the speaker has (2.15, 2.16 and 2.17) and those which relate to the hearer's understanding (2.18, 2.18 and 2.19). The repair trajectory is not affected and the trouble source is still located in the first turn, so the distinction between repair initiation and repair completion holds good, but a further distinction along speaker/hearer lines offers the possibility of a more subtle analysis of the repair process.

There are also some technical problems concerned with the analysis of repair in CR by using SJS's model. Firstly, in CR silence after the teacher's

question is quite common. How is a silence of this kind analysed by using four trajectory model? Secondly, how is the teacher's repeating or rephrasing the question to be treated? Is it as self-repair or as repair initiation? The present study will address these questions.

The above two sections examined repair from linguistic and sociolinguistic perspectives. Another dimension of repair work that has been examined is that of organizational construction. It is necessary to examine this briefly.

2. 3. 3. The analysis of repair in organizational sequence

Researchers who are interested in the construction of the repair process utilise the turn-taking mechanism as a basis for the analysis of repair sequences. The initiation and repair are located according to the turn sequences in relation to the trouble source. Schegloff, Jefferson and Sacks (1977) identify three positions where self-initiated repair takes place. They are: within the same turn; in that turn's transition place; and in the third turn to the trouble source turn. With the other-initiated repair one main position is found, ie, the turn just subsequent to the trouble source. van Lier identifies six places, shown in the following table:

Table 2.2 Repair trajectory (1988: 194)

Trouble source	Initiation *self*	Initiation *other*	Repair *self*	Repair *other*	Trajectory
1			1		T.1: same-turn self-repair
1			TS		T.2: transition-space self-repair
1			3		T.3: third-turn self-repair
1		a) 1 b) 2	1 3		T.4 other-initiation /self-repair
1				a)1 b) 2	T.5: other-repair
1	1			2	T.6: self-initiation /other-repair

Note: Numbers and letters (TS=transition space) in the columns refer to the turn in which the repair part occurs.

It is also found that the repair trajectory is not always simply organized as one initiation and repair or repair without initiation; recursive and embedded features also exist in the repair sequence.

The following pattern is presented from the analysis of an example in Schegloff, Jefferson and Sacks.

First turn:	Trouble source
Second turn:	Other-initiation
Third turn:	Re-affirmation (failed correction?)= New trouble source
Fourth turn:	Other-initiation
Fifth turn:	Self-correction
Sixth turn:	Comment, acceptance

It is reported in Reynolds's study (1990) that correction can be handled quickly, especially with a problem in pronunciation. The problem with "substantive" repair is that it is is likely to involve more turns to finish the business, so recursion is likely to occur. Reynolds suggests that recursive features are "pre-competent interaction genres". This indicates that recursive repair patterns are more common in classroom discourse than in general conversation.

Another feature of repair which Jefferson (1987) examines is embedding, where repair performs other functions besides correction. She has found within the interactional correcting business there are other "attendant activities" such as instructing, complaining, admitting, forgiving and so on. He calls these features "accounting". For example:

Ex 2. 22 (Jefferson 1987: 87)

1	Ken:	And they told me how I could stick a th-uh:: Thunderbird
2		motor? (0.5) in my jeep? And I bought a fifty five
3		[Thunderbird motor.
4	Roger:	[Not motor, engine.
5	Roger:	You speak of [electric motor and a gasoline engine,
6	Ken:	[Okay
7	Ken:	Engine. [Okay-
8	Al:	[Interna combus:tion
9	Ken:	Alright, so [look it
10	( ):	[mhhhh
11	Ken:	I moved this thing in the Jeep, yesterday...

In this example in the second turn Roger is correcting "Thunderbird motor" by "engine", and at the same time he plays an instructing role by saying "you speak of electric motor and a gasoline engine". Reynolds (1990) also notes that there are embedded features in problems and he refers to a situation where there is more than one type of problem in an utterance. The following example illustrates this feature:

Ex 2.23 (Reynolds 1990: 92)

1	SS:	X X (the same word repeated in Arabic)
2	F:	maybe=
3	T:	=what did he say?
4		(2.4)
5	S:	only to repeat that (word/once)
6	S:	X
7	T:	in English please
8	S:	no X.....X=
9	T:	=if it's nec- if it's necessary at all
10	S:	not necessary (sir)

Reynolds argues that here there is both a procedure problem (code-switching) and a communicative problem.

In the above three sections the approaches used to study repair have been examined in terms of linguistic, sociolinguistic and organizational approaches. At the same time studies in different settings on repair in terms of preference for certain trajectories have been touched upon. The basic questions of what can be repaired and what gets repair are those least investigated. However, they are worthwhile considering.

2. 4 Trouble source and repair

Who does repair and how the repair is undertaken have provided us with some insights into repair work in spoken discourse. An analysis of what really gets repaired may throw further light on this issue; however, this has been neglected in research on repair. van Lier has proposed a framework for the analysis of different types of trouble sources in terms of language functions. Three dimensions were categorised, as follows:

1. medium-oriented: a focus on the forms and/or functions of the target language;
2. message-oriented: a focus on the transmission of thoughts, information, feelings, etc;
3. activity-oriented: a focus on the organization and structure of the classroom environment, rules for the conduct of activities, etc.

Such an investigation would seem to be important because of the close relationship which is likely to exist between trouble source and repair: without establishing the nature of the problem it is not possible to analyse satisfactorily the way in which interactants seek to solve it. Different problems are likely to be solved in different ways.

2. 4. 1 What can be repaired?

As Schegloff, Jefferson and Sacks conclude:

> "Nothing is, in principle excludable from the class repairable." (1977: 363)

A repairable may not be enacted, that is, it may exist only in the mind of the communicator and it may get "repaired" prior to the vocal utterance. Therefore, for methodological purposes, what is repairable can be identified only in terms of the reaction of participants. Repair operates on a trouble source. Faerch and Kasper (1982) define a trouble source as follows:

> "The trouble source is an utterance or a part thereof which is experienced as problematic by at least one of the participants: the speaker might feel there to be a mismatch between what he said and what he intended to say, and the hearer might not be able to assign meaning to (a part of) the speaker's utterance, or he might be in doubt about the meaning he assigned to it. The metalingual and metacommunicative activity addressed to removing the trouble source is referred to as repair work. (1982: 79)

The repairables can be in a statement, in a question or a response etc. In their description, Faerch and Kasper consider trouble sources from both speaker's and hearer's point of view. These repairables are regarded as problems by either a speaker or a hearer. However, the authors restrict repair to replacement of the item which contains the trouble source. It is also noted that word searching or syntactic searching are ways to indicate there are problems, a line which has been embraced in some other studies. In their study they treat word searching as a communication strategy rather than repair, but the latter seems to be treated rather narrowly and there seems no

reason for not accepting Chaudron's definition of identification of error types[2]. This has therefore been adopted for the purpose of this study.

Having established what can, in principle, be repaired, the next step is to decide what actually does get repaired. There are few studies which have focused their analysis on this phenomenon, although a number of general statements have been made. For example, Schegloff and van Lier both claim that the repair operates on the problems of speaking, hearing, and understanding. The only full length study which analyses repairables is by Reynolds (1990). He divides language classroom problems into three categories: procedural, substantive and communicative, categories similar to the three provided by van Lier (1982). By procedural repair Reynolds refers to the repair on out-of-turn-talking, topic relevance, task trouble and code trouble (different language: L1 or L2), substantive repair addresses problems where there are no answers, inadequate answers and wrong answers; and communicative repair consists of a response to metalinguistic and metacommunicative problems. By metalinguistic problems he means trouble sources located in the medium itself (language problems focusing on pronunciation, syntax and lexis, and metadiscoursal problems involving the checking and clarification of meaning), and metacommunicative repair refers to the control and monitoring of topics.

These categorisations are based on the functions of language (Ellis 1984). At first sight his analysis looks convincing, but in fact things are not as simple as Reynolds' categories would suggest. Firstly, as he himself noted, that there are overlappings (Reynolds 1990: 119) between different categories and in addition the language used may perform a number of functions (Reynolds 1990: 124-125 for examples), so this categorisation should be treated with caution. Secondly, the author never makes entirely clear what he means by topic relevance and topic control and monitoring. Do they mean the same thing or do they mean something different and how are they to be

distinguished? Thirdly, Reynolds puts "no answer" or "inadequate answer" under the category of substantive repairs, but it is difficult to say that something can be a content problem if there is no answer. What "inadequate answer" refers to is also far from clear. In what way is it inadequate? Is it a problem with the way speakers express themselves or does it mean that they do not understand the question or content? Fourthly, it could be argued that metadiscoursal problems, which he defined as checking and the clarification of meaning, could be considered as content problems. Finally, assuming these three categories have been clearly defined, it is clearly seen that under each of three categories there can be problem with production and understanding, and the ways used to solve these problems are different, as this study will show. A refined way of identifying problems occurring in the interaction is needed.

2.5 The Present Study

The aim of this study, as mentioned in Chapter 1, is to examine repair from the source of the problems to the repairs and to examine the techniques used in three different types of interaction. What trouble source refers to in this study is all occurrences of the difficulties in terms of production and understanding the talk. A detailed description of trouble source treated in this study will be presented in Chapter 4.

As has been mentioned before, repair is used as a generic term to include all those problems occurring in the interaction, and correction is treated as one type of repair, one which simply involves replacement of an error.

The analysis in this study focuses not only on the initiation type or repair type, but also on the problem type, which is what distinguishes it from earlier studies. Under each category of trouble source, initiation and repair, a

detailed examination will be undertaken to see whether there is any relationship between problem type and initiation or repair strategies, in the other words, whether certain types of problem lead to certain types to repair. It is hoped that findings from this study will allow the repair process to be better understood, and it is also hoped that a comparison of three different types of interaction will reveal differences between them in terms of the repair process.

Previous studies (van Lier 1982, Kasper 1985, Reynolds 1990) have already shown that certain types of repair are related to certain types of interaction structure. It is therefore necessary to discuss work which is related to the three different interactions on which this study is based: conversation, classroom interaction, and group work.

2. 5. 1. Overview of research on conversation (CS), teacher-fronted classroom interaction (CR), and group work (GW)

Conversation, teacher-fronted classroom interaction and group work are three varieties of interaction which have been chosen for the purpose of comparison in this study. The distinction among them as three varieties of interaction is clearly apparent from the status of participants, their relationship, the purpose of the interaction, the interaction structure, and aspects such as the formality and plannedness. The general structure of the three types of interaction will be discussed in the following sections.

2.5.1.1 Overview of research on conversation

Providing an adequate definition of conversation is far more difficult than it seems. A glance at the literature of conversation (Gumperz 1982, Reichman 1985, Wilson 1990, Levinson 1983) shows that there have been few

definitions offered and considerable confusion concerning the term "conversation". As McGregor (1984: 72) notes:

> "Definitions of 'conversation' are rare, and general remarks about it point uncomfortably to the dimly recognised complexities of multi-facted behaviour occur in face-to-face interaction."

However, in spite of the absence of a generally acknowledged definition of conversation, certain criteria might be used to characterise conversation. Donaldson (1979: 291), for example, proposes 10 criteria for conversational interaction. For the purpose of this study, the following definition will be taken as reasonably representative of these: conversation is one type of interaction, consisting of a number of interactants — at least two — who have equal rights to the floor and to length of turns, and who freely exchange turns of talk spontaneously and in a cooperative way. It is therefore unplanned and free of either specific control or the pre-allocation of turns.

2.5.1.2 Overview of research on teacher-fronted classroom interaction

The following divisions will help to clarify the context in which this research is to be studied:

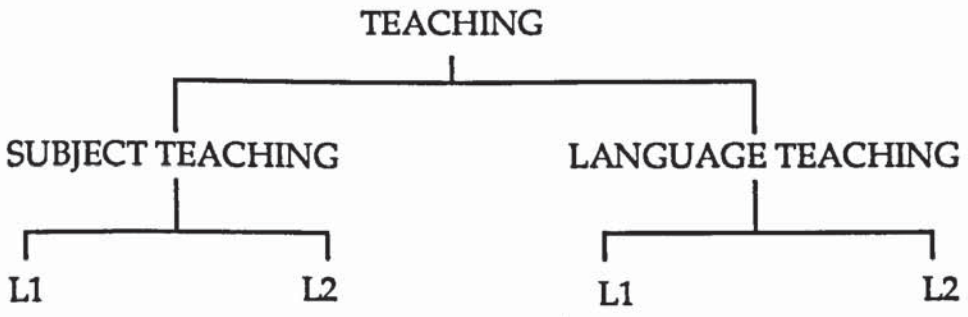

Diagram 2.2: Identification of classroom interaction

The focus in this study will be on L2 language classroom interaction and its findings may not be relevant to classroom teaching in other subject areas (see McHoul 1990 for the difference between repair in L1 and L2 classrooms).

Teacher-fronted classroom interaction is one type of teaching in a classroom and it consists of a teacher usually standing at the front of the classroom, facing students who are sitting there. The teacher controls what is going on in the interaction and the direction of interaction; the students respond to the requirements set up by the teacher.

A number of researches have been undertaken to investigate language classrooms. Some researchers have developed a comprehensive system that claims to encompass all classroom talk (Sinclair and Coulthard 1975, Mehan 1979). Other researchers have concentrated on one aspect of an event without attempting to categorize each utterance (Chaudron 1977, Seliger 1977, Spada 1987, Sato 1982). Still others focus, as Cazden (1987) puts it, "on particular slot in an event structure" such as question types in the classroom, feedback types (seminal work by Barnes 1969, Bialystok et al 1978, Long and Sato 1983, Early 1985). The present study on repair of L2 language falls into the last of the categories above. Broadly speaking, the focus is on a particular slot in an event structure, although the event structure itself is examined where necessary.

The focus of the research on CR is mainly on three areas: teacher's talk (how much the teacher talks in the interaction, the distribution of different types of talk), learners' behaviour (learner language production and situational factors, input generation, interaction between learners, and learner strategies) and interaction between teacher and learners (see Chaudron for detailed description of summary of studies).

2.5.1.3 Overview of research on group work

The reason group work has been chosen as one of the activities in this study is explained in Chapter 1. Broadly speaking, group work can refer to any type of activity which involves a group of people. In this study, group work is treated as an activity in the language classroom where a *group* of students undertake tasks without the teacher's help and control. Within a certain period of time they are expected to meet a certain objective related to the task.

Researchers who are interested in group work consider communicative language teaching theory and comprehensible input to language acquisition as a suitable focus. It is argued that the learners in group work are involved in real negotiation of meaning with one another and so create the comprehensible input, which, it has been claimed (Krashen 1981, 1982), is helpful to second language acquisition.

The researchers on GW mainly focus on comparisons between group work and teacher-fronted classroom interaction and comparisons between different types of GW. The former comparison concerns the difference in terms of the linguistic and functional use of the language (Long and Porter 1985, Bruton and Samuda 1980), and communicative use of language (Pica and Doughty 1985, Brown 1991). The latter comparison is interested in which type of GW produces optimum conditions for language acquisition. Studies comparing group work and other interactions such as conversation have not been undertaken and research on repair in group work is absent. Studies comparing GW with CR have found that GW increases the amount and variety of language practice and also motivates learners. The comparison between different types of GW provides more interesting results. Long and Porter (1983) report that a two-way exchange of information is more useful than a one-way information exchange; Doughty and Pica (1986) conclude that information exchange tasks are more helpful than problem-solving tasks;

Pica (1987) argues that information exchange tasks provide more opportunities for students to be involved in negotiation than decision-making tasks.

Although these findings about different types of GW are informative, it is difficult to draw any conclusions on the effectiveness of GW, due to different categories of task used in the analysis and a wide range of terms used for the purpose of description. More recently, Long (1990) has divided tasks into two types: pedagogical and target. This distinction may assist research on GW to clear the ground and provide a basis for language teaching. However, there are few studies which actually examine the structure of group interaction itself. It is hoped that this study will be able to make a small contribution to our understanding of this.

2.6 Conclusion

The focus in this chapter has been on review of repair and it has been suggested that previous studies, based on four trajectories, are too broad and there is no direct research which seeks to identify the nature of the problem and explain why there are different patterns in self- and other-initiation and repair or why different patterns occur in different activities. This research sets out to make up for this deficiency by investigating the phenomenon of repair in three types of interactions performed by participants falling into the same broad group. It seeks to do this by breaking down the process of repair to see how it is operated and how repair is undertaken, then using the resulting categorization to establish how the three types of interactions differ.

Notes:

1. Phases: it refers to the focus of classroom teaching
2. Chaudron's criteria for identification of error type: one is linguistically acceptable, the other is being reacted to negatively or with an indication that improvement of the response was expected.

CHAPTER THREE
METHODOLOGY

3. 1 Introduction

The aim of this chapter is to describe the methodology for obtaining the three sets of data and for analysing them in this study. As a number of researchers have pointed out, the problems concerning research on spoken discourse are very complex. Thus, before explaining the ways which are used for obtaining the data for this study, including the description of participants, transcription of the data and the layout of analysis in this study, the problems of spoken discourse research and its complex methodology will be discussed briefly.

3. 2 Problems concerning methodology in research on spoken discourse

Problems concerning the methodology of spoken discourse research are very complex and delicate and are associated with both practical and theoretical aspects. They arise at different stages in the research process, starting with problems of how to choose subjects, how to obtain access to them, what method to use in collecting data, what conventions to adapt for transcription, how to analyse the data and to how to present the results of the study. Here these issues will be discussed briefly and individually, with no intention of providing an ideal solution.

The problems concerned with choosing subjects for a study in spoken discourse lie in which group is to be chosen for a study (to study the whole population is impossible) how representative of the subjects the data should be, and how, where and when to choose them. No matter which group is

chosen and how wide the range of subjects, it is impossible to obtain an absolute randomly chosen representative group.

After a researcher has decided what kinds of subjects are wanted, consideration must be given of how to obtain them. As van Lier (1982:136) argues:

> "The issue of access is closely related to sampling and even sampling is to some extent dependent upon access."
>
> "Although they do not often surface in reports and description of research, problems of access are basic to any research project and at times many have more far-reaching consequences that any other single factor of research methodology."

Apart from ingenuity, economic and interpersonal convenience are the most obvious factors that decide this issue. Researchers who attempt to establish the general characteristics of spoken discourse must concern themselves with how to collect the data.

A method developed by Garfinkel (1967) laid the theoretical foundation for (ethnomethodological) conversational analysis. He demonstrated that there exists in every field of research an inevitable gap between the raw data as it occurs and the protocols in which the data are recorded as input to the theoretical pursuit. Labov (1972: 112) argues in a similar way as follows:

> "To obtain the data most important for linguistic theory, we have to observe how people speak when they are not being observed."

This "observer's paradox" leads him to draw the following conclusion:

> "No matter how insightful or productive these studies may be, they do not bring us much closer to the fundamental data of language in use than we were before."

He suggests that to obtain "natural data", it is necessary to minimise outside obtrusion and to find an occasion when the data collected has every chance to be as natural as possible. The detailed description of collection of data for this study is described in the following section.

How much data a study needs is another question and one which does not have specifically right or wrong answers. Stubbs (1983) states that it depends on the research goal. It is generally admitted that quantitative research needs more data, and the more, the better. In qualitative research there are no absolute rules. Previous research ranges from a few seconds (Birdwhistell 1961) to several hours. Stubbs considers that for conversation analysis (CA) a small amount of data yields rich results. Sacks argues that "the detailed study of small phenomena may give an enormous understanding of the way humans do things and the kinds of objects they use to construct and order their affairs" (quoted in Jefferson 1985: 25). van Lier (1982, 1988) explains that in the treatment of natural data the quantity of the data itself is not important. The importance lies in the composition of the data. Here the phrase "how much data" can be understood in two ways; not only how much data the study contains, but also how many participants the data involve. A detailed description of the subjects for this study is presented in following section.

Another question with regard to research in spoken discourse is transcription. Transcription is where we try to get our hands on 'actual occurrence' in order to study social order in fine detail. Transcription is not only a time-consuming process, but also affects the process of analysis: "[It] embodies an initial classification and theorising about the raw material"

(Abercrombie 1954). Ochs (1979: 44) points out that "it is a selective process reflecting theoretical goals and definitions". Jefferson (1985:25) argues "that the issue is not transcription per se, but what it is we might want to transcribe, that is, attend to." Thus the product of the transcription is no final truth. Richards (1989: A3-15) summarises the situation as follows:

> "The point which needs emphasising is that transcription is not objective or fixed; it belongs properly at the theoretical level and is never really complete. No two people will come up with the same transcription and, on an individual level, each return to a transcription will usually produce further refinement. More importantly than this, though, the nature of the transcription should reflect the decision made by the researcher about the data".

This is a particularly important issue. As a number of writers have pointed out, the idea of a "correct" transcription is an illusion: the same data will be transcribed in different ways by different people, and even by the same person at different times. It not only poses practical problems such as how much time is needed, but also theoretical problems, as Stubbs (1983: 228) says:

> "auditory hallucinations are real problems, both practically and theoretically."
>
> "there is no method of transcription which is appropriate for all studies of discourse."
>
> (Stubbs 1983:229)

A system of transcription is usually dictated by the purpose of the research at hand. The interests and assumptions of the researcher influence the product of the transcription.

Thus various transcription conventions have been developed in Conversation Analysis (CA) research (e.g Levinson 1983, van Lier 1988, Schegloff 1977). Which convention to use depends also on the aim of the

research as does the degree of accuracy which is appropriate. For discourse analysis van Lier (1988: 242) makes the following suggestions:

> "A working transcript should read like a script for a play and capture what was said and done during the interaction."

The best solution is to adopt a convention appropriate for the specific research, use it consistently, or as consistently as possible, and state clearly what choices one is making.

Finally, as Erickson (1986) points out, the corpus of materials collected in the field (including field notes, tapes and even transcripts) is not in itself data: it merely constitutes the resources for data. Data must be constructed through some formal means of analysis of the type to which Griffin (1985) refers. Griffin provides an excellent example of the ways in which information can be organised and filed. What is particularly interesting about her description is the way in which different factors interact: reactions to the research itself are taken into account and, as analysis takes place, this generates interpretative ideas which influence work in the field.

As for analysing data, a variety of techniques are available. There are different dimensions of these approaches: macro- and micro-analysis; classification and process; and a quantitative and qualitative orientations.

Macro-analysis refers to analysis concentrating on the general structures of the interaction, such as how the topic is developed, and what the structure of the conversation is in terms of the exchange system. Micro-analysis gives attention to the underlying structures, such as how the problem of production manifests itself in the interaction.

Classification is defined as a "naming, labelling and coding" activity. It describes the structure of interaction. It focuses on employing a finite number of categories to describe action. The process-oriented approach involves

understanding dynamism, describing processes and interactional features. It takes the view that the analysis is determined by the data. A analysis is based on the flow of interaction itself.

A qualitative approach concentrates on the description of phenomena that occur naturally, without artificially contrived treatment. It is heuristic and not deductive. The ultimate goal of qualitative research is to discover phenomena such as patterns existing in the certain kind of natural interaction, the patterns or models emerging from the process of data analysis. It is therefore hypothesis-generating research. A quantitative approach is concerned with the frequency of certain features in a specific interaction, or in the correlation between the features of the interaction and certain factors affecting the features. It looks upon the data as a static text, is a deductive process, and most often involves hypothesis-testing.

Each of the dimensions of these three approaches has its advantages and disadvantages. A detailed discussion can be found in van Lier (1982: 58).

Here it should be noted that these three dimensions are not contradictory to each other; they represent different parameters. Classification and process-oriented approaches are related to the research aims; macro- and micro-analysis refers to the focus of the research; and qualitative and quantitative methods are tools which are used in the analysis process. As Allwright (1983) has suggested, a combination of these different approaches is possible in order to investigate more thoroughly. The detailed analysis procedure of this study is presented in the following section.

3. 3 Description of the present study

3. 3. 1. The participants in this study

Three types of interaction were used in this study. The participants in each of interactions will be described separately in the following sections.

3.3.1.1. The participants in teacher-fronted classroom interaction

A total of 28 students and two teachers at the pre-sessional course in Aston University in Birmingham took part in the recording for teacher-fronted classroom interaction.

There are two reasons why this group of people was chosen for the present study. One is practical: the author herself happens to be a teacher of English who teaches the groups of students who are preparing in China to study abroad. It would be worthwhile for her to do some research on a similar group to acquire a better understanding of them. The other reason is to do with access. It is more convenient and economical to conduct research where the research students are, and most studies are done in this way (Long 1980, Schwartz 1980, Zora 1990).

These 28 students were divided into two classes, designated Class One and Class Two. A detailed description is provided in the following table.

Table 3.1 Description of participants in two classes

Name	Nationality	Major	Sex	Level
M.A	Bangladeshi	Operational Research	F	5.0
M. M. A	Bangladeshi	Animal Production	M	4.5
A.Y.A	Syrian	Mathematics	F	---
A.L.A	Mexican	Animal Production	M	5.0
B.S	Indonesian	Development Adminstration	M	4.5
M.B	Nepalese	Business Adminstration	M	5.0
I.B	Indonesian	Development Adminstration	F	5.0
M.A.D	Sudanese	Development Adminstration	M	4.5
M.M.E	Sudanese	Development Adminstration	F	5.5
C.P.F	Ecuadorean	Development Adminstration	M	5.0
P.S.H	Korean	Economics	M	5.5
M.A.H.	Bangladeshi	Rehabilitation of Hearing Visually Impaired	F	5.0
L.J	Mozambiquean	Economics	F	4.5
G.L.C.K	Brazilian	Maintenance Planning	F	6.0
H.S.K	Korean	Economics	M	5.0
M.M	Colombian	TESOL	F	5.5

Name	Nationality	Major	Sex	Level
Y.M.K.M	Pakistani	Accounting	M	4.5
S.N	Bangladishi	Rehabilitation of Physically Handicapped	F	4.5
L.B.N	Sudanese	Acounting	F	4.5
P.J	Indonesian	Develpoment Finance	F	5.0
P.K	Thai	Social Study	M	5.0
T.M	Japanese	Management	F	5.5
M.A.F.R	Brazilian	Social Studies	M	5.5
W.S	Indonesian	Development Adminstration	F	5.0
M.B.S	Pakistani	Educational Adminstration	F	4.5
W	Indonesian	Development and Finance	M	4.5
Z.W	Chinese	Management	M	5.5
Y.Q.D	Chinese	Business	F	6.0

All of the students came for post-graduate study in the U.K. They specialise in social science majors. English is a foreign language for them. Their English level ranged from ELTS 4.5 to 6 and they are aged between 22 and 30. As we can see from this description of the students, they represent a wide range of different nationalities, are engaged in different subjects of study, are of similar age and are at a similar level of English. They should therefore be considered reasonably representive.

Two of the native speaker teachers in these classes took part in the recording. One shall be called A, and has been teaching English as a foreign language to overseas students of different levels for several years. She studied for her MSc in ESP at Aston University in the academic year 1990-1991. The other shall be called J, and has been teaching English to both the overseas students and home students for several years. She was awarded the MSc degree in ESP at Aston University at the time when this recording was made. Both teachers were teaching reading, speaking and grammar.

This course lasted for 11 weeks. The recording sessions took place in the classroom over 6 weeks, starting from the fourth week.

The permission of all parties was obtained for recording session. It was agreed that the teachers would not change their regular plan because of the recording. Full freedom was given to the teacher, without the presence of the researcher during the taping so that the data could be collected as unobtrusively and naturally as possible. All the classes lasted for 50 minutes, and pair work or individual instruction was conducted in between. The transcription of each class for teacher-fronted classroom interaction occupies a period of 20-28 minutes.

3.3.1.2 The participants in conversation

The participants in the conversations are some of the students from these two classes. All of them were volunteers. The conversations took place in the afternoon, when the students had no classes. It was an extra activity for them. The groups were formed freely by themselves.

The topic for the conversation is "women", without any further restrictions on the subject. As one of the participants said in the conversation: "About women, anything, education, position in the society, their likes and dislikes." The reason for providing this topic was that without establishing a topic for conversations at the beginning, the conversation might turn out to be simply talking about choosing the topic for conversation. As Sacks (1968) stressed, talking topically and talking about some topic chosen by another speaker is not the same thing at all (quoted in Coulthard 1977: 77). It is considered that the topic for the conversation is neutral.

3.3.1.3 The participants in group work

The participants for group work consist of three groups: the first group were the students from these two classes, labelled as GW1. The second group were students in Stafford College, where two instances of group work were recorded, labelled as GW2 and GW3. The third group consisted of the students in Bournville College, where three instances of group work were recorded, labelled as GW4, GW5 and GW6. These five instances of group work were recorded by one of the teachers in these two classes, who was also a teacher there. The participants in these groups were also overseas students. They had come to study for the Cambridge First Certificate Test. For a detailed description of these subjects see Appendix One. Their English level is approximately the same as that of the students in the other two classes. It

would been ideal to have used the same group as for the other interactions, but originally seven instances of group work were recorded in the same classroom, and the mixed sound of each group made the transcription impossible. With effort, one group of the seven was transcribed for this study. This is Group Work 1. The fact that the results for this group are consistent with those for other groups suggests that any distortions arising from the introduction of different students are minimal. In addition, the results of those studies referred to in Chapter 2 suggest that the use of different student group has no bearing on characteristic of NS/NNS repair patterns.

3. 3. 2 Methods of collecting the data

Audio recording was mainly used for this study. Video recording is used only for identification and reference. In teacher-fronted classroom interaction, both audio and video recording are used, because there are more participants in the classroom. As for conversation and group work, audio-tapes only were used. It is found to be unnecessary to use video for conversation and group work. The reasons are follows:

1) this study is interested in the repair process, analysing verbal features and ignoring non-verbal features;
2) it is not as difficult as in teacher-fronted classroom interaction to identify speakers;
3) such equipment may be more obtrusive for a small number of students than for classroom interaction, i.e., students pay more attention to the equipment when a few participants are present.

As far as positioning is concerned, the audio tape recorders were placed at both ends of the semi-circle in the classroom and at the back of the

classroom in order to make the equipment as unobtrusive as possible. As far as the positioning of the camera is concerned, one has to choose either to place it in a fixed place or to move it around, capturing one scene after another. Both methods have their disadvantages: a roving camera is more obtrusive than a fixed one, however, one can select what one wants; and focus closely on what is happening at a particular moment. However, the selected data is more subjective, and considerable ability is required to operate the camera. A fixed camera in one corner of the classroom cannot necessarily capture all detail from the front of the class but it does not distract people's attention.

3. 3. 3 Transcription

The recordings were transcribed by the analyst and finally checked by native speakers of English, one of whom was the supervisor of the study. Finally all the transcriptions were checked by the teachers who taught in these two classes. However, it should be made clear that accuracy is unlikely to be absolute, as Labov and Fanshel (1977: 355) have admitted:

> "An important part of any micro-analysis is the preparation of an accurate version of the text — that is, of the words and other segmental units. It has been noted before that this is an open-ended process, and after 9 years we find that we still are making corrections that are by no means trivial on repeated listening."

The transcription conventions proposed by Jefferson (1978) were adapted, with a few additions and simplifications that are convenient for these three types of interaction.

Here the system for overlapping utterances uses a single square bracket for each of two utterances instead of one put in the middle of two lines,

because the word processor cannot handle this easily. It can be illustrated in the following example:

Ex 3.1 CS1=37

1 S2: Really? [in your country?

2 S1: [Yes still the same,

There are different ways of indicating pauses. Some transcribe by using tenths of a second and inserting this within parentheses. Levinson (1983) uses (.) for a "micro-pause potentially significant but very short pause, comparable perhaps to an average syllable duration or somewhere below 0.2 seconds" duration. Brown and Yule (1983) use a dash [-] for "short pauses", a plus sign [+] for "longer pauses" and two plus signs [++] for "extended pauses". van Lier (1988) uses 'periods', three of which are equivalent to one second [...]. In this study van Lier's proposal is adapted with a change of length to the period represented. Thus one period is equivalent to a quarter of a second, two to half a second and three to three quarters of a second. One second or more is indicated with a number. The reason that tenths of a second are not indicated, is because the duration of the pause to this degree of delicacy is not considered to be an important feature. The significance of the pause in this data is to identify where it appears and whether it is with filler or not. The duration is only considered when it is longer than a quarter of second.

Equal signs are used to indicate latched utterances:

Ex 3.2. GW4=116

1 S2: It's better to keep in your=

2 S3: =I was there yesterday,

Cut-offs were indicated with a hyphen.

Ex 3.3 CR3=81

1 T: Does po- poor hearing cause them to become popstar,

3. 3. 4 Analysis

The analysis of this study starts by using SJS's model to obtain the similarities and differences between these three types of interaction. While this process of analysis was under the way it was noticed that four trajectory model is powerful but too broad to fully explain the process of repair, as mentioned in Chapter 2. A related body of literature within the area of conversational analysis suggests that inclusion of content and communicative context into an analysis of repair would throw light on the nature of the repair process.

The analysis in this study focuses on two dimensions. The first starts with examining repair from both sequential organization and content and communicative context (which provide a fine-grained description of the repair process) in relation to trouble source, initiation and repair. This is considered as a qualitative analysis of the process of repair. It starts with basic features of repair and moves to the underlying functions of repair. A detailed description of the model for analysis is presented in the following chapter.

The second part of analysis applies the model developed from the qualitative examination to the three types of interaction to highlight the similarities and differences in terms of frequency. This is a quantitative analysis. Frequency, percentage and Chi-Sqare analysis have been used to test the significance of differences.

CHAPTER FOUR

The Description of a Framework

4. 1 Introduction

The aim of this chapter is to present the framework which has been developed from the analysis of the data in the present study. It starts with a brief discussion of the basis of the framework and the explanation of criteria used in distinguishing the trouble source types in terms of production and understanding. It then goes on to describe the features of each of these two categories, and finally, it examines these features in further detail, looking into features of the subcategories of production and understanding problems, the initiation of repair, and the ways used to accomplish repair.

4. 2 Discussion of the basis of the framework

As mentioned in Chapter 3 this analysis starts by using the model of repair trajectories proposed by Schegloff, Jefferson and Sacks (1977) as a way of considering the differences and similarities between the three interactions: conversation of L2 learners, teacher-fronted classroom interaction, and group work of L2 learners. While examining the data, the following features have been noticed:

1) The results drawn from the four trajectory analysis are very broad. They do not explain the complex process of the repair as it has been revealed in the present study.
2) Within the same trajectory the different functions it plays in the interaction could not be identified, (see Chapter 2: 70). For example an other-initiation can be used to:

a) indicate where the trouble source is;

b) indicate what the trouble source is;

c) show what type of repair is sought.

3) A sequential explanation for the preference of one type of repair trajectory over another in different forms of discourse proposed by SJS is an important contribution to understanding conversational processes as repair. However, the sequential explanation of repair is not the only reason that one type of repair trajectory is preferred over another. The preference for repair trajectory is also related to the content and social and communicative context; in other words, different ways used to repair are associated with the type of trouble source, the interlocutors, the purpose of interaction and the organization of the interaction.

Therefore, the four trajectory model as it stands cannot be used to explain the repair process fully.

As a result of a sense of dissatisfaction with the repair trajectory analysis, this study seeks to investigate repair from a different perspective, though the 'four trajectory' analysis is referred to as necessary.

4. 2. 1 Problems of production and problems of understanding

In real life communication there is a constant need for speakers both to self-monitor their own speech production and to monitor the reaction of their interlocutor. There is a need for listeners to ensure that their interpretation of the speaker's communicative intention in fact matches what the speaker wants to say. And occasionally there is a need for speakers and listeners to solve problems as they crop up when finding ways of conveying

communicative intentions or clarifying what turns out to be a misunderstanding or a lack of understanding. In the process of examination of the data in this study it has been noticed that certain types of repair need to be done in appropriate slots, in separate turns, while others are done within the turn in which the trouble occurs. The former generally deal with problems of hearing or understanding the talk, whereas the latter deal with problem of production, occurring immediately after the trouble spot, without waiting for the turn to end. Thus different ways used to solve the problem are closely related to the type of problems. The problems can be identified as the problems of production and of understanding. A detailed discussion of identification of the problem type will be presented in the following section; this section presents a basic description of the two categories. The following examples illustrate these two types of problem:

EX 4.1 CR3=117

—> 1 S3: The gases which are uh::
2 [..]
3 T: The gases from the asphalt you think?
4 S3: Yes, the gases from asphalt,
5 T: It might do it,

This example shows that S3 has difficulty in completing his utterance. He indicates his difficulty by stretching the sound of "uh". The teacher helps him by completing the utterance in a form of "try-marking"[1]. The completion is accepted in a form of repetition by the student.

EX 4.2 GW1=85

1 S1: Well, I think that Jenny Williams should take this [..]
2 because she is well-educated, [.] a:nd uh as she got an A
—> 3 level and she speaks French, sorry Spanish, [.] besides [..]
4 she is engaged to be married. [.] And this means that it's a
5 kind of responsibility that uh [.] can help her to get this [.]
6 job,

In this example S1 says "French", which is not right in the context. He repairs it immediately by replacing it with "Spanish" himself. This is a commonly-used method of repair in spoken discourse.

EX 4.3 GW1=106
1 S2: =She might be a [.] daughter of a Spanish woman, [..] but
—> 2 might not [.] uh speak French,
3 [1.0 secs]
4 T: [Spanish
5 S1: [Well,
6 S2: Sorry, [Spanish,
7 S?: [Spanish,

In this example S2 made a similar mistake to that of S1 in example 4.2. But it was repaired by the other participant, in this example in the next turn. This other-repair by the teacher is followed by acceptance of S2.

It is clearly seen that the problems in these three examples are problems with the speaker, or, rather more exactly, are problems in the process of production. The first example shows an inability of the speaker S3 to complete the contribution he seeks to make to on-going communication. In the second example the word "French" is not right in the context and is repaired immediately in the same turn. In the third example the trouble source "French" is repaired in the next turn by the other participant.

Other examples in the data show that problems lie with hearers who do not understand (follow) on-going speech partially or fully. The following examples illustrate these features:

Ex 4.4 CR1=234
1 T: So what I want is all the ideas you have of what you want
2 to take,
3 S3: Everything for?
—> 4 T: Sorry?
5 S3: Everything for one year to live?
6 T: Yes, (???) O.K. Sorry to live one year on the island, yes,
7 what will you take?

Example 4.4 shows that the teacher does not catch what S3 says, this being indicated by "sorry" in rising tone, which is followed by a repetition of what has been said by the trouble producer.

Ex 4.5 CS1=270
1 S1: The culture, I see,
—> 2 S2: [Culture?
3 S4: [Culture?
4 S1: To say uh [...] for instance, uh, if, it seems it seems that
5 sometimes some families do not want uh [.] girls=
6 S2: =Girls=
7 S1: =Right then they may [.] uh make the girls disappea:r,
8 ((laughing))
9 S2: Yeah,

In example 4.5 (the students were talking about birth control) S2 and S4 understood the meaning of the word "culture" but they could not understand the relevance of "birth control" to "culture". They repeated the word with a rising tone to request clarification, which is followed by an explanation.

Ex 4.6 CS1=77
1 S1: Ye:s, that woman then have, uh uh uh uh what? er [.]
2 maidservant, (???)=
3 S2: =Servant?
4 S1: This is this is=
—> 5 S2: =Assistant=
6 S3: =Assistant=
7 S1: Yeah, this is common for [the couple
8 S2: [Uh: uh: where? in the in the
9 restaurant or: in the shop?=
10 S3: =Restaurant, hotel?
11 S1: If for instance the woman works somewhere=
12 S2: =Uh=
13 S1: =Then we need a: a servant to help at home=
14 S3: =At home, uh I see yeah yeah,
15 S1: At home,

This example shows that S2 and S4 understand that the word "maidservant" to mean a servant or an assistant. S1, who said "maidservant", did not repair it, instead he makes a comment on "maidservant". S2 requests

a confirmation by an understanding check[2] on where the "maidservant" works. Then S1 explains where a servant is needed. At this point S2 and S4 have cleared up the misunderstanding.

These three examples demonstrate that the problems the hearers have can be either partially or totally "not-understanding" what has been said, or even misunderstanding what has been said. There are examples in other studies:

Ex 4.7 (Zahn 1985: 57)

1	R:	Well, evidently your ah, the effort, the yield is worthwhile
2		from what the uh ((unintelligible)) er and the uh, who was
3		it that just came in and was talkin to you about uh
—> 4		something about,
—> 5	S:	Oh, Elliot.
6	R:	Elliot!

This example shows that R stops before completing the utterances, S provides the completion to the last problem and R accepts it by repetition.

Ex 4.8 (SJS 1977: 364)

1	N:	She was givin me a:ll the people that were go:ne this
—> 2		yea:r I mean this quarter y' //know
3	J:	Yeah

In this example N says "this year" and repairs it immediately by "this quarter y'" to make it more precise. N uses "I mean" here to make it more obvious as repair. This is a commonly-used device in conversational repair:

Ex 4.9 (SJS: 366)

1	Hannah:	And he's going to make his own painting.
2	Bea:	Mm hm,
—> 3	Hannah:	And- or I mean his own frames.

In example 4.9 Hannah says something in turn 1 and Bea gives a "back channel" to continue. Hannah takes over the turn and repairs her previous

utterance by replacing the word "painting" with "frame" to make it more specific.

These three examples from other studies demonstrate similar features to the examples in the present study, all of which are production problems. Further examples will illustrate what problems hearers have:

Ex 4.10 (Quoted in Gass and Varonis 1991: 125)

	1	NS:	When I get to Paris, I'm going to sleep for one whole
	2		day, I'm so tired.
—>	3	NNS:	What?
	4	NS:	I'm going to sleep one whole day,

In this example NNS does not hear clearly what NS has said, and initiates a repair by using question word "what". NS repeats his previous utterance. This is also a commonly-used way to solve the problem of non-understanding.

Ex 4.11 (SJS: 366)

	1	Bea:	Was last night the first time you met Missiz
	2		Kelly?
—>	3	Marge:	Met whom?
	4	Bea:	Missiz Kelly,
	5	Marge:	Yes,

Example 4.11 shows that Marge does not hear clearly the name of the person Bea mentioned in the previous utterances and she initiates repair by partial repetition plus WH question word "whom" in a question form. This is followed by repetition of the name mentioned in the previous utterances.

Ex 4.12. (SJS: 368)

	1	A:	Why did I turn out this way?
—>	2	B:	You mean homosexual?
	3	A:	Yes,

In this example the trouble source lies in "this way". B is not clear about what "this way" means. B initiates repair by an understanding check, which is followed by confirmation.

Ex 4.13. (van Lier 1988: 209)

1 T: what kind of nose? does he have?
2 L: long .. long nose
3 L1: long nose?
4 T: not a long nose
5 L9: big big nose?
6 L: thin?
7 T: no
8 LL: ((laughing))
—> 9 L: very tall?
10 L: ((unint))
—> 11 T: does she say he's tall? .....medium
12 LL: medium
13 L: medium tall
14 T: medium height ...
15 LL: ((unint))
16 L9: medium height nose
17 T: medium height ....
18 L: eh .. that was the nose
19 T: yes what about his nose
20 L: uhuh?
21 T: what sort of nose does he have?
22 LL: ((unint))
23 T: did anybody get any other things down

This example shows that there is misunderstanding between the teacher and learners about what "tall" refers to. When L says "very tall", it is intended to describe "nose" which is the topic discussed among them. The teacher understands it to be used to describe the man. So the teacher does not think "tall" is right because it was mentioned in the text that "he" is of medium height. The teacher initiates repair by redirecting to where the answer can be found, which ends with a pause and incomplete utterance used as an invitation for repair. LL think they were still talking about the nose. When the teacher corrects "medium tall" by "medium height" L9 completes the response by "medium height nose". The teacher does not think L's response

is right and he initiates repair by inviting a correction. L clarifies his understanding by asking "that was the nose" which can be interpreted as "is it the nose we are talking about?". The teacher then asks "what about his nose?". L shows he cannot see the relevance of his question by "uhuh". The teacher goes back to the original question. After LL's unintelligible sound the teacher shifts his focus to something else, which leaves the problem unsolved.

These three examples from Zahn, Schegloff, Jefferson and Sacks, and van Lier demonstrate what kind of understanding problems the hearers have. The difference between non-understanding, incomplete understanding and misunderstanding will be discussed later in this chapter.

The above examples from both the present study and other studies have shown that there are problems from two different sources: one is production and the other is understanding. The aim of the illustration in this section is to provide a basic description of each of the two. It is now necessary to distinguish the differences between problems of production and understanding and establish criteria which can be used to identify them.

4. 2. 2 A description of the framework

The aim of this section is to present an overall account of the descriptive framework developed from the analysis of this study and to explain the criteria for identifying problem, initiation and repair types. The basic categories in the framework is presented in the following diagram:

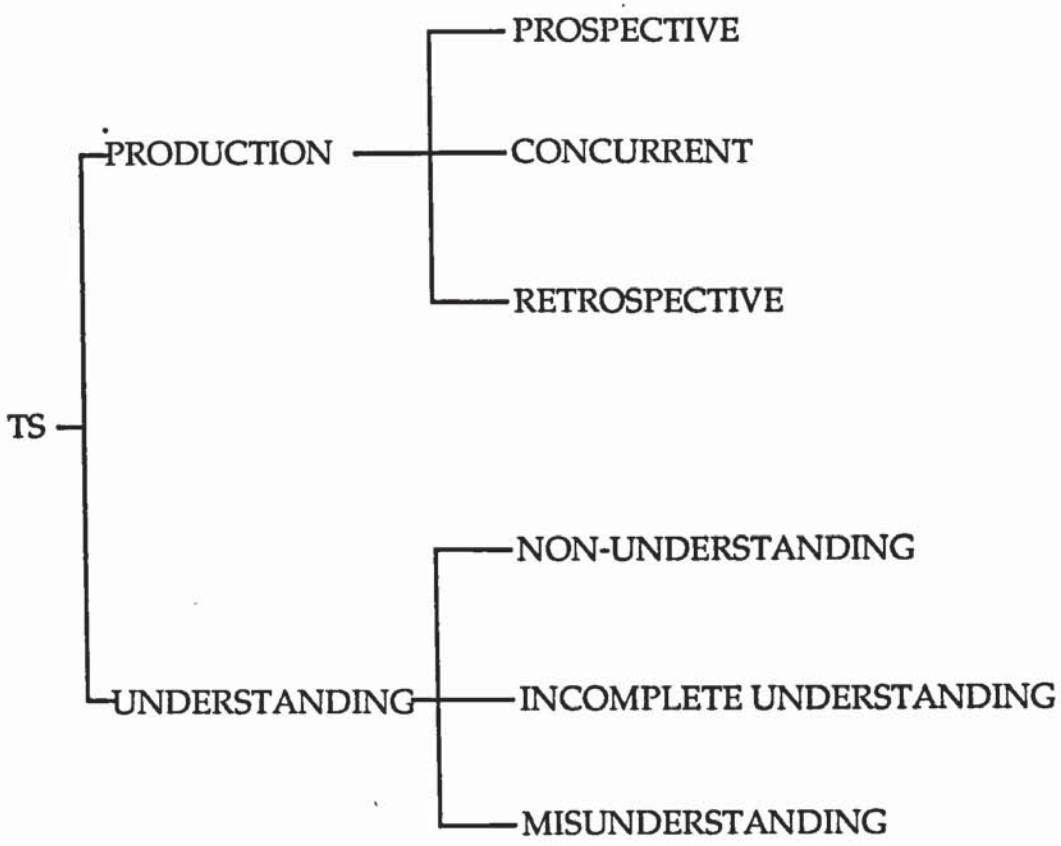

Diagram 4.1 Identification of trouble source and repair

Note: TS=trouble source.

The framework begins with the trouble source and then is divided into two types, production and understanding. The problems of production are subdivided into three: prospective, concurrent and retrospective. The distinction is based on where trouble source and repair occur. Understanding problems are subdivided into three: non-understanding, incomplete understanding and misunderstanding. The distinction is drawn according to the nature of understanding. The following sections will discuss each of them in detail and present criteria for identification.

The identification of trouble source has been discussed in Chapter 2. A trouble source is defined as repairable by SJS, who claim that nothing, in principle, can be excluded from the class 'repairable'. This claim is too broad.

In reality, the idea of "repairable" can be approached from two perspectives. One involves examining the trouble source in terms of psychological aspects: what problem participants think they have in the communication (Faerch and Kasper 1982), and which stage of speech production and understanding the problem appears in — planning, execution or interpreting (van Lier 1988:185; Bruton and Samuda, 1980). The other dimension involves examining the trouble source retrospectively, i.e. the location of potential interferences in on-going communication. In this study the latter approach has been adopted and ways to identify the trouble source are based on the criteria in Chaudron's study on corrective feedback (1977, Chapter 2: 41-42). Trouble source is located by a signal of difficulties in producing the utterances and the reaction of participants. Generally speaking, the trouble source can physically be found in two places:

1) In the incompleteness of utterances seeking to contribute to on-going communication, this takes a form of appealing for assistance or giving up the turn. It is clear that this is a production problem, since it shows the inability of a speaker to complete his/her utterances. The repair organization is operated in the sequence of self-initiation/other-repair. The following example illustrates this:

Ex 4.14 CS1=276
1 S1: =Right then they may [.] uh make the girl disappear:r,
2 ((laughing))
3 S2: Yeah,
—> 4 S1: Before they uh::
5 S2: Before they were born=
6 S1: =Bid bid before they're uh:: they are born,

In this example S1 signals difficulty in completing his utterances by the sound stretching of the filler "uh", and S2 provides the completion, which is followed by repetition by S1 as an acceptance.

2) The other place is where a trouble source is located in the completion of utterances. In this case identifying the trouble source is not as easy as identifying incompletion. Physically, it can be subcategorized into two types according to the place where it is repaired:

   a) One is repaired within the same turn, which is easier to identify. It is a production problem since it occurs in the process of production (see following section for detailed analysis). The following example illustrates this:

Ex 4.15 CS3=129
—> 1 S1: Because they're better education, [.] uh better educated, [...]
2 and uh they can [.] they can uh exchange more ideas,

In this example S1 says "education" then shows that he has a problem by a pause plus a filler, "uh", then replaced "education" by "educated" to make it correct.

   b) The other type is initiated or repaired in the following turn or beyond. It can be a problem of production or a problem of understanding. The following criteria have been used to distinguish them:

      i) If the utterance is followed by correction or replacement of one item by another it is considered as a production problem by the interlocutor. It functions as other-repair. The following example illustrates this:

Ex 4.16 GW1=180

1 S2: Uh, we agreed all- we already agreed about this criterion
2 because it's here [.] in the announcement we want a well-
3 educated, [.] a confident, energetic, uh: [.] who can speak at
4 least one foreign language, [..] uh::, these are the qualities [.]
5 which we [.] require from [..] our er candidates you see,
—> 6 S1: Candidate

Here in this example S2 says "candidates" in his utterance, which is not considered right by S1 who replaces it by "candidate" since they are talking about choosing one candidate to be offered the job.

ii) If it is followed by replacement or correction in the third turn, where the second turn is "topic continue"[3] it is considered as a production problem by speaker. Here are some examples:

Ex 4.17 SJS (1977: 366)

1 Hannah: And he's going to make his own paintings,
2 Bea: Mm hm,
—> 3 Hannah: And- or I mean his own frames,

In this example Hannah explains that "he" is going to make "paintings", which is followed by Bea's "topic continue" indicator. Then Hannah replaces "painting" by "frame", beginning with "I mean" which is a typical expression for self-repair. Such expressions as "I mean" or "you know" are labelled as initiation by SJS (1977) or editing phrases by Levelt (1983).

Ex 4.18 GW4=80

1 S1: Yeah ((?[??))
2 S2: [Sticking sticking plasters,
3 S1: No, I think it's not [.] very useful,
4 S2: Well, if you have a cut,
5 S3: If you have a cut you can,
6 S1: I mean they are quite small you know=
7 S3: =You can use your (???) ((laughing))
—> 8 S1: I mean these plasters are very small,

In this example S repairs what he has said in turn 6 in turn 8 after what I (speaker's name) said in turn 7. In these two examples repair after the "topic continue" functions as "loop" back to the previous utterances.

iii) If a problem is explicitly initiated by non-understanding indicating markers such as "sorry", "pardon", "what", "excuse me", "could you repeat that" or "I did not hear what you have said" this is clearly seen as an understanding problem. The following example illustrates this feature:

Ex 4.18 GW6=130
1 S3: What about er the pad of thin paper?
—> 2 S1: What?
3 S3: The pad of thin paper number four,

In this example S says something which M does not hear, which is indicated by "What" in question form. S then repeats the utterance plus an elaboration.

iv) If a problem is initiated by an understanding check, clarification request[4] or confirmation check[5], it is considered an understanding problem, since it indicates the uncertainty and lack of clarity about the interpretation of the previous utterances by interlocutor. The following examples illustrate this feature:

Ex 4.20 CS3=282
1 S3: And she he has to take care of [...] um his children,
—> 2 S2: Uh you mea:n [.] man?
3 S3: Yes yes, yeah instead of [...] [her,

In this example S2 has a problem with whether it is "she" or "he" S3 refers to in the previous utterance. He initiates repair by an understanding check, which is followed by confirmation.

Ex 4.21 CS2=304

1 S4: [But what what] I'd like to say say is different meaning, OK.
2 it's perfect here, except that, but he said that, in practice,
3 it's difficult, OK. if you have=
—> 4 S1: =Now but why is it [difficult?
5 S4: [No, uh er listen to me, if you have three
6 three children and the woman works from...

In this example the "difficulty" in S4's utterance is not clear to S1. S1 knows the meaning of "difficult", but she cannot see the relevance. She initiates a repair by a clarification request, followed by an explanation.

Ex 4.22 CR2=549

1 T: Em we'll just do very little, a quick bit of practice of that
2 before we do the er more difficult one. Page a hundred and
3 nineteen, please. We're moving backwards, page one
4 hundred and nineteen, (???)
—> 5 S2: Nine zero?
6 T: One em one nine a hundred and nineteen one one nine

In this example S2 is not sure about what she has heard. She confirms it by providing what she thinks T has said in the previous utterances.

v) If the problem is initiated by a repetition of the trouble source turn plus a Wh-question word it is considered as an understanding problem since a Wh-question word indicates the problem of understanding. The following example illustrates this:.

Ex 4.23 (SJS 1977: 368)

1 A: See I could ask you what you did at your party Saturday
2 night,
3 B: I didn't go to a party Saturday night.
4 A: I thought you had a date with your boyfriend to go to a
5 party.
6 B: No I went to a shower.
—> 7 A: To a where?
8 B: I went to a shower.

In this example A did not hear or understand "shower". He indicates the difficulty by repeating the trouble source with the question word "where", which is followed by a repetition of utterances in turn 6 by B.

vi) If the problem is initiated by just a repeat of the trouble source it will be identified according to the sequential organization:

(1) If the other-initiation is followed by replacement of the trouble source it is considered as a production problem by the speaker.

(2) If the other-initiation is followed by repetition, explanation or confirmation of the trouble source it is considered as an understanding problem by the speaker.

(3) Sometimes the intention of initiation can be misunderstood by participants. The speaker considers it as an understanding problem and s/he repeats the utterance to confirm what s/he said, but the interlocutor considers it as a production problem. In this case another initiation procedure may take place with a specific indication of the trouble source, which may be followed by repair. The following examples illustrates these features.

Ex 4.24 SJS (1977: 368)

1 A: Well Monday, lemme think. Monday, Wednesday, an
2 'Fridays I'm home by one ten.
—> 3 B: One ten?
4 A: Two o'clock. My class ends one ten.

In this example the initiation by repeating the trouble source in the second turn "One ten" can be interpreted as either a production or an understanding problem at this stage. However, assessed in terms of sequential organization it can be identified as a production problem, since this example fulfils the first criteria by replacing "one ten" by "two o'clock" and explaining what happens at one ten.

Ex 4.25 CS2=507

1 S4: It's- [.] they don't married,
—> 2 S2: Not married?=
3 S4: =Not married any more,

In this example (as with 4.24) "not married" can be interpreted in either way. However, according to the second criteria (after the other-initiation the trouble source is repeated and followed by confirmation) it can be identified as an understanding problem. However, here S2's "not married?" can be considered as having a dual function, as both an initiation for repair and a correction for S4, as we can see "it's- [.] they don't married" is not grammatically correct. It is treated as an understanding problem.

Ex 4.26 SJS (1977: 373) ((Three children playing water tag; Steven has been tagged, and is now 'It'))

1 Steven: One, two, three, ((pause)) four five six, ((pause))
2 eleven eight nine ten.
—> 3 Susan: Eleven? eight, nine, ten?
4 Steven: Eleven, eight, nine, ten.
—> 5 Nancy: Eleven?
6 Steven: Seven, eight, nine, ten.
7 Susan: That's better.

Sometimes the trouble source is easy to identify or it is easily recognizable in the utterances. However, sometimes identifying the trouble source is part of the repair process, which can be seen from the above example. In this example, Susan initiates repair by repetition of the trouble source plus the rest of the utterance. This initiation can be interpreted as either a production and or an understanding problem. Steven, the trouble producer interprets it as an understanding problem so he confirms it by repeating the utterance, whereas Nancy considers it as a production problem. She therefore reinitiates repair by repeating just the trouble source word, indicating that Steven has a problem in identifying the problem itself. Finally, Steven realizes the problem and repairs the trouble source by replacement.

The above criteria for distinguishing the problem of production and understanding have focused on the location of the problem and repair organization. This does not contradict to the model of SJS in terms of the opportunities for repair. The repair location can be explained in terms of repair trajectories as follows:

1) within the turn
2) at a transitional relevance place
3) next turn
4) third turn

The production problem can be repaired at three places, illustrated as follows:

Table 4.1: Production problem repair in repair trajectory

	TYPE	Turn 1	TRP	Turn 2	Turn 3
1	PROSPECTIVE	incomplete	—	OR	SR
2	CONCURRENT	SR	SR	—	—
3	RETROSPECTIVE	—	—	OR	SR

TRP=transitional relevance place OR=other-repair SR=self-repair

The production problem can be repaired at the transitional relevance place before the completion of utterance by the trouble producer or by others; it can be repaired in the same turn either before the turn ending or at the transitional relevance place by self; it can be repaired at the next turn or beyond by either self or other. A detailed discussion will be presented in section 4.4-4.5 and Chapter 6.

However, the problem of understanding can be initiated and repaired in only the next turn or beyond the next.

Having discussed the criteria for identifying the problem of production and understanding, it is now worth examining these features closely, in terms of the following aspects: what kind of problems the speaker has, how s/he signals them, what ways are used to solve them and what linguistic features they reveal.

4.3 The features of repair in spoken discourse

4.3.1 The features of repair on production problems

The problem of production as it has been discussed in the previous section is evidently a speaker problem. The ways of solving the speaker's problem are described by van Lier (1982: 421) as follows:

> "A speaker problem is one which the speaker him/herself is expected to deal with in the sequentially appropriate slots for self-initiation and repair. One option the speaker has in these cases is to call upon the hearer(s) to provide assistance, by means of 'try-marking" (e.g. the 'tentative intonation' of candidate response, see also Schgeloff 1972) or other forms of correction-invitation."

The ways used in dealing with the speaker's problem are mainly self-repair and self-initiation in two different ways according to van Lier's description: appealing for assistance or self-repairing immediately after trouble source. This finding is useful, but it is not complete. van Lier considers only how the speaker him/herself finds ways to solve the problem, he does not include the reaction of other participant. As illustrated in examples 4.3 and 4.26, the other participant may react to the problem in the interaction process (although not all the problems are initiated and repaired). In this study production problems will be examined in terms of the following three areas:

1) Where the speaker has a difficulty in completing his/her utterance while s/he is holding the floor.

a) The difficulties can be indicated by non-lexical devices such as sound stretching, pauses or pause plus fillers and cut-off. Here are examples:

Ex 4.27 CR2=81

—> 1 S3: Driving and then I want to fill up my tank with
2 [...]
3 T: Petrol=
4 S3: =Petrol, I stop my car,
5 T: Uhuh,
6 S3: and then [..] I fi:ll the tank with oil=

Ex 4.28 (Day, Chenoweth, Chun and Luppescue 1984: 30)

1 NS: Four petals
—> 2 NNS: Yeah and two: um ((pause))
3 NS: Leaves
4 NNS: Yeah, two leaves, yeah,

In example 4.27 student 3 has a problem in recalling the word "petrol" or "oil". He stops at the preposition "with" with pause. The teacher offers "petrol" as a completion. S3 acknowledges this by repetition. Interestingly, he uses the word "oil" in his following turn to complete his utterance. This may be explained by saying that the word "petrol" is not what he tries to recall, but it triggers the kind of vocabulary he intends to use. In example 4.28 NNS stops with sound stretching plus filler, showing that NNS has difficulty in completing the utterance. NS offers a completion with "leaves", which is followed by acceptance by NNS. These two examples illustrate that an appeal for completion is provided smoothly, i.e. one has a problem, the other helps to solve it. However, sometimes the searching can involve both the hearer and speaker in collaborative efforts, and indeed the word may never be "found". The following example illustrates this:

Ex 4.29 GW2=263

1 S2: =We have capital but not enough, so we have to increase
—> 2 in capital, it's to-
—> 3 S3: To prod=
4 S2: =to=
5 S3: =to produce more,
6 S2: Not to produce more,

In this example S2 stops his utterances by a cut-off to signal because he finds it difficult to complete it. S3 tries to complete it, but is interrupted by S2 who is interrupted again by S3. S3 completes with "to produce more", which is rejected by S2 who does not think this is what he wants to say. This example also shows cooperative involvement in searching for an expression.

b) The production difficulty of a speaker can be indicated by a lexical means. Here is an example.

Ex 4.30 (Day, Chenoweth, Chun and Luppescue 1980: 24)

—> 1 NNS: How do you say that?
2 NS: The handle?
3 NNS: The handle.

In this example NNS does not know the word for the object they are talking about, and asks for help directly. NS provides the word with a rising tone which shows that he is not sure whether this is the word he is looking for. NNS acknowledges it by accepting.

2) Where the speaker, repairing his/her utterance in the same turn, is searching for a word or structure or reconstructs a ready-produced utterance.

a) The following are examples of self-searching:

Ex 4.31 CS1=324

—> 1 S1: Some circumstances, some conditions, some uh: what? [.] er
2 there are some factors, let's suppose that you've got first
3 wi:fe,
4 S2: Yeah

Ex 4.32 CS1=939

—> 1 S2: No drinking, no smoking, no: [.] no what? [.] no dating,

These two examples have similar features to example 4.27 and 4.28, i.e, the speakers have a problem in recalling the word in this specific context. These examples show that the speakers are searching for a word to complete their utterances in the interaction. However, the ways of solving the problems are different. In example 4.27 and 4.28 speakers stop at the problem point and completion is offered by another participant. In these two examples the speakers use the word "what" as self-initiation and provide the repair by themselves. In example 4.27 and 4.28 the sequence of the organizational structure is self-initiation followed by other-repair. In example 4.31 and 4.32 self-initiation and self-repair are operated. These two examples at the same time demonstrate that the repair process is not as simple as it may seem: the trouble source, initiation or repair is woven into the conversation's organizational structure. Speakers also use other ways to solve problems while they are speaking. These two examples show that the speaker uses the lexical device "what" as an initiation of self-repair. There are examples where the speaker initiates using sound stretching, pause plus fillers, repeating or cut-off:

Ex 4.33 CS2=268

1 S1: [Well, but I think, yes yes, but I think just er ah, [.] like an
2 ideal an old fashioned idea or a fixed idea,
—> 3 we have been uh [.] have been uh use:d for a long time
4 because I have see:n a lot of men, a lot of men=

b) The following are examples of self-repair in the same turn:

Ex 4.34 CR2=501

—> 1 S8: over- overtake overtaking me,

Ex 4.35 GW1=66

1 S2: Ah, what [.] that doesn't uh uh, I'm afraid uh uh uh (I ask) I yer I-
2 I- I don't agree with you, because [.] that doesn't mean he is
3 anxious because he has no job, he is now unemploy-
4 unemployed, and that doesn't mean [.] he has no confidence in
5 himself, he has because he is a- athletic and he [..] and and he
—> 6 performed, uh performs uh uh in front of [.] so many people, [.]
7 so, he: [.] he has confidence [..] in his in himself,

These two examples show that the speaker repairs what s/he has said within the turn by changing "overtake" into "overtaking", and "performed" into "performs". The problems in these examples are repaired by the trouble producers themselves. The repair trajectory is self-initiation and self-repair.

Another point raised by these two examples is that there are also instances of incompletion at the beginning of the utterances. In these two examples incomplete utterances are not followed by other completion as was the case in the examples 4.28 and 4.29. The explanation for such an occurrence is that there is no way at this stage that the other speaker can provide repair because the incomplete utterances have just only started. In this study such incompleted utterances are treated as restartings and will be discussed in section 4.4.2.1.

3) Where the trouble utterances are repaired in the following turn by other participant or beyond by the trouble producer:

Ex 4.36 GW1=106

1 S2: =she might be a [.] daughter of a Spanish woman, [..] but
2 might not [.] uh speak French.
3 [1.0 sec]
—> 4 T: [Spanish,
5 S1: [Well,
6 S2: Sorry [Spanish
7 S1: [Spanish,

Ex 4.37 CR2=563

1 S4: =Before going to bed er he had a hot drink=
—> 2 T: =Lovely, before going to bed Tom had a hot drink, O.K that's
3 very nice. Now what about the next one?

In these two examples the problems which occur in the previous utterances are repaired by the next speakers. In the first example the teacher corrects what S2 said by replacing "French" with "Spanish". S2 accepts repair by offering a repetition. In the second example the teacher accepts what S4 said with some correction in a "covertly realized"[6] way, by replacing "he" with "Tom". Here the repair trajectory leads to other-correction.

The above examples demonstrate what problems speakers have, how the problems are notified in the speech, and how problems are handled.

4. 3. 2 The features of repair on understanding problems

A problem of understanding is more complicated than a problem of production in terms of defining whose problem it is. As van Lier (1982:422) states:

> "Superficially seen, problems of understanding are hearer problems. However, they are more properly regarded as mutual problems in the sense that a problem of understanding may indicate a speaker's insufficient matching of his/her talk to the hearer's current state of knowledge or attention. That this is a speaker as well as a hearer problem is evidenced by a speaker's constant monitoring of the hearer's state of knowledge and attention, by means of try-marking, checking for listening responses, etc."

van Lier argues that the problem of understanding in general refers both to the understanding of the hearer and also to the question of whether the speaker makes a correct assumption about the hearer's knowledge and attention. The latter takes us into the field of research into matching or monitoring of speaker and hearer. In the present study it will not be possible to investigate this extensive area fully, and I shall limit my description of repair in understanding to the narrower problem of the hearer's understanding of speech. In essence, the understanding problem is recognised in retrospect; in other words, it has been reacted to by the hearer. The problem of understanding can be ignored, marked by repair initiation or repaired. When the problem of understanding is ignored there is no way for the investigator to establish that there has been a breakdown in comprehension. Here the understanding problem is examined when there is an indication of a problem. The examination of the problem of understanding in this study will focus on the following three cases:

1) Where the hearer does not hear the utterances by the previous speaker at all. The following examples illustrate this type of understanding problem:

Ex 4.38 CR1=18

1 S3: (???) full of the boat, on the board,
—> 2 T: Pardon?
3 S3: Full of on boat, it has- it was vessel,
4 S2: This is some ferry,
5 T: Very probably, OK. they sent an SOS message, but the the
6 ship is going down, isn't it, so what- what are they going to
7 have to do?

Ex 4.39 CS1=30

1 S3: =How about nowadays? Still the same?
2 [..]
—> 3 S1: Now how sorry?
4 S2: [So today, the same situation,
5 S3: [Still the same nowadays yeah,

The problems in the above examples are related to a failure to hear. The trouble source can be a response, question or statement. It occurs in any place in the on-going communication. There can be various reasons why the utterances are not being heard, which will be discussed in the following section (4.5.1).

2) Where the hearer does not catch complete utterances, or does not understand utterances linguistically or pragmatically:

Ex 4.40 CS1=105
1 S2: Cook, yeah, so the the the new generation, I mean the situation
2 is quite different now? [so you(???)
3 S1: [Because because you run a risk of of of
4 quarrelling with your wife,
—> 5 S2: Uh:: a quarrelling?
6 S1: [Let's suppose that you've been=
7 Ss: [((laughing))
8 S2: =Yeah?=
9 S1: =In the morning for instance,

Ex 4.41 SJS (1977 p-368)
1 Sue: Yeah we used to live, on the highway, too. And when we
2 first moved up there, it was terrible sleeping because all
3 these semis were going on at night.
4 ((short silence))
—> 5 Bob: All the what?
6 Sue: Semis.
7 Bob: Oh

In example 4.40 S2 understands the word 'quarrelling' but he does not understand connection between a changed situation and quarrelling. This is what Thomas calls sociopragmatic failure. In the second example Bob understands most of what Sue has said except "semis". Bob requests repetition by using part of the trouble source plus question word "what". This is a commonly used way to initiate repair for an understanding problem. Both examples are identified as incomplete understanding. It can be a situation where the hearer either does not understand the utterances or

connot "fit" the assigned meaning of the utterances into this context. There are different features within incomplete understanding both in terms of what causes the problem and of the ways used to solve the problem. These questions will be discussed in section 4.5.2 and Chapter 6.

3) Where the hearer misunderstands what has been said:

Ex 4.42 CS1=77
1 S1: Ye:s, that woman then have, uh, uh uh uh what? er [.]
2 maidservant, (???)=
3 S2: Servant?
4 S1: This is this is=
5 S2: =Assistant=
6 S3: =Assistant=
7 S1: Yeah, this is common for [the couple
8 S2: [Uh: uh: where? in the in the
9 restaurant or: in the shop?=
10 S3: =Restaurant, hotel?
11 S1: If for instance the woman works somewhere=
12 S2: =Uh=
13 S1: =Then we need a: a servant to help at home=
14 S3: =At home, uh I see yeah yeah,
15 S1: At home.

This example is very complicated in terms of the sequential organization of repair. It is necessary to examine it turn by turn in order to show the nature of misunderstanding. In line 1-2 S1 has difficulty in completing his utterance, indicated by "uh uh uh uh" which is followed by "what" as initiator, and repaired by himself with the word "maidservant". The turn by S2 (line 3) can be interpreted either as a production or an understanding problem. In line 5 S2 repairs himself by changing "servant" to "assistant". S1, who is the trouble producer does not show any interest (line 7) in S2 and S3's problem. S1 continues but is interrupted by a clarification request from S2 concerning where the assistant works. Then S1 starts to repair this by explaining when a servant is needed. The misunderstanding is cleared up at the end. In this example the misunderstanding occurs between S1 and S2,3 about

"maidservant", which S2,3 think is an assistant who works in shops or hotels. S1 does not recognize the difficulty so he does not repair it, continuing his utterances in line 7. Only when he hears the further utterances, "restaurant" or "hotel" does he realize the problem of his interlocutors. S2 and S3 thought "maidservant", as used by S1, referred to the job the wife was doing, but what S1 means is that if there is a maidservant at home the wife can go out and work. He explains where the maidservant works, and then the problem is cleared up.

The above presentation is mainly focused on the description of the model itself. At the same time, we have noticed that within the three categories of production and understanding problems there are different features and patterns. It is now necessary to examine them separately and more closely.

4. 4. The different features of repair on production problems

Examples 4.1, 4.2, 4.3, 4.7, 4.8, 4.9, 4.24, 4.25 and 4.26 in the above sections show that the problems of production are handled in three places. We refer to these three different places as **prospective, concurrent,** and **retrospective. Prospective** refers to the situation where a speaker has a problem in finishing his or her utterance, ie, the problem is in the *next-due element;* **concurrent** refers to a situation when a speaker is searching for elements and repairs it in order to make what s/he has said more appropriate, precise or correct in a certain context *within the same turn;* **retrospective** refers to the situation where a problem of production is repaired in the *following speaking turn or beyond the next.*

These three categories are identified from where the problem is and where repair occurs. In this study their features will be examined at three

levels: how the speaker signals the difficulty, how the difficulty is solved and what linguistic characteristics it reveals. These three categories will now be examined closely, in turn, in the following sections.

4. 4. 1 The features of prospective repair on production problems

Examples 4.1, 4.7, 4. 13, 4.24 and 4.25 in the above sections illustrate that when a speaker has a problem in completing his/her utterances, s/he usually signals the problems by pauses, sound stretching or cut-offs. Schegloff, Jefferson and Sacks call these types of repair word searching. Shimoniff labels them future problems. SJS have found that participants in NS conversation mainly search for a person's name. Gaskill (1980) reported similar results in NS/NNS conversation. However, the word search in L2 learner interaction involved a frequent search for all kinds of vocabulary items. Vocabulary seems to be a much more common trouble source.

More important than what speakers are searching for is the way they are searching. How this repair is completed has not been examined before. Word searching for the L2 learner not only involves the speaker conferring with the auditor, but also in some cases the auditor initiating word searches of his or her own, as part of the total effort. The word searches are constructed in such a way that the speakers confer with their auditors to come to agreement on connecting a word with its exact meaning. Searching for a word is not only a means to achieve completion of the utterance in on-going communication, but also a tool for building a unit together. It is difficult to say if any of the words searched for is ever "found", but this interaction is obviously a successful negotiation of meaning. In this way, the word searching becomes an interactive process and even leads to the collaborative completion of sentences. There are examples in the following sections which illustrate how this kind of problem is solved.

Broadly speaking, when there is a problem involving an inability to complete the utterances it can be completed or left as an incompletion. Our description starts with the features of completion and incompletion.

4.4.1.1 Completion

In this section completion of unfinished utterances will be examined in terms of ways of doing it, who does it and its sequential organisation.

4.4.1.1.1 Ways Used for Completion

If the completion is provided, it can be presented directly with a statement, or indirectly by "try-marking", as the following examples demonstrate:

Ex 4.43 GW3=46
1 S1: Yeah, all the machines we've got to [..] to make uh, [1.0 secs] I
2 don't know how how to say to-
3 [...]
—> 4 S3: Change [the equipment?
5 S1: [to need less money [.] to produce the umbrellas,

This example shows that S3 tries to help S1 to complete the utterance by providing the completion in question form, which shows the uncertainty of the repairer about the unfinished utterance. The completion can also be provided directly in the statement form. Here is an example:

Ex 4. 44 GW1=297
1 S3: Call him for [.] uh-
—> 2 S2: An interview,
3 S1: No, finishing that ((laughing))
4 S2: Yes, for signing the [.] the letter,

In this example S2 provides the completion directly with the word "an interview". However, the completion is rejected by S1, which is another feature which will be discussed later in section 4.4.1.1.3.

4.4.1.1.2 Who provides the completion

1) When completion is provided, it can be done by another participant, or by the trouble source producer afterwards. The following example illustrates this:

Ex 4.45. CS2=672

1 S4: Because the church is very-
—> 2 S1: Powerful=
3 S4: =Powerful, maybe with [.] for poor people,
4 S1: Yeah=

In this example S4 signals his difficulty with a cut-off at the word "very", which is completed by S1 with the word "powerful", which is in turn accepted by S4. This repair process is operated in a form of self-initiation and other-repair. It can be explained in terms of adjacency pairs as a request/offer, offer/acceptance sequence. The second part of the first pair plays a role as the first part of the second pair.

2) It has been pointed out that searching can be a cooperative effort to build the unit together, and completion can also be done by self in the context of this:

Ex 4. 46 GW1=51

1 S2: I think just speaking Arabic doesn't give him a credit to take
2 the job because [..] uh he is actually a a failure [...] This runs
3 [.] you see contrary to the announcement of the job itself
4 which states clearly this the person should be [..] should uh
5 have a sort of uh [..] some sort of-
6 S1: Yeah=
—> 7 S2: =Education=

In this example S2 stops at "of" indicated by a cut-off. S1 does not provide the completion, instead he offers OK pass, which is followed by S2, who finishes what he said in the previous utterance. Self-completion differs from self-repair in the third turn although the turn-taking exchange system is the same. The third-turn in this case functions as the the completion of the previous utterance instead of replacement or correction.

Ex 4.47 GW3=145

1 S1: So which which could be the countries that [.] we could [.]
2 try to [.] enlarge or uh experite- expand our market to:
3 [...]
4 S3: [Uh:,
5 S1: [Obviously the northern countries

In this example S1 indicates his difficulty in finishing his utterance by sound stretching at the particle "to". After a pause S3 and S1 himself start to complete it, with S3 starting with sound stretching on the filler "uh" and S1 providing the completion.

4.4.1.1.3 Sequential organization of completion

1) When the completion is provided the completion can be accepted.

Here is an example:

Ex 4.48 CS2=231

1 S3: [But uh [..] you can supply you can su- [.] supp- [..] supply
—> 2 you can uh
3 [...]
—> 4 S1: Replaced=
5 S3: =Replaced,

This example shows that S3 has a problem in finding the right word to express himself and after making several try-markings he appeals for help to complete his utterance. S1 completes the utterance by providing the word "replaced", which is accepted by S3. Here the repair sequence is self-initiation/other-completion, which is followed by acceptance. It is also explained by the turn-taking mechanism of conversation. According to van Lier's turn-taking framework, it is done here by "giving up"[7] or in Allwright's term "turn offering"[8]. It can be explained in terms of an adjacency pair as invitation/offer and offer/accept. The second part of the first pair "offer" is also the first part of the second pair. This description illustrates that repair organization is a part of conversational structure.

2) When the completion is provided the completion can be rejected:

Ex 4.49 CS2=396

1 S2: I- I believe the man is: [.] better than woman, in: [.] in in some
—> 2 um,
3 S3: In some [areas
4 S2: [some aspects=
5 S3: In some aspects the woman are better than man,

In this example S2 signals the difficulty in his utterance by the sound stretching of "in" followed by the repeat of "in", ending with filler as an invitation for completion. S3 helps to complete it using "in some areas" which is rejected by S2 with "some aspects". Then S3 accepts the reject by using S2's replacement to continue the talk. It is very interesting in the sense

that there are loops, one turn linking to another. It forms an adjacency pair of invitation/offer and offer/reject sequence organization.

3) When a completion is provided, the completion may become a trouble source, which may lead to another other-initiation and repair:

Ex 4.50 GW3=243

	1	S1:	This is going to be very awkward (laughing). So how are we
	2		going to raise the new [.] capital? [...] Are we going to invest
	3		our own money or [..] will we for example we can [.]
—>	4		how to say when you want to [..] offer new shares [.]
	5		[in market
	6	T:	[We ca:n float the new issue,
—>	7	S1:	But [.] [this is, this is shares or:
	8	T:	[that is on the market,
	9	S1:	or=
	10	T:	=Shares=
	11	S1:	=Or for product,
	12	T:	That's for share,
	13	S1:	For share uhuh,

In this example S1 directing signals her difficulty: "how to say when you want to [..] after new shares [.] in market". The teacher helps her by giving the expression "we can float the new issue". This expression in turn becomes a trouble source to S1, who is not sure whether this refers to shares or products. S1 requests clarification (line 7) and this is followed by cooperative repair (lines 8-13). The teacher's first attempt (line 8) does not repair the problem, and a continuation (line 10) following S1's "continue signal (line 9) needs further confirmation (line 12), reconfirmed by S1 (line 13). This shows clearly the embedded and recursive features of the repair process.

4.4.1.2 Incompletion

When the completion is absent there can be two possibilities:

1) the completion is assumed to be understood:

Ex 4.51 CS1=327

—> 1 S1: But she can't er: give birth to:
2 S2: Oh:: yes,
3 S4: Oh yes,
4 S2: Right, I've heard this,

This example demonstrates that S1 has difficulty in finishing his utterance and he signals this by stretching the sound of "to". This time S2 does not provide completion as in examples 4.43, 4.44 and 4.45; instead, he continues the conversation by assuming he knows what S1 means in the rest of the utterances from the context, which can be seen in line 4 in which S2 says "I've heard this". Here "Oh:: yes," indicates that the missing part is understood and functions as a change of state token (Heritage 1984).

Ex 4. 52 GW1=189

1 S1: Well, uh according to: [.] uh you see [..] ability to speak a foreign
2 language I think [.] uh Ja- Janet [..] has [.] yes one there is no
3 evidence that Jenny Williams has any sort of foreign language or
4 she speaks any foreign language and, neither [.] Bill [...] or uh:
5 S3: I'm afraid I don't [agree
6 S1: [On this, only two,

In this example S1 explains who can and who cannot speak a foreign language and eventually only two candidates are left, Bill and Anne Marie. When S1 searches for the name of the other candidate there is no completion offerred. The appeal for assistance in form of sound stretching is followed by a comment on his argument, which shows it is assumed to be understood (with the missing elements known or regarded as irrelevant).

2) The problem of incompletion can be left without completion at the end at all:

Ex 4.53 GW1=140

1 S3: She worked as a secretary [.] and uh [...] that means he she
—> 2 has uh, the qualifications [..] for-
3 S2: Um well=
4 S1: =But I think that according to our [...] um advertisement, if she
5 has [..] certain [..] education she should attach her certificates, but
6 as far as there is no certificate her [..] I don't [.] think that=

In this example S3 stops at the preposition "for" in a form of cut-off. S2 takes up the turn, in which he does not provide the completion; instead he indicates "count-informing" (Heritage 1984), which is interrupted by S1 and the interaction continues.

Ex 4.54 CS2=202

1 S2: =the rate of employment is very high the men can't find the
2 work so I think maybe the women had better to stay home, and [.]
3 uh give the opportunity to the man, uh it's good, in China the
—> 4 population is very large, and [.] the unemployment is very [..]
5 S4: But you have some, OK. this is a good idea, but in practice
6 how [.] how do you improve that for example? [...] Yea:h, I-
7 I- if you if you if (he's) married, he has a woman she is [.] a
8 engineer, in engineering, the same level,

This example shows that S2 has difficulty in finishing the utterance and he signals this by a pause. S4 takes up the turn and changes the focus of the topic. Instead of talking about population and employment he argues about how to explain the fact of a woman with a higher education staying at home. Again, the interaction continues without the need for completion.

4.4.1.3. The purposes of appealing for completion

There are two types of inviting for completion: conversational and pedagogical. Here are examples to illustrate this difference:

Ex 4.55=[4.48] CS2=231

1 S3: [But uh [..] you can supply you can su- [.] supp- [..] supply
—> 2 you can uh
3 [...]
—> 4 S1: Replaced=
5 S3: =Replaced,

Ex 4.56 CR2=209

1 S2: I think I need some money new clothes buy,
2 T: Sorry? I think. I need so::me
3 [...]
4 S2: Money new clothes,
5 T: No, it couldn't be that, but I think I need some new clo::thes
6 [...]
7 S1: To buy,
8 S3: New clothes wearing,
—> 9 T: New clothes
10 [...]
—> 11 S2: To wear=
12 S3: =To wear,
13 T: To wear, that's right, I think I need some new clothes to
14 wear. Yes this what I always say. right, it's shame.

In this example in line 9 the teacher stops before she completes her utterance and this is followed by a pause, which is similar in terms of the form of incompletion, but different in terms of its function in the interaction. One difference is that the speaker in Ex 4.48 has a problem in finishing the utterance, whereas the speaker in Ex 4.56 stops at a certain point for completion. The purpose of the pause in line 2 in Ex 4.48 is to appeal for help.

The purpose of line 8 in Ex 4.56 is to invite repair. These two types of stopping for completion can be illustrated in the following figure:

TURN	SPEAKER	Ex 4.48	EX 4.56
1	A	utterance	utterance (TS)
2	B	utterance (TS)	utterance
		stop (initiation)	stop (initiation)
3	A	completion (repair)	completion (repair)
4	B	acceptance	acceptance
		[rejection]	[rejection]
		[initiation]	[initiation]

Figure 4.1 Prospective repair for different purposes

Although the pattern is the same in these two examples, the differences relate to function. In turn 1 the utterance in example 4.56 is the trouble source which is followed by incomplete utterance as other-initiation for repair, whereas in example 4.48 the speaker has a problem in completing the utterance in turn 2, which has no direct relationship with utterance in turn one in terms of trouble source. Turn 2 in example 4.48 contains both trouble source and self-initiation. In turn 3 both examples are followed by completion. Example 4.48 is followed by completion as other-repair; example 4.56 is followed by completion as self-repair.

The above examples demonstrate there are different ways to signal an invitation for completion: pause, cut-off and sound stretching as well as lexical devices such as "I don't know how to express it". There are different ways to provide the completion: direct vs indirect; self vs other. The sequential organization of repair of this type can be illustrated as follows:

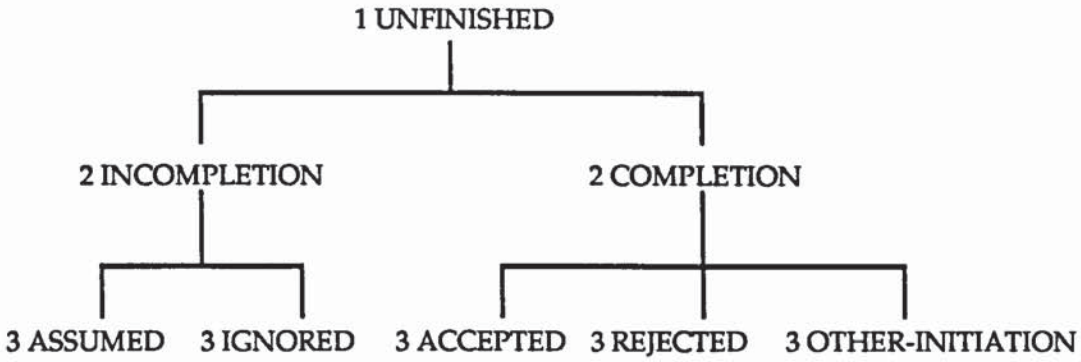

Diagram 4.2. Sequential organization of prospective repair

This diagram summarises the organizational patterns of prospective repair. This completion can be accepted, rejected or can become a trouble source, which leads to another repair process with initiation. The third type of operation of repair also explains the embedded and recursive features of repair. When completion is absent it can be assumed to be understood by the participants or the issue can be left without completion at all. These differences will be analysed and discussed in detail in Chapters 5 and 6.

This section has examined how the speaker appeals for help when s/he has a problem in completing his/her utterances as a contribution to the on-going communication. However, most of the time when there is a production problem with the speaker s/he tries to solve the problem by him/herself. Now it is necessary to see how s/he manages to do so.

4. 4. 2 The features of concurrent repair on production problems

As examples 4.2, 4.8, 4.14, 4.26, 4.27, 4.28, and 4.29 in the above sections show, the speaker uses various ways to solve the problems of production while s/he is speaking. Self-initiation and self-repair are the terms used for analysis in a number of studies (SJS, van Lier, McHoul, Kasper, Schwartz).

However, this is the first time that a study has addressed the issue of how self-initiation/self-repair operates in detail.

In self-initiation/self-repair there are two possibilities: prepositioned and post-positioned "self-editing" processes. Prepositioned self-editing signalled by cut-off, pause or sound stretching, standing in the place of a next-due element, is more likely to initiate repair on the next due item, which delays, but carries forward, the syntactic projection of the sentence-so-far. Post-positioned self-editing repairs some already-produced element of the turn, which is generally disjunctive syntactically, interrupting what is syntactically projected by the sentence-so-far.

A number of researches have examined same turn self-repair, but different perspectives have been adopted. Some look at it from the point of view of language structure (Levelt 1983); some look at it from the functional point of view (Kasper 1985). Both dimensions will feature in this study, since it is impossible to discuss the function of repair without considering the role language plays. These devices of self-initiation and self-repair are grouped under three categories:

1. a speaker can search for a word or expression or restart the utterance which has been started;
2. a speaker can change a ready-produced utterance which is not correct or appropriate in the context;
3. a speaker can modify his/her utterances.

The following section illustrates these features with examples.

4.4.2.1 Selection in concurrent repair on production problems

The term "selection" used in this study refers to self-repair in two situations.

1) It refers to pre-positioned selection, which means that the speaker signifies a difficulty in selection, searches for a word, and then continues the utterance:

Ex 4.57 CS3=319
1 S1: Take for instance, in uh, in uh in arts,

In this example the students are talking about the changing position of women in society. S1 tries to give an example of an area where women are prominent. He repeats with a filler twice and ends with "arts". While S1 is searching for the word, no other student takes up the turn. He completes his utterance by himself.

Ex 4.58 GW1=58
1 S2: =Yes, because he went he went he went to to to the university
2 you see [.] er but left after one year, that means he he was a
—> 3 pote:ntial [.] er [.] student, he he has uh very good [.] uh qualities,
4 but [.] it's it's not very important to to to finish uh, I think one
5 year in university is [.] enough ((laughing))

In this example S2 signals his searches with a pause plus filler which is the commonly-used way to undertake pre-positioned searching.

Ex 4.59 CS1=324
—> 1 S1: Some circumstances, some conditions, some uh: what? [.] er
2 there are some factors, let's suppose that you've got first
3 wi:fe,
4 S2: Yeah

In this example S1 uses the lexical device "what" to indicate that he has difficulty in finding the appropriate word.

In word-searching there are no visible trouble items in the utterances and the signals are just what Levelt calls "editing phrases", which are

distinguished from post-positioned searching. This "editing phrase" has the function of a) searching for a word, or b) securing the floor.

2) "Selection" also refers to same turn post-positioned repair, which means that the speaker says something and starts again in order to make it more appropriate, precise and more relevant to what has been said:

Ex 4.60 GW1=403

—> 1 S1: =I think she- she- [.] this this can be uh easily solved, we
2 can ask her [..] to [.] to or to get her certificate.....

Ex 4.61 CR2=58

1 T: You're heavily influenced, perhaps.
—> 2 What do- [what does the first one mean (name of student)
3 S3: [Stopping

The first example shows that S1 says something which is incomplete and restarts. Restarting is usually characterised by the trouble utterance ended with cut-offs or pauses with fillers. Here an incompletion utterance at this stage is not completed by another participant because the current speaker does not select the next and there is no self-selection undertaken; the current speaker may continue his or her utterances after these gaps. The current speaker is the floor holder.

Ex 4.62 CR2=570

1 T: =No no no soon after what? Soon af- what did the plane do
2 before it crashed?

Ex 4.63 CS2=81

1 S1: Yes, it must be [.] we we are under pressure because of our
2 traditions,

Ex 4.64 CS2=167

1 S3: The thing is I- it's good idea,

In 4.62 T tries to provide a clue to enable a student to complete her exercise by using a question. She starts with a question of "after what" and then changes into "what did it do after the plane crashed". By doing this the teacher tries to make what she expects clearer to students. In the second example S1 explains that the reason this happens is that it "must be" a result of pressure from our tradition. He truncates his utterance at "be" and then changes the focus of the utterance to explain how difficult it is for women to change: "we we are under the pressure because of the our tradition". Here speakers try to make their utterances more clear and relevant by changing the focus. An incompletion utterance at this stage is not completed by the other participant because the current speaker does not select the next speaker and there is no self-selection undertaken; the current speaker may continue his utterances after all these gaps. The current speaker is the floor holder.

4.4.2.2 Replacement in concurrent repair on production problems

"Replacement" used in this study refers to two types of repair:

1) Self-correction: this refers to the situation where the speaker replaces one item by another to make it correct:

Ex 4.65 GW1=85

1 S1: Well, I think that Jenny Williams should take this [..]
2 because she is well-educated, [.] a:nd uh as she got an A
—> 3 level and she speaks French, sorry Spanish, [.] beside [..] she
4 is engaged to be married. [.] And this means that it's a kind
5 of responsibility that uh [.] can help her to get this [.] job.

Ex 4.66 GW6=3

1 S2: I think the balloons is not- are not necessary,

In example 4.65 S1 replaces "French" by "Spanish". In example 4.66 S2 replaces "is not" by "are not". Both examples replace one item by another to make it correct. Here replacement is essential to the on-going communication, which depends on it to avoid misunderstanding. The change is needed and essential for smooth communication.

2) "Reformulation" refers to the situation where the speaker replaces one language structure by another to make it more appropriate:

Ex 4.67 CR2=373

—> S2: To understand, to: [.] to make the man understand,

Ex 4.68 GW1=75

1 S2: This is a kind of person who shouldn't be anxious. [.]
—> 2 He should [..] I think he should uh exert some effort or
3 show [..] some kind of uh patience,

Ex 4.69 CR2=136

1 T: Does it answer WHEN he- when did he stop?

These three examples illustrate structural changes. In example 4.67 S2 changes "to understand" into " make the man understand". In example 4.68 S2 changes "he should" into "I think he should..." introducing appropriate hedging. In example 4.69 T changes a Yes/No question to a direct Wh question structure. Further examples which show this kind of change in structure will be discussed in Chapter 6.

4.4.2.3 Refinement in concurrent repair on production problems

"Refinement" refers to the situation where a speaker tries to repair his/her utterances in order to make more precise and specific what s/he wants to say. There are two ways to carry it out:

1) "Substitution": It can be the case that a speaker substitutes a word or phrase by another to make it more precise. Substitution and self-correction both involve changing one item to another; the difference between them lies in that in substitution both items are linguistically acceptable, and the change is just a matter of preciseness or appropriateness in the context, whereas for self-correction only one item is acceptable or correct, the other is not:

Ex 4.70 GW1=380

1 S2: ...being a secretary once, a waitress second,
—> 2 a good speaker of, a fluent one of German language, uh [.] in
3 addition...

Ex 4. 71 GW1=287

1 S2: Or [.] he is sports: uh [..] Michael is a keen sportsman.

Ex 4.72 CS2=138

1 S1: =(???) rich people rich women can just afford to stay at
2 home,

Here in these three examples speakers substitute "fluent" for "good", to make it more precise, "Michael" for "he" to make it clearer and "woman" for "people" to make what is said more exact. Without these change the utterances can stand and are acceptable.

2) "Modification": It refers to a situation in which the speaker tries to make his/her utterance more specific, precise, clear and/or

colloquial by inserting more elements into the original phrase or clause, at the beginning of the utterance or at the end, or both. The important point is that original utterances without modifiers can stand by themselves without losing their essential meaning:

Ex 4.73 CS2=87

1 S1: [Yes, it's the first generation, yeah [.] it's going to [.] to
—> 2 break this this this ice, this piece of ice.

Ex 4.74 CR1=24

—> 1 S: Swim, they swim ashore,

Ex 4.75 CS2=75

1 S1: Because now we haven't we haven't changed at all,
—> 2 I mean we just started to change, and in this point, er many
3 problems can [.] um come can come to us in this situation,
4 er [.] women want to change but at the same time this is
5 quite difficult for her, as to [.] to be so open,

These three examples demonstrate that speakers try to repair what they say in order to make it clearer to the interlocutors. In example 4.73 S1 changes "this ice" into "this piece of ice". In example 4.74 S1 uses the word "swim" in response to a request for suggestions for escaping from a shipwreck, then he immediately repairs it to make it more specific and also make it into a full sentence: "they swim ashore.". In example 4.75 the speaker repairs herself by changing "haven't changed at all" to "just started to change", precisely what happens. It is not the language form but the content which S1 tries to repair. Here S1 uses the lexical device "I mean", as a signal.

The above aspects of repair which occur in the same turn can be categorised into the following patterns:

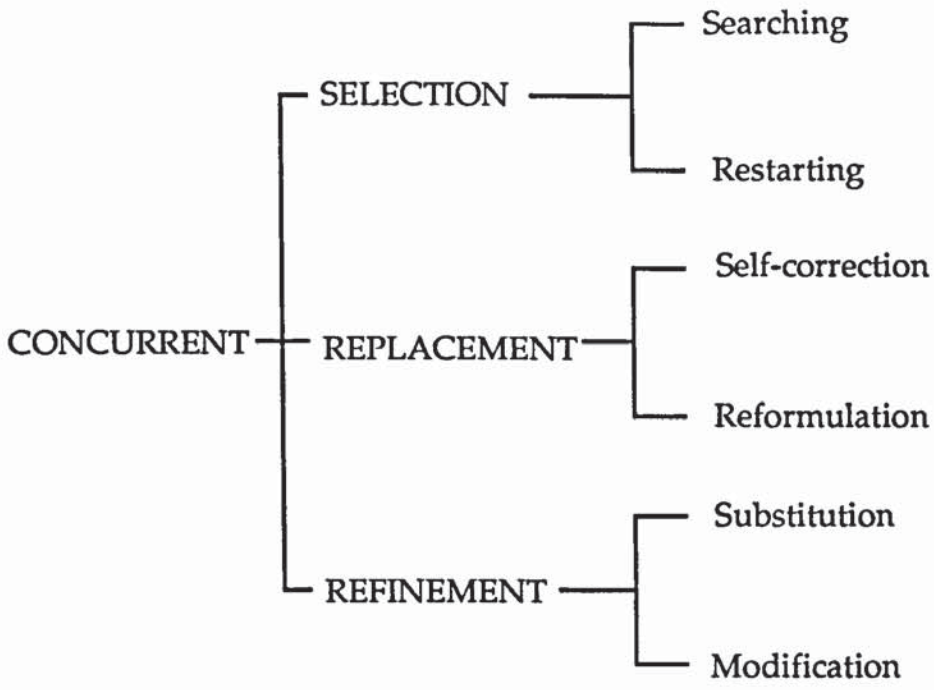

Diagram 4.3 Features of concurrent repair

The above diagram shows how a speaker repairs his/her utterances while s/he is speaking. At the same time these three categories demonstrate the three stages in the process of editing production of speech: execution, which is associated with starting the production; correcting, which refers to the process of removing the obstacles in the process; and checking, which is related to the refinement of efforts to produce an "ideal product" (Faerch and Kasper 1985:12).

Within same turn self-repair McHoul (1991: 353) has found the following features:

> "Whereas there are instances of self-initiated self-correction on the part of both teachers and students (types 1 and 2 especially)[9], these are often restricted to cases where the repairables or "trouble source" is other than an error in the strictest sense. Instead, it may be a grammatical shift, a return to a phrase that should have been inserted earlier, a vocabulary replacement, a word search, and so forth."

This study found that self-repair occurred more often in a form of restarting than in self-correction, modification or substitution, which confirms McHoul's findings. This will be examined further in Chapter 5. Another feature of concurrent repair is that it is not necessary to have these self-editing gambits to locate the trouble, because the trouble-locating "is compacted into the repair-candidate itself."

4. 4. 3 The features of retrospective repair on production problems

The term "retrospective" is used to refer to a sequence of repair when it is operated in the next turn by another participant or beyond the next by the trouble producer. When the production problem is treated in these places there are three different ways of undertaking it: other-repair, other-initiation/self-repair or other-initiation/other-repair, or third turn self-repair. The following sections will examine these features closely and separately.

4.4.3.1. Other-repair in retrospective repair on production problems

When there is a production problem in on-going communication other-repair is one of the ways used to repair it. Gaskill describes how other-repair is undertaken in conversation between NSs and NNSs as follows:

1) it is frequently preceded by a pause;
2) it is generally asserted emphatically in the form of "no + correction";
3) it is done after modulated other correction, and
4) it is associated with disagreement.

Reynolds noted that in L2 classroom other-repair seeks to repair problems of language, content or procedure. In this study both these

dimensions will be explored: the ways in which other-repair is used and what other-repair seeks to repair.

4.4.3.1.1 The ways used in other-repair

The ways used in other-correction will be examined as follows: modulated, unmodulated and disagreement, which are proposed in Gaskill's study (1980).

1) Modulated other-correction is used in the repair of a production problem, which indicates "uncertainty" about the interpretation of the previous utterance, requiring a repair. It is realized linguistically in the form of question type:

Ex 4.76 CR3=103
1 S: Unsignificant relations,
—> 2 T: Insignificant?
3 S: Insignificant,

In this example S makes a mistake about the negative formation of "significant" which the teacher indicates by uttering "insignificant" in a rising tone. This is followed by acceptance in form of repetition by the student.

2) Unmodulated other-correction is another way used in the repair of a production problem. It is undertaken directly in a form of a statement:

Ex 4.77 (Reynolds 1990, AT3/7B 508-11)
1 Sa: also bicoz large amounts of energy are required for
2 desalinization and water (trs-) tran:musition,
3 T: transmission
4 Sa: transmission

In this example Sa searches for the word "transmission" and ends up with "tran:musition". The teacher corrects it with "transmission", which is accepted by Sa.

Ex 4.78 GW1=106

	1	S2:	=She might be a [.] daughter of a Spanish woman, [..] but
—>	2		might noy [.] uh speak French,
	3		[1 sec]
—>	4	T:	[Spanish,
	5	S1:	[Well,
	6	S2:	Sorry, [Spanish
	7	S?:	[Spanish,

This example shows that the trouble source is in line 2. This mistake is corrected by the teacher directly by replacing the trouble source with the correct item. S2 accepts the correction by repetition. The correction by the teacher was offered after a pause, an example of other-repair delayed in order to provide the opportunity for self-repair.

The above examples of other-repair show the relationship between other-repair and acceptance.

3) Disagreement can constitute another type of other-repair. It is offered when the participants have different opinions about previous utterances:

Ex 4.78 GW1=249

1 S3: So Michael, Michael Robert again is the first because he
—> 2 speaks Arabic and [...] uh, some French,
—> 3 S2: Little French,
4 [...]
5 S3: No=
6 S2: =We say little which doesn't mean that he can conduct [..] a
7 conversation,
8 S1: Yes=
9 S3: =Well, he knows Arabic,

This example shows that S2 considers "some" is a "trouble source" produced by S3. S2 corrects it by "little French". This other-correction differs from the above in two ways. In modulated and unmodulated other-correction the trouble source cannot be accepted and repair is needed. Disagreement is a way by which the previous utterance is rejected. The rejection is usually delayed before delivery (see Ex 4.78 line 4 and 5). Since different opinions are involved, the distinction is not a matter of right and wrong. This example also shows that the other-repair can be rejected, as in line 5.

Other-repair is used less frequently than self-repair. It occurs more in dealing with linguistic problems of production than content ones. Analysis of other-repair in language, content and procedure will follow.

4.4.3.1.2 The focuses of other-repair

Reynolds basing his analysis on van Lier's description, noted that in L2 classroom the focus of other-repair is usually on language problems rather than on content or procedure problems. This model has been adapted in this study.

4.4.3.1.2.1 Other-repair on language problems

Other-repair on language problems refers to the repair of the form and/or function of the language:

Ex 4. 79 CR2=333
1 S2: Uh: [.] we wore warm clothes so we didn't=
2 T: So that so that,
3 S2: So that we didn't get [.] cold,

4.4.3.1.2.2 Other-repair on content problems

Other-repair on content problems involves problems in the transmission of thoughts, information, feeling etc:

Ex 4.80 CR3=132
1 S2: So it reproduces the heat of the sun, and=
2 T: =It increases the heat,

4.4.3.1.2.3 Other-repair on procedure problems

Other-repair on procedure problems refers to problems in the organization and structure of the interaction, rules for the conduct of the activities, etc:

Ex 4.81 GW4=48
1 S4: I think it's er [.] most important
2 [..]
3 S1: Speak louder please ((laughing))

Other-repair is generally self-elected and it has no connection with floor getting.

4.4.3.2 Other-initiation in retrospective repair on production problems

When a production problem occurs in an interaction the other participant may withhold the repair and undertake an initiation in order to provide an opportunity for the trouble producer to do self-repair. Other-initiation is used in analysing repair in a number of studies. van Lier describes how other-initiation occurs in two circumstances in the L2 classroom "It occurs when problems of hearing or understanding the talk are in evidence... and for procedural problems." (1988: 197). However, how it is operated has not been examined in detail. The distinction between other-initiation for production and understanding repair is a new concept proposed in this study. The differences between other-initiation in production and understanding repair lies in the fact that the other-initiator in production repair knows the correct form and has the ability to do the repair, but withholds it; in understanding repair the other-initiator has the problem of interpreting the utterance, therefore the other-initiator is unable to undertake the repair directly. Secondly, the ways used for other-initiation in production problems and understanding problems are different, as was found in this study.

Other-initiation in production repair plays dual roles: evaluating and requiring repair. Other-initiation is used to indicate where the trouble source is and what repair is required. The examination of other-initiation for production problem repair shows that clue, prompt and rejection plus are the commonly-used ways to undertake it. It is necessary to illustrate these ways closely.

4.4.3.2.1 The ways used in other-initiation

4.4.3.2.1.1 Clue as other-initiation

Cluing is one means of other-initiation. It occurs in the turn after the trouble source and it functions as a repair initiation, indicating that a repairable exists in the previous utterance and that a repair is needed. It may also indicate where a repair can be found. The following examples illustrate these features:

Ex 4.82 CR2=412

1 S1: I whispered [.] so I wouldn't want anyone to hear,
2 T: No no, I don't think you've got that. But try to do it with an
3 infinitive,
4 S1: I whispered so that nobody can hear,
5 S2: [Could hear,
—> 6 T: [Think of prevent [..] I whispe:red [.] I whispe:red,
7 S1: To [.] prevent [anybody to
8 S5: [to prevent anybody from=
—> 9 T: To prevent anyone [.] from [hearing,
10 S: [Hearing,

In this example the trouble source is the student response in line 1. The teacher does not consider S1's response is appropriate in terms of form and so initiates repair by rejection and the provision of a clue to what is be used in the answer. S1 offers the repair "so that nobody can hear". The teacher reinitiates repair by providing a further clue with a completion invitation in line 6. S1 tries to use the required form this time and S5 accompanies him to finish the answer, which is interrupted by the teacher's completion before it is completed by S5. The repair organization sequence is other-initiation/other-repair. At the same time we must bear in mind that in this example other-repair is undertaken after several opportunities provided to the students,

which confirms the finding of Swartzer (1980) that other-repair occurs in a circumstance in which several opportunities are offered for self-repair. This repair operation is specific to the classroom. The teacher's other-repair in this example plays the pedagogical role of making clear to every student what the right version for this response is and it also draws the students' attention to the correction after a long trial of self- and other-repair from the students. Linguistic and procedural problems occur in the same utterances, especially in students' utterances. The initiation for repair by clue helps the students find where the trouble is, though sometimes the students have to locate the repairable and then undertake the repairing.

Ex 4.83 CR1=429

—> 1 S1: And to protect wildlife we need some uh,
2 S2: (???)
3 S3: Gun, gun,
—> 4 T: To protect wildlife or to protect yourself from wildlife?
5 ((T and students laughing))
5 S1: To protect ourselves from the wildlife,

In this example both teacher and students are talking about how to survive on a desert island, so when S1 says "to protect wildlife we need something" S3 understands the meaning as being to protect oneself from wildlife so he responds with "gun gun". The teacher, who recognises the problem of production with S1, initiates the repair by offering two alternatives in question form, providing the student with the opportunity to self-repair. In this example the problem lies in the contextual relevance.

4.4.3.2.1.2 Prompt as other-initiation

A prompt is another way to initiate a repair of the production problem. It is similar to cluing except that a "prompt" gives no indication of what the required information might be.

Ex 4.84 (Jefferson 1987: 97)

1	Ken:	He likes that waiter over there,
2	Al:	Wai-ter?
3	Ken:	Waitress, sorry,
4	Al:	That's better,

Ex 4.85 (Jefferson 1987: 86)

1	Ken:	Hey [.] the first ti:me they stopped me from selling
2		cigarettes was this morning.
—> 3	Louise:	From selling cigarettes?
4	Ken:	Or buying cigarettes

These examples show that other participants repeat the trouble source, which can be interpreted as either a production or an understanding problem. According to the criteria of sequential organization these two examples of other-initiations are followed by the replacement of one item by another, and since Al clearly knows it is a "waitress" and not "waiter" standing there, just as Louise knows Ken is not selling the cigarettes, they are identified as problems of production. This type of repair involves other-initiation/self-repair. Prompts also feature prominently in CR interaction and will be discussed in Chapters 5 and 6.

4.4.3.2.1.3 Rejection-plus as other-initiation

Other-initiation can be done by simply rejecting what has been said in the previous utterances, which is different from disagreement where different opinions are expressed. The rejection occurs without providing the

extra information which is a feature of disagreement. Most of the time the rejection is used together with clue:

Ex 4.86 CR1=58
1 S5: Small boat,
—> 2 T: No,
3 S1: Small boat,
4 S3: Life boat,

Ex 4.87 CR1=70
1 S: Rescue boat, no?
—> 2 T: No, cause a rescue boat would come to the accident,

Ex 4.88 CR2=412
1 S1: I whispered [.] so I wouldn't want anyone to hear,
—> 2 T: No no, I don't think you've got that. But try to do it with an
3 infinitive,
4 S1: I whispered so that nobody can hear,
5 S2: [Could hear,

In example 4.86 T simply rejects S5's answer; in example 4.87 T rejects the answer with an explanation as to why it is not "rescue boat"; and in example 4.88 T rejects S1's response and provides a clue on how to repair it.

4.4.3.2.2 The focus of other-initiation

When other-initiation is used in dealing with a production problem it can be focused on language, content or procedure.

4.4.3.2.2.1 Other-initiation on language problems:

Ex 4.89 CR1=103
1 T: So this is used as the adjective here, ship(type)
2 S3: One word?
3 T: Yes, it's one word, shipwreck,

4.4.3.2.2.2 Other-initiation on content problems:

Ex 4.90 CR2=570

1 T: No no no soon after <u>what</u>? soon af- what did the plane do
2 before it crash?
3 S5: Take took
4 S2: Soon [afterwards [.] er
5 S3: [Taking off
—> 6 T: What did it do before it crashed?

4.4.3.2.2.3 Other-initiation on procedure problems:

Ex 4.91 GW1=187

1 S2: Well, let us de- decide on uh [..] who is [..] the the most
2 educated [.] among [...] the candidates, [..] who is?
3 S1: Well, uh according to: [.] uh you see [..] ability to speak a foreign
4 language I think [.] uh Ja- Janet [..] as [.] yes one there is
5 no evidence that Jenny Williams has any sort of foreign
6 language or she speaks any foreign language and, neither [.]
7 Bill [...] or uh-
8 S3: I'm afraid I don't [agree
9 S1: [On this, only two,
10 S3: About this, because here is uh the case of uh Jenny
11 Williams, [.] her qualification is [.] uh: very [..] <u>clear</u> she
12 <u>has</u> just left school with A <u>level</u>,
13 S2: In English=
14 S3: =This in terms of education she is the most or educated
15 among the group,
—> 16 S1: Excuse me, to check the the, I'm speaking about uh uh the
17 ability to speak a foreign language,
18 S3: But we first want to discuss the education ab-
19 certificates,

In this example S2 asks a question about who is the most educated among the candidates, which is the first criterion for discussion. S1 responds that in terms of foreign language ability there are only two candidates, and S3,

thinking of education in general, expresses his opposition. S3 continues by claiming that Jenny Williams is the most educated candidate. S1 now finds they are speaking about different criteria: education and foreign language ability. This failure to establish what they are talking about is considered a procedural problem, which hinders the continuation of communication. Production problems in procedure can be divided into pedagogical or conversational. Conversational procedure is usually focused on what is actually being talked about, and pedagogical procedure is focused on what it is required to talk about. Another difference is that in classroom what is required is controlled by the teacher, while in conversation it is controlled by all participants. Such differences will be discussed in Chapter 6.

4.4.3.3 Third turn self-repair on production problems

When there is a production problem there may be an opportunity for the trouble producer to repair in the third turn.

1) This can be done in a form of modification:

Ex 4. 92 CS1=131

1 S1: For the girls=
2 S2: =That's right=
—> 3 S1: =The young girls,
4 S2: Yeah,

This example shows that S1 modifies what she has said in turn 1, changing "the girl" to "the young girl" to make it more precise.

2) It can be done in a form of substitution:

Ex 4.93 GW4=85

1 S1: I mean they are quite small you know=
2 S3: =You can use your (???) ((laughing))
—> 3 S1: I mean these plaster are very small,

Ex 4.94 CR5=125

1 S2: Yes, the asphalt [.] for [.] for [.] general is- in general is [.]
2 is dark,
3 T: Yeah,
4 S2: It's black, so the black coat get the sun=
5 S3: =Sun,
6 S2: Heat, of the sun,

In example 4.93 S substitutes "these plaster" for "they" to make it clearer. Interestingly, "quite" is also changed to "very", thus rendering the point more emphatic. In example 4.94 S2 changes "dark" into "black" to make more precise what she wants to say.

3) It can be done in a form of replacement:

Ex 4.95 CS1=296

1 S1: =To marry more than one,
2 S2: Yes,
—> 3 S1: To marry more than [five wives,
4 S2: [Five wives,

These examples demonstrate that self-repair in the third turn after "topic continue" can be done in a form of replacement, substitution or modification. In this category it occurs either after back channel or when the floor has been stolen. The opportunity for undertaking self-repair beyond next turn varies in different interactions. A detailed discussion of this will be presented in Chapter 5 and 6.

The above examination of the production problem in its retrospective aspect shows that it is very complicated in terms of what kind of problem it is, and how it can be repaired. The following diagram may help to demonstrate the organizational features of the repair process:

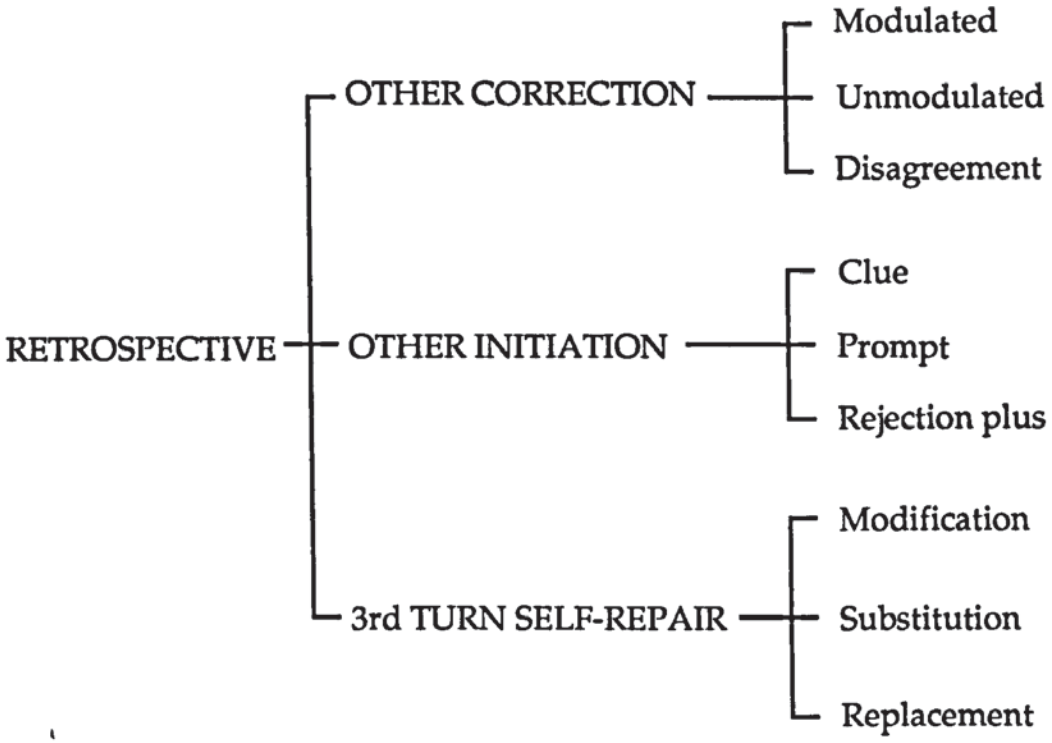

Diagram 4.4 The features of retrospective repair

The above section has analysed the problem of production from three different angles, in which different features and characteristics have been discussed. The examples used are taken from the three types of interaction. There is no intention at this stage to establish the differences and similarities between CS, GW and CR in terms of the frequency, since these will be examined in Chapter 5. The purpose of this chapter, as mentioned at the beginning, is to describe, in general, the problem types and repair processes in terms of their characteristics and relevant linguistic devices. I shall now turn to an examination of the characteristics of understanding problems in order to see how understanding problems are solved in the interaction.

4. 5. The Different features of repair on problems of understanding

Understanding problems will be examined in terms of the problems of understanding for the hearer. As examples 4.4, 4.5, and 4.6 in sections 4.1 and 4.2 have shown, the problems of understanding appear in various ways. The outcome can be complete non-understanding, partial understanding or misunderstanding. In this study the problem of understanding will be examined from these three perspectives in terms of the problem type. In addition to the distinction of problem type, the examination will also focus on the source of the problem, in other words, whether the problem of understanding is related to language, content or procedure.

Before examining these features of understanding problems there are at least four issues which are worth discussing. First, in the literature of research on the problem of understanding, Gumperz and Tannen (1979), Gass and Varonis (1985), Milroy (1985) and Thomas (1983) have examined problematic aspects of communication in which there is no consistent use of terminology (see section 4.5.3. for discussion).

The second problem is that it is not adequate to simply regard "what", "sorry" or "pardon" as indicators used to show an understanding problem. As we can see from example 4.96 these utterances perform different functions in the interaction. Without considering the context in which these expressions are used, it is difficult to say whether they are indicators of non-understanding or questioning. For example, in Gass and Varonis's (1985) article the authors illustrate the non-understanding problem as follows:

Ex 4.96 Gass and Varonis (1985: 73 — defined as Non-understanding)
1 S When are you going to visit me?
2 J Pardon me?

In this example "Pardon me?" can be interpreted in different ways. It can be an indication of not hearing, or it can be a question of a previous utterance, which means "Who said I'm going to visit you?" or "When did I say I'm going to visit you?". Without providing the context in which these interactions take place it is hard to say what problem it indicates. Every effort to solve a problem like this is fairly arbitrary and open to challenge, since it is impossible to know the speaker's intention. The solution to this problem is to examine it retrospectively, or rather from the context of interaction, considering sequential features as the "indicators" of the problem. If it is followed by a repetition, reformulation or explanation it is at least regarded as an understanding problem by the interlocutor. If it is followed by replacement or correction it is treated as a production problem by the speaker.

The third issue is the distinction between different types of understanding problem. It is difficult to judge whether it is non-understanding, incomplete or misunderstanding from the hearer's point of view, since it is impossible to know what the hearers have in mind when they initiate repair. As has been mentioned in section 4.3, understanding is not only related to the hearer's understanding of preceding speaker but also the speaker's understanding of the hearer's knowledge and attention. As this study shows, it is very difficult even to identify what the hearer's understanding really is. The solution to this problem in this study is to examine the indicators used in the interaction to see whether

1) common expressions like "what", sorry", "pardon" or "I did not hear" indicate that it is non-understanding (in the context of other-initiation for repair), since the hearer does not show any sign of understanding;
2) repetition of the trouble source or partial repetition plus WH-question word, clarification request, confirmation check,

comprehension check, indicate that it can be treated as incomplete understanding; or

3) the utterances made by the interlocutor do not match the speaker's intention, which shows a misinterpretation of the utterance in the previous turn, so it can be regarded as a misunderstanding.

The fourth issue concerns the criteria for distinguishing between a production and an understanding problem, since both can be initiated by other participants. SJS, McHoul and van Lier mention that other-initiation for a production problem may take the form of modulation as an understanding problem; in other words, the hearer treats the problem of production as if it were a problem of hearing or understanding of the talk. This gives the speaker a chance to do self-repair but it makes identification of the problem of production and understanding even more complicated. However, it is useful to distinguish them, as McHoul (1990: 371) notes:

> "The lack of a clear distinction between understanding checks and modulations in the classroom is clearly connected with their unique organization as discursive sites, and it offers a promising nexus for further research."

Whether it is modulated other-correction for self-repair or a genuine understanding check is determined by what follows the initiation in terms of the sequential organization. In this study the analysis will be based on the following considerations:

1) if the speaker replaces or corrects the trouble source after the hearer's modulated other-initiation then it is a production problem;

2) if the speaker confirms or disconfirms the utterance in other-initiation, it is treated as a genuine understanding check by the speaker;

3) if the speaker treats modulated other-initiation as an understanding problem by repeating the utterances s/he produces it would usually generate another initiation since the problem remains unsolved.

The following examples will be used to illustrate these features clearly:

*Ex 4.97

1 A: I went to Paris,
2 B: Was it Paris?
3 A: Oh sorry, it was London,

*Ex 4.98

1 A: I went to Paris,
2 B: Was it Paris?
3 A: Yes, Paris,
4 B: Are you sure it was Paris?
5 A: No, London, or A: Yes,
6 B: Are we talking about your trip last
7 week?

*Ex 4.99

1 A: I went to Paris,
2 B: Was it Paris?
3 A: Yes,
4 B: Was it good?

(Note: Examples with * marker are made up for this study)

In the above three examples the first two parts of the interaction are the same: trouble source and other-initiation. What makes them different lies in what follows the other-initiation. 4.97 is followed by self-repair and is therefore treated as a production problem. 4.99 is followed by confirmation and is treated as an understanding problem. The real difficulty lies in 4.98, in which the other-initiator uses the initiation for production repair in modulated form (line 2) and the trouble producer does not recognise it. S/he considers it as an understanding check and so repeats the trouble source (line 3), which generates another initiation by the hearer, who re-initiates repair (line 4). If another initiation is generated this means the other-initiator considers it as a production problem which needs repair (line 5 and 6 provide possible continuations of the interaction). In these three cases, 4.97 and 4.98 contain a problem in production, and 4.99 is a genuine understanding problem.

As mentioned before, any solution to solve a problem like this is arbitrary and open to challenge. However, I hope to suggest a way to getting closer to the nature of the problem.

Having mentioned the difficulties and possible solutions to problems based on criterion used to distinguish the different problems of understanding, it is now necessary to examine these three categories in detail.

4. 5. 1 Repair on non-understanding problems

The problem of non-understanding is associated with the following factors: a) sound problems; b) language problems; c) shared knowledge. In the following sections these factors will be discussed in turn.

1) It can be the case that the sounds of the previous utterances are not clear. This might arise in two different situations:

a) Lack of sound quality:

Ex 4.100 CR1=475

1 T: What Luk?
2 S: (???)
3 T: Sorry?
4 S: To sports equipment
5 T: Sports equipment,

In this example the problem is that the hearer does not follow what has been said, and it is impossible to transcribe from the tape. This indicates that the problem is related to the lack of sound clarity in the previous utterance.

b) It can be the case that the hearer does not hear the utterances clearly when two people are speaking at the same time:

Ex 4.101 CR1=82

1 T: Life boat, life boat, yes so you have life jackets life boats
2 on board,
3 S5: [I said life boat,
4 S?: [(???)
—> 5 T: Uh?
6 S5: I said life boat,

Ex 102 GW5=154

1 S1: =You take leaves or something a piece of your clothes [.] or
2 [.] it's not [luxury
3 S3: [What about compass?
—> 4 S1: What?
5 S2: It's a luxury to have a plaster,

The above examples show that the problem of non-hearing occurs in the interaction when the sound is not clear or two or more speakers are speaking at the same time. These are considered as environmental causes. Such cases

are infrequent, and simultaneous utterances are not very long, as conversational turn-taking analysis shows "less than 5 per cent of the speech stream is delivered in overlap" (Levinson 1983: 296). However, it does occur in spoken discourse and when it occurs it might cause hearing problems. When the problem of hearing is associated with sound, repair takes the form of repetition.

2) It can also be the case that the hearer does not understand the language used in the interaction:

Ex 4.103 (Reynolds 1990: 268)

1 T: an' what this section does
2 (3.8)
3 is to summarize the research that's been done by several
4 other people, summarizes the research findings of several
5 other people,
6 (3.2)
7 S: What's mean summarise?
8 T: Summarise?
9 S: (exactly)
10 S: (yes)
11 S: Summarise
12 T: What you're what you've been doing finding the main
13 points: from some other work summarise,

Ex 4.104 (van Lier 1982: 430)

1 T: thin face
2 L: ((softly)) what is thin uhm what is thin?
3 T: ((gesture)) fat [... thin=
4 L: [a:h
5 LL: =//thin (laughter))//

Although in these two examples the interlocutors fail to understand only part of the utterance it is treated as non-understanding, because the

interlocutors do not understand the repair candidate at all. This kind of problem is directly related to language. It may be that non-understanding of language is a specific characteristic of L2 learners, whose ability in the target language (TL) is limited. The initiation can take the form of request for a definition but it is usually indicated by a confirmation check, understanding check or clarification request. In the above examples the hearers do not understand the repair candidate (the words "summarise" and "thin"). The interlocutors initiate repair by asking for a definition and the problem is treated as one of non-understanding. Repair here might change the structure of the language but it will offer no additional information.

3) It can be shared knowledge which is associated with the problem of understanding:

Ex 105 CR1=234

1 T: So what I want is all the idea you have of what you want to
2 take,
3 S3: Everything for?
—> 4 T: Sorry?
5 S3: Everything for one year to live?
6 T: Yes, (???) OK. Sorry to live one year on the island, yes, what
7 will you take?

In this example the teacher asks the students what they are going to take. S3 does not answer the question directly, but asks a question to confirm the reason for doing it. Here "Everything for" can be interpreted both as a production and an understanding problem. It can be seen that "Everything for" is not a complete utterance. Such an incomplete utterance is usually treated as a trouble source in CR. However, it could be that the student is assuming that all the participants know what he is referring to when he uses "everything for" since they are discussing "living one year alone on the

island", in which case it is an understanding problem. It is clear, anyway, that the teacher can not understand what "everything for" means here, or does not hear the utterance. Here S3, who repeats the whole utterance, treats it as understanding problem on the teacher's part. The teacher is then able to clear up the student's non-understanding.

Ex 4.106 GW6=127

1 S4: Er if you want to escape this place it need it's useful but if
2 you're going to wait to [.] discover rescue you don't need
3 compass,
4 S3: What about er the pad of thin paper?
—> 5 S2: What?
6 S3: The pad of thin paper number four,
7 S1: Yeah but paper you [need a paper,
8 M: [To survival?

In this example students are talking about choosing 8 items from a list of 20. K explains that they do not need a compass, and then S introduces a pad of thin paper. M initiates repair by "what", which can be interpreted as a non-understanding problem or seeking for relevance. S repeats what he said in line 4 plus *more* information, "number four", which S uses to justify the relevance of his utterance and show where his suggestion appears in the list. The difference between a language problem and a relevance problem lies in the form of repair. In the first case a definition or explanation is given and no more information is required. But the latter case more information is required to justify the relevance of the utterance. S treats this initiation as an understanding problem by repeating the utterance with more information, which indicates the relevance and usefulness of his utterance in the context.

The above examples demonstrate that the different problems which hearers have in non-understanding are associated with the problems of sound, language or shared knowledge. Since this study focuses on the type of

problem, not on what causes the problem, the cause of the problem will not be discussed further.

The above discussion of repair in a non-understanding problem can be summarised as follows:

a) The repair process on a non-understanding problem consists of three parts: trouble source, other-initiation, and *self-repair*. This can be treated as an episode in the main story, which Schegloff refers to as a "side sequence". Gass and Varonis label it as "vertical sequence".

b) Because of the capacity of the initiator, the problem with non-understanding can be solved only by self-repair. This finding shows that self-repair here is not determined by the sequence of the organization but is related to the nature of the problem. The initiator is unable to undertake it. Sequentially it is operated as other-initiation/self-repair.

c) An examination of the linguistic features in the repair of a non-understanding problems shows that the following non-understanding indicators are often used: "pardon", "what" or "sorry", "excuse me", "I don't understand". It should be mentioned here that this does not mean that all these expressions indicate non-understanding; they can be used for questioning or complaining as well.

4. 5. 2 Repair on incomplete understanding problems

An incomplete understanding problem on the part of the hearer may be located in the following areas (descriptions in parentheses are those used by van Lier):

1) Clarity of language (Medium-oriented):

failure to hear entirely the previous utterance, a difficulty in understanding the words or syntactic structure in the utterances.

2) Clarity of Content (Message-oriented):

a) a lack of confidence in the hearer's understanding of the meaning of the utterances;

b) difficulty in understanding the relevance, clarity or certainty of the utterances in the context.

3) Clarity of procedure (Activity-oriented):

a lack of confidence in the hearer's understanding of the procedure relating to the activity, of how to perform in a given task, or of what to say on a given topic.

4.5.2.1 Repair on the problem of clarity in language

1) It can be that the hearer fails to hear a certain of part of the utterances:

Ex 4.107 CR3=109

1 S: =Yes, they can have some relations=
2 S: =But it's no the (???) relationship,
—> 3 T: I'm sorry, what is the relation?
4 S: [The gases from [.] the asphalt
5 S: [(???)

The difference between non-understanding and incomplete understanding lies in whether an indication shows that the problem with understanding is partial or total. Non-understanding may also include a situation where part of the utterance is completely "non-understood" as shown in examples 4.103 and 4.104. In examples 4.103 and 4.104 the problem is not one of hearing, but rather of understanding the meaning of the repair candidate. In this example (4.107), the word before "relationship" is

impossible to transcribe from the data, which indicates that the teacher does not hear that part. In this example it is worth noting that the teacher's initiation of repair plays another function: that of replacing the previous utterance. She uses "relation" instead of "relationship". This is very common in classroom interaction when the teacher initiates repair for the trouble producer, and at the same time corrects part of the original utterance.

2) It can be that the hearer does not hear the word clearly:

Ex 4.108 CS1=985

	1	S4:	Divorce?=
	2	S1:	=Divorce, easily
	3		[1.0 secs]
—>	4	S4:	Eas?=
—>	5	S2:	=[Pardon?
	6	S3:	=[Easily,
	7	S1:	Yes, easily

This example shows that the hearers have difficulty in hearing the word "easily". S4 hears part of the word, which is considered as incomplete, and S2 indicates this by "pardon" which shows his non-understanding. After their initiation another student repairs it by the repetition of the word said by S1, followed by confirmation from the producer.

The above examples show that an incomplete understanding occurs when a full or clear hearing of the utterance is lacking. The problem can occur in an utterance or within a word.

4.5.2.2 Repair on the problem of clarity in content

1) It can be that the hearer is not certain about what s/he hears due to a lack of confidence:

Ex 109 (Gass and Varonis 1991: 125)

	1	NS:	When I get to Paris, I'm going to sleep for one whole day.
	2		I'm so tired.
	3	NNS:	What?
	4	NS:	I'm going to sleep for one whole day.
—>	5	NNS:	One hour a day?
	6	NS:	Yes,
	7	NNS:	Why?
	8	NS:	Because I'm so tired.

In this example NNS indicates his difficulty in understanding what "one whole day" means by offering an alternative to clarify the problem. Unfortunately, NS, who is very tired, confirms the incorrect interpretation, which leaves the problem unsolved.

Ex 4.110 CS1=581

	1	S2:	=Have you have you got uh child um [.] a baby or:
	2	S1:	Ye:s uh: I've got
	3		[..]
	4	S2:	Some some, yeah=
	5	S1:	=Yeah I have got
	6	S2:	In China only one=
—>	7	S1:	=Many, [1.0 secs] one?
	8	S2:	Only one, yeah this is the er

Ex 4.111 CS2=97

	1	S3:	(???) woman now is is more than [..] I think eighty percent,
—>	2	S2:	Eighty percent?
	3	S3:	Yeah, [now,
	4	S1:	[Yeah,

In these two examples both S1 in line 6 and S2 in line 2 try to confirm their understanding by using other-initiation in the form of a confirmation check.

2) It can be that the hearer fails to be sure about what s/he has heard due to the relevance of the utterances in the context:

Ex 4.112 CS2=814

1 S3: With the teacher, the same,
2 S2: Yeah, [teacher?
3 S3: [The teacher have to go to [rural area=
4 S2: [Rural area=
5 S4: =Yes, yes, [...] where is it?

In this example the participants are talking about doctors who can not find a good job in the city, but still like to stay. Then S3 suddenly switches to "teacher", which S2 thinks refers to the same situation. The problem is that he can not see its relevance, thus he initiates repair by repeating the word. S3 explains the relationship immediately after his utterance which makes the initiation and explanation overlap. In this example the problem with the hearers is related to the relevance of the utterances in the context. It could also be argued that the situation here is the same as for the other two examples as there is uncertainty about the utterances. However, it can be seen that S3's immediate explanation justifies it as being more likely to be the problem of relevance.

3) It can be that the hearer fails to understand due to insufficient information or the ambiguity of the utterance. S/he tries to clarify it:

Ex 4.113 CS3=372

1 S2: And in Europe, one,
—> 2 S3: And one what?
3 S2: And Queen and another Queen, ((laughing)) [.] Ho- in which
4 [country,
5 S1: [Yeah, Holland in Holland we have a Queen but I mean the
6 uh politicians uh,

In this example S3 indicates his understanding difficulty by the repetition of the trouble source plus the question word "what". S2 repairs it by providing more information. This example shows the hearer is not clear about what has been said in the previous utterances due to insufficient information. The following example is from SJS:

EX 4.114 (SJS: 368)
1 A: Why did I turn out this way?
2 B: You mean homosexual?
3 A: Yes,

In example 4.114 "this way" might have different referents so B initiates repair by a comprehension check. This example shows that the problem lies in the ambiguity of the reference "this way". Both of these examples show that there is less information given than is required.

4.5.2.3 Repair on the problem of clarity in procedure

Another type of problem in incomplete understanding appears as a lack of understanding of the organization of the interaction, which includes the task required to be undertaken or the activity procedure required to be used, and the topic to be discussed:

Ex 4.115 GW6=3
1 S2: I think the balloons is not are not necessary,
—> 2 S1: Which one?
3 S2: Number twelve,

This example shows that S1 is not sure which one S2 suggests should not be taken, indicating it by initiation using a question. S2 provides the answer to the question by giving the number of the item, which is associated with the topic (selection of essential items from a list).

Ex 4.116 CR1=89

1 T: Sorry, I don't hear you. [2.0 secs] All right, now what do we call
2 this sort of accident? [.] The boat is sinking^ but what's the
3 name of that sort of accident?
4 [1.0 secs]
—> 5 S: Name?
6 S: Shipwreck,
7 T: Yes, that's the word, it's a shipwreck,

In this example the teacher asks the students to supply a word, but S does not fully understand what is required in the answer. She requests a clarification with a question. S's question of "name" is open to different interpretations. But, the response given by another student is accepted by the teacher with the comment "that's the word," indicating that the request from the first student is about what response is required. The problem is obviously associated with how to fulfil the task. It is a procedural problem.

In incomplete understanding three types of problem have been identified: linguistic, content and procedure. It has been noticed that both linguistic and procedural problems are handled immediately and briefly, while content problems take longer to resolve, since it takes time for the problem producer to locate the problem. The nature of the trouble source in its language aspects lies in the trouble item itself, and the nature of the trouble source with content is related to the context in which it occurs. Incomplete understanding, as has been indicated in the above examples, is initiated by repeating the problem, by a request for a clarification, or by asking for more information to be provided. The problem of understanding, due to its complexity, is more difficult to identify than the problem of production. However, the above analytical methods enable us at least to define and identify these problems from the sequential organization.

Having discussed incomplete understanding it is worth examining what happens when people misunderstand each other and how they manage to solve the problem.

4. 5. 3. Repair on misunderstanding problems

Prior to a detailed analysis of how the problem of misunderstanding is repaired, there are a few issues which need to be discussed. Firstly, there is a flourishing but confused terminology about misunderstanding, which has been described clearly by Gass and Varonis (1991:123) as follows:

> As discussions of miscommunication in recent years have become common in the second language acquisition literature, the terminology to describe the phenomenon has similarly flourished. Unfortunately there is little consistency between and even within authors concerning such terms as "miscommunication," "misunderstanding," and "communication breakdown." For example, what Tannen (1975) refers to as "communication mix-up," Gumperz and Tannen (1979) refer to as "misunderstanding" or "miscommunication", Thomas (1983) as "pragmalinguistic failure," and Milroy (1984) as "communication breakdown," 170. Varonis and Gass (1985a) discuss a hearer's interpretation or misinterpretation of speaker's utterances without confidence, while in the present chapter, we use the term "negotiated communication". Similarly, Thomas's "pragmatic failure" is akin to Milroy's miscommunication" and Clyne's (1977) "communicative breakdown." Thus this literature is particularly difficult to interpret because different researchers are using different terms for the same phenomenon, on the one hand, and the same term for different phenomena, on the other.

The second issue is associated with the various ways used to interpret the misunderstanding. It can be interpreted from the underlying assumption as the following examples show:

Ex 4.117 (Tannen: 220-221, quoted in Gumperz 1982: 135)

1 Wife: John's having a party. Wanna go?
2 Husband: OK.
3 (Later)
4 Wife: Are you sure you want to go to the party?
5 Husband: OK, let's not go. I'm tired anyway.

In this example the wife is an American native New Yorker of East European Jewish extraction. It is likely that this background influenced her preference for a seemingly direct style. In discussing the misunderstanding, the American wife reported she had merely been asking what her husband wanted to do, without considering her own preference. Since she was about to go to this party just for him, she tried to make sure that this was his preference by asking him a second time. She was being solicitous and considerate. The Greek husband said that by bringing up the question of the party, his wife was letting him know that she wanted to go, so he agreed to go. Then when she brought it up again, she was letting him know that she didn't want to go; she had obviously changed her mind. So he came up with a reason not to go, to make her feel all right about getting her way. Here the problem with their misunderstanding each other is not related to what language is but what the language does. This shows the different cultural aspects which affect the interpretation. Another similar example was presented in Gumperz's work (1982: 135):

(A husband sitting in his living room is addressing his wife. The husband is of middle class American background, the wife is British.

They have been married and living in the United States for a number of years)

Ex 4.118 (Gumperz 1982:135)

1 Husband: Do you know where today's paper is?
2 Wife: I'll get it for you.
3 Husband: That's O.K. Just tell me where it is. I'll get it.
4 Wife: No, I'LL get it.

This example shows a similar problem of misunderstanding. The question that is asked by the husband is misinterpreted by the wife as a request for the paper, and she offers to get the paper. Then the husband counter-suggests that he had intended to ask for information, not to make a request. The wife then insists on getting the paper.

The above examples indicate that misunderstanding is a very complicated phenomenon, which may not be recognized from the language used — what is said — but from an underlying assumption — what is done. It is interpreted on the basis of underlying socio-cultural norms, which are associated with the misinterpretation of the force of the utterances. Misunderstanding can not be seen from the surface of the language used. Cultural factors are often associated with these underlying elements of misunderstanding, and individual style is another factor which may be involved. This study will not focus on these aspects.

The third issue is that in a misunderstanding it can also be the case that the interlocutor is aware of the problem but s/he may opt for a face-saving move and continue with the conversation until the need for clarification becomes paramount. This presents insuperable problems for the analyst and it may be the case that the misunderstanding remains unresolved.

The fourth issue is that there is no analytical method available to recover the complexity of the phenomenon, although there have been some

attempts by researchers to solve the problem. Bruton and Samuda (1980: 55) have developed a model to explain the problem of understanding from six different levels of the perception process. Gass and Varonis (1985, 1991) propose several models, which are based on where the misunderstanding is indicated and what reaction of the interlocutor is. In their 1991 article they propose that misunderstanding can be examined from two aspects: grammatical and socio-cultural. As a result of the difficulty in studying the cultural norms and language differences these aspects are very complicated. Such an approach is therefore unlikely to provide the analytical means to explain the complexity of the phenomenon.

These factors have clearly illustrated that any analysis of misunderstanding must be a problematic one. Thus, this study will not try to solve this complex problem once and for all. It intends only to throw some light on the nature of the problem. It is concerned with what misunderstanding is, what misunderstanding shows, how participants react to it, and what its consequence are. Only recognisable misunderstanding which interferes with the interaction will be focused on, and underlying misunderstanding which does not show as breakdown in interaction will not be included. Careful analysis of the misunderstanding from the point of view of language and procedure will perhaps throw some light onto this problematic issue.

Having discussed the difficulty of analysing misunderstanding, the present study tries to categorise misunderstanding in terms of what has been said instead of what the participants intended to say, and to analyse it in terms of the sequential organization, rather than from a psychological perspective. Misunderstanding will be examined in terms of the following aspects:

1) if it is a misunderstanding of language (words or structure of the utterance);

2) if it is a misunderstanding of the activity procedure, required task or topic.

4.5.3.1 Repair on misunderstanding problems of language

This refers to a situation when the interlocutor misunderstands the language used in the previous utterances. The continuation of the interlocutor's utterance indicates a disparity of interpretation:

Ex 4.119 (Varonis and Gass 1985: 330)
(waiting for salesmen to return; phone is ringing)
1 Jose: Should we get those rings?
2 Rachel: Would we be able to give them any information?
3 Jose: [long pause] I mean napkin rings.

In this example, the comment is made after the misunderstanding. Rachel is a NS and Jose, her husband, a NNS. Rachel's response is made in accordance with her interpretation of Jose's (NNS) utterance. When Jose realizes that Rachel had misunderstood, he repairs her utterance by making his point clearer. Here is another example:

Ex 4.120 (Varonis and Gass 1985: 330)
1 Akihiro: I want to make a life with you.
2 Sally: [understood - 'I want to make love with you'.]

In this example a correction was made a full year later. The man, a NNS of English, made what he intended as a proposal of marriage: "I want to make a life with you." Sally understood: "I want to make love with you." Her response was non-verbal. A year later, after they were married, she was still wondering why he had never made a marriage proposal. He, of course, insisted that he had. It was then that the correction was made and the misunderstanding cleared up.

Ex 4.121 CS1=368

1 S4: [This wife, these two wives live together,
2 S2: Really?
3 S4: Yeah, [not not like in China,
4 S2: [A very big bed,
—> 5 S2: The big bed=
6 S4: =If you you have to live in the different=
—> 7 S2: =Huge one,
8 S4: The farther, the better,
8 S2: Uh:,
9 S1: In a no no not in a [.] on a large bed,
10 S2: Uhuh,
11 S1: Two women at the same time, no, but if you've got you can
12 have the same house=
13 S4: =Same house different rooms,
14 S1: Different rooms=
15 S2: =Different room yeah yeah different rooms yeah,

In this example the participants are talking about the problem of a husband with more than one wife. S2 asks whether they live under the same roof, by which he means the same room. S1 confirms the same roof, by which he means the same house but in different rooms. This can be a problem when languages have different meanings for "roof", "house" and "room". It can also be a problem arising from the socio-cultural interpretation of these terms.

4.5.3.3 Repair on misunderstanding problems of procedure

When a hearer misunderstands the rules or procedures of the activity or required task to be done s/he will produce utterances, which may be correct linguistically, but are not appropriate to the required procedure and task or not relevant to the topic in the context. Thus it becomes a production problem of procedure:

Ex 4.122 CR1=494

1 T: Have you seen this? I don't know the name for this, I
2 wonder you have [...]
—> 3 S3: Umbrella,
4 T: Umbrella?
5 S3: Uh,
6 T: Why?
7 S3: Hot,
8 T: Because it is hot, OK,

In this example the teacher asks the student to give the name for a piece of sports equipment. S3 responses with "umbrella" which is not what the teacher requires. The teacher does not think the object is called an umbrella, so she repeats his trouble word for clarification. S3 can not see there is a problem with his utterance being out-of-task. He confirms his utterance. Then the teacher makes a further request for clarification by asking why the student has selected umbrella. This time S3 can not see why the teacher asks a question like this. The student questions it by "Uh" in a rising tone. The immediate problem remains unsolved because the teacher changes the topic to one about weather. The following example is also from the language classroom:

Ex 4.123 van Lier' (1982: 433)

1 T: I'm fine thanks and you? can you say that? I'm fine
2 thanks and you?
—> 3 L9: e:r I'm fine too
4 T: okay can you just repeat that sentence, I'm fine thanks
5 and you?
6 L9: e:rm ((unint))=
7 T: =((unint)) just repeat that sentence, I'm fine thanks and
8 you?
9 L9: I'm fine thanks and you?

Repair on misunderstanding of procedure is more likely to occur in classroom discourse and group work than in CS. In conversation as long as the communication is going smoothly, modes of expression are treated explicitly. In the classroom the likelihood of occurrence may be related to whether it is "topic-oriented" or "activity-oriented" (van Lier 1988), which will affect the repair trajectories the teacher is going to use. This will be discussed in Chapter 6.

The above illustration of three different types of understanding problem shows that there is a significant difference between non-understanding, incomplete understanding and misunderstanding. The problems of non-understanding and incomplete understanding are solved by immediate initiation and repair, but the problem of misunderstanding delays the repair procedure and is treated retrospectively in a way similar to that of a production problem.

4.6 Conclusion

This chapter has described the framework of the repair process, in which problems in spoken discourse are identified and resolved. The methods used to solve such problems have been examined, and the sequential organization patterns have been demonstrated. The intention has been to present the problem types and their associated repair processes, and to illustrate these with examples. It is important to emphasise that this is just a presentation of how repair is operated in different problems of production or understanding. Examples have been used to illustrate the features of these two types of problem and their repair processes and at this stage no attempt has been made to examine the differences or similarities between CS, GW and CR. However,

such differences and similarities do exist in these three types of interactions and it is the aim of the following chapter to explore these.

Notes:

1. Try-marking: providing a candidate item to wait for confirmation or repair.

2. Understanding check: the means a hearer employs to establish whether a speaker's preceding utterance(s) has been understood correctly. It has a dual function: checking and inviting correction.

3. Topic continue: in the literature these brief turns are referred to as e.g. back channels (Duncan 1972), OK passes (Weiner and Goodenough 1977), or listening responses (Erickson (1979).

4. Clarification request: used to elicit clarification of the preceding utterance(s). At the same time it plays a role in correction. It is usually formed by questions but, unlike confirmation checks, may consist of "uh", a yes/no question or a tag question. It requires that the interlocutor either furnishes new information or recodes information previously given.

5. Confirmation check: the method a hearer uses to elicit confirmation of the utterance(s) which have been correctly understood or correctly heard. It always involves repetition of all or part of the other's preceding utterance. It requires no new information from the interlocutor.

6. Covertly realized repair: the listener does not openly interrupt the speaker but provides the correct item or the missing information tactfully while the first speaker is officially holding the floor, thus helping him/her to go on.

7. Giving up: a situation where a speaker connot or will not bring the turn to its projected or projectable conclusion (perhaps due to planning problems or for a host of other possible reasons).

8. Turn offering: a situation where a speaker stops short before the projected completion of his/her turn in order to give way to another speaker, due to interruption or simultaneous starts.

9. Type 1 and 2: (interaction type 1 to 4 in van Lier 1982, 1988). In van Lier's analysis of interaction, there are four types of interaction identified:

   1). Less topis-orientation, less activity-orientation.

   Talk about anything you want in any way you want to, observing the usual social rules.

   Examples: small talk, general conversation over a cup of coffee, etc.

   2). More topic-orientation, less activity-orientation.

   There is some information that needs to be transmitted, or some issue that needs to be sorted out.

   Examples: announcements, instructions, explanations, lectures.

   3). More topic-orientation, more activity-orientation.

   Some information needs to be transmitted, and this transmission needs to proceed along specific lines, following certain rules.

   Examples: elicitation (teacher-learner recitation), interviews, reports, summaries, discussion, debates, jokes, stories.

   4). Less topic-orientation, more activity-orientation

   Things of a certain kind must be said following specific rules. Follow the rules and you'll be all right.

   Examples: repetition and substitution, pair work, role taking, games.

CHAPTER FIVE

ANALYSIS

5. 1 Introduction

The presentation of the framework in Chapter 4 has mainly focused on how the repair is operated in spoken discourse without considering the variation between different discourses. van Lier reminds us that:

> "... certain types of activity naturally lead to certain types of repair, therefore the issue of how to repair is closely related to the context of what is being done." (1988: 211)

The aim of this chapter to apply the framework developed in Chapter 4 to CS, GW and CR so as to examine the differences or similarities between these three different modes of discourse. The similarities and differences between the three will be analysed in terms of frequency of the occurrences in each of the categories presented in diagram 5.1. The differences or similarities will be examined, working downwards to the "fine-grained". In order to provide a clearer analysis, the categories in the framework are presented diagrammatically on the following page (Diagram 5.1).

The analysis will break down each category by stages, e.g,

TS—> production .....

production —> prospective.....

prospective —> completion.....

completion —> self.....

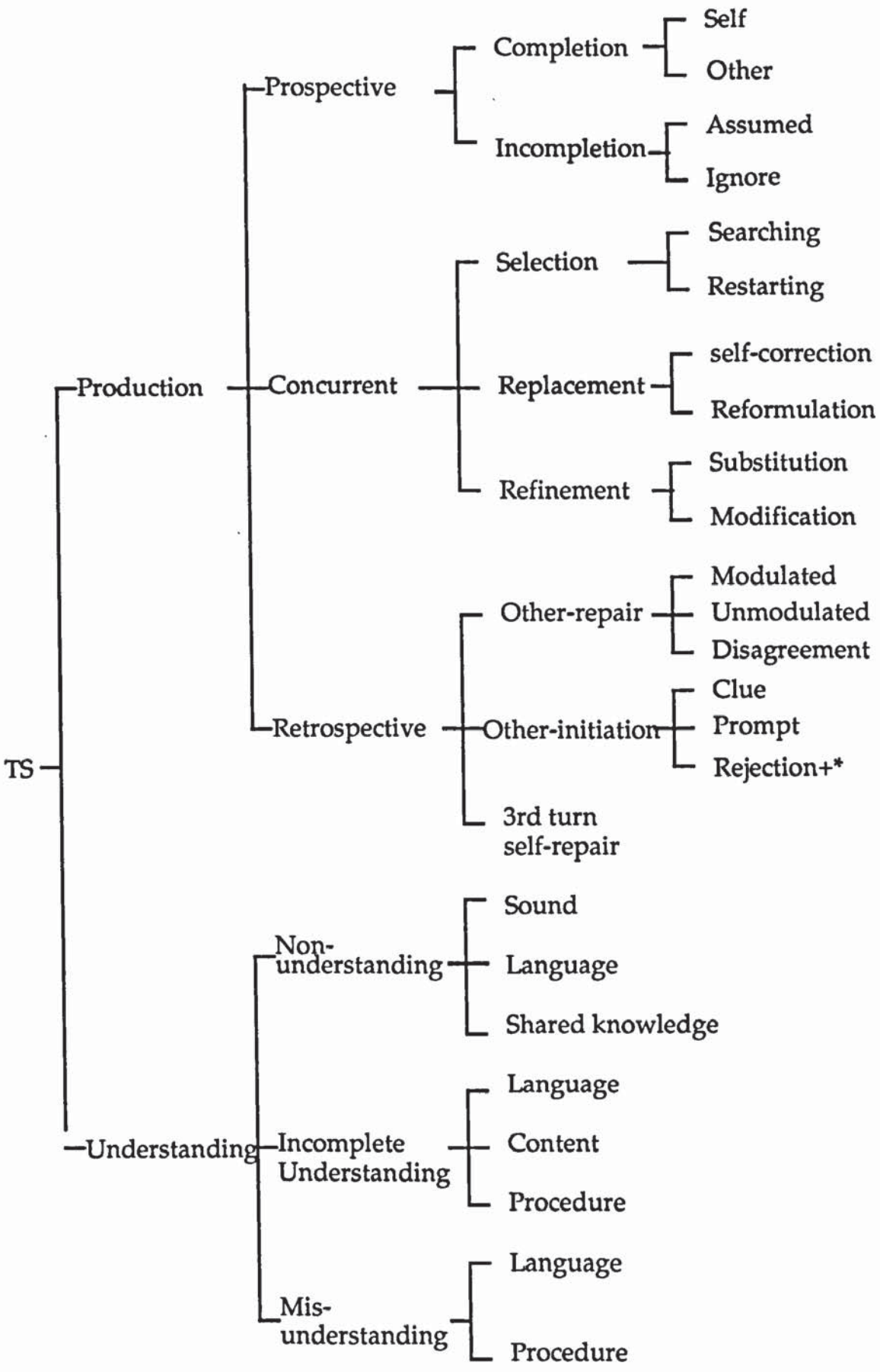

Diagram 5.1 Categories of repair in spoken discourse

For the purpose of comparison, the analysis of the results is always presented in terms of CS, GW and CR. In order to explain clearly how the students perform in CR interaction compared with CS and GW, the differences between the teacher and students, in terms of the frequency of the occurrences, will be examined in each of the categories.

Before examining the differences and similarities between CS, GW and CR, there is an issue which needs to be clarified. The framework described in Chapter 4 has provided a basis for the analysis of the repair, starting with the signals of a problem and moving to the ways used for repair, and this covers more aspects of repair than diagram 5.1 demonstrates. The reason some features which have been discussed in Chapter 4 have not been included is that the comparison between CS, GW and CR focuses mainly on the problem types and the ways used for repair. This does not mean that the features which are not included in this diagram are not important. On the contrary, this is a rich area for further research.

The following sections will present the results of the analysis of these three types of interaction.

5. 2 The frequency of repair in CS, GW and CR

As discussed in Chapter 4 and presented in Diagram 5.1, there are different ways of solving different problems. These different problems are labelled as "production" and "understanding", (for a detailed discussion of this distinction see section 4.2). The analysis in this section will start with an examination of the differences and similarities, in terms of the frequency of repair on the production and understanding problems, between CS, GW and CR. Table 5.1 illustrates the frequency of their occurrence.

Table 5.1 The frequency and percentage of repair on production and understanding problems in CS, GW and CR.

Interaction	T S		
	Production	Understanding	Total
CS	1028 93.62%	70 6.38%	1098 100%
GW	528 95.14%	27 4.86%	555 100%
CR	346 91.53%	32 8.47%	378 100%

The figures presented in this table are from "natural" data in three types of interaction, but collected for different time durations. In order to present the frequency of the occurrence consistently it is necessary to make an adjusted calculation. An adjusted calculation can be justified because obtaining natural data is considered the first priority and control of the duration of time might affect the naturalness of the data. By measuring the frequency of occurrence per hour the required adjustment is made. As expected, the adjusted frequency calculation shows virtually the same result as the original figure in terms of percentages (see the following table 5.2 for the adjusted frequency of the occurrence of production problems and understanding problems repair in CS, GW and CR).

Table 5.2 The frequency and percentage of repair on production and understanding problems in CS, GW and CR in the present study per hour

Interaction	T S				Total
	Production		Understanding		
CS	604	93.64%	41	6.36%	645 100%
GW	407	95.09%	21	4.91%	428 100%
CR	281	91.53%	26	8.49%	307 100%

For the purpose of comparison, the frequency of the occurrence in the rest of the analysis will be presented with the adjusted figures.

The results from the above table can be summarised as follows:

1) There are more repairs undertaken in CS than in CR, with GW roughly between the two. The results of a Chi-Square analysis are as follows:

   a) X^2=43.88 dif=1, p<0.01, between CS and GW;

   b) X^2=19.92 dif=1, p<0.01, between GW and CR;

   c) X^2= 120 dif=1, p<0.01 between CS and CR.

These results indicate a significant difference exists between the frequency of the three types of interaction.

2) There are more production problem repairs in CS than in CR, with GW falling roughly between the two.

The results of Chi-Square analysis are as follows:

a) X^2=38.82 dif= 1, p<0.01, between CS and GW;

b) X^2=23.14, dif=1, p<0.01 between GW and CR;

c) X^2= 118.76, dif= 1, p<0.01 between CS and CR.

These results show that the frequency of repaired production is significantly different between these three interactions.

3) There are more understanding problem repairs in CS than in GW, with CR between the two.

The results of a Chi-Square analysis are as follows:

a) X^2=6.46, dif=1, p<0.05 between CS and GW;

b) X^2=0.54, dif=1, p>0.05 between GW and CR;

c) X^2=3.36 dif=1, p>10 between CS and CR.

The results of Chi-Square analysis show that the only significant difference exists between CS and GW in terms of the frequency of understanding problem repair.

4) Production problem repair occurs more frequently than understanding problem repair in all three types of interaction.

5) The percentage distribution between production and understanding repairs is similar in all three types of interaction.

The above five points are derived from using the two broad categories of production and understanding problem repair. However, a further refinement of these two main categories into sub-categories is useful. These sub-categories may show up a similar frequency of distribution to the main categories. It is therefore necessary to examine each of the sub-categories carefully.

5. 3 The frequency of repair on production problems in CS, GW and CR

As discussed in Chapter 4 and presented in Diagram 5.1, production problem repair can be a "helping" to completing the utterances, repairing the utterances in the same turn, or repairing at the next turn or beyond. On the basis of these features, the location of the trouble source and where repair is undertaken, production problem repair is divided into three types in this study, as follows: **prospective, concurrent,** and **retrospective.** The frequency of their occurrence in CS, GW and CR is presented in Table 5.3.

Table 5.3 The frequency and percentage of production problem repair in CS, GW and CR.

Interaction	PRODUCTION				Total	
	Prospective		Concurrent	Retrospective		
CS	55	8.53%	532 82.48%	17 2.64%	604	93.65%
GW	52	12.14%	323 75.47%	32 7.48%	407	95.09%
CR	19	6.19%	191 62.21%	70 22.8%	281	91.2%

Table 5.3 shows that the frequency of repair on production problems for the total occurrence is higher in CS than in CR, and GW occupies a place roughly between the two. This finding seems to be contradictory to the normally held assumption that there are more repairs in CR than in CS, since it is a part of classroom teaching business to correct errors and deal with interaction problems. The reason that there are more production problem

repairs in CS is related to the fact that there is more concurrent repair in CS, covering 82.48% of its total occurrence, compared with 62.21% in CR. This shows that in CS concurrent repair is more often preferred by the speaker than in the other two types of interaction. This confirms the findings by SJS that concurrent is preferred, in this case not only in NS conversations, but also in L2 learner conversations. The reason for less concurrent repair in CR can also be explained as follows:

a) Student utterances in CR tend to be very short, and student response is simple in structure.
b) Allowance must be made for using fillers plus pauses to hold the floor while searching is controlled by the teacher.
c) There is greater preparedness in utterances by the teacher and students.

These factors are associated with the lower frequency of concurrent repair in CR, as compared with CS and GW. They are related to the structure of the interaction and the institutional rules, and the control of the teacher in CR, which will be discussed in Chapter 6.

In prospective repair the frequency of occurrence in CS and GW is higher than in CR, with only a slight difference between CS and GW. The results from Chi-Square analysis are as follows:

1) X^2=0.08 dif=1 p>0.05 between CS and GW;
2) X^2=6.54 dif=1 p<0.05 between CR and GW;
3) X^2=8.04 dif=1 p<0.05 between CS and CR.

The significant difference lies between CS and CR, and GW and CR.

However, in terms of the percentage of total occurrence prospective repair is higher in GW than in CS and CR. These differences can be illustrated

more clearly in terms of the subcategories within prospective repair, (see section 5.3.1).

In retrospective repair the frequency is higher in CR than in CS, with GW remaining between the two. The results of Chi-Square analysis are as follows:

1) X^2=4.6 dif=1 p<0.0 5 between CS and GW;

2) X^2=8.52 dif=1 p<0.5 between GW and CR;

3) X^2=24 dif=1 p<0.05 between CS and CR.

The differences between these three interactions are statistically significant.

Retrospective repair on production problems in CR occurs around four times as often as that in CS. The reason this happens may be that more other-initiations are used in CR than in GW and CS (see Table 5.14). The reason more other-initiation for production problem repair used in CR is associated with the orientation of the interaction. A detailed discussion of these factors will be presented in section 5.3.3 and Chapter 6.

A more detailed analysis of each of these three categories will be presented in the following sections.

5. 3. 1 The frequency of prospective repair on production problems

Prospective repair on production problems shows that the speaker has difficulty in completing the utterance. This incomplete utterance can be completed or left incompleted. Table 5.4 presents the frequency of its occurrence in CS, GW and CR.

Table 5.4 The frequency and percentage of prospective repair in CS, GW and CR

Interaction	PROSPECTIVE		
	Completion	Incompletion	Total
CS	35 5.43%	20 3.1%	55 8.53%
GW	36 8.41%	16 3.74%	52 12.15%
CR	14 4.56%	5 1.63%	19 6.19%

This table shows that there are more prospective repairs in CS and GW than in CR. The same result applies to the subcategories: incompletion and completion. The results of a Chi-Square analysis are:

In completion:

1) X^2=0.14 dif=1 p>0.05 between CS and GW;

2) X^2=9.6 dif=1 p<0.05 between GW and CR;

3) X^2=9 dif=1 p<0.05 between CS and CR.

The statistically significant difference lies between CS and CR, and between GW and CR.

In incompletion:

1) X^2=0.04 dif=1 p>0.05 between CS and GW;

2) X^2= 5.76 dif=1 p<0.05 between GW and CR;

3) X^2=9 dif=1 p<0.05 between CS and CR.

The statistically significant difference lies between CS and CR, and between GW and CR.

However, the percentage of total occurrence is higher in GW than in CS and CR. In completion the percentage is higher in GW than in CR and CS. In incompletion the percentage is higher in GW and CS than in CR. These results suggest that participants are more concerned about helping the speaker to complete the utterance in GW than is the case in CS and CR. These differences are associated with the structure of interaction and orientation of the communication, which will be discussed in Chapter 6. In order to demonstrate these differences more clearly it is necessary to analyse further the subcategories within completion and incompletion.

5.3.1.1 The frequency of completion in prospective repair

When a speaker has difficulty in finishing his/her utterance this incompleted utterance can be completed by others or by him/herself. The frequency of these two types of completion is given in the following table.

Table 5.5 The frequency and percentage of completion in prospective repair in CS, GW and CR

Interaction	COMPLETION		Total
	other-completion	self-completion	
CS	17 2.64%	18 2.79%	35 5.43%
GW	30 7.01%	6 1.4%	36 8.41%
CR	10 3.26%	4 1.3%	14 4.56%

This table shows that total frequency of completion repair is higher in CS and GW than in CR. There is more other-completion in GW than in CR, with CS falling between the two. Self-completion occurs more frequently in CS than in GW and CR. The results of Chi-Square analysis are as follows.

In other-completion:

1) X^2=3.6 dif=1 p>0.05 between CS and GW;
2) X^2=10 dif=1 p<0.05 between GW and CR;
3) X^2=1.82 dif=1 p>0.05 between CS and CR.

These results show that a significant difference exists between GW and CR.

In self-completion:

1) X^2=6 dif=1 p<0.05 between CS and GW;
2) X^2=0.4 dif=1 p>0.05 between GW and CR;
3) X^2=8.9 dif=1 p<0.05 between CS and CR.

In this category a significant difference lies between CS and CR, and between CS and GW.

In terms of the percentage of total occurrence there is only slight difference between CS and CR, with more in GW.

In other-completion the percentage is higher in GW than in CS, with CR occupying a place between the two. This suggests both competitive and cooperative involvement among participants in GW interactions.

In self-completion the percentage is higher in CS than in GW and CR. This distribution suggests that participants in CS withhold other repair for self-repair. The frequency of other-completion and self-completion is almost equal in CS. However, in GW and CR there is more other-completion than self-completion. These results again suggest that participants are more competitive in CR and GW than in CS where participants are more cooperative and withhold other-repair to offer more opportunity for the

trouble source to undertake self-repair. Whether conversational involvement is helpful in language learning is a question to be further discussed in Chapter 6.

5.3.1.2 The frequency of incompletion in prospective repair

Incompletion occurs when a speaker has difficulty in accomplishing his/her utterances. An interaction can continue either with an assumed completion understood by the participants, or with an incompleted utterance being ignored. The frequency of these two occurrences is presented in the following table.

Table 5.6 The frequency and percentage of incompletion in prospective repair in CS, GW and CR

Interaction	INCOMPLETION					
	Assumed		Ignored		Total	
CS	12	1.86%	8	1.24%	20	3.1%
GW	8	1.87%	8	1.87%	16	3.74%
CR	2	0.655%	3	0.98%	5	1.63%

Table 5.6 shows there are more incompleted utterances occurring in CS and GW than in CR, because there is more assumed completion in CS and GW. In ignored incompletion there is no difference in the frequency between CS and GW, with low frequency in CR. The significant difference is examined by Chi-Square analysis as follows.

In assumed completion:

1) X^2=0.8 dif=1 p>0.05 between CS and GW;
2) X^2=3.6 dif=1 p>0.05 between GW and CR;
3) X^2=7.14 dif=1 p<1 between CS and CR.

The only significant difference lies between CS and CR.

In ignored incompletion:

1) X^2=0 dif=1 p>0.05 between CS and GW;
2) X^2=2.28 dif=1 p>0.05 between CS and CR;
3) X^2=2.28 dif=1 p>0.05 between CS and CR.

The difference between the three is not statistically significant.

The percentages of occurrences in the assumed, ignored and total columns are consistently higher in the CS and GW categories as compared with CR. The explanation for more assumed completions in CS and GW may be linked to the orientation of interaction. In CS and GW, as long as the participants understand each other interaction can continue smoothly whether utterances are completed or not. However, in CR the students are expected to use complete utterances for practice most of time. Therefore, repair takes place far less in these circumstances.

5.3.1.3 The distribution of prospective repair between teacher and students in CR

As mentioned and discussed in previous sections, the teacher controls the interaction and turn-taking mechanism in CR because of unequal power and rights in a teacher-fronted classroom interaction system. Thus it is expected that there will be a difference in terms of repair done in a prospective way, between the teacher and students. The following table presents results for all three contexts.

Table 5.7 The frequency and percentage of the prospective repair between teacher and students in CR

Category	Teacher		Student		Total	
Other-completion	9	90%	1	10%	10	100%
Self-completion	1	25%	3	75%	4	100%
Assumed-completion	2	100%	0		2	100%
Ignored	3	100%	0		3	100%

The results in this table show that most prospective repairs are undertaken by the teacher, self-completion being the exception. This demonstrates that interaction in CR is tightly controlled by the teacher, i.e. the teacher has more opportunities to undertake repair than the students. These results have clearly displayed the unequal distribution of the repair in CR between the teacher and students. Self-completion occurs when the student cannot finish his/her response. On being given an "encourage continuing" signal, s/he then completes his/her previous utterance to the teacher's question. Self-completion represents a small number of occurrences as compared with the total number of repairs, and teacher repair overall is dominant.

5. 3. 2 The frequency of concurrent repair on production problems

Concurrent repair on production problems, as discussed in Chapter 4, refers to the repair done in the same turn by the trouble producer him/herself. According to the ways in which repair is undertaken, concurrent repair is divided into three different types: selection, replacement, and refinement. The following table presents the frequency of occurrence of these types for each of the categories CS, GW and CR.

Table 5.8 The frequency and percentage of concurrent repair on production problems in CS, GW and CR

Interaction	CONCURRENT			Total
	Selection	Replacement	Refinement	
CS	452	42	38	532
	70.08%	6.51%	5.89%	82.48%
GW	273	24	26	323
	63.79%	5.61%	6.07%	75.47%
CR	162	17	12	191
	52.77%	5.54%	3.91%	62.22%

It is apparent from the frequency in the total column that speakers do more repair at the same turn in CS than in CR, with GW remaining between the two. The same distribution is found in the three subcategories. A Chi-Square analysis shows the significant differences as follows:

In selection:

a) X^2=44.2 dif=1 p<0.01 between CS and GW;

b) X^2=28.32 dif=1 p<0.01 between GW and CR;

c) X^2=136.98 dif=1 p<0.01 between CS and CR.

The differences between these three interactions are statistically highly significant.

In replacement:

1) X^2=49 dif=1 p<0.01 between CS and GW;

2) X^2=1.2 dif=1 p>0.05 between GW and CR;

3) X^2=10.6 dif=1 p<0.01 between CS and CR.

The statistically significant difference lies between CS and GW, and between CS and CR.

In refinement:

1) X^2=2.25 dif=1 p>0.05 between CS and GW;

2) X^2=5.16 dif=1 p<0.05 between GW and CR;

3) X^2=13.52 dif=1 p<0.01 between CS and CR.

The significant difference lies between CS and GW, and between CS and CR.

In terms of percentage of the total occurrence, a similar pattern is visible, with GW being placed between CS and CR. An exception in the subcategories is seen with refinement repair, where GW has the highest percentage occurrence followed by CS and CR.

As far as frequency distribution between the three subcategories is concerned, there is an overwhelming predominance in using selection.

Just considering concurrent repair and its three subcategories, the selection subcategory consistently represents 85% of the total number of

occurrence within this group for all three — CS, GW and CR. This bias towards selection shows repair focuses predominantly on the early stage of the production process, i.e. the participants are more concerned about organizing what to say rather than changing what has been said. Another possible interpretation is that the participants are more concerned with what they want to say than how to say it. In order to illustrate the differences more clearly between the three subcategories of selection, replacement and refinement a further division of the three subcategories is necessary.

5.3.2.1 The frequency of selection in concurrent repair

There are two different ways to undertake selection repair within concurrent repair. They are labelled 'searching' and 'restarting' in the present study. Searching refers to "pre-positioned" repair, and restarting refers to "post-positioned" repair (see Chapter 4 for examples). The following table demonstrates the frequency of both types in CS, GW and CR.

Table 5.9 The frequency and percentage of selection in concurrent repair in CS, GW and CR

Interaction	SELECTION		Total
	Searching	Restarting	
CS	184 28.53%	268 41.55%	452 70.08%
GW	132 30.84%	141 32.94%	273 63.78%
CR	66 21.50%	96 31.27%	162 52.77%

This table shows a higher frequency for total occurrence in selection of concurrent repair in CS than in CR, with GW roughly between the two. The same results apply to the two subcategories. The results of Chi-Square analysis are as follows:

In searching:

1) X^2=8.56 dif=1 p<0.05 between CS and GW
2) X^2=22 dif=1 p<0.01 between GW and CR;
3) X^2=55.7 dif=1 p<0.01 between CS and CR.

The difference between the three types of interaction is significant.

In restarting:

1) X^2=39.42 dif=1 p<0.01 between CS and GW;
2) X^2=8.54 dif=1 p<0.01 between GW and CR;
3) X^2=81.28 dif=1 p<0.01 between CS and CR.

There is a significant difference between the three.

In terms of the percentage of the total occurrence of concurrent repair, GW lies between CS and CR with the one exception of searching, in which the percentage is higher in GW than CR, with CS falling between the two.

As far as the distribution between searching and restarting is concerned, there are more instances of restarting than searching repair in the three types of interaction. This distribution may be related to the turn-taking system of floor holding and the stage of speech planning.

The reason that there is only one third as much searching in CR as in CS may have to do with the institutional constraints of CR. In CR fluent use of target language (TL) is a goal in which hesitation or dysfluent use of language can be repaired, especially with students' utterances, thus there is a danger of losing the floor. In CS, however, searching is a normal means of continuing and maintaining the interaction. These factors will be discussed in Chapter 6.

5.3.2.2 The frequency of replacement in concurrent repair

The second subcategory within concurrent repair is replacement. Within replacement there are two ways to undertake repair: self-correction and reformulation. As previously mentioned in Chapter 4, self-correction refers to the situation when a speaker replaces one item with another, the latter being correct in the context. Reformulation refers to a situation where the speaker changes the structure of the previous utterances, which is different from restarting, in which changing the structure is not necessary. The following table presents the frequency of both types.

Table 5.10 The frequency and percentage of replacement in concurrent repair in CS, GW and CR

Interaction	REPLACEMENT		Total
	Self-correction	Reformulation	
CS	24 3.72%	18 2.79%	42 6.51%
GW	13 3.04%	11 2.57%	24 5.61%
CR	6 1.95%	11 3.58%	17 5.53%

There are more replacement repairs in CS than in CR, and GW occupies a place between the two. A similar picture is seen in the two subcategories of self-correction and reformulation; however, the same frequency is found in GW and CR in reformulation. Chi-Square analysis gives the following results for statistical difference in CS, GW and CR:

In self-correction:

1) X^2=3.28 dif=1 p>0.05 between CS and GW;

2) X^2=2.58 dif=1 p>0.05 between GW and CR;

3) X^2=10.8 dif=1 p<0.05 between CS and CR.

The only significant difference lies between CS and CR.

In reformulation:

1) X^2=1.68 dif=1 p>0.05 between CS and GW;

2) X^2=0 there is no difference between GW and CR,

3) X^2=1.68 dif=1 p>0.05 between CS and CR.

There is no significant difference between the three types of interaction.

The percentage of occurrence is higher in CS than in GW and CR for the total and self-correction columns. However, in reformulation the percentage occurrence is higher in CR than in CS and GW.

Therefore, there are more self-corrections than reformulations in CS and GW and more reformulations than self-corrections in CR.

The result suggests that the participants in CS and GW are more concerned about acceptability (correctness) than appropriateness. This consideration of the participants is also associated with the participants' competence in the language and the purpose of repair, in which pedagogical orientation plays an important role. The mechanism which is operating can be explained clearly by reference to table 5.11, which shows more student self-corrections and more teacher reformulations.

5.3.2.3 The frequency of refinement in concurrent repair

The third category of concurrent repair is refinement, in which participants use two ways of repairing their utterances: substitution and modification. These two categories are the least used devices for concurrent repair. Substitution is similar to self-correction in that both substitution and

self-correction are involved in replacing one item with another. However, substitution differs from self-correction in that in substitution both the items are equally acceptable, and it is a matter of preciseness or appropriacy; in self-correction only one of the items is correct in the context. The following table presents the frequency of the occurrence in CS, GW and CR.

Table 5.11 The frequency and percentage of refinement in concurrent repair and percentage in CS, GW and CR

Interaction	REFINEMENT				Total	
	Substitution		Modification			
CS	18	2.79%	20	3.1%	38	5.89%
GW	10	2.34%	16	3.74%	26	6.08%
CR	5	1.63%	7	2.28%	12	3.91%

This table shows that the total frequency of occurrence in refinement of concurrent repair is higher in CS than in CR, with GW falling between the two. The same results are found in the two subcategories. The results from Chi-Square analysis show the differences between them as follows.

In substitution:

1) X^2=2.28 dif=1 p>0.05 between CS and GW;
2) X^2=1.66 dif=1 p>0.05 between GW and CR;
3) X^2=7.34 dif=1 p<0.05 between CS and CR.

The significant difference lies between CS and CR.

In modification:

1) X^2=0.44 dif=1 p>0.05 between CS and GW;
2) X^2=3.52 dif=1 p>0.05 between GW and CR;
3) X^2=6.26 dif=1 p<0.05 between CS and CR.

The statistically significant difference exists between CS and CR.

The percentages in total and modification columns are higher in GW than in CR, with CS between the two. In substitution the percentage of occurrence is higher in CS than CR and GW. However, the difference between CS and GW and between GW and CR is not statistically significant.

The distribution of modification and substitution shows that there is a slightly greater emphasis on modification than on substitution. The reason may be that more effort is needed to find another item as a substitute for a previous one than to insert elements to make it more precise or more complete.

The overall results of concurrent repair show that students undertake more concurrent repair in CS and GW than in CR. If the frequency of concurrent repair on a production problem is analysed between the teacher and students in these categories, the frequency of occurrence in the students' utterances in CR is even less. The following section presents the frequency of occurrence between the teacher and students.

5.3.2.4 The distribution of concurrent repair between teacher and students in CR

Both the teacher and students participate in classroom discourse. As shown in the section 5.3.1.3, there is a difference between the participants in terms of the frequency of prospective repairs. The following table presents these differences for CS, GW and CR in the categories of concurrent repair on production problems.

Table 5.12 The distribution of frequency and percentage in concurrent repair between teacher and students in CR

Category	Teacher	Students	Total
searching	53 80.3%	13 19.7%	66 100%
restarting	76 79.17%	20 20.83	96 100%
self-correction	1 16.67%	5 83.33%	6 100%
reformulation	10 90.9%	1 9.09%	11 100%
substitution	3 60%	2 40%	5 100%
modification	5 71.43%	2 28.57%	7 100%
Total	148 77.49%	43 22.51%	191 100%

The results in table 5.11 show that the frequency of total occurrence of concurrent repair is higher for the teacher's utterances than for the students'. In all subcategories, except for self-correction, teacher repair occurs more frequently than the students' repair. This distribution can be explained by the fact that L2 learners are not-yet-competent speakers, who have more errors to be corrected and who are more concerned about the acceptability of their utterances.

The reason more repair is undertaken by the teacher can be explained by the fact that the teacher officially controls the interaction. S/he therefore has

the power to take the floor as long as s/he likes, to undertake self- and other-repair, and to use the repair to achieve the pedagogical ends. If an average is calculated for the use of concurrent repair by students individually, the average frequency of repair is even lower in CR than in CS and GW, since there are more students participating in CR.

5. 3. 3. The frequency of retrospective repair on production problems

Retrospective repair refers to the situation where repair is undertaken in the next turn or beyond. There are three possibilities in terms of repair trajectory: other-repair, other-initiation or third turn self-repair. The following table presents the frequency of these three types of repair.

Table 5.13 The frequency and percentage of retrospective repair on production problems in CS, GW and CR

Interaction	RETROSPECTIVE			Total
	Other-repair	Other-initiation	Third turn self-repair	
CS	10 1.55%	1 0.16%	6 0.93%	17 2.64%
GW	30 7.01%	0	2 0.47%	32 7.48%
CR	28 9.12%	41 13.36%	1 0.33%	70 22.8%

The results in table 5.13 show that in total frequency more retrospective repair occurs in CR than in CS, a reverse on the trend in all the previous categories of repair. GW is again found between CS and CR.

There are distinctive differences in distribution between the subcategories of retrospective repair. Other-repair occurs around three time more frequently in CR and GW than in CS. Virtually all other-initiations are found in CR, with only one instance in CS, and none in GW. In third turn self-repair the trend in all the previous categories of repair is established again. However, Chi-Square analysis shows that in third turn self-repair there is no significant difference between CS, GW and CR. The results of Chi-Square analysis for other-repair are presented as follows.

1) X^2=10 dif=1 $p<0.05$ between CS and GW;
2) X^2=0.06 dif=1 $p>0.05$ between GW and CR;
3) X^2=8.52 dif=1 $p<0.05$ between CS and CR.

A significant difference exists between CS and GW, and between CS and CR.

The percentage of total occurrence shows a similar pattern to the frequency occurrence.

A further refinement of the categories of other-repair, other-initiation and third turn self-repair highlights the differences between the categories even more. The following sections will examine the refined categories in turn.

5.3.3.1 The frequency of other-repair in retrospective repair

Other-repair is examined under the three subcategories of occurrence: modulated, unmodulated and disagreement. (At the same time it has been noticed that other-repair is used for different aspects of the interaction: language, content or procedure. This will be discussed in Chapter 6.) The following table shows the frequency of occurrence in these three categories in CS, GW and CR.

Table 5.14 The frequency and percentage of other-repair in retrospective repair in CS, GW and CR.

Interaction	OTHER-REPAIR			Total
	Modulated	Unmodulated	Disagreement	
CS	2 0.31%	7 1.08%	1 0.15%	10 1.55%
GW	5 1.16%	15 3.5%	10 2.34%	30 7.01%
CR	10 3.26%	18 5.86%	0	28 9.12%

The results in this table show that in total, modulated and unmodulated, more other-repairs occur in CR and GW than in CS. The exception is disagreement in which there are more repair in GW than in CS, and a total absence from CR. In terms of percentage of total occurrence, the same pattern of results has been obtained in all three categories. The Chi-Square analysis provides the following results.

In modulated other-correction:

1) X^2=0.06 dif=1 p>0.05 between CS and GW;
2) X^2=2.58 dif=1 p>0.05 between GW and CR;
3) X^2=4.59 dif=1 p<0.05 between CS and CR.

The significant difference lies between CS and CR.

In unmodulated other-correction:

1) X^2=2.14 dif=1 p>0.05 between CS and GW;
2) X^2=0.28 dif=1 p>0.05 between GW and CR;
3) X^2=4.84 dif=1 p<0.05 between GW and CR.

The significant difference lies between CS and CR.

In disagreement, there is a significant difference between GW and CS, and between GW and CR.

GW holds a middle position in modulated other-repair and unmodulated other-repair although there are more other-repairs in total. More other-repairs in CR than in CS in total suggests that other-repair is a part of classroom institutional "game", in which part of the teacher's job is to repair students' utterances: it can be demonstrated clearly in table 4.16 that most of other-repair in CR is done by the teacher. In addition to pedagogical purpose, other-repair is also associated with face work, which is suspended in CR as described by van Lier (1982: 422). Whether more other-repairs are helpful in language learning is a question which will be discussed in Chapter 6.

5.3.3.2 The frequency of other-initiation in retrospective repair

Other-initiation can be used for repair of a production problem and an understanding problem. The criteria to distinguish this difference have been discussed in Chapter 4. There are two main considerations: what other-initiation seeks, and what the sequential outcome provides (see Section 4.4.3.2). There are four ways in which other-initiation in production repair is undertaken: clue, prompt, rejection plus and others. The frequency of occurrence of these categories in CS, GW and CR is presented in the following table:

Table 5.15 The frequency and percentage of other-initiation in production problem repair in CS, GW and CR

Interaction	OTHER-INITIATION				Total
	Clue	Prompt	Rejection +clue	Others	
CS	0	0	0	1 0.16%	1 0.16%
GW	0	0	0	0	0
CR	11 3.58%	19 6.19%	10 3.26%	1 0.33%	41 13.36%

This table shows an unusual pattern for repair. It is not a matter of differing frequency between CS, GW and CR, but the highlighting of the fact that other-initiation is characteristic of CR. There is only one instance of other-initiation in CS and a total absence from GW.

Within CR there are more prompt initiations than in any other of three categories. These results suggest that other-initiation in the classroom is a means of initiating repair for a production problem. Furthermore, all other-initiation in CR in this study is undertaken by the teacher. The result further suggests that other-initiation for production problem repair is a typical teacher's device used in the classroom — a point not previously mentioned in research on repair.

However, although other-initiation is absent from GW, more data would be needed before a claim could be made that it does not occur in GW per se. The least that can be said is that other-initiation for production problem repair occurs more frequently in CR than in GW or CS. It is the

pedagogical orientation which is associated with the use of other-initiation for production problem repair. This characteristic of CR will be further discussed in Chapter 6.

5.3.3.3 The frequency of third turn self-repair in retrospective repair

Third turn self-repair is undertaken after a back-channel or OK pass (without other-initiation in the turn after the trouble source). This is the least used category in production problem repair. The ways used to undertake the third turn self-repair are categorised into three types: replacement, substitution and modification. The following table presents the frequency of occurrence for these three types of interaction.

Table 5.16 The frequency and percentage of third turn self-repair in CS, GW and CR

Interaction	THIRD TURN SELF-REPAIR			Total
	Replacement	Substitution	Modification	
CS	0	2 0.31%	4 0.62%	6 0.93%
GW	0	1 0.23%	1 0.23%	2 0.46%
CR	1 0.33%	0	0	1 0.33%

This table shows that more third turn self-repair occurs in CS than in CR, with GW between the two. The total distribution between CS, GW and CR shows the same general trend as in other categories. However, the distribution is against the trend in this specific category of retrospective repair.

The frequency of occurrence is low and is similar to the findings of van Lier and McHoul that third turn self-repair is rare in classroom discourse.

The Chi-square analysis shows no significant difference between CS, GW and CR in the total frequency and the frequency in the three subcategories.

Third turn self-repair is associated closely with control of the interaction operation. In classroom interaction what and how something is going to be said is under the control of the teacher and is affected by the goal of the interaction. As mentioned earlier, repair in classroom interaction fits in with an I.R.F structure (see Chapter 6 for discussion) and it has also been noted that it is always the teacher who finalises the exchange. Thus an opportunity to modify what has been said beyond the second turn is unlikely. However, in conversation what is going to be said and how it is said is not strictly controlled, so an opportunity to go back to what has been said is more likely.

As previously mentioned, all other-initiations are undertaken by the teacher instead of the students and the teacher is expected to do more other-repairs as well, since the teacher's job in the classroom is to monitor the successful production of speech.

This leads us to examine the difference between the teacher and students in CR to see whether this expectation is correct in retrospective repair.

5.3.3.4 The distribution of retrospective repair between teacher students in CR

Within retrospective repair a difference exists between the teacher and students in the frequency of occurrence in CS, GW and CR. The difference is presented in the following table:

Table 5.17 The frequency and percentage of retrospective repair between teacher and students

Category	Teacher		Students		Total	
Other-repair	26	92.86%	2	7.14%	28	100%
Other-initiation	41	100%	0		41	100%
Third turn self-repair	0		1	100%	1	100%

This table shows that virtually all other-repairs are done by the teacher on the students' production problems. There are only two other-repairs by students, which are done on another student's utterances instead of on the teacher's. In CR, other-initiation is overwhelmingly the teacher's "job", so the results shown in the table are not surprising.

Other-initiations for production problem repair are all undertaken by the teacher. Other-repair is an important part of the interaction in CR, a means by which the teacher monitors the students' utterances and controls the interaction in a designed direction.

There is only one third turn repair by a student in CR.

Having examined the differences and similarities between CS, GW and CR in terms of production problem repair, it is worth examining and presenting the differences and similarities between these three interactions in understanding problem repair.

5. 4 The frequency of understanding problem repair in CS, GW and CR

As discussed in Chapter 4, an understanding problem is divided into three types: non-understanding, incomplete understanding and misunderstanding. The following table presents the frequency of occurrences for CS, GW and CR:

Table 5.18 The frequency and percentage of understanding problems repair in CS, GW and CR

Interaction	UNDERSTANDING			Total
	NU	IU	MU	
CS	6 0.93%	33 5.12%	2 0.31%	41 6.36%
GW	3 0.70%	16 3.74%	2 0.47%	21 4.91%
CR	3 0.98%	22 7.17%	1 0.33%	26 8.47%

Note: NU=Non-understanding
IU=Incomplete understanding
MU=Misunderstanding

Table 5.18 shows that in total frequency more understanding repairs occur in CS than in GW, with CR falling between the two. The same pattern is found in incomplete understanding repair. In non-understanding the frequency is a slightly higher in CS than in GW or CR. The difference between CS, GW and CR in misunderstanding repair is small.

The percentage of total occurrence is higher in CR than in GW, and CS occupies a place between the two. The same pattern is found in incomplete understanding repair.

Overall examination of both production and understanding repair shows the frequency of repair is lower in understanding repair. The differences between CS, GW and CR are not significant in non-understanding and misunderstanding repair. In incomplete understanding repair the results of Chi-square analysis are as follows:

1) X^2=5.9 dif=1 $p<0.05$ between CS and GW
2) X^2=2.46 dif=1 $p<0.05$ between GW and CR
3) X^2=1.44 dif=1 $p>0.05$ between CS and CR

A significant difference exists between CS and GW.

As has been mentioned, the distribution between CS, GW and CR does not show GW to have a middle ranking. This result is associated with shared background knowledge, proficiency level and task type, which will be discussed in Chapter 6.

The following sections will focus on the differences and similarities within non-understanding, incomplete understanding and misunderstanding.

5. 4. 1 The frequency of non-understanding problem repair

Non-understanding as discussed in Chapter 4 is related to sound problems, language problems and shared knowledge. The following table presents the frequency of occurrence for these three types of problem:

Table 5.19 The frequency and percentage of non-understanding problem repair for CS, GW and CR

Interaction	NON-UNDERSTANDING			Total
	Sound	Language	Shared Knowledge	
CS	2 0.31%	1 0.16%	3 0.47%	6 0.93%
GW	1 0.23%	1 0.23%	1 0.23%	3 0.7%
CR	2 0.65%	0	1 0.33%	3 0.98%

This table shows that more non-understanding problem repairs occur in CS than in GW or CR. However, because the frequency of the occurrence is not very high, Chi-Square analysis is not appropriate.

5. 4. 2 The frequency of incomplete understanding problem repair

Incomplete understanding as discussed in Chapter 4 occurs when the interlocutor:

a) is not sure about what s/he hears or what s/he understands in terms of language aspects;

b) is not confident about the content of previous utterances;

c) is not clear about the procedure of what to do or how to do it.

The following table presents the frequency of these different understanding problems in CS, GW and CR:

Table 5.20 The frequency and percentage of incomplete understanding problem repair in CS, GW and CR.

Interaction	INCOMPLETE UNDERSTANDING			Total
	Language	Content	Procedure	
CS	2 0.32%	31 4.8%	0	33 5.12%
GW	1 0.23%	12 2.8%	3 0.7%	16 3.73%
CR	2 0.66%	13 4.23%	7 2.28%	22 7.17%

Table 5.20 shows that the frequency of total occurrence in incomplete understanding repair is highest in CS followed by CR and GW. The different patterns of the frequency emerge from the three subcategories of language, content and procedure repair.

There is only a very small but evenly spread number of repairs in the language category. By far the highest number of repairs occur in the content category, where CS has nearly three times more than either GW or CR. In the last category of procedure no instances are found in CS, with occurrence in CR roughly double that of GW.

It can be seen from the percentage of total occurrence that CR presents the highest percentage, even though in occurrence terms CS is above CR. The results mean that incomplete understanding repair is a more common choice in CR than in CS and GW over the spectrum of all categories.

As the percentage distribution for CR and CS is similar in both the language and content categories, it is the procedure category which critically boosts the total percentage occurrence of CR over CS.

The uneven distribution in the procedure category can be explained by the fact that in CR the students must focus on not only what they have to say but also how to say it. However, in CS the procedure of interaction has never been stated, therefore it is not considered as important as it is in CR. In CR responses must be pedagogically as well as linguistically appropriate if they are not to be open to repair.

Incomplete understanding repairs on a content problem are closely associated with getting the message understood and maintaining the interaction. In GW the low incidence of content repairs may be related to the artificiality of the task to which the speakers are exposed. In CR, although the task is artificial, there seems to be an agreement or contract that content is relevant to the interaction. However, the fundamental reasons for less incomplete understanding repair in GW are associated with shared knowledge, proficiency level and task type. These factors related to the use of repair in GW will be discussed in Chapter 6.

5. 4. 3 The frequency of misunderstanding problem repair

Repair on misunderstanding problems is divided into two categories according to the nature of the utterances produced in the trouble source. As discussed in Chapter 4, repair of misunderstanding problems is a problematic issue which is closely associated with the participants' process of interpretation while s/he is participating. In this study the two categories of language and procedure problem are examined from the perspective of sequential interaction. The problem can lie in a misunderstanding of the language used in the previous utterances or in the process of making a contribution to the on-going communication.

The frequencies of these two categories in CS, GW and CR are presented in the following table:

Table 5.21 The frequency and percentage of misunderstanding problem repair in CS, GW and CR

Interaction	MISUNDERSTANDING		
	Language	Procedure	Total
CS	2 0.31%	0 0.16%	2 0.31%
GW	0	2 0.47%	2 0.47%
CR	0	1 0.33%	1 0.33%

This table shows that in misunderstanding language repair occurs only in CS. There is only a small number of occurrences in procedure misunderstanding repair. The differences between CS, GW and CR in misunderstanding repair are not significant.

Seen overall, an examination of understanding repair shows that the big difference between CS, GW and CR lies in incomplete understanding repair, since the frequency of occurrences in non-understanding and misunderstanding is not very high. The discussion of understanding problem repair in Chapter 6 will focus only on incomplete understanding repair.

5.5 The distribution of other-initiation for production and understanding problem repair in CS, GW and CR

As has been discussed in Chapter 4, other-initiation is used for both production and understanding repair, and it is worth examining the incidence of these two types of repair in CS, GW and CR. An examination of the different frequency of occurrence for other-initiation in both production and understanding problem repairs further illustrates the differences and similarities when the same repair device is used. The following table presents the frequency of the occurrence in CS, GW and CR:

Table 5.22 The frequency and percentage of other-initiation for production and understanding problem repair in CR, GW and CR

Interaction	Other-initiation				Total	
	production problem		understanding problem			
CS	1	2.38%	41	97.62%	42	100%
GW	0		21	100%	21	100%
CR	41	61.18%	26	37.34%	57	100%

Table 5.22 shows clearly that in CR other-initiation is used almost equally for production and understanding problem repair, whereas in CS and GW understanding problem repair is almost exclusively used. This

fundamental difference between CS, GW and CR has not been noted before. The pattern reflects the orientation of repair in different types of spoken discourse. The finding suggests the importance of self-participation in CS and GW, since by understanding what has been said the participants can make a contribution to the on-going interaction. Other-initiation is used when the participant experiences difficulty in understanding the previous utterance as a contribution to the on-going interaction. The use of other-initiation for production problem repair is more face threatening to the speaker than other-initiation for understanding problem repair. Furthermore, in CS, as long as communication goes smoothly, repair on a production problem is not considered of paramount importance.

5.6 Conclusion

The overall approach in this chapter has been to present the occurrence in both frequency and percentage terms for the categories, derived categories and subcategories. Differences between teacher and students have also been examined in order to further demonstrate the differences in repair by students in CS, GW and CR. Other-initiation used for both production and understanding problem repair has been presented, and a significant difference between CS, GW and CR has been found. The significant differences between CS, GW and CR have been tested by Chi-square analysis.

The analysis in this chapter has been a quantitive one and the findings presented statistically. The different organizational patterns of repair and the factors which influence the frequency of the types of repair mentioned here will be discussed in more detail in the following chapter.

CHAPTER SIX

DISCUSSION

6. 1 Introduction

Having scrutinized the operation of the repair process in spoken discourse in Chapter 4 and presented the results of the analysis in terms of the frequency for CS, GW and CR in Chapter 5, the aim of this chapter is a) to discuss the results drawn from the analysis to see what the relationship is between the structure of repair and the general structure of each interaction, and b) to discuss what factors affect the repair process in these three types of interaction. The chapter will consists of a discussion of the results of the study, rather than an evaluation of the results or an attempt to offer a judgement on the repair process.

Firstly, the chapter will summarise the major results for frequency of occurrence for each of the repair categories presented in diagram 5.1 in CS, GW and CR. Secondly, it will discuss these major results in relation to their interaction structure and present the commonly used repair strategies in spoken discourse in general and the characteristic repair features in each of the three interactions in particular, based on the results drawn from this study. Thirdly, a comparison between the results obtained in this study and an analysis in terms of the standard four trajectory analysis will be presented. Finally, some implications will be drawn based on the results of this study, which it is hoped will be helpful and useful for language teaching.

6. 2 Summary of the results

The results of the analysis presented in the above chapter can be summarised diagrammatically as follows:

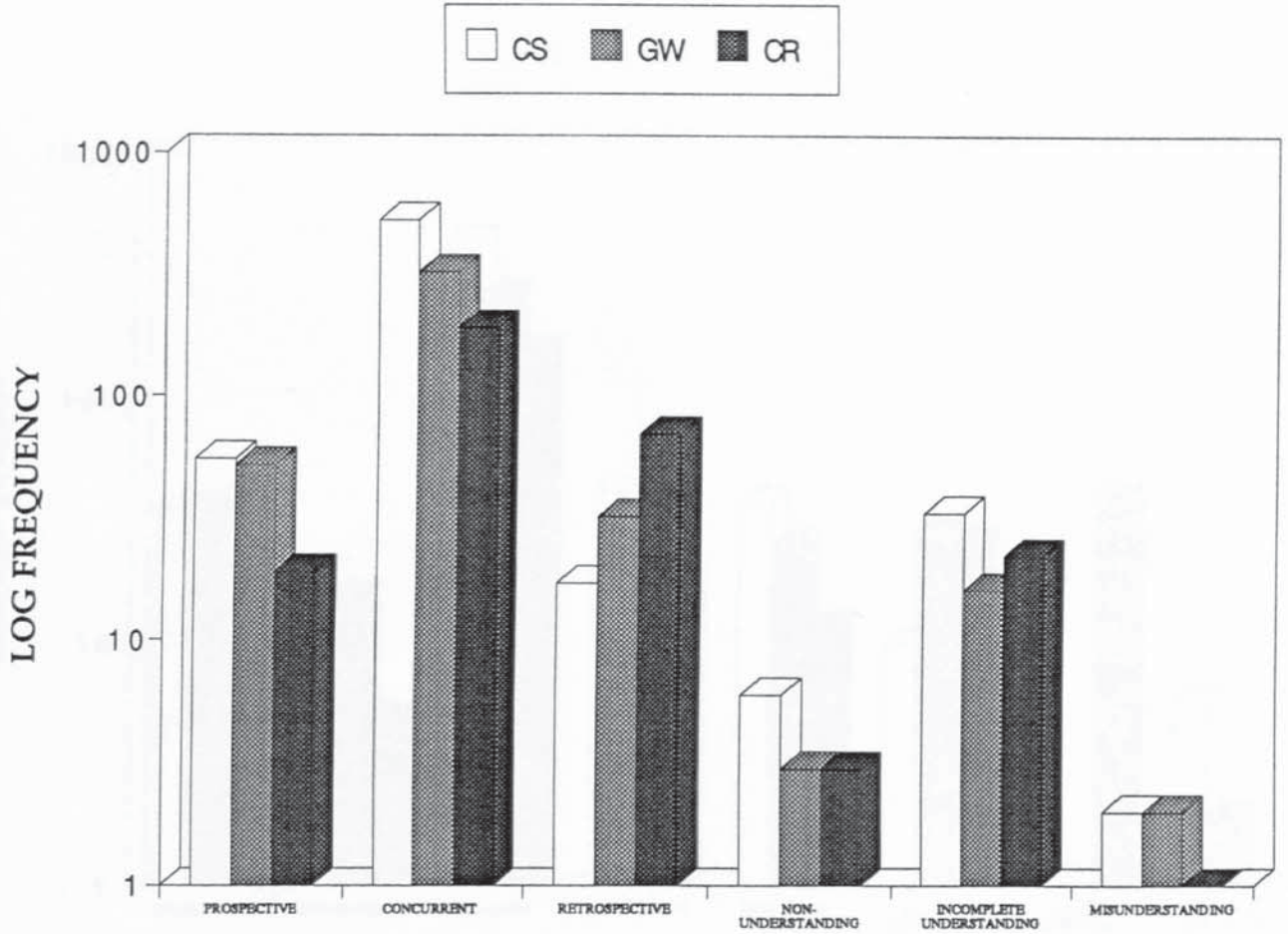

Diagram 6.1 The logarithmic frequency of repair on both production and understanding problems in CS, GW and CR

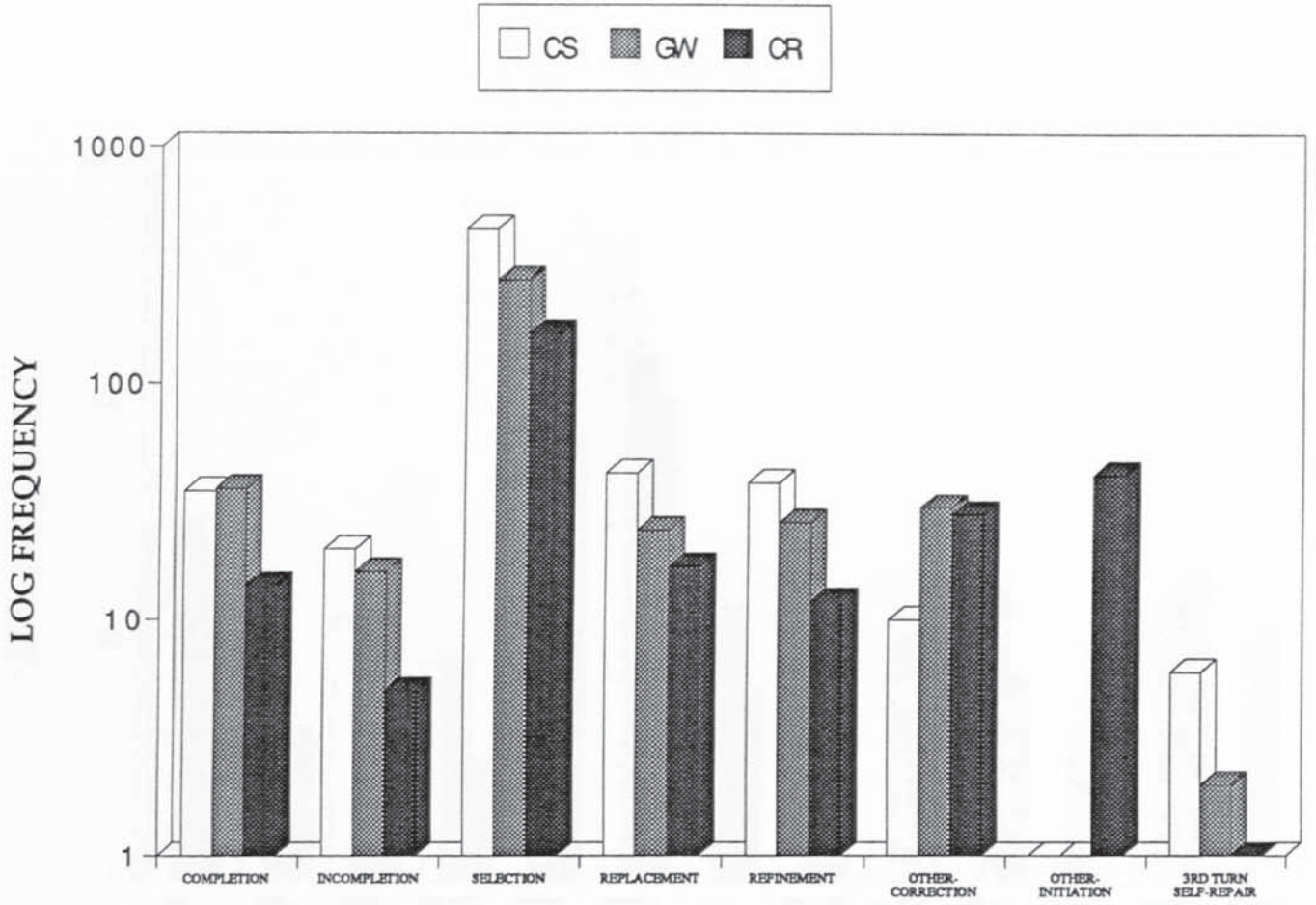

Diagram 6.2 The logarithmic frequency of repair on production problems in CS, GW and CR

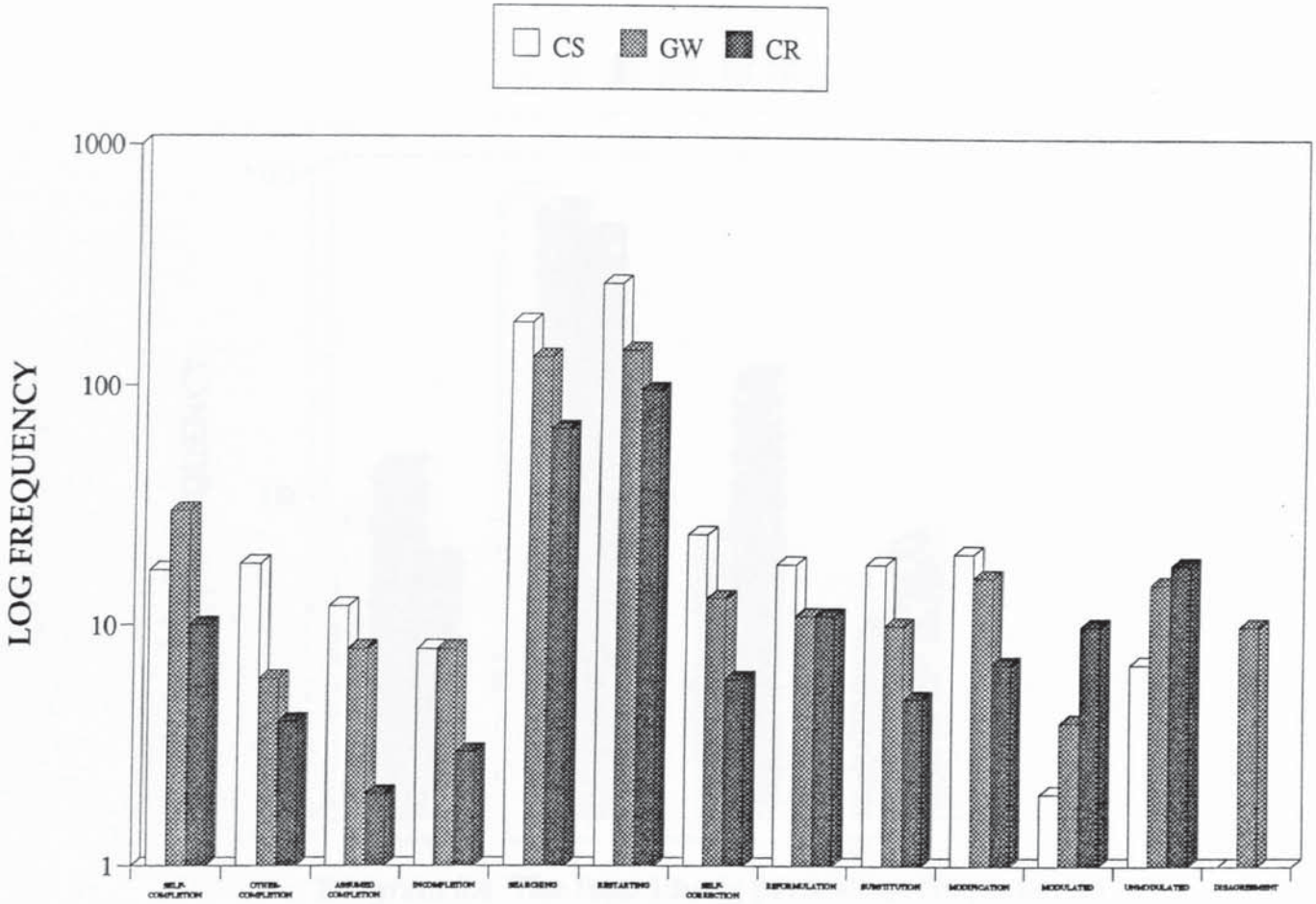

Diagram 6.3 The logarithmic frequency of repair for subcategories on production problems

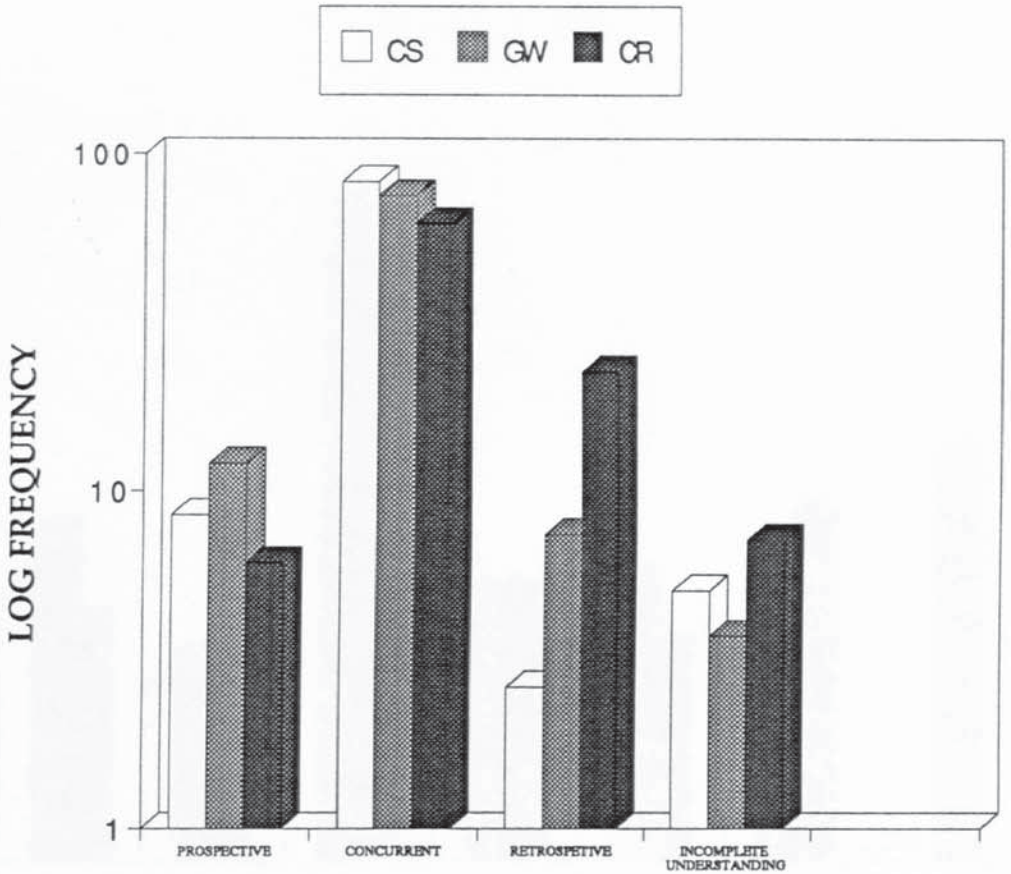

Diagram 6.4 The logarithmic percentage frequency of repair in CS, GW and CR

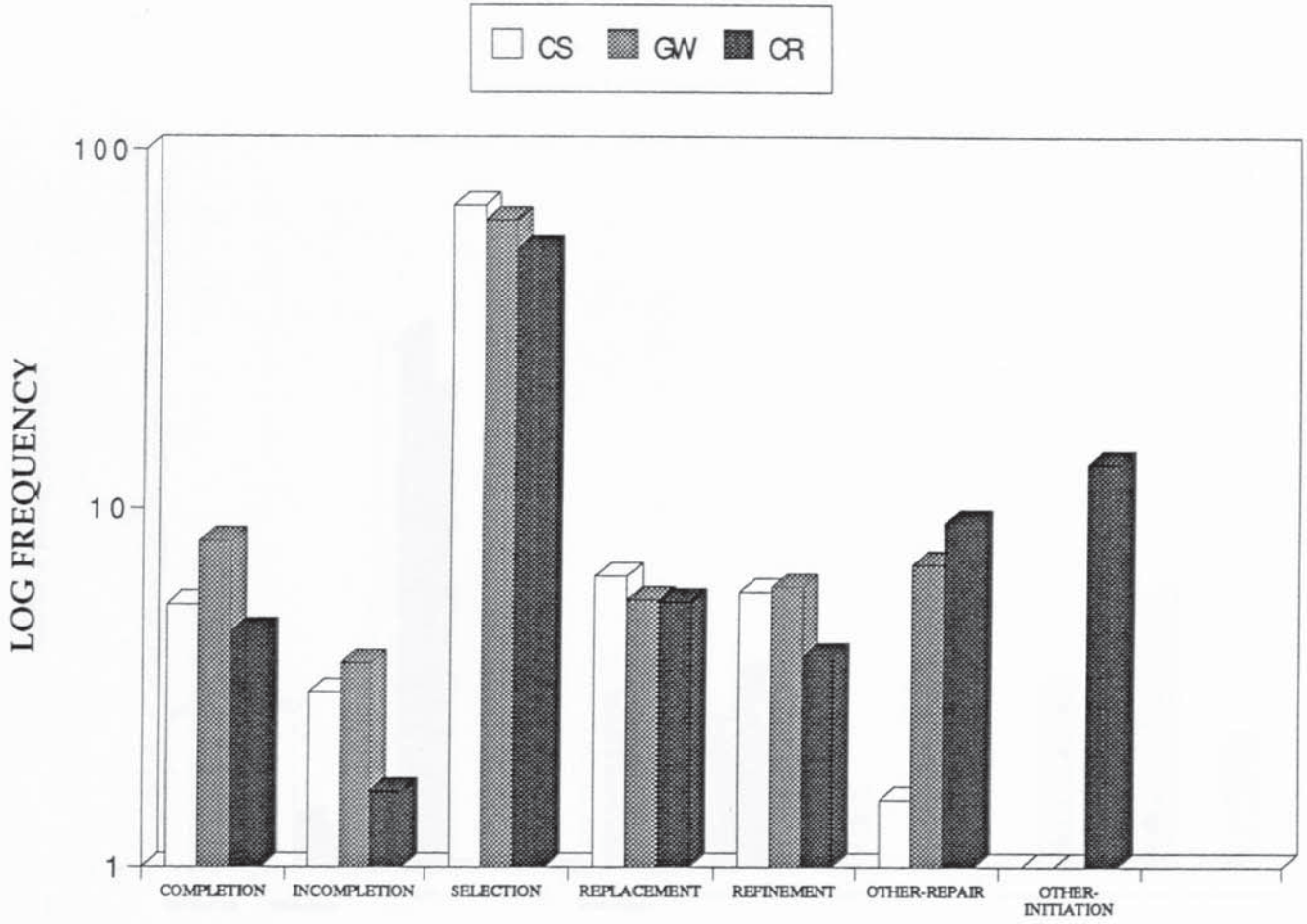

Diagram 6.5. The logarithmic percentage frequency of repair on production problems in CS, GW and CR

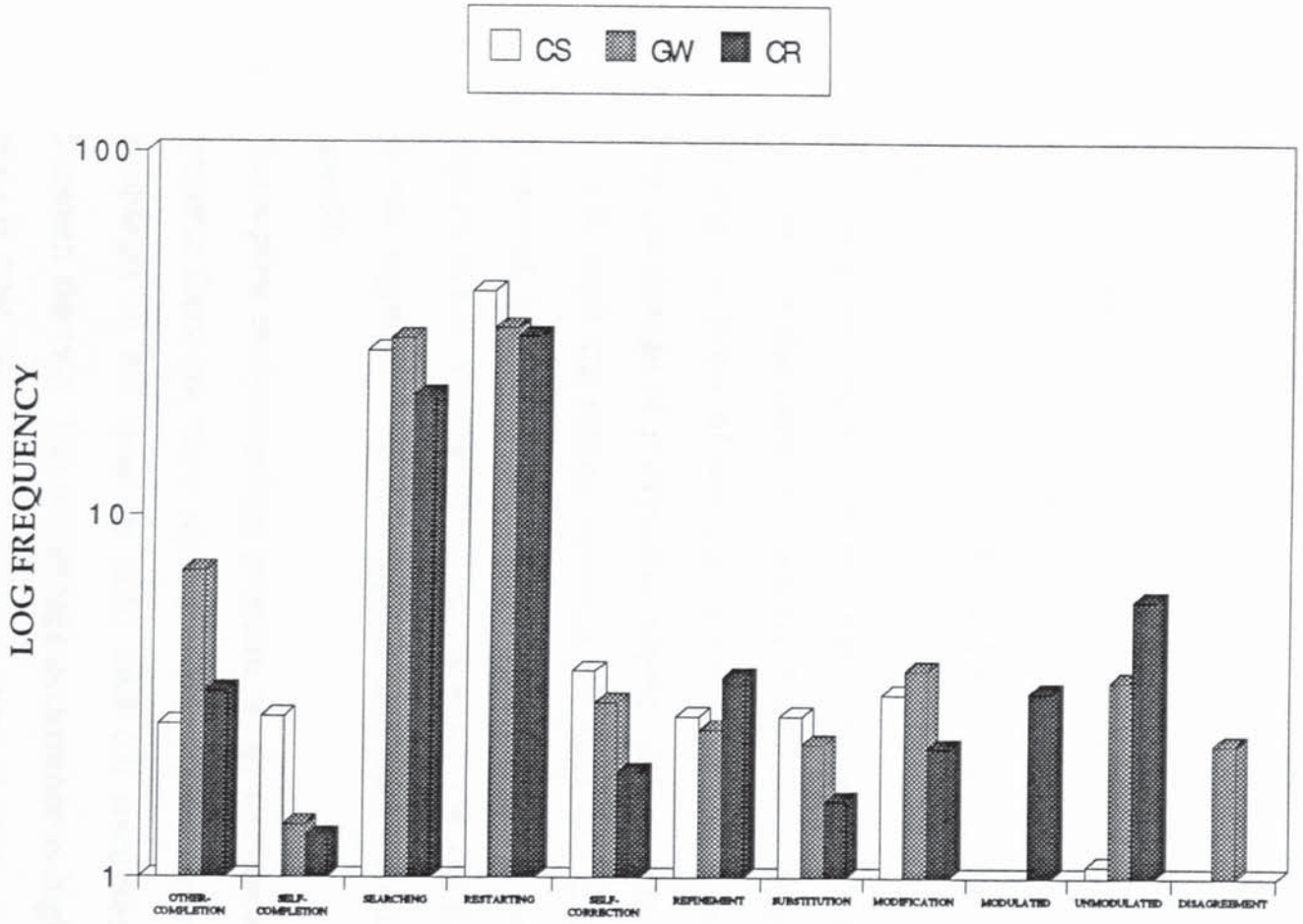

Diagram 6.6. The logarithmic percentage frequency of repair for subcategories on production problems

The results from these diagrams show:

1) The general direction of cline is that there are more repairs in CS than in CR, with GW falling roughly half way between the two, (a detailed description of GW position in terms of repair frequency will be presented in section 6.4.4).

2) There are a few exceptions in the basic categories:

   a) The opposite direction of cline has been found in retrospective repair in production problems in terms of both the raw figure and the percentage of the total occurrence, i.e there are more retrospective repairs in CR than in CS. However, interestingly, GW still occupies a place between the two.

   b) In prospective repair, the raw figure shows that the general direction of the cline is followed. However, different results emerge in terms of the percentage of the total occurrence. The percentage of prospective repair is higher in GW than in CR, with CS falling between the two, but close to CR. However, both results show that there are fewer prospective repairs in CR. The difference lies between CS and GW, and it is not significant by Chi-Square analysis, (X^2=0.08, dif=1 p>0.05).

   c) Incomplete understanding problem repair follows a different pattern: there are more repairs of incomplete understanding problems in CS than in GW, and CR occupies a place between the two. The percentage occurrence is higher in CR than in GW. However, the results show that there are fewer understanding problem repairs in GW in both measurements. The difference lies between CS and CR. This is the only case where GW does not lie between the other

two types of interaction. However, the difference between GW and CR is not significant by Chi-Square analysis (see Chapter 5: 194).

3) The subcategories of repair sometimes follow the general direction of the cline and sometimes appear in a different direction, or even the opposite direction.

The subcategories in the different directions of cline are:

a) in other-completion, the results of both frequency and percentage of occurrence show there are more other-completions in GW compared with CS and CR;

b) other-repair occurs more frequently in GW and CR than in CS;

c) in disagreement, the frequency and percentage of total occurrence are higher in GW than in the other two types of interaction;

d) in incomplete understanding repair, the frequency and percentage of occurrence for language is lower in GW as compared with CS and CR;

e) in incomplete understanding repair the frequency and percentage of occurrence for procedure is higher in GW and CR than in CS.

4) The distribution of other-initiations between production and understanding problem repairs is different between the three types of interaction. Other-initiation is mainly used in understanding problem repair in CS and GW, whereas equal distribution between repair of production and understanding problems is found in CR.

The results mentioned above will be discussed in the following sections in relation to the social and communicative context which include the interaction structure, participation patterns, orientation of interaction and face work. These are the factors found to be related to the ways the participants choose repairables to be repaired and the techniques undertaken to repair them. Secondly, the roles of group work in comparison with CR and CS will be discussed. (The results in terms of frequency in each of the categories between CS, GW and CR will be compared, and the results of percentage of occurrence in CS, GW and CR will be discussed across categories of repair within each of the three types of interaction).

6. 3 Discussion of the results of repair in CS, GW and CR

6. 3. 1 Introduction

So far I have essentially explored the concept of repair in a top-down manner, and this has resulted in a conceptual framework and analysis of the frequency of repair. It is necessary now to turn to a different mode of viewing, from the bottom up, looking into the relationship between the structure of repair and the structure of spoken discourse, which highlights the factors which are associated with the choice of repair devices and the frequency of occurrence.

Repair is done selectively; not everything which can be repaired is in fact repaired. The ways used to undertake repair are various in different spoken discourses. Repair can involve searching for a word, offering a completion, requesting clarification and providing a clue, etc. What is chosen for repair and the method of repair used are associated with social and cognitive operations which take place in the interaction. The participants' relationships and their roles in the interaction play an important role. Levinson (1980) has also argued that one must consider the goal of an interaction in order to

analyse it adequately. For L2 learners, their ability in the target language also restricts what they repair and how they repair it.

By examining the relationship between these factors and repair work we can better understand the process of interaction.

6. 3. 2. Self-completion and other-completion of prospective repair on production problems

Table 5.5 shows that more other-completions occur in GW than in CS and CR. This shows that the participants in GW are keen to participate and, even more obviously, to cooperate in the joint construction of sequences and sentences. This suggests that participants in group work are more cooperative in achieving the goal of the required task in the interaction.

All these features are characteristics of Tannen's (1984) high involvement style. This can be explained very clearly if we look into the goal of interaction. The goal of GW interaction is to reach the target of the required task. In order to complete this target the participants in GW have to work together and help each other. Cooperative and collective efforts are essential for the success of the interaction and equal right of participation in the interaction allows the participants to take part in activity in such a way. Reaching the target collectively overrides the importance to participants of protecting their face, which may be one reason for the use of more other-completion than self-completion in GW.

The above result for GW confirms the findings of Porter (1983), that in NS/NNS interaction learners "prompt" other learners five times more than they prompt NSs. These results also confirm the findings by Pica and Doughty that there are more other-completions in GW than in teacher-fronted classroom interaction. The results of this study provide further evidence to support the claim that GW is considered as an activity which offers a

favourable environment for language acquisition, not only in terms of the quantity and quality of use of the language (Long 1984), but also the active and cooperative participation revealed in the present study. These features of GW are similar to the descriptions given by Brumfit (1984: 75): "Group cooperative, rather than individual competitive, are held by these researchers to reduce anxiety, increase awareness of possible solutions to problems, and increase commitment to learning." However, how they interact with each other — cooperatively, as shown in this section — has been clearly revealed for the first time.

A number of researchers have reported that active involvement is beneficial to language learning (Allwright 1984, Mehan 1979, Seliger 1977). However, there are few studies which provide the empirical evidence that GW does have such potential to assist participants to develop their communicative competence. Although some comparative studies between GW and CR (e.g Long 1984, Pica and Doughty 1987) have been done, the features they have examined are mainly concerned with the quantitative use of the language. The comparison between GW and CS has not been investigated before. The results in this study comparing GW and CS reveal more other-completions in the former than in the latter, which offers empirical evidence that other-completion is a characteristic of GW.

The fact that there are fewer other-completions and self-completions in CR can be explained by the circumstances of the specific classroom setting, where the teacher does not expect other participants to help to complete his/her utterances, except in the case of pedagogical invitation for completion (see Chapter 4). This rule also applies to students, who are pedagogically expected to respond to the teacher's requirement in a complete utterance. However, this does not mean that students are not used to this way of solving the problem when they have difficulty in doing so. There are some cases

where the students do appear to invite completion, as the following example illustrates:

Ex 5. 1 CR2=81

1 S3: [Driving and then I want to fill up my tank with [...]
2 T: Petrol=
3 S3: =Petrol, I stop my car,
4 T: Uhuh,
5 S3: And then [..] I fi:ll the tank with oil=

Such instances occur when the students and the teacher are engaged in conversation rather than in question-answer-comment format characteristic of the general exchange system manipulated in CR. The characteristic of repair shown in the above example is a conversational repair in CR, which differs from didactic repair. Such instances do not occur as frequently as other categories of repair identified in this study.

Furthermore, although there are fewer completions in CR, the majority of the completions are by the teacher. This result demonstrates that the repair structure of CR fits neatly into the I - R - F pattern proposed by Sinclair and Coulthard (1975), as the following diagram shows:

Initiation (I)	Response (R)	Feedback (F)
	Students	Teacher
Utterance	TS	Other-repair
Teacher	Student	Teacher
	(self-initiation)	(Other-completion)

Figure 6.1. Other-completion in I.R.F structure

The structure of I - R - F is based on discourse analysis, focusing on speech act theory. This has been reinforced in the conversational analysis of CR undertaken in this study. van Lier (1988) holds a similar view when he describes the process of repair as a turn-taking mechanism. He suggests that in CR it is usually students who have difficulty in completing the utterance and they always address the problem to the teacher. The teacher, who is in authority, takes the floor and offers "help". Reynolds (1990) argues that the "power" of the teacher in asymmetric discourse allows him/her to control CR interaction in such a way. Kasper (1985) has found that in CR exchanges it is always the teacher who finalises the exchange. It is not surprising that nine out of ten other-completions in CR are undertaken by the teacher. However, in CS, it is usually the case that a self-following-up move occurs even after an other-completion. This indicates that the participant who is responsible for the trouble source keeps his turn at speech, even in cases of other-repair. This pattern for repair work is upset in CR because it is typically the teacher who finalises all repair sequences, as illustrated in Figure 6.1.

There are fewer other-completions and more self-completions in CS compared with GW and CR. This result confirms SJS's claim that in CS self-repair is preferred. This finding suggests that participants in CS withhold other-completion for self-completion. It also explains that the way used by L2 learners in CS follows the conversational exchange system — it is more cooperative, not unlike normal participants in a genuine interaction. Cooperative participation here in CS has different implications to those which surface in GW. In CS the participants are cooperative as they aim to create a setting for interaction to take place. The aim of participation is for them to converse. In GW, as mentioned above, they work together to reach the goal set up for them. Secondly, it is the goal of interaction between GW and CS that differs. In GW the goal of their participation is to reach the target that is clearly set up at the very beginning, whereas, the goal of the interaction

in CS is not clearly defined, and it is developed on a local interactional basis. This not-yet-clearly-defined goal in turn makes it difficult for other-participants to complete a speaker's utterance. Thirdly, achieving the goal together in GW overrides face work, which implies that other-completions in GW do not have such a face threatening effect as they have in CS.

These results reveal that the process of CR interaction structure in terms of repair is closely associated with the classroom interactional exchange system, the turn-taking mechanism and the power of the teacher. The organizational features of repair in CR indicate the relationship of dominant and subordinate between the participants. These arguments have been discussed in the literature in terms of linguistic analysis and discourse analysis. However, no study has investigated specifically such a feature of repair structure, in terms of *completion* before. Such a feature cannot be discovered through the standard repair trajectory analysis.

6.3.3. Assumed completion and ignored incompletion of prospective repair on production problems

Table 5.6 shows that more assumed completions and ignored incompletions occur in CS and GW than in CR. This result suggests that in CS and GW, as long as communication goes smoothly, whether the utterances are complete or not is not as important as it is in CR. This is associated with the goal of interaction as mentioned in the above section. In CR, the practice in using language is a part of the game. In CS, as long as the participants understand each other it is not necessary for the completion to be undertaken. This indicates that forcing completion in CR makes interaction artificial.

Assumed completion is a new concept developed from this study, a concept which is identified from the context, starting with an incomplete

utterance in the previous turn (see Chapter 4 for an illustration of the example). This can be considered in the light of Grice's conversational maxim of quantity, "to say no more than you have to say". This explains why there are more assumed completions in CS and GW. The reason there are fewer assumed completions in CR may be explained by the fact that CR is a place for learners to practise the language and use language in a "standard" way. This is commonly accepted in CR, where the students are expected to produce complete utterances. It is also the teacher's job to help students to practise the language. The result of this kind of teaching is as Hullen (1982: 207) describes:

> "... that learners' utterances frequently sound so much more correct than utterances of native speakers. It is, however, a perfection which is achieved at the cost of creativity."

Assumed completion without causing breakdown of communication is acceptable in real interaction. Forcing completion in this case runs contrary to the demands of real communication. In order to become a competent member of a speech community one must participate in the affairs of that community; in order to develop communicative competence, one must learn to use the language code the way it is supposed to be used. Enforcing the use of complete utterances in CR is contradictory to the aim of teacher-fronted language teaching, which is to prepare the students for communication outside the classroom. As Gumperz (1982) argues, the learning of discourse or communication strategies is most successful when outside conditions exist which force interlocutors to disregard breakdown of communication and stay in contact. In terms of this category, GW occupies a place between the other two, close to CS. The characteristics of GW will be discussed in 6.4.4.

The discussion in this section reflects the fact that prospective repair in CR interaction is not as "natural" as in CS and GW, since completion is undertaken by one participant, and that completion is principally accomplished for a pedagogical purpose.

Prospective repair in incompletion shows the underlying difference between CS, GW and CR in terms of the participation of the speaker regarding whether to complete and how to complete unfinished utterance. Although a number of researchers have investigated the fundamental differences between inside classroom practice and outside classroom interaction, the results of assumed completion in CS, GW and CR have thrown new light on this issue.

As far as GW interaction is concerned the detailed results are as follows:

1) In terms of completion, GW is similar to CS and there is no significant difference between GW and CS, as shown by Chi-Square analysis (X^2=0.14). However, there is a significant difference between GW and CR, (X^2=9.68).
2) In terms of assumed completion, GW moves towards CR, since there is no significant difference between GW and CR, as shown by Chi-Square analysis (X^2=0.4). However, there is a significant difference shown by Chi-Square analysis between GW and CS (X^2=6).

However, whether GW can bridge this gap between CR practice and CS use in real interaction needs to be examined by further investigation.

6.3.4 Searching and restarting in selection of concurrent repair on production problems.

Table 5.8 shows that the results of searching and restarting follow the general direction of the cline, but it is still worth discussing and exploring,

since the difference in this category between these three types of interaction is so great that it accounts for more than twenty percent of the total occurrence. Self-initiation/self-repair demonstrates the basic structures of repair within the turn. An explanation is necessary.

The reason there are fewer searchings and restartings in CR has been noted by a number of researchers (Long 1983, Pica 1987, van Lier 1982, 1988, Papaefthymiou-Lytra 1989, Long and Porter 1985, Brumfit 1981, 1985). Kasper (1986: 27), for example, states:

> "The decisive factor is that an opportunity for self-repair does not usually occur in the teacher-fronted teaching, in which the learner (most of the time) has to provide FL response to very short NL stimuli. There are, therefore, very few speech planning phrases long enough for self-repair."

Even if learners are required to produce longer utterances in a slot-and-filler, teacher-to-learner format, trouble sources frequently occur, but in these cases the teacher tends to provide repair, repair-initiation or prompts before the learner reaches an appropriate slot to initiate self-repair. The following example clearly illustrates this point:

EX 6.2 CR2=399

	1	S3:	So as [.] uh no one uh:
—>	2	T:	No no you can't say that=
	3	S3:	=So as to=
—>	4	T:	=So [as to:
	5	S3:	[let's no one,
	6	S5:	Let no one,
—>	7	T:	No, say that again.....

In this example the teacher "interrupts" three times: the first is when S3 indicates her difficulty in completing the utterance by sound stretching,

which could be interpreted as TRP signalling the difficulty in completing utterance. In this case the teacher takes the opportunity to complete it. The second is when the student is still speaking. Here, the teacher interrupts using repetition without giving the student enough time to finish the utterance. The third is when the student continues talking without a rising tone to request help or giving up his turn, and the teacher takes over. These interruptions in the example demonstrate that the teacher can take the floor or interrupt whenever s/he feels it to be necessary, with or without a signal of difficulty from the students.

In a word, the reasons for the low incidence of self-initiation and self-repair in students' utterances are as follows: the students will not say more unless required, they cannot say more because of a lack of ability, or they are not allowed to say more (as the above example shows). Another reason closely related to this issue is that the tolerance for intra-turn pauses and hesitations in teacher-led recitation sequences tends to be rather low. More self-initiation/self-repair in teachers' utterances compared with students' can be explained by the simple fact that the teacher holds the floor more often and longer than students and controls the turn-taking mechanism. The teacher is, after all, the official floor keeper.

Example 6.2 also explains why there are more other-initiations in CR by the teacher, since s/he interrupts the student whenever s/he feels it necessary by providing clues or prompts to elicit correct responses. These clues and prompts are treated as other-initiation, which will be discussed in section 6.3.7.

The above mentioned factors offer powerful explanations as to why there are fewer searchings and restartings in CR and argue for the fact that the repair structures are closely related to the nature of the interaction structure, interaction orientation and the control of participants. There are some other factors, such as preparedness for the utterances and the speaker's fearfulness,

which affect the repair process. These factors are linked to the psychological dimension, which is not a focus of this study. Therefore, discussion about these factors will be brief. Hullen (1982: 209) describes preparedness in classroom discourse as follows:

> "The learner's response meets this elicitation with an answer, the remainder of the sentence, or another utterance — all of them being speech acts whose semantic contents are previously given and whose syntactic structure is often — though not always — prepatterned either by the text (in the memories of teacher and learners) or by the elicitation of the teacher. The special form of the elicitation may be planned in order to stimulate a certain response e.g a certain structure or lexical item."

His statement suggests that not only are students' utterances planned on the basis of the teacher's question and context, but also the teacher's utterances according to the goal of the teaching. However, CS is unplanned activity. Hullen goes on to describe how the learner, as a member of the classroom community, knows the rules appropriate to interaction between the teacher and students:

> "At the same time, as a rule the learners know of the match between elicitation and response, that is, they know what they are expected to say."

In CR foreign language learners are often reluctant or afraid to restart because they fear that after the first difficulty they may encounter more serious ones. The teacher is afraid of losing control of the interaction and tries to minimise such a situation. Long (1976: 138) holds a similar view:

> "It is claimed that the quality of verbal interaction possible between teacher and students, and student and

> student, is influenced adversely by such factors as (1) the pressure teachers feel to maintain a rapid pace during student oral work in order to avoid boredom among the learners, and (2) the pressure students feel as a result of what Barnes (1973 19) calls the "audience effect," i.e. the inhibition resulting from having to speak "publically" in front of a large group of fellow students and the dominating figure of the teacher. One of the results of the pressure on teachers is a tendency for them to limit individual student production to isolated sentences; the audience effect creates in students a need to provide the short polished "finished article" in the form of grammatically correct sentence in which generally truth value and almost always adequacy and appropriacy are hardly considered either by student or teacher."

The tolerance for pauses and filled pauses is substantially higher in CS than in CR.

The above factors also explain why there are more searchings and restartings in CS than in GW and CR, since these interactional constraints on the use of "impromptu" speech in CR are absent from CS. The unplannedness and not-yet-defined goal of interaction account for the greater use of searching and restarting in CS. As a number of researchers have reported, in CS the L2 learners produce longer and more complex utterances in which self-repair is more likely to occur, and equal footing in the participation allows them to feel comfortable in holding the turn to talk. Finally, the limited use of interruption in CS may increase the use of searching and restarting. Such a high incidence of searching and restarting in CS indicates that "impromptu" speech is a characteristic of L2 learner conversation.

The frequency of searching and restarting in GW remains between that in CR and CS. This may simply be because GW is similar to CR in terms of

the plannedness of interaction, but also similar to CS in that there is no controller of what to say or how to say it.

The above factors also explain why there is more restarting than searching in all three types of interaction. But there are fundamental differences in the turn-taking system. In CR the teacher can take over the turn when there is difficulty in the process of production, as illustrated in example 6.2. In CS, however, turn-taking is based on the normal conversational rules (SJS turn-taking system of conversation). Other-initiation/other-repair will occur unless overridden by the need for the smooth continuation of interaction. Another explanation for more restarting is the operation of the repair process itself. Searching is signified by a pause with a filler or sound stretching, which can be interpreted as a transitional relevance place (TRP) where the floor is offered. When this happens the repair operates in the form of prospective repair as discussed in section 6.3.3, whilst restarting is undertaken by a cut-off, repeating or overlapping using the same word, which secures the floor for the speaker to continue.

The problem with the control of students' speech in CR by preventing them using such strategies is that learners are hardly ever able to go through all phases, from setting a communicative goal to planning and speaking. Allwright (1984) argues that only in going through this mental procedure can the learners find the necessary hypothetical rules, test them, find them confirmed or rejected and thus develop them into correct generalisation. In tightly controlled classroom interaction learners may be forced to concentrate on producing correct sentences with the result that they do not replicate the ways in which these correct sentences are arrived at mentally under normal communicative circumstances. Foreign language teaching is prone to produce language with a low incidence of redundancy.

Thus these features of impromptu speech are not necessarily considered as aberrations in CR interaction. However, teachers seem to regard such

behaviour with suspicion and tend to make learners repeat their utterances or interrupt students' turns whenever searching or restarting occurs.

However, in order to control the interaction in CR the teacher has to use his/her power to prevent incorrect use of the language and awkwardly constructed interaction in the designed direction. It is not necessary to sacrifice control of interaction to achieve this. It does, however, imply the necessity of envisaging new teaching methods which give learners ample room to learn to use language creatively, and it does seem that it would be better if the teachers in formal teaching settings were more tolerant of a learner's non-fluent speech.

Another method of solving this problem is to allow L2 learners plenty of opportunity for GW interaction. The results from this study have shown clearly that there is more searching and restarting in GW and the frequency of restarting and searching in GW is close to that in CS. Similar findings have been noted about GW by Barnes (1973: 19):

> "An intimate group allows us to be relatively inexplicit and incoherent, to change direction in the middle of a sentence, to be uncertain and self-contradictory. What we say may not amount to much, but our confidence in our friends allows us to take the first groping steps towards sorting out our thoughts and feelings by putting them into words. I shall call this sort of talk "exploratory."

The characteristics of "exploratory talk" described by Barnes are those of the language people use when they are trying to communicate, rather than when they are engaged in the mechanical production of practised verbal formulae. Barnes's statement explains clearly that GW is in a similar position to CS, which may help students to develop the ability to communicate outside the classroom. Brumfit (1984: 79) has a similar view about this in GW:

> "... quantity of target language production has been increased, and so probably has the spontaneity." ... "...as soon as such discussion does occur, of course, the language used will be unpredictable for the teacher, and the characteristics of genuine fluency work will accidently start to appear."

van Lier has found similar features in his study:

> "By far the most frequent incidence of self-initiation and self-repair in my data occurs in group and pairwork sessions where it occurs perhaps more frequently than it would in the general conversations in the target language, since in these situations learners are often required to produce utterances and sequences of utterances of a complexity they would not generally attempt outside the conversation." (van Lier 1982: 425)

Searchings and restartings account for over half of the total occurrence in this study. Such a high incidence of self-initiation/self-repair may indicate that this feature is a characteristic of not-yet-competent L2 learner discourse.

6.3.5 Self-correction and reformulation in concurrent repair on production problems

The results in table 5.9 show that the occurrence of self-correction and reformulation repair follows the general direction of the cline; GW occupies a place between CS and CR. However, the distribution of correction and reformulation is different between these three types of interaction. There are more self-corrections in CS and GW than reformulations, and the reverse is true for CR. At first sight this result is surprising. It is interesting to find that within the classroom a different frequency of occurrence between the teacher and students in terms of this category shows that students undertake more self-corrections than reformulations, since five out of six self-corrections are

done by the students and ten out of eleven reformulations are done by the teacher (see tables 5.9 and 5.11). These results imply that students do more self-corrections and the teacher does more reformulations. The following explanations could be offered for these results:

1. Self-correction is associated more with acceptance and linguistic competence. The teacher, who is a competent speaker, is not expected to make "mistakes" and repair them, whereas the students, who are not-yet-competent, are more likely to make "mistakes", which need repair.
2. Reformulation is associated with avoiding ambiguity and securing understanding. It is generally accepted that reformulation is a common technique which is used by the teacher in CR interaction for the following purposes:
   a) securing the understanding of students by reselecting an appropriate means of expression (to make sure the students get the message);
   b) teaching different ways to express the same idea by using different vocabulary and structures;
   c) steering the learners' mental search process for a correct response into the desired direction by changing the focus of an utterance;
   d) drawing the learner's attention to different but equally acceptable responses by rephrasing questions;
   e) giving learners enough time to "construct" answers while reformulation takes place.
3. It is also associated with the nature of interaction in CR, where acceptability or accuracy is emphasized in the L2 learners' correct use of language. Secondly, the students' repair has to be quick, which makes it difficult for students to undertake reformulation.

Another factor is that the students are competitive in getting the floor to speak, which means that students are unlikely to get a chance to undertake reformulation of their own utterances in CR. The teacher who is a turn allocator and floor holder, and has the interaction purposes mentioned above, (McHoul 1980), is able to undertake the reformulation.

The teacher's reformulation usually focuses on lexical choice, whereas students' reformulation focuses on language forms.

Reynolds (1990: 253) argues in a similar vein that the teacher's same turn self-repair is "shaping the meaning" and students' is "searching for meaning".

However, with the absence of the teacher and these constraints of CR it is not surprising to find that there are more student reformulations in CS and GW than in CR. If we accept that reformulation is a communicative skill which enables participants to express their ideas effectively and avoid misunderstanding, it is important for the students to master this skill. If there is more self-correction in students' utterances in CR and if there are more reformulations in GW than in CR, then GW is in a reasonable position to help students develop this competence. Crudely put, CR is a place where the emphasis is on acceptance and accuracy, whereas in GW the emphasis is on the appropriateness and communicative use of the language. This is another discovery about GW which may bridge the gap between CR repair and the communicative use of repair.

The above two sections discuss the factors which affect the different frequencies of occurrence in terms of the basic ways in which speakers repair their own speech in the same turn. It is hoped that the results of this analysis are useful for the analysis of process in language production.

6.3.6 Modulated repair, unmodulated repair and disagreement in other-repair on production problems

Table 5.13 shows that modulated and unmodulated other-repair takes the opposite direction to the general cline. This result is not surprising. It is predicted by SJS (1977:381) that other-repair will skew towards this direction when interaction between not-yet-competent participants (without respect to age) takes place. It is also generally accepted in CR that the teacher's job is to monitor students' utterances and that students' expectation of classroom interaction is that it will help them in this way. Interestingly, it has been found that GW still occupies a place between CS and CR.

The greater frequency of other-repair used in CR indicates that other-repair is an important part of a classroom institutional "game". The results of Table 5.16 also show that most of the other-repair in CR is done by the teacher.

Other-repair in CR usually occurs in the turn following the problem turn of a student's response and can be regarded as either an evaluation in the traditional exchange structure sense, or feedback. McHoul (1990) considers it formulated in classroom Q-A-C adjacency pairs[1]. van Lier (1988:206) argues that other-repair plays the role of correcting, evaluating and re-initiating. Sometimes these functions overlap and are conflated, and their sequential purpose and implications are in many cases identical. Thus it is considered as "routine repair". However, there is no case in this study where the student does other-repair to the teacher's utterances, which supports the results from previous studies.

As regards other-repair in CR, Day argues:

> "it has been an unexamined assumption that other-repair plays an important role in second language learning by providing learners with information about

> the correctness of their speech, and that, in so doing, it helps them to modify their current interlanguage rules." (1986: 225)

This is not necessarily true in CS and GW.

Other-repair is also related to face work, which may be suspended in CR:

> "In classrooms, of course, such principles or strategies may not operate in the same way as in general conversation, since it is part of the teacher's institutionalized role that s/he notes and deals with errors, and this may allow for more overtness and directness". (van Lier 1982: 422)

> In classroom, this face-risk must be regarded as officially suspended, though not perhaps in all cases privately absent. (van Lier 1982: 420)

The suspended face work is in turn associated with the goal of the interaction. However, in CS, other-repair is seen as embarrassing to interlocutors who are supposedly on an equal footing.

Most of the other-repair in CR focuses more frequently on the students' *language* problems compared with GW and CS, as the following table illustrates:

Table 6.1 The frequency of other-repair in retrospective repair in CS, GW and CR

Interaction	OTHER-REPAIR			Total
	Language	Content	Procedure	
CS	2	8	0	10
GW	10	17	2	29
CR	22	5	1	28

The results in this table show where the focus of repair falls in the interaction. In CS other-repair is not necessary unless what is uttered interferes with what is going to be talked about. However, in CR learning to use the language correctly is the goal of the game.

Other-repair occurs almost as often in CR as in GW. However, they differ in terms of focus: there are more content repairs in GW than in CR.

Another finding of this study is that unmodulated other-repairs occur more frequently than modulated other-repairs in all three types of interaction. This result contradicts the findings from previous studies (Schwartz 1980, Gaskill 1980, McHoul 1990), in which it is overwhelmingly claimed that modulated other-correction overrides unmodulated other-correction, not only in L2 learners' conversation (Schwartz 1980, Gaskill 1980) but also in the L1 classroom (McHoul 1990). The explanation for this contradictory result may lie in the responses to the "uncertainty", which could be treated either as modulated other-correction or other-initiation. The difficulty of drawing a distinction between modulated other-correction and

other-initiation has been long recognised. McHoul's description of this distinction is "far from clear" and he points out that there is a "promising nexus for further research" (1990: 375). The analysis of this study, by examining the different types of problem in terms of production and understanding (see Chapter 4 for criteria), focusing on the sequential organization, might help to draw this distinction between the two. If it is a production problem then this uncertainty plays the role of modulated other-repair. If it is an understanding problem then this uncertainty becomes an other-initiation, which needs confirmation or clarification in order to continue. In both cases the first turn is the trouble source, the second turn contains "uncertainty" utterances. The third turn, which follows this "uncertainty", plays an essential role in determining the nature of this uncertainty. If the third turn contains repair to a trouble source in turn 1 this uncertainty is interpreted by the third turn as "modulated other-repair", which offers the first speaker an opportunity to repair it (as a production problem repair). The intention of modulated other-repair is to require repair and save the face of the speaker by downgrading the initiator him/herself. If the third turn contains a confirmation of turn 1, this shows that turn 3 treats the second turn as other-initiation for understanding repair. If this other-initiation of uncertainty is considered by the first speaker to be a reformulation of the trouble source, he/she will accept this other-initiation by confirmation. But it is still considered as an understanding problem repair. Under these situations the other-initiator has a genuine problem with understanding so that the repair is essential.

With the distinction between other-initiation and modulated other-repair, the resulting incidence of modulated other-repair is unlikely to be the same as in other studies which have treated all the uncertainty as modulated other-repair. This analysis is necessary, since distinguishing genuine uncertainty from modulated other-repair allows the participants develop

communicative and interactional competence through the interaction, and allows the analyst to view the different ways used in relation to the participants' consideration of problem.

This distinction is interesting and useful. The real interest for this study is that in both modulated and unmodulated other-repair GW remains between the two. Although more other-repair occurs in terms of the total frequency in GW, this is because of more disagreement in GW.

Disagreement is another feature in other-repair. Levinson (1983: 338) argues that disagreement in CS is dispreferred, which is confirmed in this study. However, the evidence in GW suggests that its dispreferred status may be relaxed in task-based group work and it is not "conspicuously avoided". Pick (1987: 15) claims that when the group is engaged in a decision-making task the participants' contribution to the decision is primarily in the form of argument and opinions. This suggests that there would be a higher possibility for disagreement to occur.

It has been noticed that unmodulated other-repair is usually used for a linguistic problem, while modulated other-repair usually focuses on factual problems.

6.3.7 Clue, prompt, rejection in other-initiation of retrospective repair on production problems

Table 5.14 shows that although clue, prompt, rejection are commonly used ways to initiate repair on a production problem for CR, there is only one example in CS, and they are totally absent from GW. This fundamental difference between CR and CS/GW makes this study differ from the previous studies since their findings show only the preferences certain of a specific repair trajectories. This study also shows that all the other-initiations for production problem repair in CR (in this study) are undertaken by the

teacher, which further suggests that other-initiation for production problem repair is under the control of the teacher.

The teacher uses other-initiation in production problem repair mainly for pedagogical purposes, and is primarily concerned with the corrective use of the language. "Wrongly" used language can be seen as an obstacle in the production process and so can and should be promptly removed. Another function of other-initiation is that the teacher uses it to control the interaction in the classroom, keeping it to the desired direction. Thirdly, by using other-initiation more opportunities are provided for students to do the self-repair, ie, to learn how to communicate properly and where to undertake repair.

The use of other-initiation for repair on a production problem by the teacher plays the role of "help" which does not constitute a floor threat in the same way that such an interruption might do in general conversation.

Other-initiation for a production problem repair indicates either what repair is sought or where the trouble source is.

Other-initiation for production problem repair becomes a means of checking, testing and control exercised by the teacher. In terms of language learning, other-initiation is a better way to elicit students' responses than other-repair, because other-initiation provides an opportunity for the learner to go through the repair process — recognising the trouble source and carrying out repair by themselves.

Other-initiation is used more frequently for the repair of language problems than content problems. In van Lier's study a similar result has been noted as he states that, "errors of grammar (and other errors) are usually repaired by others, or at the very least the repair is other-initiated, especially in teacher-led activity-oriented sequences", which is different from what happens in normal conversation, as noted by Schegloff et al.:

> "when 'errors' of grammar are made and repaired, the repair is usually initiated by the speaker of the trouble source, and rarely by others." (1977: 370)

Schegloff et al. argue that there is a massive preference for self-repair in conversation, so that "others withhold repair initiation from replacement while the trouble source turn is in progress" (1977: 373).

Other-initiation realized in the form of clue, prompt and rejection plus clue or prompt not only gives the chance for L2 learners to do self-repair, but also plays a learning function in that the learner, in productively using a particular item or rule, can test a hypothesis about the foreign language or automize existing foreign language knowledge. Finally, it provides the teacher with information about the status of the learner's foreign language knowledge. Other-initiation plays roles of enabling and evaluating.

The absence of other-initiation for production problem repair in CS and GW is not surprising, because correcting, evaluating and testing the language is not the aim of the interaction. The direction of the interaction is not predetermined.

6. 3. 8. Third turn self-repair in retrospective repair on production problems

Table 5.15 shows that third turn self-repair follows the general direction of the cline although it runs against the direction of the cline in retrospective repair, which third turn self-repair embraces. Third turn self-repair is related to the control of the interaction structure. In conversation what is going to be said and how to say it is not strictly controlled; as has been mentioned several times, the goal of interaction in CS is not clearly fixed. Therefore, there are more opportunities to turn back to repair what has been said. The participants' equal right to decide what is going to be said and how to say it

allows them to make third turn self-repair possible. However, in classroom interaction what is going to be said and how to say it are tightly controlled by the teacher, as are the goal of interaction, the structure of interaction and the opportunity to modify what has been said beyond the second turn.

This result confirms the findings of Reynolds and van Lier in the L2 classroom and McHoul in the L1 classroom, that third turn self-repair occurs rarely in CR discourse. Although Schwartz (1980) reported that third turn self-repair is absent from her L2 learners' conversation it does occur in CS in this study. However, the results of her study should be cautiously interpreted since there are only two participants in each conversation. Furthermore, she herself admitted that "although there was an absence of third turn self-repair it does not necessarily show that the second language learner does not use it." This study shows that third turn self-repair does occur, although the frequency is not very high. In third turn self-repair GW remains between CR and CS.

Retrospective repair of a production problem is a characteristic of CR. It is pedagogically motivated. Although GW remains between CS and CR, it is not consistent in the three categories. The interesting thing is that other-repair in CR mainly focuses on language problems, whereas other-repair in GW mainly focuses on content (see table 6.1). This can be explained by the different goals of interaction in different forms of discourse. The fact that GW remains close to CS in terms of other-initiation can be explained by the aim of the interaction — an interaction in which communication is considered more important than the correct use of language.

The above discussion focuses on the repair of a production problem from the lower level of the categories in the model to the higher level in order to reveal the internal interactional structure of repair in relation to the structure of interaction in each discourse type. To finish the discussion of the

results of this study it is necessary to discuss how to initiate repair when the interlocutor has an understanding problem.

6. 3. 9 Repair on understanding problems

As mentioned in Chapter 4, analysing an understanding repair is very complicated and more problematical than a production problem repair. Furthermore, the frequency of occurrence in understanding repair shown in Chapter 5 is not very high. For these two reasons, the discussion of understanding problem repair will focus only on incomplete understanding repair as mentioned in Chapter 5, this being the most frequently used category in understanding repair. Incomplete understanding repair is informative, since it is closely related to seeking the relevance, accuracy and certainty of the interpretation, as discussed in Chapter 4. It forms an important part of the negotiation in the interaction (Long 1980, and Gass and Varonis 1985, analysed this feature as an important part of second language acquisition). Repair caused by understanding problems consists of genuine loops which serve to secure comprehension without, however, directly affecting the process of interaction.

What emerges from these results is that there are fewer understanding problem repairs in GW than in CS or CR. One way to approach this is to examine the factors which are related to the occurrence of understanding problems. The discussion in this section will examine factors which are generally considered to influence understanding.

The explanation for the frequency of occurrence in understanding repair is related to the participants' level of language proficiency. The more proficient the students are the more they can understand each other, therefore the less likely are understanding problems. The participants in this

study are advanced L2 learners, thus fewer understanding problem repairs compared with production problem repairs are to be expected.

That there are fewer understanding problem repairs in GW than in the other two types of interaction can be explained at least in part by the nature of of GW. Doughty and Pica (1986:307) argue that a decision-making type of group work does not involve participants engaging in understanding repair:

> "The decision-making activities, ... while communicative in emphasis, were nevertheless not required information exchange tasks. Each participant's contribution to the decision, primarily in the form of arguments, and opinions, may have been useful in helping other participants arrive at a group solution, but was not necessarily required for making the final decision. In other words, completion of the task did not oblige participants to pool information known only to individuals as would be required by a multi-way information gap task."

As mentioned in Chapters 2 and 3, as the GW used in this study belongs to this type it is not surprising to find relatively few understanding repairs.

Although the frequency of incomplete understanding repair in CS is higher than GW and CR, the percentage of occurrence is higher in CR. This means that in CR more attention is devoted to incomplete understanding problem repair which is oriented particularly towards problems with the understanding of procedure. However, in CS incomplete understanding repair focuses on the content of the interaction and repair of understanding on procedure is totally absent. These results indicate that what is talked about is more important in CS than how to talk about it. But in CR how to participate may also affect the frequency of repair.

A second explanation focuses on shared knowledge and topic and has been proposed by Varonis and Gass (1985). The more shared knowledge the

participants have, the fewer understanding problems they have. All participants in GW are provided with the same information about the task, which means they have more shared information than do the participants in CS. Again, fewer understanding repairs in GW is not surprising. Participation in CR is also partly planned, so the frequency of repair on understanding on content is similar between GW and CR.

The final explanation for fewer understanding repairs is associated with physical size. In GW there are fewer participants compared with CR, which makes the interaction easier to manage, with fewer understanding problems, at least in terms of hearing problems.

As discussed above, interaction in decision-making GW with less problematic occurrence allows interactants to engage in smooth communication. One would assume that this would encourage them to maintain the fluency of the interaction and allow them to participate in an active way.

Although there are fewer understanding repairs in GW, the frequency of repair on a content problem of understanding is similar to that of CR. The difference between GW and CR lies in repair on language problems, which shows the association with the orientation of the interaction. Although there is less understanding repair in GW, the frequency of occurrence of repair on understanding of procedure in GW is greater than in CS, which suggests that the procedure of participating affects the use of repair in GW interaction due to its task-based nature.

It can be inferred from these results (more other-initiations occur in the interaction of understanding repair in NNS discourse) that NNS may feel that as learners they have little to lose by indicating an understanding problem because they recognise their shared incompetence, and that only in this way can they learn more.

The above discussion of the results in relation to the contextual factors affecting the frequency of occurrence in the use of various repair strategies has shown the salient repair features in different contexts. It is now necessary to summarise these features in CS, GW and CR.

6 4. The characteristics of repair in L2 learner in CS and GW and CR

6. 4. 1 Introduction

Some salient features of repair for CS, GW and CR have emerged from the above discussion. The aim of this section is to summarise these features in each type. The comparison between the findings in this study and in previous studies will be drawn whenever it is necessary.

6.4.2 The characteristics of repair in CS

The results of CS in this study confirm the findings in previous studies on both NS (SJS 1977, Moerman 1977), and NS/NNS (Day 1980, Gaskill 1980) and NNS (Schwartz 1980) conversations, that self-repair is preferred. Self-initiation/self-repair occurs most frequently among all repair devices within CS, and when compared with GW and CR. Within self-initiation and self-repair, searching and restarting are the most frequently used devices, This result indicates that a speaker spends more time on searching and selecting in the process of production. Unfolding the self-initiation/self-repair process in this study has allowed such detailed features to be found.

Third turn self-repair is another characteristic of repair in CS, since it has been reported absent from L1 and L2 classrooms (McHoul 1990, Kasper 1985, van Lier 1982, 1988). Although it occurs in GW and CR in this study, it does occur more frequently in CS than in CR and GW.

Other-initiation of a production problem repair is rare in CS.

Other-initiation of repair on a procedure problem in both production and understanding problems is totally absent in CS.

Repair on an understanding problem focuses on the content problem of interaction rather than on language.

The differences between L1 and L2 conversations are found in the following aspects:

1. More self-initiation/self-repair, in the form of searching, occurs in the L2 learner conversation than the L1 conversation. Self-initiation/self-repair involves searching for more variety of vocabulary in L2 CS (SJS reported that searching in L1 conversation is mainly for the person's name).
2. There are more unmodulated other-repairs in L2 learner conversation (SJS reported that other-repair rarely occurs in the L1 conversation and it occurs in a modulated form).
3. More self-initiation/other-repair may occur in L2 learners' conversation than in L1 conversation because the former are not-yet-competent speakers, who need help to sustain the interaction. Unfortunately, it is impossible to offer an accurate comparison, since the frequency of occurrence has not been reported in previous studies of L1 conversation.

Overall, more repairs occur in CS than GW and CR.

6. 4. 3. The characteristics of repair in CR

Compared with the L2 learner CS and GW, overall, there are fewer repairs undertaken in CR. It applies to most of the repair categories, retrospective repair on a production problem being the exception.

Other-repair occurs in unmodualted form and is usually undertaken by the teacher.

The third feature of CR is that the frequency of reformulation is higher than in GW and CS.

The fourth characteristic is that the other-initiation for production repair is a typical device for CR used by the teacher.

Finally, procedure repair occurs more frequently in CR than in CS, when dealing with both production and understanding problems.

The structure of interaction restricts the use of repair. Pedagogical orientation of talk in the L2 classroom justifies the use of more other-repair. Classroom interaction rules affect what is considered as an appropriate repair candidate. The unequal distribution of repair work due to the asymmetrical power in the interaction is associated with the occurrence of other-repair in CR.

Within the CR the overall results of repair are that self-repair is preferred in both the teacher's and students' utterances. This result confirms the findings in previous studies (eg, van Lier 1988:194). Unfortunately, van Lier and other researchers have not reported the ways in which the teacher and students undertake self-initiation/self-repair. The results in Chapter 5 show that the ways and purposes of the use of self-initiation/self-repair are different. Firstly, all other-completion is undertaken by the teacher. Secondly, the students are engaged in more self-correction and the teacher is engaged in more reformulation (see section 5.3.2.4). Thirdly, the students undertake more understanding problem repair, mainly focusing on procedure problems.

The following table summarises the different frequencies of major repair categories, in CR, for the teacher and students.

Table 6.2 The frequency of repair of teacher and students in CR

Participant	prospective	concurrent	retrospective	understanding	Total
T	4.89%	48.21%	21.84%	3.58%	78.52%
S	1.30%	14.41%	0.98%	4.89%	21.48%

It is apparent that more repairs have been undertaken by the teacher than by the students. The significant difference lies in concurrent repair and retrospective repair on production problems. There is more understanding and less prospective repair by students. However, the differences between these two are not statistically significant.

Compared with the results in the L1 classroom by McHoul (1990) more self-initiation/self-repairs occur in the L2 classrooms, since McHoul reports that in L1 other-initiation/self-repair is preferred. There are also more unmodulated other-corrections in L2 classrooms, McHoul describes that when other-correction occurs in L1 it takes the form of modulated and unmodulated other-correction which occurs in specific environments.

6. 4. 4. The characteristics of repair in GW

GW as described in Chapter 2 is a kind of interaction where the participants have equal rights to participate, as in CS, but due to the task for GW there is some control of what is talked about, which is similar to CR.

There are more other-completions in GW than in CS and CR, and other-completion seems to be a characteristic of GW.

Disagreement is another characteristic of GW and is associated with the nature of the task, as mentioned in section 6.3.6.

Another characteristic of GW is that there are fewer understanding repairs, which has been discussed in the above section.

GW is not like CR, where only one participant is mainly responsible for undertaking the repair. In GW the participants have an equal right and equal opportunity to carry out repair work.

GW is not like CS; it is task-based interaction which requires participants to interact in a designed direction.

Although GW occupies a place between the other two interactions in most of the categories in the present study, in some of the categories GW drifts closer to CS, and in some other categories GW moves closer to CR. In order to illustrate these features clearly the results are presented diagrammatically.

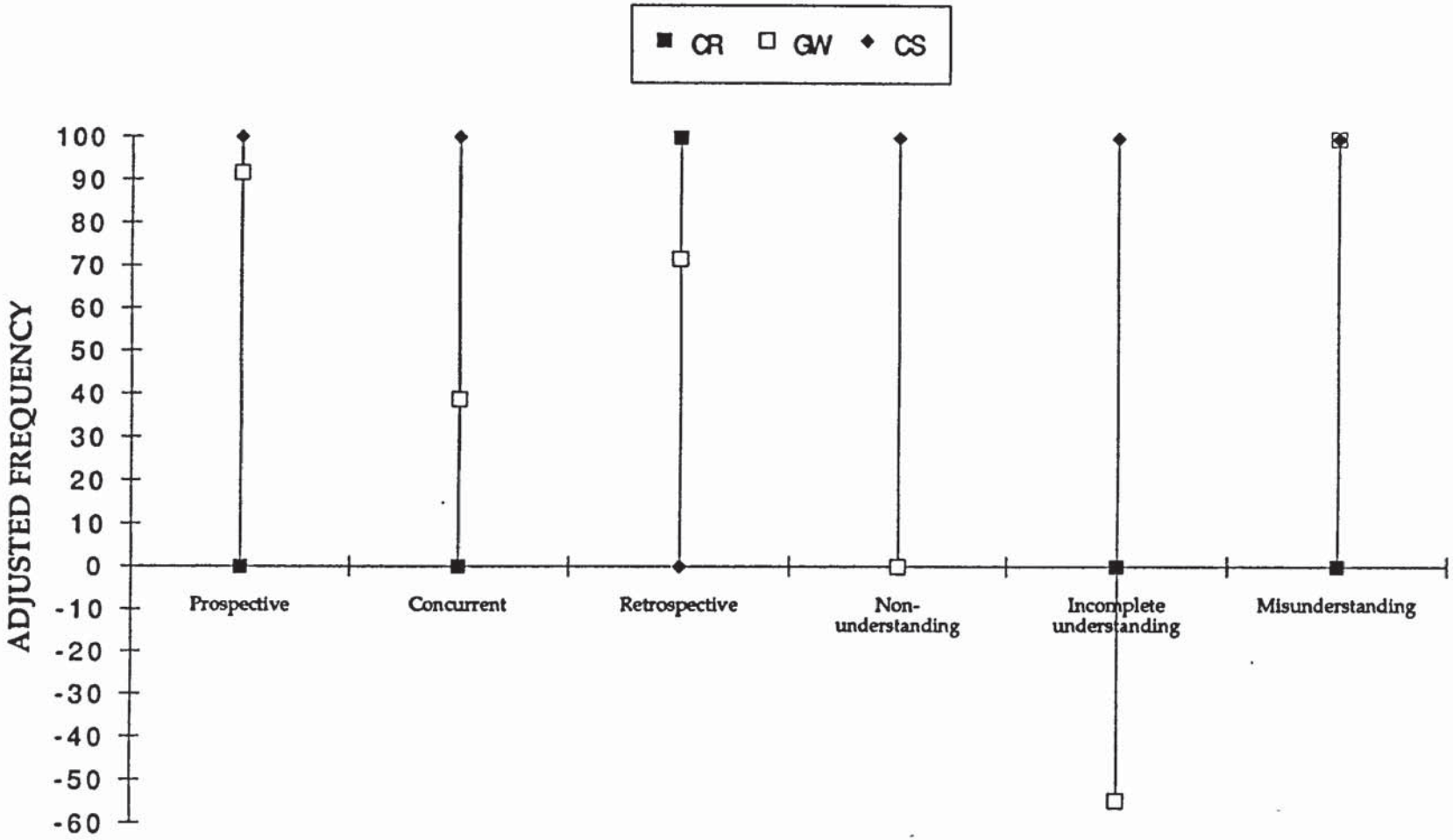

Diagram 6.7. The adjusted frequency of repair in CS, GW and CR

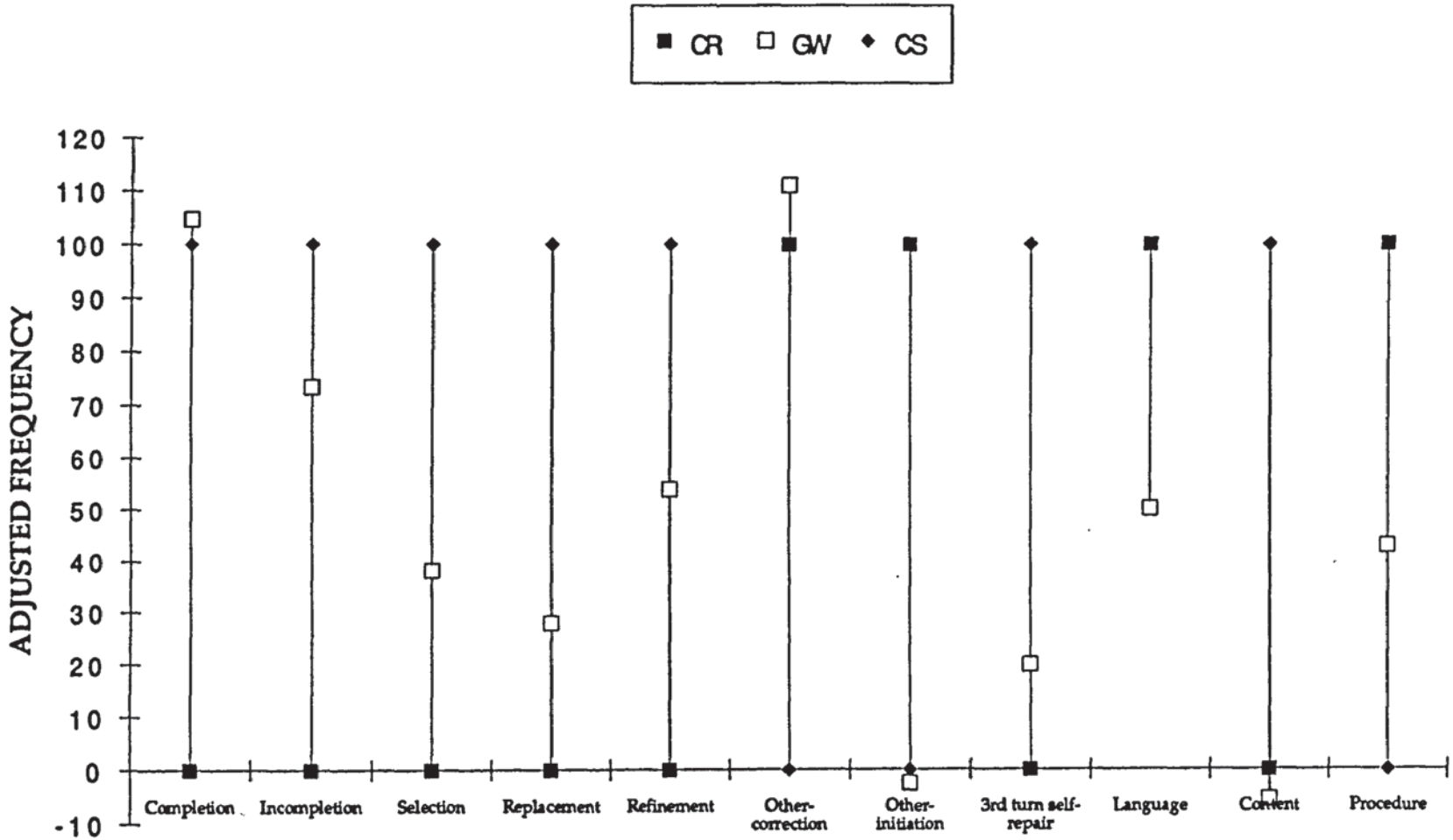

Diagram 6.8. The adjusted frequency of repair for subcategories in CS, GW and CR

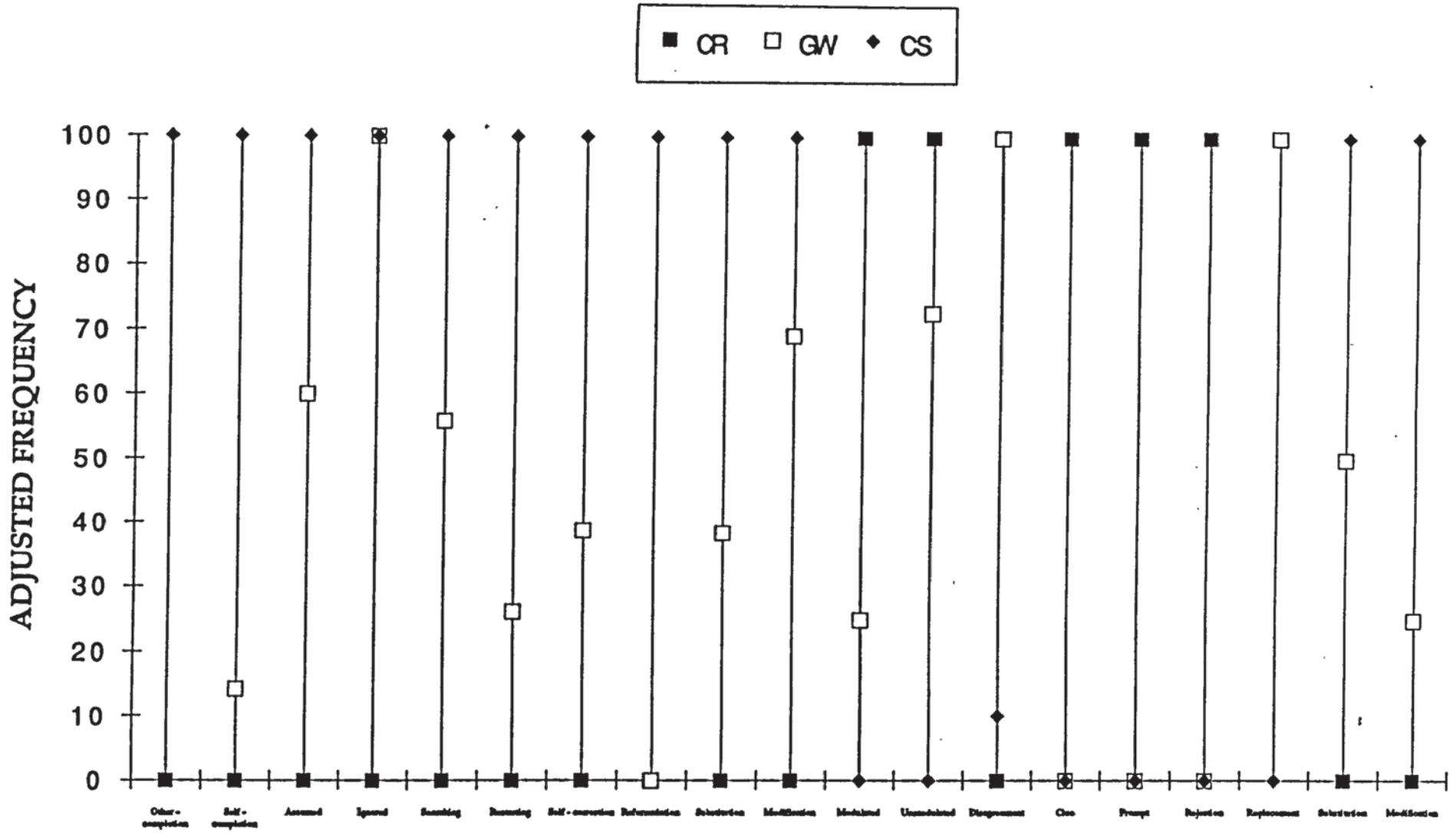

Diagram 6.9. The adjusted frequency of repair for subcategories on production problems in CS, GW and CR

These diagrams are based on the adjusted figures in each of the categories by normalising the most frequent one with 100 and the least frequent one with 0 in order to show where the median stands.

6. 4. 5 Conclusion

There are two differences which emerge in the above analysis. One is a difference in terms of frequency. The other is a matter of specific features in each of the spoken discourse types.

Having discussed the characteristics of each of these three types of interaction, based on the results of the present study, it is worth examining the results by using four trajectory models to further illustrate the importance of the fine-grained analysis of this study.

6. 5 The results based on SJS's four trajectories

6. 5. 1 Introduction

Previous studies of repair have been interested in "self" or "other"; who does initiation and who carries out repair in spoken discourse. However, although the present study of repair has taken a different line of approach from previous ones, this does not mean that the results are contradictory to the repair trajectory model. The results from this study can be interpreted in terms of four repair trajectories. The aim of this section is to present the results of this study based on four repair trajectories in order to show the differences between these this model and the SJS model, as well as differences within the four trajectories themselves.

6. 5. 2. Summary of the results on SJS's four trajectory model

The following table presents the summary of the results examined by using SJS's four trajectory model.

Table 6.3 The frequency of four trajectories in CS, GW, and CR

Interaction	SI/SR	SI/OR	OI/SR	OI/OR	Total
CS	556	17	38	4	615
	90.41%	2.76%	6.18%	0.65%	100%
GW	331	30	19	2	382
	86.65%	7.85%	4.97%	0.52%	100%
CR	196	10	59	8	273
	71.79%	3.66%	21.61%	2.93%	100%

The results in this table show that there are more self-initiations and self-repairs, but they do not show how these self-repairs operate, as demonstrated in this study (see section 6.5.3.1).

Self-initiated/other-repair is described by SJS with an example, and the issue of self-initiated/other-repair is not discussed further. McHoul (n.d.: 50), in a footnote, suggests that, although he has not found any data in this study to confirm this, he has a suspicion that self-initiated other-correction does occur. van Lier (1982: 434) describes this trajectory as follows:

> "It may be a special feature of L2 classrooms that this trajectory occurs there quite regularly, but I must admit to being surprised that it does not occur with some regularity in general conversation or in other classroom data. This aside, it is reasonable to expect less competent L2 speakers to appeal to more competent co-interactants to provide linguistic support in the interest of smooth running of the discourse."

In this study it occurs more frequently in GW than in CR, with CS falling roughly between the two. However, with the figures in this table, it is difficult to know how it is operated in the process of repair (see section 6.5.3.2 for detailed discussion of the results in this study).

Other-initiated self-repair occurs more frequently in CR compared with CS and GW, which confirms the finding by the previous studies in CR discourse (van Lier 1982, Kasper 1985, McHoul 1990). However, the results in the above table can not explain how other-initiation is used. The different functions played by other-initiation that have been examined in section 6.5.3.3 can not be shown from this summary. The real difference in the use of other-initiation for production problem repair for CR can not be seen.

Other-initiation and other-repair are used more in CR, which confirms the prediction of SJS that more other-repair would occur in not-yet-competent speakers. However, from the results of this table it can not be seen how other-initiation and other-repair are undertaken. The explanation of "not-yet-competent" is not sufficient.

6. 5. 3 The results of present study in four trajectories

The aim of the following section is to present the results of the present study in terms of the four trajectories. Each of these trajectories will be

discussed in turn and examined against the evidence from the analysis in this study.

6.5.3.1 Self-initiation/self-repair

The results of self-initiation and self-repair in this study are presented in the following table.

Table 6.4 Self-initiation and self-repair in CS, GW and CR

Inter action	SI/SR (SJS)	Self-completion	Concurrent self-repair	Third-turn self-repair
CS	556	18	532	6
	90.41%	2.93%	86.50%	0.98%
GW	331	6	323	3
	86.65%	1.57%	84.55%	0.79%
CR	196	4	191	1
	71.79%	1.47%	69.96%	0.37%

The results in this table are consistent with the findings from table 6.1. Self-initiation/self-repair is preferred in the three types of interaction.

Self-initiation and self-repair in this study are operated in three different ways. In all the three categories the frequency is higher in CS than in CR and the results for GW always occupy a place between the other two. It is close to CR in self-completion; close to CS in concurrent; close to CR in the third-turn

self-repair. Without a fine-grained analysis these results could not have been discovered.

The first category of self-initiation/self-completion is a concept introduced in this study (see section 4.3.1 for an example). It is a commonly used repair category in spoken discourse. This analysis shows how the participants try to maintain the interaction when it is difficult to continue. Although the frequency of the occurrence is low, it is worth mentioning since the frequency of occurrence in CS is three times that in GW and more than four times that in CR.

Self-initiation/self-repairs in the concurrent category show that the participants mainly concentrate on searching and restarting the utterances (see Table 5.8); it accounts for two thirds of the total occurrence of concurrent repair in all three interactions. This finding suggests that repairs occur more frequently at an early stage in the speech production process. This could not be known by simple analysis of SI/SR but it is important for research on the speech production process.

6.5.3.2 Self-initiation/other-repair

It has been argued in previous studies that self-initiation/other repair is rarely used in either conversation or classroom interaction (see section 4.3.1). The results of this study offer a different set of pictures for the story. The following table presents the results of the different frequencies of occurrence:

Table 6.5 The frequency of self-initiation and other-repair in CS, GW and CR

Interaction	self-initiation/other-completion
CS	17 2.64%
GW	30 7.01%
CR	10 3.26%

The results in this table show that there *are* self-initiation/other-completions in these three types of interaction. It is particularly interesting that there are more self-initiation/other-completions in GW (the frequency in GW is twice as much as in CS and three times as much as in CR). The reason why this has been neglected lies in the fact that the previous studies focus on repair in CS and CR, in which, as this study shows, there are a few occurrences, and these may not have attracted attention. However, in GW, in task-oriented interaction, self-initiation/other-completions are a common feature of repair. Different types of GW are a rich area for further investigation to explore this feature.

6.5.3.3 Other-initiation/self-repair

Other-initiation/self-repair has been treated as one category in previous studies. For the first time in this study it is divided into production and understanding problems based on different purposes. The importance of the distinction and means of identification have been discussed in Chapter 4. The

following table presents the other-initiation for both production and understanding repair.

Table 6.6 The frequency of other-initiation/self-repair in CS, GW and CR

Interaction	production		understanding		Total	
CS	1	0.26%	33	5.12%	34	5.37%
GW	0		15	3.50%	15	3.50%
CR	33	10.75%	19	6.19%	52	16.94%

The results from this table show that other-initiation for production repair is mainly used in CR. The distinction between other-initiation in production and in understanding assists in finding this difference. More other-initiation/self-repair in CR confirms McHoul's finding within this category compared with CS or GW interactions, but it is not the preferred repair trajectory across the four repair trajectories as reported in McHoul's summary.

6.5.3.4 Other-initiation/other-repair

Other-initiation/other-repair can be undertaken in two ways. The first is where the speaker who does the other-initiation also carries out the other-repair, i.e. other-initiation and other-repair is undertaken by the same participant. The other is that one speaker 'other-initiates' and the third party carries out the repair.

In this study other-repair after other-initiation is mainly undertaken by a third party. As SJS observe, other-initiation/other-repair rarely occurs in CS but it occurs more frequently in L2 classroom discourse. This result confirms the finding by Schwartz (1980) who points out that other-repair is a delicate matter, and usually only occurs after the 'other' speaker has given the speaker numerous chances to repair his/her own speech. With L2 learners, however, there are sometimes areas in which they are incapable of correcting themselves, and in this situation the other participant does the repair. Schwartz's findings are not replicated in this study. The explanation of the other-initiation/other-repair by the third party in this study comes from the fact that more participants in CR are learners trying to answer the questions asked by the teacher. van Lier (1982: 431) states that "it occurs with high regularity" in the L2 classroom.

This result suggests that L2 is different from L1 in this respect, since McHoul has found that other-initiation and other-repair are withheld in L1 classroom discourse. Other-initiation/other-repair does occur in these three interactions. However, it does not occur very frequently compared with the other categories in this study. The following table shows the frequency of the occurrence in each of the interactions:

Table 6.7 The frequency of other-initiation/other-repair in CS, GW and CR

Interaction	Production		Understanding	
CS	0		5	0.47%
GW	0		6	0.47%
CR	5	0.49%	10	0.98%

This table shows the difference between CS, GW and CR in other-initiation/other-repair in terms of production and understanding problem repair. The former is specifically used in CR. In terms of understanding problem repair, however, the difference is less marked. The reason for this result could be closely associated with the orientation of participation in the different contexts. A few other-repairs in CS and GW and more in CR may be due to the number of participants. In CR competitive use of the floor in a question and answer format explains why there are more other-repairs on production problems.

Understanding problem repair is usually repaired by self. This again shows the importance of the distinction between the repair of production and understanding problems, which brings such features to light.

The above two sections demonstrate the results interpreted by repair trajectories, based on the analysis of SJS's model and the analysis of the present study. In terms of the frequency of the basic trajectories, there are not big differences between them. However, the results of this study offer not

only the frequency of the occurrence in each category, but also the ways in which these four trajectories are operated.

6.6 Implications

6.6.1 Introduction

As regards the implication of the study for spoken discourse, as Allwright (1975:99) says:

> "There are, then, three distinct but closely related foci for any investigation. First of all (in logic if not in fact) there is the possibility of improving our understanding of learners' ways of learning in classrooms. Secondly, there is the possibility of improving our understanding of the teacher's contribution, for good or ill, to the learners' learning. And thirdly, there is the possibility of developing techniques that would play some part in helping teacher's improve their classroom skills."

The suggestions which are going to be made in this section fall into the last category. It is worth mentioning, however, that any suggestions in this section are open to challenge, since the study of language teaching is infinitely complex and draws in a wide range of considerations, such as a teacher's assumptions and belief about language teaching, the students' attitude towards language learning, institutional effects and the background of language teaching in specific contexts, etc.

The basic questions asked very often about language teaching are whether we should make classroom language teaching approximate to the 'natural' world, and whether it is in fact possible to introduce natural interaction into the classroom. It is not the intention of this study to answer these questions. However, one thing is certain: students need strategies to

assist them to learn how to cope with problems both in and out of the classroom.

In the following section I shall not attempt to do more than offer some suggestions for dealing with repairing in general. Therefore, the suggestions primarily focus on language teaching when it is concerned with problems of production and understanding generally, and more specifically with GW.

6. 6. 2 Implications for language teaching

The results of repair work in CR in this study indicate the following:

1. Due to teacher control and classroom constraints, there are fewer self-initiations and self-repairs, a fact which makes interaction in CR artificial. As discussed in section 6.3.4, self-initiation/self-repair is an essential part of natural interaction. Part of being a competent speaker of a language is having mastery of appropriate repair strategies.

On the other hand, the teacher needs to exert some degree of control over classroom interaction in order to fulfil the teaching plan or syllabus.

2. There is a heavy emphasis in the data on other repair or on other-initiated self-repair of production problems. Such repair strategies, however, interrupt the flow of discourse and stop the learner's interactive work and cognitive work in its tracks by focusing interest on the trouble spot. The use of other-initiation for production problem repair prevents the students' creative and spontaneous use of the language, and allows fewer opportunities to undertake self-repair.

On the other hand, other-initiation and other-repair as corrective feedback have an important function to play as learners try out newly established hypotheses about the target language. The teacher, of course, has a role to play here in encouraging the students to try out these hypotheses.

However, it is essential to find a way which can achieve the goal of offering feedback without interfering with the flow of interaction.

3. The issue of what is effective in foreign language learning or teaching is obviously crucial. Allwright (1984) argues for active involvement, Seliger (1977) argues for initiative interaction by the students, Long argues (1976, 1984) that qualitative use of the language can assist the students to develop both linguistic and communicative competence. All these arguments suggest that to achieve successful transfer from inside the classroom to the real world beyond, it is necessary to practise some "real world" skills.

On the basis of the communicative approach prevalent since the late 1970's, researchers and language teachers have tried to find ways to engage students in authentic interaction in order to facilitate the transfer from the language classroom to a real world context. The present research can be perceived as a continuation of this general development. It fits comfortably with the basic preconceptions of the movement — with, for instance, Brumfit's (1982) emphasis on the importance of fluency over accuracy by engaging students in task-based activities, Allwright's (1984) argument that the interactional involvement of students can help them develop communicative competence, Widdowson's (1982) distinction between signification and value, and Mehan's (1979) point that for L2 learners it is important not only that they develop linguistic competence and communicative competence, but also interactional competence. With this in mind, I now turn to some suggestions which I hope might be of value to teachers.

6.6.2.1 Encouraging students to take an active part in interaction

On the basis of the results in the present study, allowing more opportunities for students rather than the teacher to undertake other-completion enables the former to engage in cooperative and meaningful interaction.

Interaction in this way assists the students to develop their communicative and interactional competence. The teacher's role becomes that of a conductor rather than a controller. As Littlejohn (1984) suggests, learners can learn more from each other than they expect.

Allowing students to undertake self-initiation/self-repair is one way to help students move towards active involvement in the interaction. The importance of self-repair is discussed in many research articles. The major points of its importance can be summarised as follows:

> From the social point of view, self-repair gives the student an opportunity to restore face; it also has a learning function in that the student, in productively using a particular item or rule, can test a TL hypothesis. It also provides the teacher with information about the status of the learner's TL knowledge.
>
> From the point of view of classroom management, self-repair clears up the trouble source (noise, inattentiveness) in teacher-initiated repair of learners' utterances.
>
> From a second language learning point of view, L2 learners can use more complex and longer utterances. It would also be beneficial for the teacher to let students correct themselves, thus enabling them to form their own hypotheses about the TL, while encouraging fluency rather than focusing on the accuracy of the language produced.

One way to achieve this is to withhold other-initiation for production repair, which provides an opportunity for students to engage in natural interaction since other-initiation for production problem repair focuses on pedagogical interaction rather than genuine communication.

This suggestion is similar to the idea of waiting-time proposed by Fanselow and supported by van Lier when he states:

> "I suggest that some delay of other-repair (both initiation and error-replacement) may be beneficial, since it would promote the development of self-monitoring and pragmatic adjustment which is essential to competence in the target language."
>
> (1976: 211)

Another suggestion for classroom teaching is concerned with the use of other-initiation for production problem repair. The teacher's intervention when productive linguistic or content problems occur in learners' responses functions as negative feedback, thus having an impact on the learner's hypothesis testing, and functions as an elicitation to which the self-completion of the repair provides the response.

From the pedagogical point of view, the teacher-initiated and learner-completed repair of a learner-produced trouble source can thus be fitted into the pedagogical exchange: elicitation, response, feedback. The initiator of the repair is usually the teacher, who passes its completion onto another student (this occurs more frequently in the L2 classroom). Peer repair has the function of involving other students in the repair activity, ensuring their active participation in the teaching/learning process. This teacher-initiated student-completed repair also gives students sufficient speaking time to allow them to hold the floor and express themselves fully. Therefore, it is suggested that other-initiation be used rather than other-repair, which does not provide such opportunities for a learner to go through the process of repair. However,

a certain amount of other-initiation when there are content problems is appropriate, since focusing on the meaning of interaction rather than on the form of the language itself forms a negotiation process, which has been argued in a number of studies (eg, Breen 1985) as being very important for L2 language learning.

Thirdly, it has also been argued that other-repair breaks down the continuation of the communication. It plays the role of vertical movement in the interaction (Gass and Varonis, 1985). Other-repair which offers feedback to the students about their interlanguage situation is necessary for language learning. However, correctness is achieved at the cost of breaking down the interaction.

In order to monitor the students' utterances and not to break the continuity of the interaction, a more indirect method of other-repair may be helpful for classroom language teaching, i.e. acceptance of the utterance to maintain the interaction, while mentioning the correction as a secondary consideration. "Minor errors" can then be treated indirectly.

Kasper (1982: 31) notes that such repair plays a multi-functional role in interaction. The teacher accepts the learner's response at the content level but repairs it at the grammatical level, or accepts its main referential aspects but not its categoric formulation. Such repair confirms rather than rejects the response. The "error" being corrected is considered of secondary importance in this context. However, care should be taken that such treatment is explicit — this will make the student aware of the location of the problem. Care should also be taken that this repair method is used consistently, so that there is no ambiguity affecting the student's comprehension.

The above suggestions, specifically concerning repair, are clearly related to the management of CR as whole. By using suggested ways to handle the problem in CR teaching the teacher becomes a manager rather than a controller.

6.6.2.2 Introducing group work in the classroom interaction

Another possible way to solve the problem discussed in the above section is to use group work to support a teaching plan which contains a substantial amount of task-based interaction. The use of GW in the second language classroom has long been supported by sound pedagogical and psychological arguments (Long 1984). Task-based interaction has been tried out by Prahbu (1982:81).

There have also been many general discussions of the use of group work in language teaching (Rivers, 1968, Long 1975, 1985). In the light of the increasing popularity of non-native group work in the ESL classroom, it seems surprising that so little research has been conducted specifically in this area, given the extent to which it has been studied in general ELT. For example Brumfit (1984: 68) argues:

> "...accuracy activity may be aimed at conscious learning by the students, but .... the conversion of the tokens of the language thus learnt into a value-laden system with genuine communicative potential requires fluency activity in which the learners' focus is on meaning rather than on form."

Littlejohn (1983: 598) argues that in GW participants feel free to speak, to make mistakes, and to contribute their own experiences, all of which give them a feeling of being supported in their learning difficulties. Beach (1974:198) also found that tutorless groups not only scored higher in a final achievement test than tutor-led control groups, but that there were also improvements in critical thinking and lasting curiosity aroused by the learning. Gruber and Weitman (1962, reported in Beach 1974: 192) found "developing attitudes which results in the students' continuing search for acknowledgment after the formal experience is over". GW promotes a more

intimate setting and a more supportive environment in which students can try out embryonic second language skills.

Long and Porter (1985) in their review of the importance of group work in language teaching, list the five aspects (pedagogical and psychological) in which group work can benefit the learner. The characteristics of GW given in section 6.4.4. confirm the findings of Long and Porter on the significance of GW.

Second language learners may resent GW and not feel that it is useful, because they feel that they cannot learn from each other. However, as Schwartz has reported and the results of this study have shown, learners can learn from each other. As Allwright (1984: 157) puts it:

> "We learn by communicating, especially in language learning, where it is by using the means of communication in solving communication problems, that we not merely practise communicating, but also extend our command of the means of communication, the language itself.".

Repair is a part of the interaction which is normal conversation, and it is essential for L2 learners to learn how to do it in order to communicate in the real world. If learners are regularly deprived of the opportunity to practise various repair strategies in the CR, one can expect that they will have difficulties in solving problems in real communication. If the goal of ELT instruction is student communicative competence there is an urgent need for further investigation of how its many components, including linguistic and pragmatic strategies and fluency skills, can be developed in the CR when non-native speakers participate in GW. The results of this study, in terms of repair, positively support the use of GW in second language classrooms. The following comments suggest why GW is so appropriate in language teaching.

There are more repairs done in GW than in CR for all aspects except retrospective and understanding. Retrospective and understanding repairs account for only a small percentage of the total occurrence. Other-repair and other-initiation for production problem repair, as mentioned previously, is pedagogically motivated and therefore offers only artificial practice rather than a genuine interaction.

In GW the participants carry out all strategies used in spoken discourse, except other-initiation for production problem repair, which is rarely used in CS. If FL teaching is also to help learners effectively develop ways of communication outside the classroom, the problem of other-initiation for production problems is not very important for L2 learners.

Participants are more actively involved in GW than in CR, a conclusion which is supported by the presence of more other-completions, and more disagreements in GW.

However, not everyone is convinced of the value of group work:

> "...we *feel* that small-group use of communicative activities *can* be effective in the ESL classroom but that its benefits *may* be more limited than had previously been *assumed*." (Pica and Doughty 1985: 131)

(Italic is my emphasis).

The doubts of the author are clear, and presumably arise from their feelings or belief that there is no empirical evidence for their assumptions. However, there are some studies which have found that different types of group work play different roles in interaction. Long and Porter put forward the advantage of a two-way exchange of information over a one-way information exchange; Doughty and Pica (1986) advocate information-exchange tasks over problem-solving tasks; Pick (1987) stresses the importance of students restructuring interaction both as initiators and responders in

information exchange; Brown (1991) suggests that problem solving tasks requiring interpretation provide better second-language acquisition opportunities than procedural ones which require only decision-making. However, all these comparative studies are *within* group work or based on a comparison of GW and CR. There are no studies which compare GW with CS. Secondly, all previous studies focus on the effectiveness of group work, and examine "comprehensible input", which is ill-defined and consists of only part of the interaction. This study examines group work by examining the repair process in relation to the structure of interaction, which includes more interactional elements, and makes comparisons not only with CR but also with CS. The results from the present study support the claim made about the use of group work: that it promotes active involvement and genuine interaction. GW is a natural setting for conversation. Students can engage in cohesive and coherent sequences of utterances. Although the difference between various types of group work is not the focus of this study, it might be useful to investigate this in the future.

The suggestions made here for language teaching are practical rather than theoretical. They are based at least in part on the results of this study and are therefore open to challenge, and further research is needed in order to confirm their validity.

6.7 Conclusions

Purpose-oriented interaction is likely to influence the kinds of repair work that are undertaken, both in terms of the kinds of trouble that are considered suitable candidates for repair and of the ways in which the repair can be done (van Lier 1988).

It is therefore likely that repair and correction procedures control part of the sequential structuring of discourse, and do not uniquely occur as side

sequences inserted in the sequential structuring. Repair work is not a side sequence or a vertical process (Gass and Varonis 1985) of interaction: it forms a part of a negotiation and follows a general interaction structure in a given discourse setting.

The analysis of repair with four trajectories is powerful and fundamental to our understanding of conversational repair. The fine-grained analysis of this study offers a detailed description of the structure of the repair process.

Notes

1. Q-A-C adjacency pair: Q=question, (elicitation in Sinclair and Coulthard's I.R.F. structure, (1975): A=answer, (responses in I.R.F.). C=Comment, (follow-up or feedback in I.R.F.).

CHAPTER SEVEN

SUMMARY and CONCLUSION

7.1 Introduction

The aim of the present research has been to carry out a conversational analysis of CS, GW and CR. These three types of interaction among L2 learners have been qualitatively and quantitatively examined in the course of this thesis with the focus being wholly placed on repair within the interaction.

The analysis of repair in these three types of interaction has shown that the type of repair device used in each of the three interactions is closely associated with the content, social and communicative context, including of course the sequential organization. The findings in the relationship between different repair strategies and different problem types have helped to highlight the differences between these three types of spoken discourse. These differences can be seen not only in terms of the preference for certain types of repair, but also in terms of the fundamental issue — what repair work is characteristic of each of the three interactions.

Breaking down the process of repair and relating the process of repair to the general structure of interaction has allowed detailed explanations of what affects the use of repair in CS, GW and CR to be offered.

This chapter will first of all briefly summarise the major findings. Secondly, it will specifically discuss GW in relation to language teaching and learning in general and repair work in particular. Thirdly, it will suggest possible improvements in the conduct of such a study. Finally, it will make some recommendations for further research.

7. 2 Summary of findings

7. 2. 1 Introduction

The examination of repair work in this study has shown that the repair system is a very complex interactional process. The operation of the repair system is based on communicative aspects such as what to repair, how to repair, why to repair, and who is to undertake repair. These factors are interrelated. Merely examining who is undertaking repair, while neglecting other factors, leaves an investigation of repair incomplete and inadequate. Scrutinizing the complex repair process and breaking down the operation of interaction have offered the following findings for repair work in CS, GW and CR.

7.2.2 Major findings on repair work

Distinguishing the repair on production and understanding problems has shown that there are two types of differences between CS, GW and CR. One is the surface difference in terms of preference. The other is the underlying difference in terms of the importance of repair and the choice of repair candidates.

In terms of frequency, more repairs are undertaken in CS than CR, with GW falling roughly between the two (see 6.1 for detailed results). Underlying differences explain why different methods of repair are used and at different places in the interaction in CS, GW and CR. More importantly, this underlying difference distinguishes the purpose of repair in different contexts. For example, the same patterns of prospective repair play different functions in different settings (see Chapter 4) and the same form of other-initiation can be used for different purposes and requires different types of repair (see Chapter 4).

The examination of repair in terms of problem type has also shown that production problems can be solved by self or other, whereas understanding problems are usually repaired by the trouble producer after other-initiation. This finding is not associated with sequential organization, but with the capability of the repairer. For an understanding problem it is impossible for the trouble producer to undertake concurrent repair because s/he has no way of knowing that his/her utterances are in any way problematic.

Other-initiation for production repair is characteristic of CR due to the pedagogical orientation. It is undertaken deliberately and predeterminedly, whereas understanding problem repair is accidental and localised.

Prospective repair occurs regularly in this study, which shows the characteristics of L2 learners who are not-yet-competent. Assistance is essential for them to develop their interactional skills.

By comparing the students' performance in CR with that in GW and CS it is possible to identify what problems the students have in terms of language production and understanding in CR, relating these to control in classroom discourse.

The present study has assisted in finding out the structure of repair in GW. The results in GW compared with CS and CR have offered empirical evidence for the justification of adopting GW in classroom language teaching. In addition to this evidence, the teacher can also isolate the roots of a communication failure which provide him/her with clues as to how to develop the learners' repair strategies in the classroom.

7. 2. 3 Major findings on repair work in GW

It is worth mentioning that the circumstances in which communication takes place outside CR can not be reproduced exactly in CR; what the teacher can do is to bring certain communicative tasks into the classroom and engage

the students in meaningful interaction that mirrors actual communication. In other words, the teacher is required to create a simulation of the situation in which the learner is supposed to use the language outside CR by practising it. The following characteristics of GW in terms of repair indicate that GW task-based interaction can bridge the gap between CR and real world interaction outside the classroom.

One interesting characteristic of GW (see Chapter 5) is that it occupies a place between the other two interaction setting in terms of the frequency of repair occurrence.

A further characteristic is evident from the results of GW, compared with those of CR. These results have shown that students undertake more repairs in GW than in CR, with exception of retrospective repair. The students in GW use greater variety of repair than in CR. The occurrence of retrospective repair on production problems is pedagogically motived. Its effect on students' interaction has to be considered carefully (see Section 6.3.6 for discussion). More importantly, retrospective repair strategy is not used in CS. If the aim of students' interaction is to prepare them for outside classroom communication, such a repair strategy is not necessarily needed.

Another characteristic of GW is its own features of repair, which include: the cooperative involvement shown by more other-completion; communicative use of language verified by more assumed-completions and fewer other-initiations for production problem repair in the interaction; genuine interaction demonstrated by more disagreement in terms of voicing personal opinions in the interaction. Such features have been hypothesized (Hatch 1978, Long 1981) to be vital to second language acquisition.

7. 3. A note on research methodology

Patterns of repair interaction have emerged from evidence provided by the data of interaction, not from other sources.

Examination of the process of repair rather than the presentation of predetermined and selected segmental elements of repair has allowed the patterns of repair to emerge.

Scrutinising the operation of the repair process, based on what is repairable and where repair takes place, how repair has been carried out, and what factors are related to the repair structure, has allowed this study to identify detailed patterns of repair.

Data-driven analysis, rather than dependence on the analyst's predetermined categories has made this study different from many previous ones.

7. 4 Limitations of this study

Although this investigation has captured macro-features, micro-features of repair and fundamental difference between three types of interaction, there are certain limitations in relation to methodology which need to be mentioned.

The most clearly observed limitation of the study at hand is the limited amount of data examined for the analysis. The statistical analysis of the differences in this study call for a greater population to be recorded and analysed. However, this factor is closely linked to the amount of time available for the study and to resources and access. Secondly, while the author is confident about the information provided by this analysis, no attention has been made to examine the relationship between repair and the realization of language structure, which could provide fruitful results.

7.5 Suggestions for future research

In this final section I wish to make two suggestions: one about ways in which investigations like the present one could be carried out, and the other about what further research might be carried out based on the findings from this study.

The present study has been based on a collection of audio and video data. In future studies of this kind, I would consider it essential to triangulate data more thoroughly in order to deepen our understanding of particular events and associated phenomena, reflecting as far as possible participants' perceptions rather than those of the analyst.

This study has resulted in generalizable findings and has provided a preliminary but fine-grained description of the repair process based on a framework for analysis. This framework could now be used in the analysis of other spoken discourse, perhaps involving different age groups or learners at different language proficiency levels. The framework could also be applied to different types of GW to see whether the same results can be obtained. An investigation of the impact of different repair patterns on the learner's development of communicative competence in foreign language study would also provide a rich area for further, longitudinal, study.

Finally, the framework developed from the data and used for analysing the data in this study is not perfect: "repair" is necessary.

REFERENCE

Abercrombie, D. 1954. The recording of dialect material. In *Studies in Phonetics and Linguistics*. London: Oxford University Press, 108-113.

Abbott, G. 1981. Encouraging communication in English: paradox. *ELT Journal*, 35 (1): 228-230.

Adelman, C. 1981. On first hearing. In C. Adelman (ed.). *Uttering, Muttering*. London: Grant McIntyre, 78-97.

Adelman, C. (ed.). 1981. *Uttering, Muttering*. London: Grant McIntyre.

Allen, J. P. B., M. Frohlich, & N. Spada. 1984. The Communicative orientation of language teaching: An observation scheme. In J. Handscombe, R. A. Orem, & B. Taylor (eds.). *On TESOL'83: The question of control*. Washington, D. C.: TESOL, 231-252.

Allen, E. D. 1977. *Classroom techniques, Foreign Languages and English as a Second Language*. New York: Harcourt Brace Jovanovich.

Allwright, R. L. 1975. Problems in the study of language teachers' treatment of learner error. In M. K. Burt, & H. C. Dulay (eds.). *On TESOL 75: New directions in second language learning, teaching and bilingual education*. Washington, D. C.: TESOL, 96-109.

Allwright, R. L. 1980. Turns, topics and tasks: Patterns of participation in language learning and teaching. In D. E. Larsen-Freeman (ed.). *Discourse Analysis in Second Language Research*. Rowley Mass.: Newbury House, 165-187.

Allwright, R. L. 1983. Classroom-centred research on language teaching and learning: A Brief Historical Overview. *TESOL Quarterly*, 17 (2): 191-204.

Allwright, R. L. 1984. The importance of interaction in classroom language teaching. *Applied Linguistics*, 5 (2): 156-71.

Allwright, R. L. 1988. *Observation in the Language Classroom*. London: Longman.

Anivan, S. (ed.). 1990. *Language Teaching Methodology for the Nineties*. Singapore: SEAMEO Regional Language Centre.

Anthony, E. M. 1983. Approach, method and techniques. *ELT Journal*, 17 (2): 63-67.

Aston, G. 1986. Trouble-shooting in interaction with learners: The more the merrier? *Applied Linguistics*, 7 (2): 128-143.

Atkinson, P. 1981. Inspecting classroom talk. In C. Adelman (ed.). *Uttering, Muttering*. London: Grant McIntyre, 98-113.

Atkinson, J. M. & J. Heritage, (eds.). 1984. *Structures of Social Action. Studies in conversation analysis*. Cambridge: Cambridge University Press.

Au, K. H. & J. M. Mason. 1981. Social organization factors in learning to read: the balance of rights hypothesis. *Reading Research Quarterly*, 17: 115-152.

Au, K. H. & J. M. Mason. 1983. Cultural congruence in classroom participation structures: Achieving a balance of rights. *Discourse Processes*, 145-167.

Austin, J. L. 1962. *How to Do Things with Words*. Oxford: Oxford University Press.

Bailey, L. G. 1975. An observational method in the foreign language classroom: a closer look at interaction analysis. *Foreign Language Annals*, 8: 335-344.

Bailey, K. M. 1985. Classroom-centred research on language teaching and learning. In M. Celce-Murcia (ed.). *Beyond Basics: Issues and Research in TESOL*. Rowley Mass.: Newbury House, 96-121.

Barnes, D., J. Britton, & H. Rosen. 1969. *Language, the Learner and the School*. Harmondsworth: Penguin.

Barnes, D. 1973. *Language in the Classroom*. Milton Keynes: Open University Press.

Barnes, D. & F. Todd. 1977. *Communication and Learning in Small Groups*. London: Routledge and Kegan Paul.

Beach, L. R. 1974. Self-directed student groups and college learning. *Higher Education*, 3: 187-200.

Bealing, D. 1976. Issues in classroom observational research. *Research in Education*, 9: 70-82.

Bellack, A. A., H. M. Kliebard, R. T. Hyman, & F. L. Smith. 1966. *The Language of the Classroom*. New York: Teachers College Press.

Beretta, A. & A. Davies. 1985. Evaluation of the Bangalore Project. *ELT Journal*, 39 (2): 121-127.

Beretta, A. 1989. Attention to form or meaning? Error treatment in the Bangalore Project. *TESOL Quarterly*, 23 (2): 283-303.

Besnier, N. 1982. Repair and errors in Tuvaluan Southern conversation. Unpublished paper, Linguistics Department, University of California.

Bialystok, E. & M. Frohlich. 1978. Variables of classroom achievement in second language learning. *Modern Language Journal*, 62: 327-335.

Bialystok, E. 1983. Inferencing: Testing the 'hypothesis-testing' hypothesis'. In H. W. Seliger, & M. H. Long (eds.). *Classroom Oriented Research in Second Language Acquisition*. Rowley Mass.: Newbury House, 104-124.

Biddle, B. J. 1967. Methods and concepts in classroom research. *Review of Educational Research*, 37 (3): 337-357.

Birdwhistell, R. L. 1961. Paralanguage twenty-five years after Sapir. In Laver and Hutcheson (eds.). 1972. *Face-to-Face Communication*. Harmondsworth: Penguin, 82-100.

Boomer, D. S. & A. T. Dittmann. 1962. Hesitation pauses and punctual pauses in speech. *Language and Speech*, 5: 215-220.

Bowers, R. 1980. Verbal behaviour in the language teaching classroom. Unpublished Ph.D. Thesis, University of Reading.

Breen, M. P. 1985a. Authenticity in the language classroom. *Applied Linguistics*, 6 (1): 60-70.

Breen, M. P. 1985b. The social context for language learning — a neglected situation? *Studies in Second Language Acquisition*, 7: 135-158.

Brock, C. A. 1986. The effects of referential questions on English second language classroom discourse. *TESOL Quarterly*, 20 (1): 47-59.

Brock, C., G. Crook, R. R. Day, & M. Long. 1986. The differential effects of corrective feedback in NS-NNS conversation. In R. R. Day (ed.). *Talking to Learn: conversation in second language acquisition*. Rowley Mass.: Newbury House, 229-236.

Brown, P. & S. Levinson. 1978. Universals in language usage: politeness phenomena. In E. Goody (ed.). *Questions and Politeness: strategies in social interaction*. Cambridge: Cambridge University Press, 56-289.

Brown, G. & G. Yule. 1983a. *Discourse Analysis*. Cambridge: Cambridge University Press.

Brown, G. & G. Yule, 1983b. *Teaching the Spoken Language*. Cambridge: Cambridge University Press.

Brown, G. 1985. Two windows on the classroom world: diary studies and participant observation differences. In P. Larson, E. L. Judd, & D. S. Messerschmidt (eds.). *On TESOL'84: a brave new world for TESOL*. Washington, D. C.: TESOL, 121-134.

Brown, R. 1991. Group work, task differences, and second language acquisition. *Applied Linguistics*, 12 (1): 1 -12

Brumfit, C. J., & K. Johnson, (eds.). 1979. *The Communicative Approach to Language Teaching*. Oxford: Oxford University Press.

Brumfit, C. J. 1980. *Problems and Principles in English Teaching*. Oxford: Pergamon Press.

Brumfit, C. J. 1984. *Communicative Methodology in Language Teaching: the roles of fluency and accuracy*. Cambridge: Cambridge University Press.

Bruton, A. & V. Samuda. 1980. Learner and teacher roles in the treatment of oral error in group work. *RELC Journal*, 11 (2): 49-63.

Candlin, C. H. & H. G. Widdowson (eds.). 1987. *Roles of Teachers and Learners*. Oxford: Oxford University Press.

Cathcart, R. & J. W. Olsen. 1976. Teachers and students' preferences for correction of classroom errors. In J. Fanselow, & P. Crymes (eds.). *On TESOL'76*. Washington, D. C.: TESOL, 41-53.

Cazden, C. B. 1986. Classroom discourse. In M. C. Wittrock (ed.). *Handbook of Research on Teaching*. New York: Macmillan, 432-463.

Cazden, C. V. J., V. P. John, & D. Hymes, (eds.). 1972. *Functions of Language in the Classroom*. New York: Teachers College Press.

Celce-Murcia, M. (ed.). 1980. *Essays for Language Teachers*. Rowley Mass.: Newbury House.

Chamberlain, A. & T. Llamzon, (eds.). 1982. *Studies in classroom interaction* Occasional Papers, No. 20, SEAMEO Regional Language Centre, Singapore.

Chanan, G. & S. Delamont, (eds.). 1975. *Frontiers of Classroom Research*. Windsor: NFER.

Chaudron, C. A. 1977. A descriptive model of discourse in the corrective treatment of learners' errors. *Language Learning*, 27 (1): 29-46.

Chaudron, C. A. 1983a. Foreign talk in the classroom — an aid to learning. In H. W. Seliger & M. H. Long (eds.). *Classroom Oriented Research in Second Language Acquisition*. Rowley Mass.: Newbury House, 127-143.

Chaudron, C. A. 1983b. Simplification of input: topic reinstatements and their effects on L2 learners' recognition and recall. *TESOL Quarterly*, 17 (3): 437-478.

Chaudron, C. A. 1985. Comprehension, comprehensibility and learning in the second language classroom. *Studies in Second Language Acquisition*, 7: 1-14.

Chaudron, C. A. 1986a. The role of simplified input in classroom language. In G. Kasper (ed.). *Learning, Teaching and Communication in the Foreign Language Classroom*. Aarhus, Denmark: Aarhus University Press, 99-110.

Chaudron, C. A. 1986b. Teachers' priorities in correcting learners' errors in French immersion classes. In R. R. Day (ed.). *Talking to Learn: conversation in second language acquisition*. Rowley Mass.: Newbury House, 64-84.

Chaudron, C. A. 1987. The role of error correction in second language teaching. In B. K. Das (ed.). *Patterns of Classroom Interaction in Southeast Asia*. Singapore: SEAMEO Regional Language Centre, 17-50.

Chenoweth, N. A., R. R. Day, A. N. Chun, & S. Luppescus. 1983. Attitudes and preferences of ESL students to error correction. *Studies in Second Language Acquisition*, 6 (1): 79-87.

Christopher, M. E. 1986. An analysis of discomfort, risk taking sociability and motivation in the L2 classroom. *Language Learning*, 36 (1): 1-26.

Cicourel, A. V. et. al. 1974. *Language Use and School Performance*. New York: Academic Press.

Clark, H. H. 1973. The language-as-fixed-effect fallacy: a critique of language statistics in psychological research. *Journal of Verbal Learning and Verbal Behaviour*, 12: 335-359.

Coulthard, M. 1977. *An Introduction to Discourse Analysis*. London: Longman.

Coulthard, M. & M. Montgomery. 1982. *Studies in Discourse Analysis*. London: Routledge & Kegan Paul.

Coupland, N., H. Giles, & J. M. Wiemann. 1991. *Miscommunication and Problematic Talk*. Newbury Park: Sage.

Courchene, R. 1980. The error analysis hypothesis, the contrastive analysis hypothesis, and the correction of error in the second language classroom. *TESL Talk*, 11 (2): 3-13, 11 (3): 10-29.

Cuff, E. C. & W. W. Sharrock. 1985. Meetings. In T. van Dijk (ed.). *Handbook of Discourse Analysis*, 1-4: 149-159

Clyre, M. 1977. Intercultural communication breakdown and communication conflict: Towards a linguistic model and its exemplification. In C. Molony, H. Zobl, & W. Stolting (eds.). *Deutsch im kontact mit anderen sprachen*. Kronbery, West Germany: Scriptor Verlag, 129-146.

Day, R. R., N. A. Chenoweth, A. E. Chun, & S. Luppescu. 1984. Corrective feedback in native-non-native discourse. *Language Learning*, 34 (2): 19-45.

Day, R. R. 1984. Student participation in the English second language classroom or some imperfections in practice. *Language Learning*, 34 (3): 69-102.

Day, R. R. (ed.). 1986. *Talking to Learn: conversation in second language acquisition*. Rowley Mass.: Newbury House.

Delamont, S. 1976. *Interaction in the Classroom*. London: Methuen.

Delamont, S. (ed.). 1984. *Readings on Interaction in the Classroom*. London: Methuen.

Dickson, W. P. 1982. Creating communication-rich classroom: insights from the sociolinguistic and referential traditions. In L. C. Wilkinson (ed.). *Communication in the Classroom*. New York: Academic Press, 131-150.

Dinsmore, D. 1985. Waiting for Godot in the English Foreign Language Classroom. *ELT Journal*, 39 (4): 225-234.

Di Pietro, R. J. 1981. Discourse and real life roles in the English second language classroom. *TESOL Quarterly*, 15 (1): 27-33.

Donaldson, S. K. 1979. One kind of speech act: How do we know when we're conversing? *Semiotica*, 28: 259-299.

Doughty, C. & T. Pica. 1986. "Information gap" tasks: Do they facilitate second language acquisition? *TESOL Quarterly*, 20 (2): 305-325.

Downes, N. 1981. Foreigner talk inside and outside the classroom. Department of Linguistics, University of Pittsburgh, Mimeo.

Doyle, W. 1979. Classroom effects. *Theory into Practice*, 18 (3): 138-144.

Duff, P. 1986. Another look at interlanguage talk: taking task to task. In R. R. Day (ed.). *Talking to learn: conversation in second language acquisition*. Rowley Mass.: Newbury House, 147-181.

Duncan, S. 1972. Some signals and rules for taking speaking turns in conversation. *Journal of Personality and Social Psychology*, 23 (2): 283-293.

Duncan, S. 1973. Toward a grammar for dyadic conversation. *Semiotica*, 9: 24-46.

Duncan, S. & G. Niederehe. 1974. On signalling that it is your turn to speak. *Journal of Experimental Social Psychology*, 10: 234-247.

Early, M. 1985. *Input and interaction in content classroom: foreigner talk in classroom discourse*. Unpublished Ph.D. Dissertation, University of California, Los Angeles.

Edmondson, W. J. 1980. Some problems concerning the evaluation of foreign language classroom discourse. *Applied Linguistics*, 1 (3): 201-216.

Edmondson, W. 1981. *Spoken Discourse: a model for analysis*. London: Longman.

Edwards, A. D. 1980. Perspectives on classroom language. *Educational Analysis*, 2 (2): 31-46.

Ellis, R. 1980. Classroom interaction and its relation to second language learning. *RELC Journal*, 11: 29-48.

Ellis, R. 1984. *Classroom Second Language Development*. Oxford: Pergamon.

Ellis, R. 1985a. Teacher-pupil interaction in second language development. In S. Gass & C. Madden (ed.). *Input in Second Language Acquisition*. Rowley Mass.: Newbury House, 69-85.

Ellis, R. 1985b. *Understanding Second Language Acquisition*. Oxford: Oxford University Press.

Enkvist, N. E. (ed.). 1982. *Impromptu Speech : a symposium*. Ado: Ado Akademi.

Erickson, F. 1977. Some approaches to inquiry in school-community ethnography. *Anthropology and Education Quarterly*, 8: 58-69.

Erickson, F. & J. Shultz. 1981. When is a context? Some issues and methods in the analysis of social competence. In J. Green, & C. Wallat (eds.). *Ethnography and Language in Educational Settings*. Norwood, N.J.: Ablex, 147-160.

Erickson, F. 1982a. Classroom discourse as improvisation: relationships between academic task structure and social participation structure in lessons. In L. C. Wilkinson (ed.). *Communicating in the Classrooms*. New York: Academic Press, 153-181.

Erickson, F. & J. Shultz. 1982b. *The Counsellor as Gatekeeper: social interaction in interviews*. New York: Academic Press.

Erickson, F. 1985. Qualitative methods in research on teaching language. In M. C. Wittrock (ed.). *Handbook of Research on Teaching*. New York: Macmillan, 119-161.

Faerch, C. & G. Kasper. 1982. Phatic, metalingual and metacommunicative functions in discourse gambits and repairs. In N. E. Enkvist (ed.). *Impromptu Speech: a symposium*. Ado: Ado Akademi, 71-103.

Faerch, C. & G. Kasper. 1985a. Repair in learner-native speaker discourse. In E. Glahn, & A. Holmen (eds.). *Learner Discourse*. Anglica et Americana 22, Department of English University of Copenhagen, Copenhagen, 11-23.

Faerch, C. 1985b. Meta talk in foreign language classroom discourse. *Studies in Second Language Acquisition*, 7: 184-199.

Faerch, C. & G. Kasper. 1986. The role of comprehension in second-language learning. *Applied Linguistics*, 7 (3): 257-274.

Fanselow, J. F. 1977a. Beyond rashomon. *TESOL Quarterly*, 11 (1): 17-39.

Fanselow, J. F. 1977b. The treatment of error in oral work. *Foreign Language Annals*, 10: 583-593.

Farag, S. M. 1986. A linguistic analysis of spoken and written narrative discourse. Unpublished Ph. D. Thesis: Aston University.

Felix, S. W. 1981. The effect of formal instruction on second language acquisition. *Language Learning*, 31 (1): 87-112.

Felix, S. W. & A. Hahn. 1985. Natural processes in classroom second language learning. *Applied Linguistics*, 6 (3): 223-238.

Ferguson, C. A. 1975. Towards a characterization of English foreigner talk. *Anthropological Linguistics*, 17: 1-14.

Flanders, N. A. 1960. *Interaction Analysis in the Classroom: a manual for observers*. Ann Arbor: University of Michigan.

Flanders, N. 1976. *Analysing Teacher Behaviour*. Wesley, Reading Mass.: Addison.

Florian, C. (ed.). 1981. *Conversational Routine*. The Hague: Mouton.

French, P. & M. Maclure. 1979. Getting the right answer and getting the answer right. *Research in Education*, 22: 1-23.

Frick, T. & I. S. Melvyn. 1978. Observer agreement and reliabilities of classroom observational measures. *Review of Educational Research*, 48: 157-184.

Frohlich, M., N. Spada, & P. Allen. 1985. Differences in the communicative orientation of L2 classroom. *TESOL Quarterly*, 19 (1): 27-57.

Furlong, V. A. & A. D. Edwards. 1977. Language in classroom interaction: theory and data. *Educational Research*, 19 (2): 122-128.

Gaies, S. J. 1977a. The nature of linguistic input in formal second language learning: linguistic and communicative strategies in second language learning teachers' classroom language . In H. D. Brown, C. A. Yorio, & R. H. Crymes (eds.). *On TESOL'77: Teaching and learning English as a second language: trends in research and practice.* Washington, D. C. : TESOL, 204-212.

Gaies, S. J. 1977b. *A comparison of the classroom language of second language teachers and their speech among peers: an exploratory syntactic analysis.* Unpublished Ph.D. Dissertation: Indiana University, Bloomington.

Gaies, S. J. 1983. Learner feedback: an exploratory study of its role in the second language classroom. In H. W. Seliger & M. H. Long (eds.). *Classroom orientated research in second language acquisition.* Rowley Mass.: Newbury House, 190-212.

Galton, M. 1979. Systematic classroom observation: British research. *Educational Research,* 21 (2): 109-115.

Garfinkel, H. 1967. *Studies in Ethnomethodology.* Englewood Cliffs, New Jersey: Prentice Hall.

Garfinkel, H. 1972. Remarks on ethnography. In J. J. Gumperz and D. Hymes (eds.). *Direction in Sociolinguistics: The Ethnography of Communication* Oxford: Basil Blackwell.

Gaskill, W. H. 1980. Correction in native speaker - nonnative speaker conversation. In P. Larsen-Freeman (ed.). *Discourse Analysis in Second Language Research.* Rowley Mass.: Newbury House, 125-137.

Gass, S. M. & C. G. Madden (eds.). 1985. *Input in Second Language Acquisition.* Rowley Mass.: Newbury House.

Gass, S. M. & E. M. Varonis. 1985. Task variation and nonnative/nonnative negotiation of meaning. In S. M. Gass & C. G. Madden (eds.). *Input in Second Language Acquisition.* Rowley Mass.: Newbury House, 149-161.

Gass, S. M. & E. M. Varonis. 1989. Incorporated repairs in nonnative discourse. In M. R. Eisenstein (ed.). *The Dynamic Interlanguage.* New York and London: Plenum Press, 77-86.

Gass, S. M. & E. M. Varonis. 1991. Miscommunication in nonnative speaker discourse. In N. Coupland, H. Giles, & J. M. Wiemann. *Miscommunication and Problem Talk.* Newbury Park : Sage, 121-145.

Gerry, A. 1980. Teaching the learner to ask for information. *TESOL Quarterly,* 14 (1): 5-16.

Glahn, E. & A. Holmen. 1985. *Learner Discourse.* Anglica et America 22, Department of English, University of Copenhagen, Copenhagen.

Goffman, E. 1974. *Frame Analysis.* New York: Harper and Row.

Goffman, E. 1981. *Forms of Talk.* Oxford: Basil Blackwell.

Goodwin, C. C. 1981. *Conversational Organization: interaction between speakers and hearers.* New York: Academic Press.

Grice, H. 1975. Logic and conversation. In P. Cole & J. L. Morgan (eds.). *Syntax and Semantics3: Speech Acts.* New York: Academic Press, 41-58.

Grimshaw, A. D. 1980. Mishearings, misunderstandings, and other nonsuccesses in talk: a plea for redress of speaker-oriented bias. *Sociological Inquiry,* 50 (3): 31-74.

Grimshaw, A. D. 1990. *Conflict Talk* . Cambridge: Cambridge University Press.

Gruber, H. E. & M. Weitman. 1962. *Self-directed Study: Experiments in Higher Education.* University of Colorado Behavior Research Laboratory Report No. 19.

Gruenewalk, L. J. & S. A. Pollack. 1984. *Language Interactions in Teaching and Learning.* Baltimore: University Park Press.

Gumperz, J. J. & D. Tannen. 1979. Individual and social differences in language use. In C. Fillmore, D. Kempler & S. Y. Wany (eds.). *Individual differences in language ability and language behavior.* New York: Academic Press, 305-325.

Gumperz, J. J. 1981. The linguistic bases of communicative competence. In D. Tannen (ed.). *Analysing Discourse: text and talk.* Washington D. C.: Georgetown University Press, 323-34.

Gumperz, J. J. 1982. *Discourse Strategies*. Cambridge: Cambridge University Press.

Gumperz, J. J. (ed.). 1982. *Language and Social Identity*. Cambridge: Cambridge University Press.

Guthrie, L. F. 1984. Contrasts in teachers' language use in a Chinese-English bilingual classroom. In J. Handscombe, R. A. Orem, & B. P. Tayler (eds.). *On TESOL'83: The Question of Control*. Washington, D. C. : TESOL, 39-52.

Hakansson, G. 1986. Quantitative aspects of teacher talk. In G. Kasper (ed.). *Learning, Teaching and Communication in the Foreign Language Classroom*. Aarhus, Denmark: Aarhus University Press, 83-98.

Halliday, M. A. K. & R. Hasan. 1976. *Cohesion in English*. London: Longman.

Hamilton, D. & S. Delamont. 1974. Classroom research: a cautionary tale. *Research in Education*, 11: 1-16.

Hammersley, M. 1980. Classroom ethnography. *Educational Analysis*, 2 (2): 47-74.

Hammersley, M. & P. Atkinson. 1983. *Ethnography, principles and practice*. London and New York: Routledge.

Hargreaves, D. H. 1977. The process of typification in classroom interaction: models and methods. *British Journal of Educational Psychology*, 47 (3): 274-284.

Harrop, L. A. 1979. Unreality of classroom observation. *Educational Research*, 21 (3): 207-211.

Hatch, E. 1983. *Psycholinguistics: a second language perspective*. Rowley Mass.: Newbury House.

Heath, S. B. 1982. Ethnography in education: defining the essentials. In P. Gilmore & A. A. Glatthorn (eds.). *Children in and out of school*. Centre for applied linguistics, Washington, D. C., 33-35.

Heath, S. B. 1982. What no bedtime story means: narrative skills at home and school. *Language in Society*, 11 (2): 49-76.

Hendrickson, J. M. 1978. Error correction in foreign language teaching: recent history, research, and practice. *Modern Language Journal*, 62: 387-398.

Henzl, V. M. 1973. Linguistic register of foreign language instruction. *Language Learning*, 23: 207-222.

Henzl, V. M. 1979. Foreign talk in the classroom. *International Review of Applied Linguistics*, 17: 159-167.

Heritage, J. 1984. A change of state token and aspects of its sequential placement. In J. M. Atkinson & J. J. Heritage (eds.). *Structure of Social Action : studies in conversational analysis*. Cambridge: Cambridge University Press, 299-345.

Hoge, R. D. 1985. The validity of direct observation measures of pupil classroom behaviour. *Review of Educational Research*, 55: 469-483.

Hullen, F. 1982. Observations related to impromptu elements in classroom discourse and to the function of such elements in foreign language teaching and learning. In N. E. Enkvist (ed.). *Impromptu Speech*. Ado: Ado Akademi, 207-239.

Hullen, W. & W. Lorscher. 1987. On describing and analysing foreign language classroom discourse. In W. Oleksy (ed.). *Contrastive Pragmatics*. Amsterdam: Benjamins, 268-291.

Humphrey, F. M. 1979. *'Shh!': a sociolinguistic study of teachers' turn-taking section in primary school lessons*. Ph.D. Dissertation, Georgetown University, Washington D. C.

Hyllenstam, K. 1983. Teacher talk in Swedish as a second language classrooms: quantitative aspects and markedness conditions. In S. W. Felix & H. Wode (eds.). *Language Development at the Crossroads*. Tubingen, West Germany: Cunter Nam, 173-188.

Hymes, D. 1977. Qualitative/quantitative research methodologies in education: a linguistic perspective. *Anthropology and Education Quarterly* , 8: 165-176.

Hymes, D. 1981. Ethnographic monitoring. In H. T. Trueba, G. P. Guthrie, & H. P. Au (eds.). *Cultural and the Bilingual Classroom: studies in classroom ethnography.* Rowley Mass.: Newbury House, 56-68.

Jefferson, G. 1975. Error correction as an interactional resource. *Language in Society,* 3: 181-199.

Jefferson, G. 1978. Sequential aspects of storytelling in conversation. In J. Schenkein (ed.). *Studies in the Organization of Conversational Interaction.* New York: Academic Press, 219-48.

Jefferson, G. 1984a. On the organization of laughter in talk about troubles. In J. M. Atkinson, & J. J. Heritage (eds.). *Structures of Social Action: Studies in conversation analysis.* Cambridge: Cambridge University Press, 346-369.

Jefferson, G. 1984b. Side Sequences. In D. Sudnow (ed.). *Studies in Social Interaction.* New York: Free Press, 295-338.

Jefferson, G. 1987. On exposed and embedded correction in conversation. In G. Button, & J. R. E. Lee (eds.). *Talk and Social Organization.* Clevedon, U.K.: Multilingual Matters, 86-100.

Jefferson, G. 1988. On the sequential organization of troubles-talk in ordinary conversation. *Social Problems,* 5 (4): 418-441.

Johnson, D. M. 1983. Natural learning by design: a classroom experiment in social interaction and second language acquisition. *TESOL Quarterly,* 7: 55-68.

Jordan, B. & N. Fuller. 1975. On the non-fatal nature of trouble: some-making and trouble-managing in lingua franca talk. *Semiotica,* 13: 11-31.

Kasper, G. 1985. Repair in foreign language teaching. *Studies in Second Language Acquisition,* 7 (2): 200-215.

Kasper, G. (ed.). 1986. *Learning and Teaching and Communication in the Foreign Language Classroom.* Aarhus, Denmark: Aarhus University Press.

Kramsch, C. J. 1985. Classroom interaction and discourse options. *Studies in Second Language Acquisition*, 7: 169-183.

Krashen, S. D. 1981. *Second Language Acquisition and Second Language Learning*. Oxford: Pergamon.

Krashen, S. D. 1982. *Principles and Practice in Second Language Research*. Oxford: Pergamon.

Krashen, S. D. & T. Terrell. 1983. *The Natural Approach: language acquisition in the classroom*. Oxford: Pergamon.

Krashen, S. D. 1985. *The Input Hypothesis*. London:Longman

Kopperschmidt, J. 1985. An analysis of argumentation. In T. van Dijk (ed.). *Handbook of Discourse Analysis*, 1-4, New York: Academic Press, 159-167.

Labov, L. M. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.

Labov, L. M. 1977. *Therapeutic Discourse: psychotherapy as conversation*. New York: Academic Press.

Laosa, L. M. 1979. Inequality in the classroom: observational research on teacher-student interaction. *Aztlan*, 8: 57-67.

Larsen-Freeman, D. E. (ed.). 1980. *Discourse Analysis in Second Language Research*. Rowley Mass.: Newbury House.

Legarreta, D. 1977. Language choice in bilingual classroom. *TESOL Quarterly*, 11: 9-16.

Lemke, J. L. 1989. *Using Language in the Classroom*. Oxford: Oxford University Press.

Levinson, S. C. 1983. *Pragmatics*. Cambridge: Cambridge University Press.

Levelt, W. J. M. 1983. Monitoring and self-repair in speech. *Cognition*, 14: 14-104.

Lightbown, P. A. 1983. Exploring relationships between developmental and instructional sequences in L2 acquisition. In H. W. Seliger, & M. H. Long (eds.). *Classroom Orientated Research in Second Language Acquisition*. Rowley Mass.: Newbury House, 217-2243.

Littlejohn, A. P. 1983. Increasing learner involvement in course management *TESOL Quarterly* , 17 (4): 595-608.

Loman, B. & A. Akademic. 1982. The segmentation problem in the study of impromptu speech. In N. E. Enkvist (ed.). *Impromptu Speech: a symposium*. Ado: Ado Akademi, 105-129.

Long, M. H. 1975. Group work and communicative competence. In the ESOLC 9th Annual Convention of TESOL, *On TESOL' 75: New Directions*. Washington, D. C.: TESOL, 211-223.

Long, M. H., L. L. Adams, & F. Castanos. 1976. Doing things with words: verbal interaction in lockstep and small group classroom situations. In J. Fanselow& R. Crymes (eds.). *On TESOL' 76*. Washington D. C.:TESOL, 137-53.

Long, M. H. 1980a. Inside the 'black box': Methodological issues in classroom research on language learning. *Language Learning*, 30: 1-42.

Long, M. H. 1980b. *Input, Interaction and Second Language Acquisition*. Ph.D. Dissertation: University of California, Los Angeles.

Long, M. H. 1981. Questions in foreigner talk discourse. *Language Learning*, 31: 135-157.

Long, M. H. & C. J. Sato. 1983a. Classroom foreigner talk discourse: forms and functions of teacher questions. In H. W. Seliger & M. Hech (eds.). *Classroom orientated research in second language acquisition*. Rowley Mass.: Newbury House, 268-285.

Long, M. H. 1983b. Does second language instruction make a difference? A review of the research. *TESOL Quarterly*, 17: 359-382.

Long, M. H. & P. A. Porter. 1985. Group work, interlanguage talk and second language acquisition. *TESOL Quarterly*, 19 (2) 207-227.

Long, M. H. 1985. Input and second language acquisition theory. In S. Gass and C. Madden (eds.). *Input in Second Language Acquisition*. Rowley Mass.: Newbury House.

Long, M. H. 1990. Task, group, and task-group. In S. Anivan (ed.). *Language Teaching Methodology for the Nineties*. Singapore: SEAMEO Regional Language Centre, 31-50.

Lorscher, W. 1986. Conversational structures in the foreign classroom. In G. Kasper (ed.). *Learning, Teaching and Communication in the Foreign Language Classroom*. Aarhus, Denmark: Aarhus University Press, 11-22.

Malamah-Thomas, A. 1987. *Classroom Interaction*. Oxford: Oxford University Press.

Malcolm, I. G. 1979. The West Australian aboriginal child and classroom interaction: a sociolinguistic approach. *Journal of Pragmatics*, 3: 305-320.

Malcolm, I. G. 1986. Classroom interaction analysis: using a sociolinguistic model. Paper presented at the RELC regional seminar on patterns of classroom interaction in Southeast Asia, Singapore, April, 21-25.

McAleese, R. & D. Hamilton. 1978. *Understanding Classroom Life*. NFER.

McNamara, D. R. 1980. The outsider's arrogance: the failure of participant observers to understand classroom events. *British Educational Research Journal*, 6 (2): 113-125.

McCutcheon, G. 1981. On the interpretation of classroom observations. *Educational Research*, 10: 5-10.

McDonald, F. J., K. S. Meredith, & Y. Allen. 1977. *The effects of classroom interaction patterns and speaker's characteristics on the acquisition of proficiency in English as a second language*. Princeton, N. J. : Educational Testing Service.

McGregor, G. 1984. Conversation and communication. *Language and Communication.*, 4 (1): 71-83.

McHoul, A. W. 1978. The organization of turns at formal talk in the classroom. *Language in Society*, 7: 183-213.

McHoul, A. W. 1990. The organization of repair in classroom talk. *Language in Society*, 19 (3): 349-377.

McLaughlin, M. L. 1984. *Conversation: how talk is organized.* Beverly Hills: Sage.

McTear, M. F. 1975. Structure and categories of foreign language teaching sequences. In R. L. Allwright (ed.). *Working papers: language teaching classroom research.* Essex: Department of Language and Linguistics, University of Essex, 97-130.

Medley, D. M. & H. E. Mitzel. 1963. Measuring classroom behavior by systematic observation. In N. L. Gage (ed.). *Handbook of Research on Teaching.* Chicago: Round McNally, 247-328.

Mehan, H. 1974. Accomplishing classroom lessons. In A. Cicourel et al. (ed.). *Language Use and School Performance.* New York: Academic Press, 76-142.

Mehan, H. 1979a. What time is it Denise? Asking known information question in classroom discourse. *Theory into Practice*, 18 (4): 285-294.

Mehan, H. 1979b. *Learning Lessons: social organization in the classroom.* Cambridge, Mass.: Harvard University Press.

Miller, A. H. 1978. Analysing teaching in a student-centred Classroom. *British Journal of Teacher Education*, 4 (1): 37-46.

Milroy, L. 1984. Comprehension and context: successful communication and communicative breakdown. In P. Trudgill (ed.). *Applied sociolinguistics.* London: Academic Press, 7-31.

Mitchell, R. 1985. Process research in second language classroom. *Language Teaching*, 18: 330-352.

Moerman, L. 1977. The preference for self-correction in a Thai conversational corpus. In T. Givon (ed.). *Syntax and semantics 12: discourse and syntax.* New York: Academic Press, 872-882.

Moskowitz, G. 1976. The classroom interaction of outstanding foreign language teachers. *Foreign Language Annals,* 9: 135-143.

Muriel, Saville-Troike. 1982. *The Ethnography of Communication: an introduction.* Oxford: Basil Blackwell.

Naiman, N., M. Frohlich, H. H. Stern & A. Todesco. 1978. The good language learner. *Research in Education,* 7, Toronto: OLSE.

Nunan, D. 1987. Communicative language teaching: making it work. *ELT Journal, 41* (2): 136-45.

Nunan, D. 1989. *Designing Tasks for the Communicative Classroom.* Cambridge: Cambridge University Press.

Nystrom, N. J. 1983. Teacher-student interaction in bilingual languages: four approaches to error feedback. In H. W. Seliger & M. H. Long (eds.). *Classroom Orientated Research in Second Language Acquisition.* Rowley Mass.:Newbury House, 169-188.

Ochs, E. 1979. Transcription as theory. In E. Ochs, & B. B. Schieffelin (eds.). *Developmental pragmatics.* New York: Academic Press, 43-72.

Papaefthymiou-Lytra, S. 1989. Conflict in communication vis a vis repairing in the foreign language classroom. *Journal of Applied Linguisticss,* 5: 43-67.

Patsy, M. L. 1985. Great expectations: Second language acquisition research and classroom teaching. *Applied Linguistics,* 6 (2): 173-189.

Philips, S. U. 1983. *The Invisible Culture: communication in classroom and community on the Warm Spring Indian reservation.* New York: Longman.

Pica, T. 1983. Adult acquisition of English as a second language under different conditions of exposure. *Language Learning,* 33: 465-497.

Pica, T & C. Doughty. 1983. The role of group work in classroom second language acquisition. *Studies in Second Language Acquisition*, 7: 233-248.

Pica, T. & C. Doughty. 1985. Input and interaction in the communicative language classroom: a comparison of teacher-fronted and group activities. In S. M. Gass, & C. G. Madden (eds.). *Input and Second Language Acquisition*. Rowley Mass.: Newbury House, 115-132.

Pica, T. & M. H. Long. 1986. The linguistic and conversational performance of experienced and inexperienced teachers. In R. R. Day (ed.). *Talking to Learn: conversation in second language acquisition*. Rowley Mass.: Newbury House, 85-98.

Pica, T., C. Doughty, & R. Yong. 1986. Making input comprehensible: do interactional modifications help? *ITL Review of Applied Linguistics*, 72: 1-25.

Pica, T. 1987. Second language acquisition, social interaction and the classroom. *Applied Linguistics*, 8 (1): 3-20.

Pica, T. 1988. Interlanguage adjustments as an outcome of NS/NNS negotiated interaction. *Language Learning*, 38 (1) 45-73.

Politzer, R. L. 1970. Some reflections on 'good' and 'bad' language teaching behaviour. *Language Learning*, 20: 31-43.

Politzer, R. L. & M. McGroarty. 1985. An exploratory study of learning behaviour in linguistics and communicative competence. *TESOL Quarterly*, 19: 103-123.

Porter, P. 1983. *Variations in the conversations of adult learners of English as a function of the proficiency level of the participants*. Unpublished Ph.D. Dissertation, Stanford University.

Porter, P. 1986. How learners talk to each other: input and interaction in task-centred discussion. In R. R. Day (ed.). *Talking to Learn: conversation in second language acquisition*. Rowley Mass.: Newbury House, 200-222.

Prabhu, N. S. 1980. *Second Language Pedagogy*. Oxford: Oxford University Press.

Reichman, R. 1985. Extended person-machine interface. *Artificial Intelligence*, 22: 157-218.

Remler, J. E. 1978. Some repairs on the notion of repairs in the interest of relevance. Regional Meeting, *Chicago Linguistic Society*, 14: 391-402.

Reynolds, M. J. 1990. *Repair and control in the native speaker/nonnative speaker classroom: a case study*. Ph.D. thesis, Lancaster University.

Riding, R. J. 1979. Tell me once, tell me slowly: repetition versus speaking slowly as methods of improving children's learning. *Research in Education*, 21: 71-77.

Richards, J. C. & T. Rodgers. 1982. Methods, approach, design, procedure. *TESOL Quarterly*, 16 (2): 153-168.

Richards, K. (1989). *Classroom Research*. Aston University DL MSc materials.

Riley, P. 1977. Discourse networks in classroom interaction: some problems in communicative language teaching. Paper Presented at the BAAL Seminar: University of Bath, U. K.

Rivers, W. M. 1968/1981. *Teaching Foreign Language Skill*. Chicago: University of Chicago Press.

Rivers, W. M. (ed.). 1987. *Interactive Language Teaching*. Cambridge: Cambridge University Press.

Rosenshine, B., & F. Norma. 1973. The use of direct observation to study teaching. In R. Travens (ed.). *Second Handbook of Research on Teaching*. Chicago: Rand McNally, 122-183.

Rosenshine, B. 1976. Classroom interaction. In N. L. Gage (ed.). *The psychology of teaching methods*. Chicago: National Society for the Study of Education, 335-371.

Rothfarb, S. H. 1970. Teacher-pupil interaction in the foreign language English speaker class. *Hispania*, 53: 256-260.

Sacks, H., E. A. Schegloff, & G. Jefferson. 1974. A simplest systematics for the organization of turn-taking in conversation. *Language*, 50 (4): 596-735.

Salica, C. 1981. Testing a model of corrective discourse. M.A. in TESL thesis. University of California, Los Angeles.

Sato, C. 1982. Ethnic styles in classroom discourse. In M. Hines & W. Ratherford (eds.). *On TESOL'81*, Washington, D. C.: TESOL, 11-24.

Schegloff, E. A., G. Jefferson, & H. Sacks. 1977. The preference for self-corrections in the organization of repair in conversation. *Language*, 53: 361-82.

Schegloff, E. A. 1979. The relevance of repair to syntax-for-conversation. In T. Givon (ed.). *Syntax and Semantics 12: Discourse and Syntax*. New York: Academic Press, 261-285.

Schegloff, E. A. 1987. Between micro and macro: Contexts and other connections. In J. C. Alexander, B. Giesen, R. Munch, & N. J. Smelser (eds.). *The micro-macro-link*. Berkeley: University of California Press.

Schiffrin, D. 1985. Everyday argument: the organization of diversity in talk. In T. van Dijk (ed.). *Handbook of Discourse Analysis: discourse dialogue*. New York: Academic Press, 35-46.

Schinke-LIane, L. 1983. Foreigner talk in content classrooms. In H. W. Selinger & M. H. Long (eds.). *Classroom Orientated Research in Second Language Acquisition*. Rowley Mass.: Newbury House, 146-164.

Schwartz, J. 1980. The negotiation for meaning in repair in conversations between second language learners of English. In D. Larsen-Freeman (ed.). *Discourse Analysis in Second Language Research*. Rowley Mass.: Newbury House, 138-153.

Searle, J. R. 1969. *Speech Acts*. Cambridge: Cambridge University Press.

Seliger, H. W. 1977. Does practice make perfect: a study interaction pattern and L2 competence. *Language Learning*, 27 (2): 263-278.

Seliger, H. W. 1979. On the nature and function of language rules in language teaching. *TESOL Quarterly*, 13 (3): 359-369.

Seliger, H. W. & M. H. Long. (eds.). 1983. *Classroom Orientated Research in Second Language Acquisition*. Rowley Mass.: Newbury House.

Shimanoff, S. B. & J. Brunak. 1977. Repair in planned and unplanned discourse. In E. O. Keenan & T. L. Bennett (eds.). *Discourse across Time and Space*. Los Angeles: University of Southern California.

Sinclair, J. McH. & D. Brazil. 1982. *Teacher Talk*. Oxford: Oxford University Press.

Sinclair, J. McH. & M. Coulthard. 1975. *Toward an Analysis of Discourse*. Oxford: Oxford University Press.

Smith, P. D. 1970. A comparison of the cognitive and audiolingual approaches to foreign language instructions: the Pennsylvania foreign language project. Philadelphia: Centre for Curriculum Development.

Spada, N. M. 1986. The interaction between types of content and types of instruction: some effects on the L2 proficiency of adult learners. *Studies in Second Language Acquisition*, 8: 181-199.

Spada, N. M. 1987. Relationships between instructional differences and learning outcomes: a process-product study of communicative language learning. *Applied Linguistics*, 8: 137-161.

Stephen, B. (ed.). 1982. *Culture in contact: studies in cross-cultural interaction*. Oxford: Pergamon Press.

Stokes, A. 1975. Error and teacher-student interaction. In R. L. Allwright (ed.). *Working Papers: Language teaching classroom research*. Essex: University of Essex, Department of Languages and Linguistics, 52-63.

Stratton, H. 1986. Repair and error in the language classroom. Paper Presented at the RELC Regional Seminar on Patterns of Classroom Interaction in Southeast Asia, Singapore, April 21-25 (mimeo).

Stubbs, M. 1975. Teaching and talking: a sociolinguistic approach to classroom interaction. In G. Chanan & S. Delamont (eds.). *Frontiers of Classroom Research.* NFER, 233-246.

Stubbs, M. 1976. *Language, Schools and Classrooms.* (2nd edition) London: Methuen.

Stubbs, M. & S. Delamont (eds.). 1976. *Explorations in Classroom Observation.* Chichester: Wiley.

Stubbs, M. 1983. *Discourse Analysis: The sociolinguistic analysis of natural language.* Chicago: University of Chicago Press.

Stubbs, M. 1986. *Educational Linguistics.* Oxford: Blackwell.

Swaffar, J. K., A. Katherine, & M. Martha. 1982. Teacher classroom practices: redefining methods as task hierarchy. *Modern Language Journal,* 66: 24-33.

Tannen, D. 1975. Communication mix and mixup or how linguistics can ruin a marriage. *San Jose State Occasional Papers in Linguistics,* 205-211.

Tannen, D. 1984. *Conversational Style: Analyzing talk among friends.* Norwood, N. J.:Ablex.

Tarone, E. 1980. Communicative strategies, foreigner talk and repair in inter-language. *Language Learning,* 30 (2): 417-431.

Tarone, E. 1981. Some thoughts on the notion of communicative strategies. *TESOL Quarterly,* 15 (3): 385-296.

Teresa, P. 1987. Second language acquisition, social interaction and the classroom. *Applied Linguistics,* 8 (1): 3-21.

Thomas, J. 1983. Cross-cultural pragmatic failure. *Applied Linguistics,* 4 (2): 91-112.

Toanne, C. & S. Stephen. 1987. *Literature in the Language Classroom: a resource book of idea and activities.* Cambridge: Cambridge University Press.

Townsend, D. R. & G. L. Zamora. 1975. Differing interaction patterns in bilingual classrooms. *Contemporary Education*, 46: 196-202.

Travers, R. M. M. (ed.). 1986. *Second Handbook of Research on Teaching*. London: Collier Macmillan.

Trueba, H. T., G. P. Guthrie, & H. P. Au (eds.). 1981. *Culture and the Bilingual Classroom: studies in classroom ethnography*. Rowley Mass.: Newbury House.

Tsui, A. B. 1985. Analyzing input and interaction in second language classroom. *RELC Journal*, 16: 8-32.

Valdes, J. M. (ed.). 1986. *Culture Bound: bridging the cultural gap in language teaching*. Cambridge: Cambridge University Press.

van Dijk, T. (ed.). 1985. *Handbook of Discourse Analysis*: 1- 4. New York: Academic Press.

van Lier, L. A. W. 1982. *Analyzing interaction in second-language classrooms*. Unpublished Ph.D. Thesis: University of Lancaster.

van Lier, L. A. W. 1984a. Discourse analysis and classroom research: a methodological perspective. *International Journal of the Sociology of Language*, 49: 111-133.

van Lier, L. A. W. 1984b. Analyzing interaction in second language classrooms. *ELT Journal*, 38 (3): 16-169.

van Lier, L. A. W. 1988. *The Classroom and the Language Learner*. New York: Longman.

Varonis, E. M. & S. Gass. 1985a. Native/nonnative conversations: a model for negotiation of meaning. *Applied Linguistics*, 6: 71-90.

Varonis, E. M. & S. Gass. 1985b. Miscommunication in Native/nonnative conversation. *Language in Society*, 14: 327-343.

Wells, G. 1981. *Learning through Interaction*. Cambridge: Cambridge University Press.

Wesche, M. B. & R. Doreen. 1985. Foreigner talk in the university classroom. In S. M. Gass, & C. G. Madden (eds.). *Input in second language acquisition*. Rowley Mass.: Newbury House, 89-114.

West, C. 1984. *Routine Complications: Troubles with talk between doctors and patients*. Bloomington: Indiana University Press.

Widdowson, H. G. 1979. *Explorations in Applied Linguistics*. London: Oxford University Press.

Widdowson, H. G. 1979. Directions in the teaching of discourse. In C. J. Brumfit & K. Johnson (eds.). *The Communicative Approach to Language Teaching*. Oxford: Oxford University Press, 49-60.

Widdowson, H. G. 1987. The roles of teacher and learner. *ELT Journal*, 41 (2) 83-88.

Wilkinson, L. C. (ed.). 1982. *Communication in the Classroom*. New York: Academic Press.

Wilson, S. 1977. The use of ethnographic techniques in educational research. *Review of Educational Research*, 47: 245-265.

Wilson, S. 1989. *On the Boundaries of Conversation*. Oxford: Pergamon Press.

Willes, M. 1979. Getting it wrong and putting it right: teachers' explanations to five year olds. *Language Learning*, 1 (2): 77-85.

Willis, J. 1981. *Spoken discourse in the ELT classroom: a system of analysis and a description*. Unpublished MA Thesis: University of Birmingham.

Wolfson, N., & J. Manes (ed.). 1985. *Language of Inequality*. Berlin: Mouton.

Wong-Fillmore, J. 1982. Instructional language as linguistic input: second language learning in classrooms. In L. C. Wilkinson (ed.). *Communicating in the Classroom*. New York: Academic Press, 283-296.

Wong-Fillmore, L. 1985. When does teacher talk work as input?. In S. Gass & C. Madden (eds.). *Input in second language acquisition*. Rowley Mass.: Newbury House, 17-50.

Wragg, E. 1970. Interaction analysis in the foreign language classroom. *Modern Language Journal*, 54 (2): 116-120.

Wren, D. 1982. A case study of the treatment of oral errors. Selected Papers in TESOL (1), Monterey Ca.: Monterey Institute of International Studies, 90-103.

Yule, G., M. Powers, & L. Macdonald. 1992. The variable effects of some task-based learning procedures on L2 communicative effectiveness. *Language Learning*, 42 (2): 249-277.

Zahn, C. J. 1984. A reexamination of conversational repair. *Communication Monographs*, 51: 56-66.

Zahorik, J. A. 1968. Classroom feedback behaviour of teachers. *Journal of Educational Research*, 62: 147-150.

Zamel, V. 1981. Cybernetics: a model for feedback in the English Second language classroom. *TESOL Quarterly*, 15: 147-150.

Zora, S. S. P. 1990. A linguistic study of interview and conversation. Unpublished Ph.D. thesis, Aston University.