THE EFFECTS OF REPAIR TECHNIQUES ON L2 LEARNING AS A PRODUCT AND AS A PROCESS: A CA-FOR-SLA INVESTIGATION OF CLASSROOM INTERACTION

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Declaration

I certify that all material in this thesis which is not my own work, has been identified and that no material is included which has been submitted for any other award or qualification.

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ABSTRACT

The link between L2 classroom learning and repair of syntactical errors has not yet been sufficiently explicated. Moreover, previous findings on the effectiveness of different repair types have been inconclusive. Therefore, this thesis aims to investigate the effects of different types of repair technique (RT), namely recasts, prompts and explicit correction, on L2 classroom learning of the English passive voice as both a product and a process, using a methodology that has not previously been employed with this perspective by any other study. For this purpose, the focus is on establishing whether a relationship exists between types of RT and learners' test scores (i.e., classroom product) on the one hand and between these types and classroom interaction (i.e., classroom learning processes) on the other, in order to show how interaction and learning are bound up together. To achieve this goal, two methods were used to collect and analyse data obtained from two sources.

First, a quantitative experimental research design consisting of an intervention using a pre-test/post-test measure was employed to quantify the relationship between learners' pre-test/post-test scores and the types of RT, in order to assess their effectiveness in promoting learning of the English passive voice. Five groups of EAP learners participated in the study during their focus-on-forms (FonFs) classes at King Faisal University in Saudi Arabia. Three groups received one repair type each in response to their errors. In the fourth group, learners' errors were not corrected at all, while learners in the fifth group, where no intervention conditions were implemented, received their teacher's normal corrective behaviour. The quantitative analysis revealed a statistically significant positive effect of all types of RT on language learning, with corrective recasts being the most beneficial, followed by prompts and then explicit correction. Additionally, ignoring learners' errors proved to have a slight – though not significant – negative effect on learning.

Second, a qualitative CA approach was adopted to analyse teacher-learner interaction during the intervention. Sixteen hours of audio- and video-recorded classroom interaction was transcribed and analysed using CA tools and methods. CA is not employed as a learning theory or as a tool to measure learning, but as a part of a strategy to explore learning opportunities and the types of behaviour that could be associated with them. The results of the qualitative analysis of the interaction uncovered aspects of the interaction-learning relationship by demonstrating how learning processes occurred in the intersubjective spaces between participants and by

portraying why the different RT types varied in their effectiveness in promoting opportunities for language development and learning of the passive voice.

By applying a product-process perspective to the interaction-learning relationship, this thesis leads to a rethinking of the close and complex relationship that exists between repair and classroom learning. Hence, the present study attempts to bridge the gap between the cognitive and social-interactional schools of SLA and seeks to inform current perspectives on theory and practice.

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ABBREVIATIONS

AL	Applied linguistics
CA	Conversation analysis
CF	Corrective feedback
CI	Comprehensible input
CO	Comprehensible output
CRG	Corrective recasts group
EAP	English for academic purposes
ECG	Explicit correction group
EDDA	Exploratory descriptive data analysis
ERG	Eclectic repair group
EFL	English as a foreign language
ESL	English as a second language
FFI	Form focused instruction
FLT	Foreign language teaching
FonF	Focus on form
FonFs	Focus on forms
ICDA	Inferential comparative data analysis
L2	Second language
N.B.	Note well
NNSs	Non-native speakers
NSs	Native speakers
PG	Prompt group
PhD	Doctor of philosophy
RT	Repair technique
SLA	Second language acquisition
SPSS	Statistical package for the social sciences
STD	Standard deviation
SV	Subject - verb
SVA	Subject – verb - adverbial
SVC	Subject – verb - complement
SVO	Subject – verb – object
$SVO_i O_d$	Subject – verb – indirect object – direct object
TCU	Turn-constructional unit

TRP	Transition relevance place
VS	Verb - subject
VSO	Verb – subject - object
ZRG	Zero-repair group

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CHAPTER 1: INTRODUCTION

In this chapter the purpose of the research is described. In Section 1.1 the research gap is discussed in order to demonstrate the important contribution this study makes to language pedagogy and research. The objectives of the study and the research questions are presented in Sections 1.2 and 1.3 respectively. An overview of the research context follows in Section 1.4, and the methodological framework of the study is then briefly described in the penultimate section, 1.5. Lastly, in Section 1.6, the chapter concludes with an outline of the thesis.

It is necessary at the outset to introduce the reader to the two constructs (namely, repair and correction) which are the principal focus of this study, by briefly defining them and explaining how they differ and how they are used in this thesis (see Chapter 2, Sub-sections 2.2.2 and 2.2.4 for detailed definitions). This does not mean that in this study these constructs are perceived as distinct independent entities. Rather, it is explained how repair extends to incorporate correction. Thus, an initial understanding of repair from the perspective of conversation analysis (CA) with particular relevance to teaching can help to define the relationship between 'repair' and 'correction' and to show how the latter, which is one of the most frequent practices in classrooms, is a subset of the former. In CA terms, as Nakamura (2008) states, repair is

> "a device to point out and deal with any feature of the prior turn that participants orient to as a conversational problem." (p. 269)

Repair incorporates a variety of actions in which people engage to deal with various types of trouble (Arminen, 2005; Schegloff et al. 1977, p. 363; ten Have 1999, p.116) which might occur in speaking, hearing and understanding (Schegloff 1997, p. 503) and that may impede communication between participants (Seedhouse 2004, p. 143). Correction, on the other hand, refers to "the act of remediating a learner-produced error in spoken or written discourse" (Hall 2007, p. 515). In this sense, correction is employed only to replace a trouble item by another item and as such should be perceived as a particular variety of the generic concept of repair. Correction is illustrated by Extract 1.1, in which the teacher repeats the student's utterance using the correct form.

(1.1)

1	S:	my mother go home last night.
2	T:	your mother went home last night?

(Hall 2007, p. 516)

It is evident in L2 classroom data that repair is used to treat various kinds of trouble in ways that might not involve correction, whereas any type of correction is an action of repair. Hence, it could be said that repair and correction are different but cooperating organizations. The distinction between correction and repair could be made clear by comparing the above extract with Extract 1.2 below which illustrates how self-repair is used by the speaker although there is no hearable error.

(1.2)

1 Ken: sure enough ten minutes later the bell r- the doorbell rang ...

(Schegloff et al. 1977, p. 363)

In second language (L2) teaching and second language acquisition (SLA) studies, both repair and correction have been investigated in research on feedback which has explored the negotiation of input and output (Jenks, 2006). These studies have used the term 'corrective feedback' (CF) to identify the various error correction strategies used in classrooms: for instance, recasts, prompts and explicit correction. The three arrowed turns in Extracts 1.3, 1.4, and 1.5 illustrate these strategies respectively (see Chapter 2, Sub-section 2.2.4 for definitions and more examples).

(1.3)

1 T: most of them lived in which of the three regions.

2 LL: middle

3→ T: the middle.

(Hellermann 2005, p. 118)

(1.4)

1 S: she have the book.

2→ T: she ...?

(Hall 2007, p. 516)

(1.5)

1 S: put in my box.

2→ T: you're missing the direct object pronoun *it*. It should be Put *it* in my box.

(Hall 2007, p. 516, emphasis in original)

Research on feedback has also shown that repair and error correction are commonly employed in form-focused instruction (FFI), which is a teaching approach that supports a focus on form as a reaction to the focus on meaning trend that prevailed in L2 pedagogy for a number of decades. In the present study, the applied linguistics (AL)

term 'form-and-accuracy' is used to refer to the research setting, which is also a type of FFI (for more information on FFI and its types, see Chapter 2, Sub-section 2.3.2).

On the basis of this distinction between repair and correction and because the interactional data in this study were transcribed using CA conventions (Appendix A) and analysed in terms of sequence organization according to CA methodology, the term 'repair technique' (henceforth RT), rather than the term 'corrective feedback', is used to refer to the different correction strategies (i.e., recasts, prompts and explicit correction) employed in treating syntactic errors. Seedhouse (2009) argues that employing a mixture of CA and Interaction Hypothesis constructs works well, but that certain problems may arise if these constructs are not defined explicitly enough. Therefore, all the CA and SLA constructs which are used in this thesis will be thoroughly defined in Chapter 2. Principally, the term 'repair technique' is employed to highlight the CA-for-SLA perspective which this thesis adopts to investigate repair of syntactic errors and the relationship between different types of repair and the learning processes which take place. This relationship is emphasized by Havranek (2002) as follows:

> "Juxtaposing the learner's utterance and its corresponding version in the target language draws the learner's attention to structures that have not been mastered, thus initiating a learning process." (p. 256)

1.1 Research Purpose

This research attempts to establish a link between interaction and learning by examining repair and correction, which represent two major investigative areas at the intersection of three research fields: foreign language teaching, conversation analysis and second language acquisition. L2 learning and acquisition have been subjected to SLA-driven enquiries by a great number of studies in the realm of foreign language pedagogy, while CA-informed studies have always contributed useful insights in terms of the structure and sequential organization of classroom talk (Seedhouse, 2005a). Thus, this study is an extension of previous and ongoing research which attempts to contribute to our understanding of the interrelationship between repair and L2 learning.

In the wake of the growing interest in constructivist approaches to language learning and use in recent years, many aspects of classroom interaction have been studied using different methodological approaches (Nikula, 2005; Zuengler & Mori 2002, p. 238). Repair of syntactic errors is one of these aspects and one of the important interactional devices used for restructuring learners' target language awareness. In this thesis, recasts, prompts and explicit correction are seen as different types of repair and subjected to quantitative and qualitative investigations. It was not the goal of this research to

investigate the long-term effects of types of RT on learners' communicative competence and language use. Rather, the aim was to study the immediate effects of these types of repair on learners' language development and to examine the moment-by-moment interaction in their learning processes as it occurred in the actual, real-time context of a lesson.

Owing to the fact that most of the SLA studies on CF are of a positivistic nature and quantitative in approach, they focus only on the product, while the process of accomplishing correction is neglected (Ellis, 2003). For this reason, the present study used not only a quantitative but also a qualitative CA approach to examine correction in particular sequential environments, and to analyse it in terms of interactive functions. The use of the latter approach shows how interaction unfolds in time as a developing process, not as a finished product. This enabled the researcher in the current study to adopt a CA-for-SLA analytical approach when examining the spoken details of the interaction. Such an approach is necessary in order to understand what is actually happening in teacher-student talk and how interaction is actually being deployed on a moment-by-moment basis for the purpose of L2 learning. This CA-for-SLA approach was chosen as the approach best suited to the purposes of this research since it can make the quantitative and qualitative methods work in tandem to contribute to the three areas of interest to this study: namely, CA, SLA and FLT (foreign language teaching). In other words, the goal behind using two different methods to answer the two research questions was to look at L2 learning as a product (i.e., the SLA perspective) and a process (i.e., the CA perspective) simultaneously. This component of the CA-for-SLA research agenda is explained by Markee (2002, p. 11, cited in Seedhouse, 2004) as follows:

> "An important strand of future empirical work on the Interaction Hypothesis should specify in qualitative terms how many different classroom talks are attested in second and foreign language classrooms and provide detailed descriptions of how these speech exchange systems are organized. Complementary experimental research should establish through factor analysis and other powerful inferential statistical techniques what contributions different classroom talks make to acquisition." (pp. 252-3)

As will be discussed in the analysis in Chapter 4, examples of the research contributions which emerged from the examination of the data in this study are the identification of an optional acknowledgement turn in the repair sequence, a new category of prompts, and abundant instances of learners encroaching on the interactional rights of other participants, even those of the teacher.

In the main, two studies inspired the present research. The first of these is Lyster's (2004) quasi-experimental study on form-focused instruction in which he found that prompts are more effective than recasts in promoting language development. The other is Lyster and Mori's (2006) descriptive study, which investigated the immediate effects of explicit correction, recasts and prompts on learner uptake and self-repair in French and Japanese immersion classes and found that students accomplished varying amounts of repair in response to the different repair types.

However, the initial impetus for carrying out this research was the prevailing situation of low achievement levels in English in Saudi Arabia. This deficient standard has been of concern to many official and educational bodies. Almandil (1999) notes that this issue was highlighted by such bodies as early as 1984 and was drawn to the attention of the public in two major daily newspapers, Al-Riyadh and Okaz. As a result, a number of studies in English language teaching were carried out in an attempt to identify causes of this problem, which is believed to be inherent in the Saudi educational system. Nevertheless, the limited amount of research which has been conducted has dealt with the status of English language teaching and learning as regards methods of teaching, teacher training, learning strategies, attitudes and motivation of learners etc. A few studies have dealt with correction, but have concentrated on aspects completely different from the focus of this thesis. Moreover, general findings of SLA research on the effectiveness of repair techniques in promoting L2 learning have been inconclusive. For example, research findings have shown that the predominance of the use of recasts compared with that of the other types of RT is not in doubt (Sheen 2006, p.366); however, the role played by recasts in promoting language learning has not yet been empirically investigated in a sufficiently thorough and clear-cut fashion (Ammar & Spada 2006, p.549). These two situations have resulted in a research gap, demonstrating an unquestionable need for data-based studies addressing these issues. The present research is, therefore, intended to fill this void by examining low levels of achievement in the Saudi context from a completely new perspective and thus making a significant contribution to this area of study.

Moreover, despite the constellation of SLA studies on classroom interaction, teachers are not really being helped to gain a true understanding of the active processes of learning they encounter in their L2 classroom scenarios on a daily basis. Hence, the examination of L2 classroom interaction processes, including repair, from an emic (i.e., participant-relevant or inter-actional) CA perspective provides valuable insights into language pedagogy, since it focuses on what actually happens in the classroom by

describing actual processes, rather than prescribing techniques. Indeed, the understanding of these processes which is contributed by the present study will benefit not only teachers but also researchers, L2 learners and curriculum designers.

To achieve this goal, two research objectives were established and fulfilled in the course of the investigation. These are presented in the following section.

1.2 Research Objectives

Two principal objectives were identified for this study, and the rest of this thesis will demonstrate how these objectives were achieved. The first objective was to establish a link between types of RT and learners' performance. This was accomplished by carrying out a quantitative examination of repair in classroom interaction, seeing language learning as a product, in order to determine which type of RT was most beneficial to learning a grammatical structure of the target language. With this in mind, the study attempted to find out if a change in the type of RT used would affect students' learning of the passive voice.

The second objective was to uncover the process of classroom learning produced while employing different types of RT. This was achieved by applying CA methodology and thus working inductively from the data to investigate the learning processes and the social and contextual dimensions of talk, adopting an emic perspective (Freeman, 2007; Mori, 2007). In other words, the repair phenomenon was examined in situ. First, teacher-fronted form-focused/FFI classes were chosen as a research setting. Next, the interaction, which focused on grammar rule explanation and error-correction, was recorded, and finally, the actual instances of teacher-student talk were analysed.

In the next section the research questions, which were designed to help accomplish these objectives, are introduced. These questions will be referred to again in later chapters.

1.3 Research Questions

Taking into account the aim of seeing L2 learning as both a product and a process, the following questions were formulated:

1. Which type of RT is more beneficial to the development of the target language structure, in this case, the passive voice (i.e., classroom learning product)?
2. How do different types of RT promote opportunities for the development of the target language structure (i.e., classroom learning processes)?
    a) How do types of RT differ in terms of their sequential organization and use in a form-and-accuracy (i.e., FonFs) context?

b) How do learners display uptake of the types of RT?

c) What are the interactional features produced by different types of RT?

The first question was answered by collecting and analysing data using a quasi-experimental research design consisting of a pre-test/post-test intervention, while the second question was answered through addressing the three sub-questions by collecting and analysing repair sequences taken from the classroom interaction that was recorded during the intervention.

In the following section the research context will be explored in order to provide the background to the research setting and the subjects of the research.

1.4 Research Context

In Sub-section 1.4.1, the general and academic status of the English language in Saudi Arabia is examined. The second sub-section provides information on the current provision of English teaching at tertiary level in the study setting, and finally, Sub-section 1.4.3 describes the teaching method used to teach English at KFU where the study took place.

1.4.1 English in Saudi Arabia

In Saudi Arabia, as elsewhere in most countries of the world, English has been gaining more attention in diverse aspects of life over the last few decades. Although English does not have an official status, it is used for communication between foreigners and Arab speakers of English, albeit usually in a pidgin form. In the manpower sector and the work market, English is highly valued and there is a growing interest in using it in business, commerce and technology. In recent years, the availability of resources in English around the country has increased. English newspapers, such as the Saudi Gazette and Arab News, are in public circulation in addition to various kinds of English books and magazines. English TV series and films are subtitled in Arabic but not dubbed. Moreover, many types of street and shop signs are in both English and Arabic scripts. Lately, with the introduction of the Internet in the country, new horizons have been opened for the public to access English online.

Above all, English plays a distinctive role as a medium of instruction in some universities and language institutes offering English for Academic Purposes (EAP) and English as a Foreign Language (EFL) programmes, besides being the only foreign language taught in intermediate and secondary schools. Following standards set by the Ministry of Education, English is taught as a compulsory subject that must be passed in order to qualify for higher education. All students at school learn English, mainly

through the audio-lingual method, for six years, starting at the seventh grade, before enrolling for undergraduate studies. However, for a multitude of reasons, most students are still unable to use it efficiently. As a result, when they are admitted into English-medium science and medicine colleges, they have difficulty coping with their studies.

1.4.2 The EAP Programme at KFU

King Faisal University, where the study data were collected, was established in Dammam in 1975 and girls were admitted into the faculties of medicine, medical sciences, interior design, lab technology, nursing and many others. Except for a very few students who are exempt from studying English, all first-year students are enrolled in the EAP Programme at the language centre, where the researcher taught 'Structure' for many years. This programme is taught in an intensive format which includes particular language classes linked to content courses. It is the type of EAP taught in countries where English is mandatory for specializing in certain subjects, such as medicine, engineering, technology and science.

The programme offers students a full-time one-year course in two parts: general English in the first term and scientific English in the second. Both parts are composed of four subjects: Reading, Structure (i.e., Grammar), Writing and Listening. Upon completion of the course, students must pass exams in these subjects in order to continue with their undergraduate studies in their chosen fields.

The research setting is the Structure class offered to first-year Arabic-speaking learners who have the same educational and socio-cultural background and who were originally assigned to these classes because of the specialist subjects they had chosen. These learners passed a simple test in English grammar at the beginning of the year. However, they still had linguistic problems that could hinder their learning of the English-medium scientific material in their chosen subjects. Structure classes represent form-and-accuracy contexts, which, owing to their focus on form, could naturally provide a larger amount of repair opportunities to treat learners' syntactical errors than Reading, Writing or Listening classes. These classes were therefore chosen as the setting for implementing the intervention.

1.4.3 English Teaching Method at KFU

The more traditional teaching practices, such as teacher-led and product-oriented teaching approaches, are prevalent in the study setting, which is a form-and-accuracy context where focus on forms (FonFs) is the normal method employed for teaching L2 grammatical rules (for a description of this method see Chapter 2, Sub-section 2.3.2).

Nevertheless, the teachers are not requested to follow a specific teaching method. Rather, they usually adopt an eclectic approach by selecting the strategy they feel is most appropriate for the subject, the learners' needs and for the teaching-learning situation. Therefore, different methods are applied in the four subjects of the EAP programme. For example, in Structure, which is a grammar class, the sole focus is on the form of the language and the accuracy of learners' utterances. The method of teaching this subject usually combines some features of the Grammar-Translation method, emphasizing the deductive application of an explicit grammatical rule, with a behaviourist approach which involves practising linguistic forms by means of structural drills typical of audio-lingualism (Almandil, 1999).

Although English is considered as a skill subject, it is not taught according to the principles of communicative language teaching (CLT) and the skill of speaking is almost completely ignored. Techniques used for instruction include chorus repetition, correction and some group work in Writing and Reading, whereas games and role-play are rarely used. All of these classes are teacher-fronted with the teacher having the authoritative role as the knowledge source who does most of the talking in class, leaving only a small opportunity, if any, for learners to engage in communicative activities.

The next section gives a general picture of the methodological framework adopted for the research.

1.5 Methodological Framework

As mentioned previously, two methodologies (i.e., a quantitative cognitive SLA approach and a qualitative ethnomethodological CA approach) were adopted for the present research. This was done in order to apply a product-and-process orientation to the learning of a particular language structure.

The quantitative approach examines the effects of different types of RT adapted from Lyster and Ranta's (1997) error-treatment model (Appendix B) on learners' pre-test and post-test scores, following a quasi-experimental research design which included an intervention in which a variety of RTs were employed during the teaching of the use of the passive voice in English. Only the experimental groups were exposed to the manipulated variable, i.e., the types of RT, so each received one of the following types of repair: recasts, prompts or explicit correction, while one group received no feedback at all. The fifth group received an eclectic correction strategy: that is, their teacher used the correction method which she normally employs to correct their errors. A statistical analysis was carried out to quantify learners' performance on the tests and express causal connections between variables, in order to identify the link between the types of

RT and learning outcomes and thus provide an answer to the first research question. The key variable in the analysis was the types of RT and the improvement rate shown in the test scores would reflect the effects of these types of RT on the learners' performance.

The qualitative aspect of the research consisted of a CA-based analysis of the talk-in-interaction within the context of the study to reveal the process by which the key variable (i.e., types of RT) might produce different learning outcomes. The qualitative analysis revealed how repair was sequentially organized and how the different RTs shaped the interaction. Repair sequences from 16 hours of audio- and video-recorded interaction in real-time were analysed using CA tools to describe and explain the learning processes that contributed to the changes in the learners' performance which were identified by the quantitative analysis. The results of this analysis provided the answer to the second research question by offering a minute description of the interaction and by portraying the reflexive interaction-learning relationship (Jung, 1999; Kasper, 1986; Seedhouse, 2004; van Lier, 1988b). According to Markee (2000),

> "CA represents one way of demonstrating how micro-moments of socially distributed cognition instantiated in conversational behavior contribute to observable changes in participants' state of knowing and using new language." (p. 3)

The use of CA in the current study made it possible to reveal and explain the process by which different types of RT might produce different learning outcomes, thus demonstrating the contribution made by CA to which Markee refers in the passage quoted above.

This section has presented an overview of the methodological framework used for the current research. In the next and final section of this chapter, a brief outline of the organization of this thesis is provided.

1.6 Thesis Outline

This thesis is organized into five chapters. The first, present, chapter has provided an introduction to the study and a statement of the research gap and research questions. The second chapter will present the theoretical argument on which the study is based by reviewing the related literature; this review includes a discussion of a number of theories and issues important in L2 pedagogy. In the third chapter the methodology of the research is described in detail, showing how the study was conducted through the use of particular methodologies (i.e., a quasi-experimental research design and CA). In the fourth chapter, the quantitative and qualitative data are analysed and a detailed discussion of the results and findings is presented. Chapter Five, the last chapter,

contains a general discussion of the findings in relation to the research questions, a discussion of certain methodological issues and the limitations of the study, a statement showing the originality of the study, a presentation of the pedagogical implications of the findings of the study and some suggestions for further research.

CHAPTER 2: LITERATURE REVIEW

In this chapter the arguments that repair of syntactical errors is important to learning a target L2 structure and that a relationship can be established between different types of RT and learning as a product and a process will be presented. This will be done by examining related hypotheses put forward by previous researchers and by critically discussing their views on the repair and correction of language form. In this way not only will the discrepancies between the arguments presented in this thesis and other research claims be highlighted but also attention will be drawn to views that support and endorse the findings of this thesis.

Section 2.1 presents an argument against some of the claims made by Krashen in his Input Hypothesis (1985), through which he devalues the role of repair and noticing in language learning. Contrary to Krashen's view, this research demonstrates the importance of repair in a product-process perspective on language learning. It will also be shown how the argument put forward in the current study is aligned with Schmidt and Forta's (1986) notion of 'noticing the gap'. Insights from Swain's (1985) Output Hypothesis and Long's (1996) Interaction Hypothesis are also adopted to support the argument in the chapters which follow, in which the effectiveness of repair of syntactic errors on learners' performance and learning processes is investigated. Section 2.1 describes these insights and demonstrates their relevance to the current study.

In Section 2.2, SLA research on CF and CA research on repair are reviewed and the significance of the role played by CA in SLA is emphasized, with the aim of demonstrating how such research also supports the arguments presented in this thesis.

Section 2.3 introduces three significant issues from L2 pedagogy to clarify particular aspects of the arguments. It will first be shown how error is treated in certain common L2 teaching methods and an argument is put forward against error tolerance. Next, a brief examination of FFI is presented in order to describe the setting of this research in more detail. Lastly, in this section it will also be demonstrated how the issue of learner uptake is related to the main argument presented in this thesis.

The aim in conducting the literature reviews just described was to analyse and synthesize the insights of previous researchers in order to establish a firm basis for the current study. The presentation of the reviews in the three sections reveals the theoretical background against which this research is set.

2.1 Relevant SLA Hypotheses

Scholars engaged in interaction research have shown that comprehensible input, feedback, output and attention comprise the interactional features which are believed to promote SLA (Jenks, 2006). Four hypotheses were found to be relevant to the arguments presented in this thesis: the Input Hypothesis, the Noticing Hypothesis, the Output Hypothesis and the Interaction Hypothesis. In this section the chief claims of each hypothesis are discussed, and also the ways in which the claims of each hypothesis are related to each other and to the main focus of this research, which is, as mentioned above, the influence of repair on learning a particular language structure.

2.1.1 The Comprehensible Input Hypothesis

According to Krashen's Comprehensible Input Hypothesis, which has greatly influenced SLA research, "people acquire second languages only if they obtain comprehensible input" (1985, p. 4). In other words, learners improve when they understand linguistic messages or receive input which is a "little beyond" their current level of competence (Krashen 1981, p. 103). What they need, therefore, is natural meaning-focused communication in which they do not concentrate on the form of their utterances. (As will be shown in later chapters, the findings of the current research, however, indicate that ignoring language form can lead to adverse outcomes.)

In a later study, Krashen (2004) goes on to claim that language and literacy development takes place unconsciously through reading, if the nature of the reading material itself is designed simply to convey a message and not to encourage readers to pay attention to language form, and that conscious knowledge of the language plays only a minor role in language production. He further asserts that output is not necessary to language acquisition (ibid., 2003), that error correction has no influence on students' acquired language (ibid., 1985) and that its influence on language development has been "weak or nonexistent" (2008, p. 179). In fact, in one of his early studies, he argues that CF should be abandoned owing to its potential negative influence on learners' affect that in turn might hinder the flow of communication (Krashen, 1981).

(However, other scholars have found that comprehension does not guarantee acquisition.) Hammerly (1987) reviewed six French immersion programmes in Canada and concluded that the attempt to elicit comprehensible input from learners in L2 classrooms results in only "a very defective and probably terminal classroom pidgin" (p.397). Moreover, contrary to Krashen's (1985) claim that learners acquire the L2 unconsciously, some researchers (e.g., Ellis, 1991; Schmidt, 1990, 1994, 2001; Schmidt & Forta, 1986) contend that in order for learners to benefit from a focus on language

form, their conscious attention is necessary. This is what Schmidt and Forta emphasized in their Noticing Hypothesis and this was also confirmed by the data analysis in this research.

2.1.2 The Noticing Hypothesis

Schmidt (1990, 1993, 1995, 1998, 2001) and Schmidt and Forta (1986) proposed what they referred to as the Noticing Hypothesis, which simply states that, "people learn about the things that they attend to and do not learn much about the things they do not attend to" (Schmidt 2001, p. 30). In keeping with this view, Housen and Pierrard (2005) also argue that the acquisition of language is affected by "the allocation of attentional resources to language features in the input" (p. 6). As a consequence, learners pass through different levels of awareness ranging from perception and detection to noticing and then understanding the language features (Robinson, 1996; Schmidt, 1995). It is Schmidt and Forta's (1986) notion of 'noticing the gap' (i.e., learners' awareness of the difference between the input and their current level of language development) that is relevant to the arguments of the present study. Swain's (1985) Output Hypothesis and Long's (1996) Interaction Hypothesis, described below, indicate that learners' noticing the gap is triggered by interactional modifications to their output. The findings from the data analysis in this study also confirmed this. Moreover, Truscott (1998) contends that correction helps noticing, stating that form-focused feedback is "the clearest test case for noticing the gap" (p. 124). Supporting this statement, this thesis argues that this type of feedback generally draws learners' attention to the mismatch between the input and their current level of grammar (see Gass & Varonis, 1994; Long & Robinson, 1998). In the data obtained for this study, the concept of noticing the gap is evident in students' display of uptake in response to the types of RT employed to treat their errors.

In her study of noticing, Mackey (2006) explored the relationships between error treatment, learners' noticing and L2 development in questions, plurals and past tense forms. The results indicated a complex positive relationship between the three variables and supported Truscott's (1998) assertion that noticing helps in the acquisition of metalinguistic knowledge and that this process gradually becomes automatized, so that "speakers might come to use it fluently, possibly making up for weaknesses in competence" (p. 125). According to proponents of this hypothesis, it is important to draw learners' attention to the formal aspects of language in order to ensure noticing. Therefore, many researchers, such as Doughty (2001) and Norris and Ortega (2000), have proposed form-focused instruction (FFI) to attain this aim.

The crux of the argument contained in this hypothesis is the claim that CF helps learners notice the gap between their (i) and the (+1) of the target language (Schmidt, 2001). Therefore, in the present study, different types of RT were employed to make learners aware of the gap between their current level of grammar and the target grammar.

2.1.3 The Output Hypothesis

Swain's view concerning the role of modified output is confirmed by the findings of this study. Swain (1985, 1995, 2000, 2005) criticized Krashen's CI hypothesis and claimed that comprehensible output (CO) was also necessary to language development because she believed that language acquisition is also contingent on producing accurate utterances. She asserts that learners should be provided with opportunities to use the language and the skills they have acquired. This is almost as important as giving students the appropriate level of input (Pica et al., 1989, 1996; Swain & Lapkin, 1995). It has been argued that, "producing comprehensible output entails the provision of useful and consistent feedback from teachers and peers" (Lyster & Ranta 1997, p. 41). Therefore, learners can acquire language when they produce it as this gives them opportunities to receive feedback or to experiment with language forms until they achieve communicative success. In Swain's (1995) terms:

> "...one function of output in second language learning might be to force the learner to move from the semantic processing prevalent in comprehension to the syntactic processing needed for production. It might be that producing language forces learners to recognize what they do not know, or only know partially." (p. 357)

In other words, a shift must be made from focusing on establishing message comprehensibility to establishing accuracy in order to push learners to notice certain language structures. Swain showed that this process helped students notice their mistakes and either self-corrected or used other strategies to employ the correct word or syntax in ways that they did not use when they only received comprehensible input through listening or reading. These strategies are, in essence, modifications of the output which help learners to engage in acquisition while they experiment with language forms (Swain, 1995, 1998, 2005). Hence, generating repair enables learners to tackle errors by revising their hypotheses about the target language (ibid., 1993).

Unlike the CI model and Long's Interaction Hypothesis, which is discussed in the following sub-section, Swain's hypothesis emphasizes accuracy of the L2 forms. Ngwenya (2006) explicates this aspect as follows:

> "Output puts the learner in control. It often primes the learner to move from the open-ended processing techniques common in comprehension to the complete grammatical processing techniques that accuracy demands. In other words, output is likely to foster the development of syntax and morphology rather than semantics and pragmatics." (p. 48)

In short, despite a global consensus that CI plays a crucial role in promoting learners' L2 acquisition, current SLA studies have proved that CI alone is insufficient for language development. Thus, proponents of the Output Hypothesis, such as Lyster and Ranta (1997), assert that modifications to the output in the form of correction enhance language development. The arguments in the present thesis support this claim and also present evidence in support of Swain's emphasis on the importance of output.

2.1.4 The Interaction Hypothesis

According to Long (1983), it is necessary to modify the interactional structure of conversation to make input comprehensible. In proposing his Interaction Hypothesis, Long claimed that there is a "relationship between linguistic and conversational adjustments and SLA" (Long 1985, p. 388). As a result, much research has focused on examining interaction modifications in conversation. One important finding, which concurs with the results of the present study, states that the quality, rather than the quantity, of interactional modifications is a crucial factor in acquiring a second language. For example, in an object-describing task, Ehrlich et al. (1989) examined the interactions of Native Speaker/Non-native Speaker (NS/NNS) dyads and found that particular aspects of negotiation played a factor in facilitating comprehension, whereas the actual number of modifications played only a minor role.

In a similar way to Swain's (1985) hypothesis, the Interaction Hypothesis also emphasizes the need for production and interactional modifications of the conversational structure. When NNSs engage in conversations with NSs, both parties struggle for mutual comprehension using modifications to the language and the structure of the discourse (Long, 1983, 1985). Through such modifications, learners obtain comprehensible input, obtain feedback on their use of the L2 and adjust their own output (Pica, 1994).

It is the updated version of the Interaction Hypothesis which is of relevance to the arguments presented in this chapter. In this version, Long (1996, 2006) claims that learners get the best input for language acquisition when they modify output in exchanges where they are trying to overcome a communication problem. This process of modifying interaction is partly reflected in the use of conversational repair moves such as clarification requests and incorporations in learners' speech (Jenks, 2006). In

this sense, the Interaction Hypothesis, despite its focus on meaning and fluency, is relevant to the present research, since these repair moves are also employed in form-and-accuracy contexts which concentrate on negotiation of language form. Thus, the essential point to be highlighted is the implication that learners acquire the L2 when they use a range of repairs as conversational mechanisms to reformulate their own erroneous utterances or when they receive repair for their errors. Long (1996) states that,

> "... negotiation work that triggers *interactional* adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways." (pp. 451-2, emphasis in original)

The point made here by Long is highly relevant to the arguments presented in this study, in that it draws attention to the relationships between the implications from the four hypotheses discussed above. However, the aspect which is most relevant to the current research is the claim that interactional adjustments (feedback or correction) from the more competent speaker can help learners in their language development. Long (ibid.) emphasizes the important role played by correction by clearly stating that,

> "...utterances by a competent speaker, such as repetitions, extensions, reformulations, rephrasings, expansions and recasts...helps [sic] reveal the meaning of new forms and so make the forms themselves acquirable." (p.452)

Following the insights provided by both the Output and the Interaction hypotheses, many researchers have discussed CF and repair as interactional modifications employed to draw learners' attention to the difference between their interim rules and the target rules. For example, prompts, as Lyster (2004) notes, can be used by teachers to push their students to produce accurate output. Mackey (2006, p. 405) also points out that recasts provide CF, which leads to modified output. In the same vein, the present study adopts this premise despite the fact that these hypotheses relate principally to contexts in which there is a reactive focus on form. Nevertheless, it could be argued that these hypotheses also pertain to FonFs settings, which also employ interactional modifications and repair strategies, as demonstrated in the study data. Additionally, from the researcher's point of view as a language teacher, whereas FonFs targets linguistic structures alone, using the L2 as a vehicle for explaining grammar could give the language lesson the quality of a communicative activity because the target language is simultaneously the object of pedagogical attention and the medium of instruction.

In short, this thesis questions Krashen's scepticism regarding the importance of correction and conscious learning to language development and investigates this issue

further, providing clear empirical evidence to support the theory that CO which results from syntax processing contributes to language learning. The current study also adopts Schmidt and Forta's notion of noticing the gap and draws on Long's Interaction Hypothesis and Swain's Output Hypothesis to highlight the effectiveness of interactional adjustments in promoting language learning.

In the following section a critical review of empirical research and of studies which are relevant to the arguments put forward in this thesis is presented.

2.2 Research on Repair and Correction

This section starts with an overview of the position of CA and SLA as research traditions. It sheds light on the criticism leveled against SLA studies and the emergence of the CA-for-SLA trend. Several CA studies on repair are then reviewed and a detailed definition of this construct is presented. SLA research on CF is also reviewed and definitions of correction and of the different types of correction are provided.

Repair and correction have been widely studied in various disciplines over the last five decades or so. For most of this time, CA and SLA researchers have examined interaction processes from a sociolinguistic and a cognitive perspective respectively. However, SLA studies of classroom interaction have lately received much criticism on account of the fact that they do not offer a contextual analysis of the interaction which is the focus of CA by default (Jenks, 2006), despite being informed by the interaction hypothesis framework which asserts the importance of interactional modifications to L2 development. That is, those SLA studies have isolated and quantified interactional phenomena according to preconceived notions and predetermined criteria, neglected the social and contextual aspects of language use and adopted a purely etic perspective on talk (ibid.). In contrast, CA, as an analytic procedure, adopts a variable approach to interactional phenomena such as repair and correction, and presents a holistic view by focusing on the sequential development of interaction in order to derive meaning from the participants' social actions as conveyed through their interactive processes. The CA approach rejects any fixed "set of intellectual concerns" to analysis (He 2004, p. 560). Rather, it emphasizes the importance of adopting an emic perspective on talk-in-interaction (Seedhouse, 2004), it "interprets from the data" (Walsh 2006, p. 52), and it investigates the processes of social actions, as will be seen in the qualitative analysis of the interaction in this study, in which a CA approach was adopted to examine types of RT and to describe how the repair phenomenon could contribute to language learning.

As a result of this limitation (i.e., the fact that SLA research does not include a contextual analysis of interactions), SLA has been condemned as a "hermetically sealed

area of study" (Firth & Wagner 1998, p. 92) and criticized for its psycholinguistic focus on the cognition of the individual while ignoring the social context of L2 learning (van Lier, 2000). For this reason, some researchers, such as Firth and Wagner (1997, 2007), have recommended reconceptualizing SLA. Another criticism is based on the fact that the data used by SLA research are collected from L2 learners in artificial settings; therefore, the results obtained are irrelevant to the interests of the field of applied linguistics (Tarone, 2000).

In reaction to such criticism, SLA studies have started to incorporate social and contextual dimensions (e.g., Tarone, 2007) and to emphasize the sociocultural paradigm within SLA (e.g., Lantolf, 2000; Ohta, 2001). Moreover, embracing a CA-for-SLA trend, a large body of research has started to incorporate a social interactional approach and to apply a conversation analytic perspective to naturally occurring SLA data (e.g., Hamilton, 2004; Hauser, 2003; He, 2004; Jenks, 2006; Kasper, 2004; Markee, 2000, 2004; Mori, 2002, 2004, 2007; Nakamura, 2008; Seedhouse, 2004; Wong, 2000, 2004). The present study is another example of this trend.

2.2.1 CA Research

In this sub-section, the CA and SLA perspectives on repair and the CA contribution to SLA are first discussed; then a number of CA studies on repair are examined as examples of this contribution.

CA studies on repair started with investigations of ordinary everyday conversations using the conceptual and methodological framework of CA (e.g., Brouwer et al., 2004; Egbert et al., 2004; Jung, 1999; Kasper, 1986; Radford, 2004; Schegloff et al., 1977; Seedhouse, 1999; van Lier, 1988a). Generally, the findings from these studies showed that conversational repair is not merely a matter of treating trouble, but is also "a preventive measure to ensure that the turn-taking machinery is still running" (Nakamura 2008, p.270) and a manifestation of the co-management of talk between participants (Wong, 2000). Additionally, classroom research showed that didactic repair incorporates correction, which is a fundamental aspect of teacher-learner interaction.

The new interest in CA-for-SLA brought about reconciliation and cooperation between the two disciplines, and numerous studies adopting this approach have been conducted over the past few years. Of interest to this thesis are studies which have applied CA methodology to naturalistic SLA data, such as those mentioned above. Several studies are reviewed below to explain the CA-for-SLA perspective and show how CA presents a variable approach to repair in L2 classrooms, an approach which is also represented in the present study.

Nakamura (2008) employed an inductive conversation analytic methodology to describe and analyse the organization of repair in sequences of turns. Through his study, he showed how the roles and relationships of the participants shift from expert and novice to co-participants in the interaction. The study illustrated how repair displays the co-management of talk-in-interaction and highlights the contextual variables that shape teacher-student interaction outside the classroom setting.

Another study, by Wong (2000), examined NS/NNS interaction in terms of a general principle established by Schegloff et al. (1977), which states that repair is a co-managed process. Wong found other-repair initiatives to be a resource employed for the purpose of "averting, avoiding, or correcting miscommunication and misunderstanding in talk" (p. 244).

Mori (2004) also used the methodological framework of CA to analyse an interactive task in Japanese foreign language classrooms. She found that learners transformed their orientations towards learning opportunities in a moment-by-moment manner. They employed turn-taking and repair mechanisms to manage and accomplish the task, as well as to overcome various communicative problems by co-constructing intersubjectivity (i.e., interlocutors' understanding of what is being said or done through the primary context provided by the sequential environment of talk) amongst themselves as interlocutors and by orienting to the learning context.

Markee (2004) investigated the structural properties of interaction occurring at the transition between speech exchange systems in classrooms. His conclusion, which is reflected in one of the findings of the current study, states that,

> "When teachers and learners make the transition from one speech exchange system to another, it is quite common for problems of various kinds to occur as members adjust to the turn-taking and repair practices of the new speech exchange system" (p. 584).

Studying constraints on other-correction, Hauser (2003) found that in some situations constraints on other-correction can be relaxed, as in parent-child conversation and teacher-learner talk. In these contexts, which are characterized by an asymmetrical access to knowledge, parents and teachers are "less constrained in initiating correction and may wield the power to decide who completes a correction and whether a proposed correction is adequate" (ibid., p. 98).

The brief review presented above has drawn attention to the many ways in which CA can be applied to study the repair phenomenon. This shows how CA can complement SLA by facilitating a holistic approach to interaction and a portrayal of

process. The adaptability of CA, which makes it possible to use it in SLA research, is explicitly illustrated in the present thesis.

In the following sub-section, the term 'repair' is defined and explained in detail, the functions and trajectories of repair are discussed, and an explanation of how the term 'repair' is used in the present research is provided.

2.2.2 Defining Repair

According to Seedhouse (2004, p. 34), repair is "the treatment of trouble occurring in interactive language use." That is, it deals with accidental lapses which might occur at any point of speech processing. Schegloff et al. (1977) note that any deviation from orderly conduct is regarded as being accountable and therefore in need of repair, which tends to be initiated by one of the interlocutors in the earliest possible turn. Thus, everything in the talk, as Schegloff (2007, p. 100) asserts, may be "a possible repairable or a possible trouble-source."

The reason people treat failures in communication is in order to maintain reciprocity of perspectives and intersubjectivity (ten Have 1999, p.116). This intersubjectivity is the basis of any collaboratively established courses of action and a means of developing shared understanding between the interlocutors as to what is happening in the interaction. Therefore, repair can be seen as "a communicative move, not only one of evaluation" (Nakamura 2008, p. 280).

To explain how repair works sequentially within talk-in-interaction, Schegloff et al. (1977) explain that it generally consists of three turns. The first turn contains the trouble source, the second turn contains the repair-initiation and the actual repair is performed in the third turn. Explicating the form of repair, Schegloff et al. (1977) show that there are four scenarios for Turns 2 and 3 after the trouble source. The repair trajectory in each senario is illustrated by arrowed turns in the extracts below:

Self-initiated self-repair

(2.1)

1→ Roger: we're just workin on a different thing, the same thing.

(Schegloff et al. 1977, p. 370)

Self-initiated other-repair

(2.2)

1	B:	he had dis uh Mistuh W—m whatever k—I can't think of his first name, Watts on, the	
2→		one that wrote [that piece	(self-initiation)
3→	A:	[Dan Watts	(other-repair)

(Schegloff et al. 1977, p. 364)

Other-initiated self-repair

(2.3)

1	Ken:	is Al here today?	
2	Dan:	yeah.	
	(2.0)		
3→	Roger:	he is? hh eh heh	(other-initiation)
4→	Dan:	well he was.	(self-repair)

(Schegloff et al. 1977, p. 364)

Other-initiated other-repair

(2.4)

1	B:	where didju play ba:sk [etbaw.	
2	A:	(the) gy:m.	
3	B:	in the gy:m?	
4	A:	yea:h. Like grou(h)p therapy. Yuh know=	
5	B:	=[oh:::.	
6	A:	=[half the group thet we had la:s' term wz there en we jus' playing arou:nd.	
7→	B:	uh— fooling around.	(other-initiated other-repair)
8	A:	eh— yeah ...	

(Schegloff et al. 1977, p. 365)

These trajectories follow an order of preference, with self-initiated self-repair being the most common and preferred trajectory and other-initiated other-repair being the rarest and least preferred (ibid.).

It is also postulated that didactic repairs in institutional settings depend on the type of activity being performed (Jenks, 2006; Kasper, 1986, p. 39; Seedhouse, 2004; van Lier, 1988a, p.211). Hence, there is a reflexive relationship between the pedagogical focus and the organization of repair. The relationship, according to Seedhouse (2004), is clearly seen in the organization of talk in the different types of L2 classroom context. In a form-and-accuracy context (as in the present study) learners are supposed to produce linguistically correct forms, therefore repair is employed when they produce any problematic utterance. In contrast, in a meaning-and-fluency context where errors are usually tolerated, if repair is performed, it takes the form of recasts or embedded corrections (Brouwer, 2004; Jefferson, 1987). In task-oriented contexts, the most common repair trajectory is self-initiated other-repair.

In accordance with the purpose of the present thesis, only repair sequences that treat students' syntactic errors were selected for the qualitative analysis. As noted at the

beginning of the thesis, the term 'repair technique' (RT) is employed to refer to recasts, prompts and explicit correction, which are used in the data to treat syntactic errors. Using a CA methodology, the repair episodes are sequentially analysed in order to depict the learning processes that actually take place within the intricacies of the interaction.

2.2.3 SLA Research on CF

As previously mentioned, there has been a constellation of SLA studies on correction that have investigated the nature and role of CF in L2 pedagogy in different contexts. Although these studies were based on the interaction hypothesis claim that exposure to CI might produce a great deal of L2 learning (Panova & Lyster, 2002), attention was also drawn to the claim that providing correction affects language learning. According to van Lier (1988a, p. 32),

> "... everyone involved in language teaching and learning will readily agree that evaluation and feedback are central to the process and progress of language learning."

Thus, in the wake of the shift to FFI in language teaching, studies started to investigate the formal aspects of interaction and reported the positive influence of interactional feedback on learning (e.g., Iwashita, 2003; Leeman, 2003; Mackey, 1999; Philp, 2003). Moreover, other studies (e.g., Ammar & Spada, 2006; Lightbown et al., 2002; Lightbown & Spada, 1994; Mackey, 2006) have asserted that L2 learning is contingent on the type of interactional feedback which helps learners notice L2 forms. Mackey and Philp (1998), for example, examined the effect of recasts on the development of question forms in adult ESL intermediate and advanced levels. Learners completed three information gap tasks with a NS partner. While learners in the experimental group received recasts following their errors, those in the comparison group did not receive any feedback. Analyses of pre-test/post-test differences indicated that learners who received recasts outperformed those in the comparison group in producing more advanced question forms.

A crucial issue relevant to understanding interactional corrective feedback involves the cognitive functions of the different types of RT. With recasts, the input information is processed immediately in the form that triggers comparisons between input and output (de Bot, 2000). Prompts, on the other hand, work in a way that helps learners retrieve already internalized representations from long-term memory and this, as de Bot (1996) contends, enables them to restructure their language system. Retrieval of linguistic forms is enhanced and automatized by pushing learners to produce modified output, a view which is reiterated by Lyster and Ranta (1997). As regards explicit correction, it is

found to be effective in learning early L2 rules (Dabaghi & Basturkmen, 2009); however, it is generally considered intrusive to learning because it breaks into the learner's encoding of an utterance (Doughty, 2001).

It is important also to mention that in search of evidence for the usefulness of CF, a large body of descriptive and experimental research has examined the different variables of CF (e.g., types and method of correction, context and focus of CF). Classroom studies of reactive FFI, as Lyster and Mori (2006) point out, demonstrate that oral CF has a significant effect on L2 development in a variety of instructional settings. Therefore, in order to investigate the effectiveness of CF on language acquisition, researchers have employed varied measures such as immediate post-tests (e.g., Carroll & Swain, 1993; Long et al., 1998); delayed post-tests (e.g., Doughty & Varela, 1998; Mackey & Philp, 1998); examinations of learner uptake (e.g., Lochtman, 2002; Lyster & Ranta, 1997), and examinations of learner noticing (e.g., Mackey et al., 2000). The present study employs a pre-test/post-test quasi-experimental research design to measure language development and to examine learning a language structure as a product of applying specific types of RT in the teacher-learner interaction.

In addition to Lyster's (2004) and Lyster and Mori's (2006) studies, which were mentioned in Chapter 1, Section 1.1, there are numerous relevant studies which demonstrate the vast extent of SLA literature on CF. It was therefore deemed prudent to present the results from the most relevant CF studies in a succinct tabular form (see Table 2.1 below), in order to shed light on findings which corroborate or contradict the results of the present thesis. Each study is classified in terms of three aspects: author and year of publication, study focus and study results, in order to aid the reader in inspecting, reviewing and comparing the studies.

Study	Study Focus	Results
Long (1996)	Communicative role of recasts	• Recasts that arise from negotiation of meaning aid language acquisition
Lin and Hedgcock (1996)	Noticeability of recasts	• Recasts are noticed by more proficient learners
Lyster and Ranta (1997)	Implicitness of recasts in content-based L2 classrooms	• Recasts yielded low rate of uptake • learner-generated repairs enhance learning

Lyster (1998a)	Effects of recasts, prompts and explicit correction in Communicative classrooms	• Recasts are not noticed by young learners • Prompts are more effective than recasts and explicit correction with lexical and grammatical errors • Recasts are more effective with phonological errors
Mackey and Philp (1998)	Effects of reacts and no feedback on ESL learners' acquisition of question form (laboratory study)	• Recasts benefited learners' developmental level • Learners' developmental readiness determines the effectiveness of recasts
Mackey et al. (2000)	Noticeability of recasts	• Recasts are not the most effective CF to lead to uptake • Repeating recasts may indicate noticing
Panova and Lyster (2002)	CF effects on uptake/repair in an adult ESL classroom	• Recasts are used more than prompts • Recasts yielded low rate of uptake/repair • Prompts push learners to modify their output
Philp (2003)	Noticeability of recasts	• It was difficult for low proficiency learners to notice recasts • Recasts benefit learners if they notice them
Farrokhi (2003)	Role of context on CF	• Additional cues help learners notice CF • Recasts provide dual focus on form and meaning
Lyster (2004)	Effects of recasts/prompts/no feedback on uptake in FFI settings (grammatical gender)	• Recasts rarely result in repair • Prompts are more facilitative of language development
Ferreira-Cabrera (2004)	Type/frequency/effectiveness of CF in ESL classrooms	• Prompts are more effective with grammatical and lexical errors • Recasts are more effective with phonological errors

Sheen (2004)	Ambiguity of recasts	• Clear recasts promote language development in FFI contexts
Ellis et al. (2006)	Effects of recasts/prompts on learners' acquisition of past tense	• Prompts were more effective than recasts
Loewen and Philp (2006)	Effects of recasts in adult ESL classrooms	• Certain characteristics of recasts lead to successful uptake and accuracy • Implicitness of recasts may affect their effectiveness
Lightbown and Spada (2006)	Explicitness of recasts/young learners	• Explicit CF are more effective with young learners • Recasts produce accuracy when they are noticed
Lyster and Mori (2006)	Immediate effects of recasts/prompts/explicit correction on uptake/repair in French/Japanese immersion classrooms	• Predominance of recasts • Recasts yielded high rates of repair in Japanese contexts • Prompts yielded high rates of repair in French contexts
Sheen (2006)	Conversational/didactic recasts in communicative ESL/EFL classrooms	• Didactic recasts are explicit • Explicit recasts yield more uptake/repair than conversational recasts
Ammar and Spada (2006)	Effects of recasts/prompts on the acquisition of possessives in grade 6 in ESL classes	• Prompts were generally more effective than recasts • Prompts were more effective than recasts for low proficiency learners • Prompts and recasts are equally useful for high proficiency learners
McDonough and Mackey (2006)	Impact of recasts on ESL learners' question development	• Recasts are indicative of ESL question development
Trofimovich et al. (2007)	Noticeability of recasts	• It is difficult for low proficiency learners to notice recasts • Recasts improved level of accuracy for learners with efficient attention control

Nassaji (2007)	Role of elicitation and reformulation in dyadic interaction in intermediate ESL classes	• Higher rates of accurate repair when elicitations and reformulations are accompanied with explicit intonational or verbal prompts
Kang (2007)	Role of corrective feedback on Korean past tense form in reactive and proactive focus-on-form	• Corrective feedback in reactive focus-on-form is successful in promoting knowledge of the target form
Ammar (2008)	Effects of recasts/prompts/no feedback on L2 learners' acquisition of possessive determiners in ESL primary schools	• Prompts are more effective than recasts and no feedback in learners' acquisition of the target structure
Dabaghi and Basturkmen (2009)	Effects of recasts and explicit correction on learning of developmental early and late language features in intermediate level L2 classrooms	• Explicit correction facilitates learning of early L2 features • Recasts facilitate learning of late L2 features
Lyster and Jesús (2009)	Effects of prompts and recasts on the acquisition of grammatical gender by adult L2 learners of French	• Recasts and prompts improve learners' accuracy
Lyster and Saito (2010)	Effectiveness of oral CF on language development/ meta-analysis of 15 classroom-based studies	• Prompts have larger significant effects than recasts
Yang and Lyster (2010)	Effects of prompts/ recasts/no feedback on the use of English past tense in EFL classes	• Prompts are more effective than recasts and no feedback on language form • Prompts are more effective in increasing accuracy in the use of regular past tense forms • Prompts and recasts had similar effects on improving accuracy in the use of irregular past tense forms

Table 2.1: SLA Studies on CF

Table 2.1 above clearly shows the diversity in focus, purpose and design of CF studies and the enormous array of differences between the variables in most of them, although some of their findings are similar. It is important to note that the majority of

studies indicate that despite their predominance, recasts might not be noticed by some learners; this puts their effectiveness in question when they are compared to prompts, which are explicit and push learners to self-correct. Concerning learner uptake, most studies show concurring results. Lyster and Ranta (1997), for example, investigated the effects of some types of CF on learner uptake in content-based L2 classrooms. Their study revealed that 55% of the teachers' feedback utterances led to learner uptake (response minus correction) whereas only 27% of the feedback utterances led to learner repair (response with correction). They therefore concluded that recasts and explicit correction did not encourage learner-generated repair. Similarly, in an observational study, Panova and Lyster (2002) examined the range and types of CF and their relationship to learner uptake and immediate repair in an adult ESL classroom. Their results showed that low rates of learner uptake and immediate repair of error were recorded because of a preference for recasts over other types of CF. It should be noted here that from a CA perspective such results are entirely predictable and represent a typical characteristic of talk since it is a normal interactional feature of recasts and explicit correction to display fewer responses as they are not first pair parts and it would be odd in the extreme if they produce more responses than prompts which are first pair parts that project conditionally relevant second pair parts.

Because of the inconsistencies in design and research variables in most of the SLA studies on CF, it was deemed practical to select the findings that are most relevant to the arguments put forward in this thesis and to produce a synthesis by summarizing these findings in the following points:

- Different types of CF, as Panova and Lyster (2002) suggest, should be selected and balanced according to various contextual, linguistic and cognitive factors rather than relying heavily on one type to the exclusion of the others.
- Recasts are the type of CF used most frequently by teachers following learners' nontarget-like oral production (Ammar, 2008; Braidi, 2002; Chaudron, 1977; Doughty, 1994; Ellis et al., 2001; Iwashita, 2003; Loewen, 2004; Lyster & Mori, 2006; Lyster & Ranta, 1997; Oliver & Mackey, 2003; Panova & Lyster, 2002; Sheen, 2004); recasts are the type of CF which has been researched most extensively.
- There are two conflicting bodies of findings concerning the effectiveness of recasts on L2 development. On the one hand, recasts are found to be beneficial to L2 development for many linguistic forms: for instance, question development in

English (Mackey & Philp, 1998; McDonough & Mackey, 2006); the English past tense (Han, 2002); noun-adjective gender agreement in Spanish (Leeman, 2003), and verbal morphology in Japanese (Iwashita, 2003). On the other hand, other studies have shown that recasts are not as effective as other feedback types in leading to modified output (e.g., Anton, 1999; Oliver, 2000; Panova & Lyster, 2002; Shehadeh, 2001); in treating grammatical errors (e.g., Lyster & Ranta, 1997), or in promoting language acquisition (e.g., Ammar, 2008; Ferreira-Cabrera, 2004; Loewen & Philp, 2006).

- Although recasts are considered by many L2 researchers "to be the ideal CF technique" (Ammar & Spada 2006, p.545) because of their numerous positive characteristics, they are not as effective as prompts in promoting uptake and self-repair.

In summary, however, it is important to note that even such a vast body of research cannot be considered as prima facie evidence for the effectiveness of a particular RT as the ideal method of helping learners to attend to the formal properties of a language. This is because most CF studies are incomparable owing to the extensive variety of design, focus, setting etc. Consequently, no clear-cut definitive finding that any one CF type is more effective than others has yet been reached. Moreover, as noted in Chapter 1, previous CF research conducted in Saudi contexts has dealt with aspects different from the focus of this thesis and consequently no relevant findings can be obtained from them. Although the findings of this thesis are promising and add important conclusions to the existent literature, they need to be confirmed by additional research. Many researchers (e.g., Ammar, 2008; Loewen & Philp, 2006; Lyster & Mori, 2006; Nicholas et al., 2001) suggest that more experimental and quasi-experimental research is needed in order to reach meaningful conclusions regarding certain aspects of CF. According to Ammar and Spada (2006),

> "[E]ven though the research evidence supports the consensus of L2 teachers and researchers that a focus on the formal properties of the L2 through CF is beneficial, more research is needed before we can arrive at any conclusions about whether certain CF techniques are more effective than others." (p. 544)

The following sub-section defines correction and types of CF as they appear in SLA studies and shows how they are used in this thesis.

2.2.4 Defining Correction

As previously mentioned, correction in L2 teaching is defined as the treatment of learners' errors in spoken or written discourse (Hall, 2007). In fact, there is no consensus concerning the number and labelling of correction types in the literature; this study therefore adopts the taxonomy presented in Lyster and Mori (2006), which classifies correction into three main types: recasts, prompts and explicit correction. Since repair incorporates correction, the study refers to these types of correction as repair techniques. They are defined and discussed below with illustrative extracts.

Recasts

Recasts are defined as implicit corrective feedback moves that reformulate or expand an ill-formed or incomplete utterance (Panova & Lyster 2002, p. 582). They involve the covert paraphrasing of learners' non-target output while maintaining their intended meaning (Ammar & Spada, 2006). According to Lyster and Mori (2006), the reformulations are accomplished without negative evaluation, i.e., without explicitly telling students that their utterances are wrong. Recasts put the onus of error detection and correction entirely on the teacher, who both initiates and completes the repair within a single move employing other-initiated other-repair. An example of a recast is the teacher's turn in Extract 2.5 below.

(2.5)

1	L:	yeah, boy get surprise all the time.
2	T:	yes, he was surprised, wasn't he? usually little boys don't do the things that
3		men do, do they?

(Johnson 1995, p. 23)

The teacher in this extract implicitly corrects the learner's erroneous utterance by reformulating and expanding it after the word "yes" to show approval. It is crucial at this point to note that the definition of what constitutes a recast varies in the enormous amount of literature on the subject. That is, definitions of recasts have been operationalized inconsistently across studies. In some studies, recasts are believed to be accompanied by signs of approval, praise markers or conversational moves of agreement that validate the utterance, in addition to the provision of the correct form (Seedhouse 2004, p. 239). As shown in the above example, the teacher's recast is used "both to confirm the meaning of the learner's utterance and to correct the form" (Loewen & Philp 2006, p. 537). According to this definition, recasts perform another social action in addition to providing the correct form. They also provide agreement and encouragement

as they demonstrate confidence in the learner and promote positive affect and motivation. Nevertheless, a number of researchers (e.g., Han & Kim, 2008; Lyster, 1998b; Mackey et al., 2003) have called an utterance a 'recast' if it gives implicit reformulation of the error without necessarily being accompanied by any other move. This type of recast, which represents almost all of the recasts in the data obtained for the present study, is what Lyster (1998b, p.58) calls "isolated declarative recasts." In his analysis, Lyster classified recasts in terms of the functional properties they possess which might affect their corrective potential. He found that if a recast reformulates all or part of a learner's utterance with no additional meaning supplied, it is an 'isolated' recast; and if this isolated recast takes the form of a statement, not a question, it is then an 'isolated declarative' recast. Han and Kim (2008, p. 37) note that "declarative recasts are, in general, perceived by learners as corrective" because they help learners notice the difference between their linguistic developmental level and the target language. Since these recasts are isolated, learners' noticing is immediately focused on the reformulation, and because they are declarative and not interrogative, they are perceived by learners as corrective rather than inviting topic continuation, in which case the recasts are called communicative (ibid.) as can be seen in the extract above. Nicholas et al. (2001) argue that in FFI the effectiveness of recasts increases whereas in meaning-focused contexts it decreases. They attribute this occurrence to the fact that in FFI, "it is clear to the learner that the recast is a reaction to the accuracy of the form, not the content, of the original utterance" (p. 720). This finding confirms the results of other studies, such as those of Leeman (2003), Long et al. (1998) and Mackey and Philp (1998).

While Extract 2.5 above illustrates a communicative recast, which serves the purpose of topic continuation more than that of correction, the arrowed turn in Extract 2.6 below illustrates a corrective isolated declarative recast.

(2.6)

1	S:	I can see their leg.
2→	T:	*I could see their legs.*
3	S:	I could see.

(Han & Kim 2008, p. 36, emphasis in original)

In the teacher's utterance the recast takes the form of a statement and only corrects the error without incorporating any other move. Therefore, it is isolated and declarative. The student easily notices the reformulation and perceives the recast as corrective. This

is reflected in the display of successful uptake of the recast provided by the student as a repetition of the reformulation.

It is also essential to point out that the two extracts above illustrate the distinction between 'embedded correction' and 'exposed correction' proposed by Jefferson (1987). Embedded correction, as Jefferson (1987, p. 95) states, is "a by-the-way occurrence in some ongoing course of talk," whereas in exposed correction the utterances are "occupied by the doing of correcting." Therefore, it could be said that what Lyster (1998b) calls 'communicative recasts' could also be referred to as 'embedded correction' and what he calls 'corrective recasts' are observed to be isolating the correction and thus are the same as 'exposed correction'. Despite this similarity, Jefferson's terms 'embedded correction' and 'exposed correction' are not used in this thesis since it is more viable, as mentioned earlier, to use the term repair technique (RT) which is best suited to the purposes of this research.

Recasts in general have a number of advantages which cause most teachers to prefer them. These advantages have been described by researchers as follows:

- "Implicit, unobtrusive, and perform the dual function of providing a correct model while maintaining a focus on meaning" (Ammar & Spada 2006, p.545).
- "Time-saving, less threatening to student confidence, and less disruptive of the flow of interaction" (Loewen & Philp 2006, p. 537).
- A means to draw the learners' attention to problems in their linguistic forms immediately when they occur (Doughty, 2001).
- A strategy to provide the opportunity to learners to map form to meaning and integrate new linguistic information while speaking (ibid.).

Researchers, as will be discussed in Sub-section 2.3.3 below, have two different arguments regarding the successful uptake of recasts. One argument suggests that learners' displays of uptake following recasts are just redundant reiterations and do not contribute much to L2 development because the repair is initiated and completed by the teacher (Panova & Lyster, 2002). The contrasting argument, which is also consistent with the argument put forward in this thesis, advocates that these repetitions may well be a reliable indicator that learners have noticed the recasts and perceived their corrective intent (Mackey et al., 2000).

Prompts

Prompts are teacher's feedback moves that push learners to self-correct. In CA terms, prompts are called 'other-initiated self-repair'. They are used to negotiate form until learners are able to produce their own modified output (Panova & Lyster, 2002). These interactional moves, as Lyster (2004) describes, are more cognitively engaging than other forms of feedback. According to Lyster (1998a, 2004) and Lyster and Mori (2006), prompts include a range of feedback types that may be classified into four main categories:

- **Elicitation:** using one of three ways directly to elicit self-repair from the learner: (a) replaying the learner's utterance and pausing at the error point to allow the learner to complete the utterance, as in Extract 2.7, (b) using questions to elicit correct forms, as in Extract 2.8, or (c) asking the learner to reformulate the erroneous utterance, for example when the teacher responds to the learner's error by saying 'again, please', 'say that again' or 'pay attention', as in Extract 2.9.

(2.7)

1	S:	my father cleans the plate.
2→	T:	excuse me, he cleans the ???
3	S:	plates?

Lightbown & Spada 2006, p. 127)

(2.8)

1	T:	in a fast food restaurant, how much do you tip?
2	S:	no money.
3→	T:	what's the word?

(Panova & Lyster 2002, p. 584)

(2.9)

1	T:	after they have put up their tent, what did the boys do?
2	L:	they cooking food.
3→	T:	no, not they cooking food. Pay attention.
4	L:	they cook their meal.
5	T:	right, they cook their meal over an open fire.

(Tsui 1995, p. 52)

- **Metalinguistic Clues:** giving comments, questions or information related to the well-formedness of the learner utterance without explicitly providing the correct form, as in Extract 2.10 below:

(2.10)

1	S:	we look at the people yesterday.
2	T:	what's the ending we put on verbs when we talk about the past?
3	S:	e – d

(Lightbown & Spada 2006, p.127)

- **Clarification Requests:** using phrases that request explication or further clarification to get reformulation or repetition from the learner of his or her utterance, as illustrated by the teacher's turn in Extract 2.11:

(2.11)

1	S:	la marmotte c'est pas celui en haut
2	T:	pardon?
3	S:	la marmotte c'est pas celle en haut?

(Lyster & Ranta 1997, p. 50)

- **Repetition:** repeating the learner's ill-formed utterance while highlighting the error with intonation, as Extract 2.12 illustrates:

(2.12)

1	S:	le ... le giraffe?
2	T:	le giraffe?

(Lyster & Ranta 1997, p.48)

As the above examples demonstrate, the correct form is not provided for the learner and successful uptake of prompts can be displayed when the learner produces self-repair.

Explicit Correction

This type provides explicit signals to the learner about the ill-formedness of the previous utterance in addition to supplying the correct form (Lochtman, 2002; Lyster & Ranta, 1997; Panova & Lyster, 2002). In other words, the teacher supplies the correct form and at the same time clearly indicates to the learner that the utterance is incorrect. Therefore, this type is similar to recasts (Lochtman, 2002) in providing reformulations but differs from recasts because of the addition of direct negative evaluation or explicit indication of the trouble. This type of other-initiated-other-repair, as Hauser (2003) notes, has two parts. The first includes a contradiction element to show disagreement or indicate the trouble and the second part provides the replacement element. These two parts can be separated in two turns (ibid.) or can be initiated and completed within a single turn (Lyster & Mori, 2006), as in the following Extract:

(2.13)

1 S: the dog run fastly.

2 T: 'fastly' doesn't exist. 'fast' does not take -ly. That's why I picked 'quickly'.

(Lightbown & Spada 2006, p.126)

It is essential to note that the contradiction part, as will be shown in Chapter 4, may contain any form of verbal, non-verbal, or both verbal and non-verbal behaviour to indicate a problem in the learner's preceding utterance. Examples of these forms can be: a prompt which is not followed by self-repair, as in Extract 4.43; a negative word, as in Extract 4.41; an audible in-breath, as in Extract 4.49; a directive like 'you should say', as in Extract 4.44, or a metalinguistic comment, as in the above example.

Successful uptake of explicit correction is also displayed in the same way as in recasts when the learner repeats the reformulation provided in the preceding turn. The arrowed turn in Extract 2.14 below illustrates how the student displays successful uptake of the teacher's explicit correction in the preceding turn:

(2.14)

1 S: [...] *le renard gris, le loup, le coyote, le bison et la gr ...groue.*

((tr.: [...] the gray fox, the wolf, the coyote, the bison and the cr ... crane.))

2 T: *et la grue. on dit "grue".*

((tr.: and the crane. we say "crane."))

3→ S: *grue.*

((tr.: crane.))

(Lyster 1998a, p. 301)

In the preceding paragraphs, the constructs used in the current study have been defined. These different types of RT were assigned to the five groups of learners who formed the subjects of this study as the key variable in the quasi-experimental research design in order to test their effectiveness in promoting learning of the passive forms of English verbs. Three of the groups each received one of these techniques while the fourth group received all of the techniques and the fifth group received none of them. The interaction in these five groups was recorded and analysed in order to reach findings about the students' learning of the passive voice, as will be shown in the subsequent chapters.

The following section will introduce some issues from language teaching which are relevant to the current study.

2.3 Relevant Issues from L2 Teaching

Three issues from L2 pedagogy are of interest in this thesis. The first involves how certain teaching approaches deal with correction, the second involves the FFI approach, and the third concerns scholars' views on learners' uptake of repair.

2.3.1 Correction in Some L2 Teaching Approaches

Providing correction has always been a controversial issue in the long history of L2 teaching and learning. Different approaches have treated errors in various ways as regards whether an error is critical or not and how the teacher should respond to trouble in the classroom. A brief outline of the relation between correction and some common language teaching approaches will help to give an overall picture of the situation and to summarize the attitude to error treatment in the literature on L2 pedagogy.

In the Grammar-Translation method, through which students are taught to translate texts from one language to another and are given grammatical explanations for language structures (Cook, 2001), students' errors should be corrected either by teacher-repair or delegated repair (Larsen-Freeman 2000, p. 16).

The Direct Method, which emerged in reaction to the Grammar-Translation method, emphasizes the spoken language and focuses on using the target language communicatively to convey meaning directly. It holds the view that self-correction facilitates language learning; therefore it should be encouraged (ibid., p. 30).

The Audio-Lingual Method, some aspects of which are used in the language course at KFU, is based on structural linguistics and behavioural psychology. It encourages habit formation through drills in which grammatical sentence patterns are formed. According to the principles of this method, students' errors are critical and should be countered by teacher-repair immediately (ibid., p. 43).

In the 1960s and 1970s, the hypothesis that learners should first understand language in order to be able to produce it (Winitz, 1981) prevailed and gave rise to the Natural Approach suggested by Krashen and Terrell (1983) in which more emphasis is placed on CI and less on correction.

In the early 1980s, language teaching started to focus on helping students to engage in genuine communication outside the classroom within a social context, and the focus of language teaching shifted from linguistic to communicative competence (Hymes, 1971). A Communicative Approach (Widdowson, 1990) led to the emergence of Communicative Language Teaching, which emphasizes the relationship between language and communication and requires students to learn ways to use the language (Larsen-Freeman, 2000). In this method, errors are tolerated in order to maintain the

flow of talk and promote fluency. However, the teacher may return to the errors at a later stage with an accuracy-based activity (Cook, 2001).

Actually, from the late 1970s to date, using the target language to communicate within a social context has been the goal of many methods which are completely tolerant of errors, to the extent of ignoring them unless they hinder communication of meaning. Even when teachers provide feedback on errors, as Seedhouse (2004) notes, they try to avoid direct and unmitigated negative evaluation. Searching a large database, Seedhouse (ibid.) found only one instance of bold, entirely unmitigated, overtly negative evaluation (i.e., 'no'). He attributed the dispreference to pedagogical recommendations in current L2 pedagogy which advocate "a humanistic, communicative paradigm in which learners' feelings and emotions are taken into account" (p. 172).

Nevertheless, such methods were not without drawbacks. In a reaction to the grave consequences of error tolerance and an overriding focus on meaning, an interest was aroused in what SLA calls FFI, or form-and-accuracy in AL terms. In this teaching method, language form came to the fore and correction is employed to confront learners' errors (Long & Robinson, 1998). However, the debate, as Guénette (2007) notes, still rages between advocates of correction implementation and defenders of error tolerance. Allwright and Bailey (1991), for example, warn against ignoring errors and stress that the gravity of errors is influenced by many factors, whereas Lightbown and Spada (2006) disapprove of excessive correction which might discourage learners.

Furthermore, as mentioned above, Seedhouse (2004) notes that approaches to repair in language teaching vary, as different teachers use different methods according to the different varieties of interactional contexts. For example, teachers focus on meaning and disregard correction in meaning-and-fluency contexts, while in form-and-accuracy contexts they pay much attention to correction. The latter approach, which reflects the context of the present study, is reviewed in the following sub-section.

2.3.2 Form-focused Instruction (FFI)

Despite the positive outcomes of the shift to CLT at the beginning of the 1990s in most teaching contexts, the change was not completely favourable (Cook, 2001). Niżegorodcew (2007) notes that

> "... one of the negative outcomes of the changes has been the apparent lack of target-like (accurate and appropriate) L2 instructional input to classroom learners, linked with some degree of uncertainty on the part of L2 teachers,

whether it is their role to provide corrective input during classroom activities." (p. 148)

In order to address this problem, it was important to draw learners' attention to the formal aspects of language through guided instruction. Therefore, many researchers, such as Doughty (2001) and Norris and Ortega (2000), recommended Form-focused Instruction (FFI).

Ellis (2001) defines FFI as "any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form." This occasional shift of attention to language form is performed by the teacher or/and one or more students in response to problems in comprehension or production (Long & Robinson, 1998). FFI is divided into two types, focus on form (FonF) and focus on forms (FonFs) (Dabaghi, 2006). The first type is derived from Long's (1988, 1991, 2000) work on the interaction hypothesis advocating incidental focus on the form of the target language. Long (1991) refers to FonF as drawing learners' attention to linguistic features overtly, "as they arise incidentally in lessons whose overriding focus is on meaning and communication" (pp. 45-6).

FonF is further classified into two types: proactive and reactive. In the former, the focus on form is planned in advance to ensure that some grammatical areas are highlighted, whereas in the latter, the focus on form is performed only in reaction to learners' errors (Dabaghi, 2006).

In FonFs, which contradicts Krashen's (1981) views, grammar is deliberately handled and taught in isolation, as it involves the teaching of isolated linguistic forms following a structural syllabus. That is, the teacher extracts linguistic features from the context or the communicative activity. In this approach, which reflects the context of the present study, the focus is purely on form, with meaning and communication playing a subsidiary role. The chief principle in FonFs is the "division of the language according to lexis, structure, notions or functions, which are selected and sequenced for students to learn in a uniform and incremental way" (Klapper & Rees 2003, p. 288). While the learning of grammar and vocabulary is proffered as skills-learning in FonFs, it is treated as an incidental by-product of communicative activities in FonF (Sheen, 2005; see also Lochtman, 2005).

The next sub-section discusses a highly significant concept in pedagogy: namely, learner uptake of correction.

2.3.3 Learner Uptake

Lyster and Ranta (1997) refer to uptake as different types of learners' responses which immediately follow the teacher's feedback. The present study employs Mackey and Philp's (1998) system of analysing uptake because this system covers all the uptake forms found in the data of this research. In Mackey and Philp's system, opportunities for uptake are classified into four categories, as follows:

1) Successful uptake: the learner incorporates the linguistic correction into his/her production.
2) Unsuccessful uptake: the learner responds to the feedback without incorporating the linguistic correction.
3) No uptake: the learner does not respond to the feedback.
4) No chance: the learner is deprived of the chance to respond.

This taxonomy implies that if uptake is displayed then it is either successful or not. When it is not displayed, this is either because the learner is being deprived of the opportunity to display it (see also Ammar, 2008) or because s/he has chosen to bypass this opportunity. Usually, as will also be seen in Chapter 4, uptake is a common feature in a form-and-accuracy context, which represents an approach to classroom interaction replete with error correction and repair for the sake of accuracy. The only difference that this thesis makes when adopting Mackey and Philp's system concerns the second type of uptake, namely, unsuccessful uptake. In this thesis, successful uptake is displayed when the learner repeats the proffered correction or enquires about it whereas repeating the error after the repair turn is considered unsuccessful uptake.

Uptake appears in the interaction as a "next-turn proof procedure" (Sacks et al. 1974, p.729) or an "understanding-display" (Schegloff 1991, p. 154) mechanism that provides evidence of noticing (Chaudron, 1977; Loewen, 2002, 2004; Mackey, 1999) which is, in turn, essential for learning to take place (Schmidt, 1995). However, because it is an optional product (Ellis et al., 2001; Loewen, 2004; Mackey & Philp, 1998) which depends on a learner's choice to respond (e.g., after a recast and explicit correction), noticing does not necessarily ensue (Leeman, 2003). Therefore, researchers have claimed that learner uptake cannot be used as a benchmark to judge the effectiveness of CF techniques. For example, Leeman (ibid.) argues that learners' acknowledgement of correction is not necessarily an indication of language development. Other researchers (e.g., Ammar, 2008; Braidi, 2002; Gass, 2003; Mackey & Philp, 1998; Oliver, 2000)

also argue that the absence of successful uptake does not imply lack of learning. For this reason, the present study used testing alone to measure learner performance and linguistic development, although uptake is discussed in relation to the qualitative data analysis.

Studies such as those of Loewen (2004), Lyster (1998b) and Lyster and Ranta (1997) used learner noticing as a measure of uptake. They considered uptake following an elicitation (i.e., a prompt) to be indicative of whether a learner has understood the problem, although this is not the case with uptake following recasts (Loewen & Philp, 2006). The common view, then, is that responses to recasts, as Mackey and Philp (1998) suggest, do not indicate an influence on L2 acquisition. They explain that noticing of recasts is not contingent on display of uptake because the learner is not expected to provide either a response or a self-repair after a recast. Indeed, the argument of this thesis is in line with Ammar's (2008) declaration that it is not reasonable to see recasts as ineffective just because they lead to limited uptake. Moreover, if uptake, which is called 'acknowledgement' in this thesis (see Chapter 4, Sub-section 4.2.1), is absent, this does not imply a lack of learning (see Braidi, 2002; Gass, 2003; Mackey & Philp, 1998; Oliver, 2000), because learning might occur even if the correction is not acknowledged by learners. As Mackey (2006) puts it, "absence of evidence is not the same thing as evidence of absence" (p. 409).

With regard to learners' repetitions of recasts, one argument (e.g., Panova & Lyster, 2002) maintains that these repetitions are merely redundant reiterations which may not lead to L2 development. A contrasting argument is that these repetitions may be a reliable indicator of learners' noticing of the recasts as corrective feedback (Mackey et al., 2000), which is a predictor of both learning (Loewen, 2005) and language acquisition (Ellis et al., 2001, p. 287). Thus, researchers who supported the latter argument further investigated the factors that might affect the amount of learner uptake. For example, Lyster and Mori (2006) found that "the extent to which learners repeat recasts appears to vary according to instructional settings" (p. 274). This finding is consistent with a number of studies where abundant successful uptake was observed in research investigating different contexts: for instance, adult EFL conversation classes in Korea (Sheen, 2004) and adult ESL classrooms in New Zealand (Ellis et al., 2001); whereas infrequent uptake was observed in adult ESL in Canada (Panova & Lyster, 2002) and in French immersion classrooms (Lyster & Ranta, 1997). Because these contexts belong to different cultural settings, it could be argued that display of uptake of recasts and

other types of RT is not only influenced by the type of instruction (e.g., controlled or free context), but also by cultural aspects.

Another important finding that relates to the role of the instructional setting as an instrumental factor in the occurrence of successful uptake in response to recasts is Nicholas et al.'s (2001) assertion that in FFI, the effectiveness of recasts increases whereas in meaning-focused contexts it decreases. Hence, they conclude that recasts may be most effective in contexts that enhance their noticeability by focusing on the accuracy of the learner's utterance (see also Leeman, 2003; Long et al., 1998; Mackey & Philp, 1998).

The arguments concerning uptake can be generally summarized by saying that the display of uptake of any type of RT type indicates noticing (Ellis et al., 2001; Lightbown, 1998; Loewen, 2004) but might not lead to language development (Leeman, 2003), while at the same time learners may notice the correction and their language may develop even if they do not display uptake (Ammar, 2008; Mackey & Philp, 1998).

2.4 Chapter Summary

At the beginning of this chapter, the research hypothesis that different types of RT employed to treat syntactic errors are essential to learning a target language structure and that a relationship can be established between these types and learning as a product and a process was presented. Since the review of the literature indicated that no other study has yet addressed the link between repair and learning with a product-process orientation, and since the findings of previous research on the effectiveness of types of RT on L2 learning have been inconclusive, the present study represents an attempt to fill this research gap. In order to accomplish this aim, two research methods were adopted and designed to create a CA-for-SLA study which would help to increase the understanding of L2 learning from a product-and-process perspective.

The chapter then introduced and discussed insights relating to both repair and correction in their respective disciplines: i.e., CA and SLA, and the arguments of the thesis were presented in relation to previous arguments in the literature. In Section 2.1, four SLA hypotheses were critically analysed in order to investigate the relationship between repair and learning. Krashen's (1985) claim that repair and noticing play a lesser role in language learning was called into question, while Schmidt and Forta's (1986) concept of noticing the gap was seen as being relevant to the arguments of the present thesis. It was also demonstrated how the notion of interactional modifications in Long's (1996) Interaction Hypothesis and that of learners' modified output in Swain's

(1985) Output Hypothesis are adopted in this thesis to explore the effectiveness of repair of syntax on learners' performance and learning processes.

In Section 2.2, a review of CA and SLA studies on repair and CF was provided, in order to place the present study in the existent literature and emphasize its significance within the CA-for-SLA movement. It was possible through this research to demonstrate how CA facilitates the adoption of a holistic approach to interaction and a portrayal of process which complements the SLA approach. It was thought that to use these two methods would be the best way to serve the research investigation and answer the research questions, in order to plug the research gap and explicitly illustrate the potential of CA to work in conjunction with SLA.

The chapter concluded with a discussion of three pedagogical issues: the position of error treatment in L2 pedagogy, the FFI teaching approach, and learner uptake. By means of this exhaustive review, the present research establishes itself as a unique study that examines learning not only as a product of L2 classrooms but also as a sociolinguistic process which develops and unfolds with the progress of the interaction in the academic milieu.

As will be explained in the next chapter, the investigation is presented in two sections in Chapter 4, according to the methods used to answer the research questions. The first section describes how a quantitative quasi-experimental methodology was employed to investigate learning as a product in order to answer the first research question, while the second section demonstrates how a qualitative CA methodology was used to examine learning as a process by analysing classroom interaction in a form-and-accuracy context and hence answer the second research question along with its sub-questions.

CHAPTER 3: METHODOLOGY

In this chapter the methodological framework of the research is discussed. It is demonstrated how two research methods were employed to explore the learning of a language structure not only as a product but also as a process. The purpose of using these methods was to establish a relationship between types of RT and learners' performance on the one hand and between these types and the developing learning processes on the other.

After stating the research questions in Section 3.1, the quantitative and qualitative research paradigms are described in Section 3.2. The approaches adopted in the study are then explicated in Section 3.3. This is followed by a justification for the research methodologies in Section 3.4. In Section 3.5 the instruments and procedures used for the data collection are described in detail and in Section 3.6 the procedures used for the data analysis are presented. Ethical considerations and modes of obtaining access to the study participants are explained in Section 3.7. The chapter concludes in Section 3.8 with a discussion of the steps taken to maximize the reliability and validity of the research.

3.1 Research Questions

In order to investigate the interactional phenomenon of repair employed to treat learners' syntactic errors and establish a link between this phenomenon and language development, the following main questions and sub-questions were developed:

1. Which type of RT is more beneficial to the development of the target language structure, in this case, the passive voice (i.e., classroom learning product)?
2. How do different types of RT promote opportunities for the development of the target language structure (i.e., classroom learning processes)?
   a) How do types of RT differ in terms of their sequential organization and use in a form-and-accuracy (i.e., FonFs) context?
   b) How do learners display uptake of the types of RT?
   c) What are the interactional features produced by different types of RT?

As mentioned in Chapter 1, these questions were answered by collecting and analysing two types of data. In order to answer the first question, in which the learning of the passive voice is explored as a product, a quantitative data analysis was conducted,

in which the pre-test/post-test scores of five groups of students were statistically analysed in order to measure their performance. Causal connections between variables were sought in order to establish whether there were any statistically significant differences between the pre-test and post-test scores of the five groups; the purpose was to determine which type of RT is most conducive to learning a grammatical structure in an L2 classroom.

The second question was designed to explore the learning of the passive voice as a process. A qualitative data analysis was conducted in order to answer this question and its three sub-questions (a – c). CA transcripts were made of the recorded data obtained from the classroom interaction of the five groups of students with whom different types of RT were employed, and these transcripts were then subjected to a qualitative analysis. It was expected that addressing the sub-questions would help in identifying any potential differences between the RT types and that this, in turn, would illuminate the relationship between these techniques and learning processes in this type of setting.

3.2 Research Paradigms

Basically, quantitative methods are opposed to qualitative methods in the sense that the former employ a systematic scientific type of investigation from a causal-realist epistemological standpoint, whereas in the latter the complexity and uniqueness of the cases is emphasized through the use of an interpretive-constructivist hermeneutic epistemology (Mertens, 1998).

Positivist quantitative research generally converts observations into discrete units in order to compare them to other units by means of statistical analysis, which is described as an objective, formal and systematic process (Carr, 1994). A key feature of positivism, as Bryman (2008) notes, is its objective, value-free, unbiased approach, in which the personality and social position of the investigator is not involved. On the other hand, qualitative research generally involves conducting a detailed examination of people's words or actions in narrative or descriptive ways and emphasizes the notion of understanding research phenomena in situ; therefore, it reflects a subjective ontology through addressing the subjective qualities of the lived world (de Vaus, 2002).

Despite this divide between the quantitative and qualitative research paradigms, using qualitative and quantitative methods alongside each other has recently become increasingly common. Bryman (2006) clearly depicts the nature of both paradigms:

> "Qualitative research is often depicted as a research strategy whose emphasis on a relatively open-ended approach to the research process frequently produces surprises, changes of direction and new insights. However, quantitative research

> is by no means a mechanical application of neutral tools that results in no new insights. In quantitative data analysis, the imaginative application of techniques can result in new understandings." (p. 111)

The present study employed both paradigms, which are each represented in the two research methodologies (i.e., the quasi-experimental and CA) that were used to answer the two research questions. These two methodologies characterize the research approaches, which are discussed in the following section.

3.3 Research Approaches

Because this research employed two methodologies to deal with two types of data, it worked with two different approaches. The first of these is a cognitive mentalistic approach which verifies the students' language development and individual cognition; the second is a sociological descriptive CA approach which analyses social actions and portrays socially distributed cognition. Each approach is discussed separately below.

3.3.1 The Cognitive Approach

Research in cognitive psychology (e.g., McLaughlin, 1990) has described mentalistic L2 learning as the acquisition of complex cognitive skills taking place in an individual's mind, which is the locus of acquisition. As McLaughlin (ibid.) contends, these complex skills are learned through the learner's initial attention and then, through practice, they become automatic. Therefore, it could be said that attention and practice are two factors that affect L2 learning. Moreover, interaction is a third factor that is necessary in this regard because, as Mackey (2006) maintains, the cognitive process of attention mediates "input and L2 development through interaction" (p. 408). Furthermore, since cognitive alacrity has been shown to trigger noticing, which can in turn lead to uptake and learning, this also could be added to the list of essential factors. In a study carried out by Ellis et al. (2001), adult ESL learners received two types of instruction, one with the focus on form and the other with the focus on meaning. The results indicated a fairly high rate (76%) of successful uptake after recasts which the researchers attributed to the fact that the participants were adult learners who were focused on improving their English and thus were cognitively ready to pay more attention to linguistic forms.

Additionally, cognitive researchers have observed that skill acquisition is "a gradual change in knowledge from declarative to procedural mental representations" (Lyster 2004, p. 401) and that the process of skill development moves from controlled processing through noticing to automatic processing, which is enhanced through practice and feedback that involve learners' restructuring of their language system

representations (ibid.). Processing information, as Skehan (1998) notes, involves an analytic rule-based system and a memory-driven exemplar-based system. It is the use of the former system that can activate developmental linguistic changes as it is more sensitive to feedback. Thus, since feedback draws learners' attention to the gap between their production and the target form (Schmidt & Forta, 1986), this perception of the mismatch "may lead to grammar restructuring" (Gass & Varonis 1994, p. 299).

What is worth considering in this approach in relation to the present study is that the impact of the RT on the learners' developmental language system is apparent when they are helped to move to the next developmental stage, in which they are able to notice examples of the linguistic structure they want to learn. Then, through practice, they acquire the skills automatically. The present study examined the cognitive activity of language processing by measuring individual students' extent of language development when learning a syntactic feature of the target language.

3.3.2 The CA Approach

CA as a research methodology was inspired by ethnomethodology, which is a sociological and phenomenological research perspective first developed in the early 1960s. CA has recently gained a conspicuous position as a methodological resource for second language research and as a credible form of disciplined enquiry that may be used to examine the organization of talk-in-interaction.

As a branch of science, CA primarily studies the sequential accomplishment of social actions in interaction (Arminen, 2005), rather than "how aspects of language are organized in relation to each other" (Seedhouse 2005b, p. 251). It describes interaction in terms of orderliness, structure and sequential organization in casual or institutional conversation using four types of interactional organizations: turn-taking, adjacency pairs, repair and preference (Drew, 1997; Jefferson, 1987; Markee, 2000; Schegloff, 1997). These interactional organizations, as Seedhouse (2004, p. 17) contends, are not to be taken as units of analysis in the linguistic sense but as organizations used normatively and reflexively by the participants in the conversation as an action template to produce social actions and as a point of reference to interpret those actions.

A very important principle of CA that should be highlighted is its concern with socially distributed cognition. In conversations, interlocutors understand what is being said or done through the primary context provided by the sequential environment of talk (Schegloff & Sacks, 1973). This sequential organization produces intersubjectivity (Arminen 2005, p. 2; Heritage 1984, p. 96; Seedhouse 2004, p. 6), which is represented in the interactants' cooperation in finding ways to maintain their belief in a shared

reality. Such intersubjectivity, as Zimmerman and Boden (1991) contend, is achieved by shaping and reshaping elements of interaction throughout the advancement of the talk. Therefore, activities produced interactionally in conversations are socially structured because they are collaboratively accomplished (Psathas, 1991), and since they are social, they are context-sensitive (Seedhouse, 2004, 2007). Thus, participants accomplish their social actions by using context-free interactional organizations in a context-sensitive manner. Each contribution a participant makes is context-shaped and context-renewing in that it is structured according to the preceding turn, and at the same time, it shapes the subsequent turn. Because "[t]he context of a next action is repeatedly renewed with every current action" (Heritage 1984, p. 242), interlocutors display common understanding of their shared actions (Hall 2007, p. 512).

Bearing this in mind, it could be said that the CA view of socially distributed cognition used in the qualitative analysis in this thesis complements the focus on individual cognition represented in the quantitative analysis.

Another concept central to CA is the adoption of an emic perspective on talk. According to Seedhouse (2005b), the goal of CA is to provide explanations that are grounded in the participants' constructions of their own interactions. CA analyses the methods participants use to achieve intersubjectivity (Jenks, 2006) and studies behaviour from inside the system, with criteria discovered and drawn from that system during the investigation (Markee, 2000; ten Have, 1999). By presenting concrete, visible evidence, analysts and readers are able to examine the data "beyond their surface manifestations and discover issues that are presented in the data themselves" (Mori 2004, p. 547). That is, CA is an emically-focused (Firth & Wagner, 2007; Freeman, 2007) research methodology which derives phenomena from data and which only takes any conventional, theoretical, political or ideological preconceptions into account when they become visible in the orientations of participants in their interactions (Hauser, 2005; ten Have, 2006). CA first develops an internal view or emic perspective on talk which means that the cultural and contextual characteristics relevant to "the linguistic forms used", "the topic of the talk", and "the social actions performed" (Seedhouse 2004, p. 92) are only identified if they can be shown to appear in the details of the talk (see also Heritage 1995, p. 396; Psathas 1995, p.47).

In this study, the emic perspective adopted in the qualitative analysis served to complement the etic perspective of the quantitative analysis. In the following section, the justification for using these two methodologies is described.

3.4 Rationale for the Methodologies

Despite the qualitative-quantitative divide, both methods were used in this study because they not only complement each other, but also each of them serves particular purposes in the research.

The principal advantage of using both methods lies in the product-process coverage which is afforded. The quantitative method demonstrates an incremental change in individual learning, whereas the qualitative method holistically portrays the learning processes through interactions which may contribute to such changes. Other reasons for using both methods are described in the following paragraphs.

Although qualitative research is criticized for an element of subjectivity in the sense that analysts make subjective interpretations of the social world, CA reflects intersubjectivity in the sense that it permits the analysts' perspectives to converge with those of the participants since they interpret utterances in the same way they are taken up by the people who produce them. In making sense of interaction in conversations, as Levinson (1983) notes, an analysis of talk is "provided by participants not only for each other but for analysts too" (p. 321). He also states that in CA "what conversation analysts are trying to model are the procedures and expectations actually employed by participants in producing and understanding conversation" (p.319). Thus, to counter charges of subjectivity, it could be argued that when participants share a common perspective, they make their conversation focus on objective realizations which are not influenced by subjective differences. This is what CA seeks to portray using sociolinguistic studies which insist on obtaining objective evidence of the social dimensions of talk-in-interaction. Moreover, it could be argued that the availability of CA transcripts for other researchers to examine and replicate the analyses gives scientific rigour to CA. Additionally, both the objective statistical analysis (see Carr, 1994) and the CA methodology used in this study complement each other and thus enhance the generalizability of the findings (see also Bryman, 2008).

Moreover, repair, as Jenks (2006) asserts, "is highly ordered and sequentially fixed to the turn-by-turn moments" (p. 88) of interaction, and utterances depend on their locations in a sequence; therefore, the data should be analysed using a methodology that is capable of dealing with this discursive characteristic of talk. This can only be done, as Mori (2007) asserts, through adopting an internal view of or an emic perspective on the interaction and by analysing the repair sequences within their discourse context. Such a method guarantees access to the multiple layers of meaning. CA was thus deemed to be

eminently suitable for the purposes of this thesis. A CA research methodology was also deemed appropriate for this study because detailed CA transcription provides a minute description of the interaction, and it was thought that this would help to understand and explain the nature of repair in the teaching context under study and portray the reflexive relationship between pedagogy and interaction which has been highlighted by many scholars, such as Jung (1999), Kasper (1986), Seedhouse (2004) and van Lier (1988b). According to Markee (2000), recorded conversations provide a means to observe in situ how participants establish and maintain mutual understanding and achieve intersubjectivity through the constantly changing matrix of interaction, which cannot be depicted through the use of quantitative methods or tools. In classroom interaction, participants not only achieve intersubjectivity but also take into consideration the contextual factors of the particular institution (Arminen 2005, p. 19), such as the pedagogical focus of the lesson or the identity roles of the participants. This quality of institutional talk was reflected in the interaction of the participants in the present study, as will be shown in Chapter 4.

Additionally, the emphasis on the social and contextual dimensions achieved through the increased sensitivity which results from the adoption of an emic perspective exempts CA from the criticism levelled at SLA research that it ignores the social context of L2 learning (Firth & Wagner, 1997, 2007). This emphasis makes CA an appropriate methodology for the purpose of the present study, which was to portray learning as a process of socially distributing cognition and establish a link between the product and process of learning. The adoption of this qualitative ethnomethodological paradigm is thus an effective way of uncovering the rules governing social life, a task that cannot be accomplished through the positivist, scientific paradigm.

A concern regarding the quantification of interactional data is raised by Seedhouse (2005c), who argues that when SLA quantifies interactional phenomena, all uniquely occurring instances are treated as if they were homogeneous. This suggests an inherent tendency to homogenize heterogeneous discoursal features. Consequently, some instances that do not conform to the definition are included in the quantification. To guard against this mistreatment, he suggests conducting a prior case-by-case qualitative emic analysis as the first stage in the research, then inputting discoursal data into quantitative machinery as the second stage. In the present research, the quantification was performed after conducting what Seedhouse refers to as "an emic, holistic microanalysis of each extract as an instance of discourse in its own right" (ibid., p. 552).

Quantitative and qualitative methods have been used jointly by researchers principally because in research there is a constant reciprocity between observation and explanation which needs to be epistemologically investigated through the process of theory construction and theory testing (de Vaus 2002, p.9). Ellis et al. (2001) have recommended the use of experimental and descriptive approaches in particular, if the aim is to examine FFI learning outcomes in terms of cognitive processes and social factors. The present thesis applies this recommendation by employing two methods. Each method, though, is used to answer a different research question.

The decision to employ two different methods in this research was also informed by the aim of acquiring a deeper understanding of the research focus and in order to be able to view it from alternative perspectives (see Laws 2003, p. 281). Generally speaking, when dealing with any type of learning (e.g., learning the passive voice), it is useful to trace and collect data from more than one source in order to generate a complete picture. It was therefore deemed appropriate to use two types of data collection instrument (test scores as quantitative data and recorded classroom talk as qualitative data) and two research methodologies (a quasi-experimental research design and CA methodology). This allowed for the collection of two different sets of data which could be placed against each other when interpreting the results. Each method, as mentioned above, was used to answer one research question. This undertaking made it possible to examine the repair phenomenon from two methodological angles: a quantitative SLA approach and a qualitative CA approach.

The two methods were also employed in this research for the purpose of achieving "complementarity" (Bryman 2008, p. 607), which refers to using one method to clarify and illustrate the results obtained by means of another method. In the present study, analysing recorded classroom interaction furnished additional information about the learning process and helped the researcher to examine the interaction-learning relationship by explaining results obtained from the statistical analysis. For example, the qualitative analysis showed that prompts, compared to recasts, yielded longer interactional sequences which might negatively affect learners' noticing. This finding helped to explain the quantitative analysis finding that recasts outperformed prompts in improving learners' test performance and promoting classroom learning

This quality of 'complementarity' demonstrates the nature of the relationship between theory and research through employing both deductive and inductive approaches. First, a hypothesis is developed; then it is tested. Then an inductive stance is taken to derive theory and inferences from observations, while theory is used as a

background to the qualitative investigation (ibid., p. 13). The test scores generated information on learning as a product of using different types of RT, while information relating to the learning as a process and to the actual behaviour of the participants during the learning process was obtained from the qualitative data. In Bryman's (ibid.) words, "the qualitative findings allow the quantitative data to be contextualized" (p. 621).

Furthermore, the use of two methods can also help to corroborate evidence (see Bryman, 2006). In this regard, the present study corroborates some of the findings obtained through the quantitative and qualitative data analyses. For example, both quantitative and qualitative data analyses in the study showed that ignoring learners' syntactic errors had a detrimental effect on their learning. The present study employed the two methods as complementary paradigms to carry out this procedure of corroboration of information and thus guaranteed the validity and reliability of the study and enhanced the integrity of the results by using each method to cross-check findings from the other. According to Seedhouse (2005c), in SLA quantitative research which deals with classroom discoursal features, the intended pedagogy may develop into a different and unexpected actual pedagogy. Therefore, a mismatch could occur between what is purported to be researched and what is actually researched, resulting in a "split personality" of the research construct which may endanger its validity (p. 545). Hence, as a precaution, a CA methodology could be used to check the validity of the quantitative treatment of the cognitive SLA work and eliminate any threats caused by a discrepancy between the intended and the actual pedagogy. In the present research, the use of CA helped to ensure that the intervention conditions were mainly implemented as expected, with the exception of the few occasions when the RT types were not absolutely discrete as the teachers alternated between them. Additionally, the use of CA revealed how on some occasions an intended RT type changed to another type as a result of a specific sequential organization (see pp. 126-7). Thus, it could be said that the use of CA in this research helped to support the validity of the quantification. Moreover, the quantitative results helped to test any hypotheses that were formulated from the qualitative analysis. For example, the mean value of the scores in the prompt group where learners' errors were treated using only prompts helped the researcher to check and corroborate the finding derived from the qualitative analysis that long prompting sequences could have a negative effect on learners' attention.

In the following section the instruments and procedures of data collection are described.

3.5 Data Collection Instruments and Procedures

In this study, quantitative and qualitative data were collected and organized into two separate databases. The first of these consisted of the students' scores in a pre-test and a post-test on the English passive voice, while the second comprised 16 hours of student-teacher talk which had been audio- and video-recorded during the interactional activities engaged in by five different groups of students and teachers. The transcribed data consisted of classroom interaction during which the students participated in activities and exercises. The instruments and procedures used to collect each type of data are presented below in the following two sub-sections.

3.5.1 Quantitative Data Collection Instruments and Procedures

A quasi-experimental pre-test/post-test design was used as the instrument for collecting the quantitative data. Lyster and Ranta's model was used with minor modifications to help design the intervention conditions in the quantitative analysis. The following sections contain an explanation of the adapted model and a description of the quasi-experimental research design used in this study.

Lyster and Ranta's Model

All sequences which contained repair of syntactic errors were first transcribed and analysed in CA terms. They were then coded into the three categories: recasts, prompts and explicit correction, identified by Lyster and Mori (2006), who adapted them from Lyster and Ranta's (1977) model of error treatment sequence (see Appendix B). In their model, Lyster and Ranta describe the interactional possibilities that can follow a learner's error:

> "The sequence begins with a learner's utterance containing at least one error. The erroneous utterance is followed either by the teacher's corrective feedback or not; if not, then there is topic continuation. If corrective feedback is provided by the teacher, then it is either followed by uptake on the part of the student or not (no uptake entails topic continuation). If there is uptake, then the student's initially erroneous utterance is either repaired or continues to need repair in some way. If the utterance needs repair, then corrective feedback may again be provided by the teacher; if no further feedback is provided, then there is topic continuation. If and when there is repair, then it is followed either by topic continuation or by some repair-related reinforcement provided by the teacher. Following the reinforcement, there is topic continuation."(pp. 44-5)

It should be noted here that this model was adopted in this study as an initial step solely in order to identify the patterns of teacher response and learner uptake in an RT sequence. However, a more elaborate model, as will be shown in Chapter 4, Sub-

section 4.2.1, was developed during the qualitative analysis to fit the data obtained in this study.

Quasi-experimental Design

In order to test the relationship between the RT types and students' language development, a quasi-experimental design was used. The independent variable (types of RT) was manipulated to determine its effects on the students' learning of the passive voice represented by the dependent variable (pre-test/post-test scores, i.e., learners' performance). This design was chosen to implement the intervention in naturally occurring classroom interaction because, as Gribbons and Herman (1997) contend, it is the most suitable for application in naturalistic settings when an intervention is involved.

A quasi-experimental pre-test/post-test design (see Figure 3.1 below) was used as the instrument for the quantitative data collection. An intervention was implemented in the teaching of the passive voice in which the teachers were assigned different types of interactional behaviour in response to learners' syntactic errors, according to the categories of teacher feedback given in Lyster and Mori (2006).

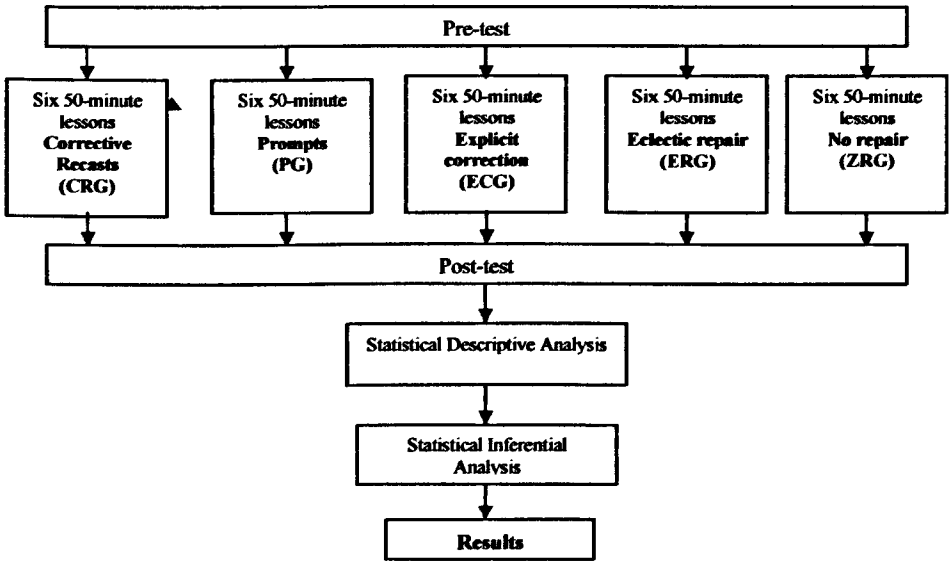

Figure 3.1: Quasi-experimental Design

As Figure 3.1 shows, the intervention sessions (six 50-minute lessons for each group) commenced after administering a pre-test. During the sessions, different types of RT were employed in the teaching of the English passive voice. Only the experimental groups were exposed to the manipulated variable, i.e., the RT types, so each received

one of the following types of repair: recasts, prompts or explicit correction, while one group received no feedback at all. The fifth group (i.e., the control/comparison group) received an eclectic correction strategy. That is, their teacher used the method she normally employs to correct their errors. After the end of the sessions, a post-test was administered. Then the students' scores from both tests were subjected to statistical analyses, which are described in Chapter 4, Section 4.1.

With regard to the selection of the subjects of the research, accessibility sampling (Greenfield, 2002) was used for compelling reasons, which led to selecting the most accessible units. The five groups of students can be considered a representative sample of all female students in similar settings in other Saudi universities where EAP is offered because their characteristics reflect those of the general population. Moreover, only a few similar settings are available in Saudi Arabia and the total population does in fact represent a small minority in the country, of which this sample forms a relatively large part. Thus, the group make-up was typical of many university-level EAP programmes in Saudi Arabia. The learners participated in the classes to which they had originally been allocated according to their specialist subjects. Thus, no selection of individual students for the different groups was carried out because, as in most educational settings, randomized allocation of subjects to different groups was not possible (Bryman, 2008). Unlike designs used in laboratory settings, this design helped to set up the intervention in a way that caused the fewest possible changes in the instructional setting.

One requirement of experimental research designs is to eliminate the influence of any rival variables (ibid.). Therefore, two weeks before the intervention took place the students completed a brief questionnaire, adapted from section one of a questionnaire used by Almandil (1999) with a different sample from the same setting. This questionnaire was used in this study only as a preliminary step to collect information about the learners' demographic details and background as well as their exposure to English outside the classroom, and thereby to control in advance for any substantial variations among the students. No such variations were found. In fact, there were some uncontrollable variables, such as whether the teachers were native or non-native speakers, the relationships between the learners and their teachers, and different group dynamics. However, the existence of these is not considered as a limitation in this study since it is impossible to control for all variables in quasi-experimental research. Thus, to prevent biased results, care was taken to ensure that the experimental conditions were consistently identical for the groups, which were assumed to differ systematically only in terms of the variable under study.

In order to eliminate the placebo effect, the experiment was single-blinded. That is, the nature of the intervention that was being administered was concealed from the groups of students. When they were informed about the study and their participation in it, they were only briefed about its general goals and told that the teacher-student interaction would be recorded, without giving them any more details. However, in the group where no RT was used, students were informed that their teacher would not respond to their errors.

Since the questionnaire did not indicate any substantial variation in the learners' linguistic backgrounds, the latter were not used as a criterion for allocating the types of RT to the groups. Moreover, it is important to note that the differences between the scores obtained in the pre-test and post-test were used to measure the rate of the students' improvement between these tests in each group separately; this rate was then compared across the groups. This means that what was being targeted was the knowledge they had acquired during the intervention rather than their previous knowledge or their language proficiency. Therefore, the students' scores in the pre-test could not help in the allocation of the types of RT to the groups. For these reasons, other factors were considered in order to accomplish this task.

To begin with, the comparison group (i.e., the eclectic-repair group) was assigned to the teacher who usually taught Structure to only one group, since she was supposed to use her own corrective style and not be exposed to any knowledge of the RT types or the conditions of the intervention. The groups in which the other four experimental conditions were being applied were assigned to the two teachers who taught Structure to two groups each. Therefore, another factor that had to be considered was their habitual corrective styles. Hence, prior to the start of the intervention and the workshop with the teachers, the researcher observed and recorded each teacher for 2 hours in her usual grammar teaching lessons then tallied the number of each type of RT used to repair syntactical errors. The reason was to determine each teacher's corrective style and track her normal use of repair. This also helped to acclimatize the learners as well as the teachers to the researcher's presence in the classroom so that less attention would be paid to the fact that the interaction was being recorded when the intervention started. Owing to the fact that these classes were form-and-accuracy contexts, the observation revealed that none of the teachers deliberately ignored any learner's grammatical error, but rather that all of them used a combination of the three types of RT, with prompts being the most preferred type. Thus, each type of RT was allocated to the teacher who used that type the most. Assigning teachers the RT types that were compatible with their

usual corrective methods was important in order to underscore the ecological validity of the study and avoid the occurrence of an apparent change in the teachers' corrective styles, a condition which was, however, inevitable with the group in which no repair was provided.

After allocating the study conditions to the groups, the groups were labeled accordingly. The labeling was as follows:

The corrective-recast group (CRG)

The prompt group (PG)

The explicit-correction group (ECG)

The eclectic-repair group (ERG)

The zero-repair group (ZRG)

Participants

189 first-years participated in the study while attending their normal Structure classes, and these students formed the five groups who were the subjects of the quasi-experimental aspect of the research. The participants were Arabic-speaking female students whose ages ranged from 18 to 19, all studying English at tertiary level in the language centre at KFU before enrolling in their undergraduate subject courses. All of these students had passed the same local high school final exam, administered by the Ministry of Education. Group sizes ranged from 35 to 40, with an average of 38 students per group. The distribution of the participants in the five groups was as follows: ZRG = 36, CRG = 40, PG = 40, ECG = 35 and ERG = 38.

Workshop for Teachers

Prior to the commencement of the intervention sessions and after allocating the different types of RT to the groups, the researcher held a two-session workshop with the participating teachers. All the teachers attended the first session and were handed a teachers' guide, which consisted of two parts. The first part briefly explained the main aims and general procedures of the study and the second part included the lesson plans. While explaining the contents of the teachers' guide, the researcher did not make any reference to the different types of RT or to the intervention conditions so that the teacher's corrective style in the ERG (i.e., the control/comparison group) would not be affected. The second session was attended by the teachers of the experimental groups so that the different intervention conditions could be assigned to them and at which they were given another teachers' guide which included a detailed explanation of the types of RT, in addition to practice exercises to do at home. Moreover, during this session the teachers practised the different types of RT, employing role-play of some RT episodes,

so as to perceive and understand the nature of the interaction provided by these types. The next day, the researcher met with each teacher to check their answers to the exercise questions and to ensure their full comprehension of the information. Additionally, each teacher received a third teachers' guide, which included a checklist (Appendix C) of the instructions she was supposed to follow.

Intervention Sessions

The instructional intervention consisted of four teaching sessions and two practice sessions spread over a month. These sessions were the students' 50-minute regular grammar classes in the EAP programme taught by their own teachers. The total period of the intervention in each group was five hours. The data that were recorded, transcribed and analysed consisted solely of the teacher-student interaction while performing the activities and answering the exercise questions: a total of 16 hours of classroom talk. During the teaching sessions, the teachers taught 'the English passive voice' to their students as part of their curriculum, following lesson plans designed by the researcher. The lesson plans incorporated a chapter on passive and active sentences in Azar (2003), in addition to other worksheets involving various interactional activities adapted from Thornbury (1999, 2001). The worksheets were designed by the researcher to promote interactional participation while using the target structure and hence provide more opportunities for errors to occur and repair to take place. These activities included multiple-choice sentences, matching sentences to pictures, filling in blanks, constructing a dictogloss etc.

Target Structure

The grammatical structure examined in the study was the passive voice, which is a compulsory element in the students' curriculum. Although it should generally be used sparingly and only for good reason, it is of particular importance for the subjects of the study as they will need it in their future studies for formal academic scientific writing, such as describing experiments and reporting on projects.

This aspect of grammar was selected for this study on the grounds that it is acknowledged to be one of the most problematic grammar aspects for NNSs (Ferris, 2002; Olson & Filby, 1972). Arab learners do, in fact, present a good example of students' recurrent inability to master this grammatical structure, as found by the researcher and her teaching colleagues in the setting used for the study. This problem provided the impetus for selecting this language structure for examination since it could provide ample repair instances for the analysis.

The passive voice, which is not a derivative of the active voice, is basically used to put emphasis on the subject (i.e., the recipient or product of an action). What differentiates a passive sentence from an active sentence in terms of their syntactic structure is the form and position of the verb while both sentences have the same semantic value. In the passive structure, the object of the active sentence becomes the subject of the corresponding passive sentence and the subject (if retained) is included in a 'by-phrase' after the verb (Greenbaum & Nelson 2009, p. 108; Wang 2010, p. 945).

The preceding paragraph does not, however, provide a sufficiently detailed description of the English passive voice, which is a complex language structure. It is therefore important at this point to give an accurate definition of the passive construction, both in terms of the standard grammar book description and in terms of how it is analysed by the teachers and in the course book in the teaching situation where the study took place. For this reason, in the following pages a summary of Quirk et al.'s (1985) exhaustive account of the English active and passive voice is first presented, followed by a description of how the passive construction was taught to the subjects in the study setting. A discussion of the problem with reference to the passive voice in Arabic is then provided.

In order to explain the active-passive relationship, it is important first to examine the seven types of English clauses listed in Table 3.1, which is adapted from Quirk et al. (ibid., p.53).

Clause Type	S(ubject)	V(erb)	O(bject)	C(omplement)	A(dverbial)
SV	John	is reading			
SVO	John	helped	Jack		
SVC	John	became		famous	
SVA	John	stayed			in the house
SVOO	John	gave	Mary/a book		
SVOC	John	considers	the story	interesting	
SVOA	John	put	the cups		on the table

Table 3.1: Clause Types

Two points should be noted in the table above. First, different clause types can be formed using five elements, the first two, S and V, are basic in all clause types: subject, verb, object, complement and adverbial. Second, it is generally the main verb which determines the form of the rest of the structure. As the table illustrates, the SVOO

clause type has two objects which have different semantic roles. Normally, the former is called the indirect object and the latter is called the direct object. Their presence in this clause type is determined by the type of the main verb in the clause. In English grammar, there are three main verb classes:

1) Intransitive verbs: main verbs that are not followed by an object, as in the SV clause type.
2) Transitive verbs: main verbs that are followed by an object and occur in clause types SVO, SVOO, SVOC and SVOA.
3) Copular verbs: main verbs that are followed by a subject complement as in the SVC clause type, or by an adverbial as in the SVA clause type.

To examine the relationship between active and passive structures, it is necessary to observe systematic correspondences between them in terms of grammatical choice and meaning. The grammatical category of voice in the active and passive sentences **"makes it possible to view the action of a sentence in either of two ways, without change in the facts reported"** (ibid, p. 159). The changes that take place when converting sentences from the active to the passive voice are as follows:

1) Adding a form of the auxiliary 'be' followed by the past participle of the main verb.
2) Rearranging two clause elements: the active subject becomes the passive agent and the active object becomes the passive subject.
3) Introducing the preposition 'by' before the agent. In general, when the agent is irrelevant, unknown or redundant, the agent by-phrase is optional and may not appear in the passive sentence.

As mentioned above, despite the difference in the form and arrangement of the elements between active sentences and their passive counterparts, "the relation of meaning between their elements remain the same" (ibid, p. 160). Table 3.2 below shows the relations between active and passive clause types. It presents the adverbial A (i.e., the agent by-phrase) within parentheses if it is optional.

Active Clause	Correspondent Passive Clause
SVO_d Susan visited James	$S\ V_{pass}$ (A) James was visited (by Susan)
$SVO_i\ O_d$ John gave Mary a book	$SV_{pass}\ O_d$ (A) Mary was given a book (by John) $SV_{pass}\ O_i$ (A) A book was given (to) Mary (by John)
SVO_dC_o John considers the story interesting	SVC_s (A) The story is considered interesting (by John)
$SVO_d\ A_o$ John put the cups on the table	$SV_{pass}\ A_s$ (A) The cups were put on the table (by John)

Table 3.2: Relations between Active and Passive Clause Types

As illustrated in the table above, the passive auxiliary is normally a form of 'be'. However, in some informal passive constructions, 'get' is used to express the result of the action on the subject as in the sentence 'Our school got rebuilt'.

Considering all aspects of the passive voice, Quirk et al. (1985) classified the passives into three types:

1) Central or true passives (i.e., passive constructions whose active counterparts can be constructed by supplying an appropriate agent):
    a) With expressed agents: This dress was made by my aunt
    b) Without expressed agents (agentless passive): Taxes will be raised
2) Semi-passives (or mixed passives) which have both verbal and adjectival properties; that is, the past participle in these passives can be coordinated with adjectives and modified with adverbs like 'very', 'more', 'quite', etc.:

    Jack was interested in history
3) Pseudo-passives (or copular passives) "which have neither an active transform nor a possibility of agent addition" (ibid, p. 169). They denote a resultant state; that is, rather than describing an action, they describe the result of an action :
    a) With current copular verbs: The letter is already mailed
    b) With resulting copular verbs: Maria got tired

In the teaching situation where the intervention was implemented, the teachers taught the passive voice using a standard grammar book, '*Fundamentals of English*

Grammar' by Azar (2003), which included sixteen chapters. Each chapter is organised around a group of related structures and usages. The eleventh chapter explained the passive voice in twelve charts that covered a number of the grammar points in the passive voice (e.g., stative passive) and presented them in a simple fashion which was suitable for lower-intermediate and intermediate students. During the teaching sessions, the teachers explained the grammar points in the charts which they used as a springboard then the students took turns to answer the exercises that followed each chart. Since the teachers thought that the eleventh chart might be problematic to the students, they excluded it from the curriculum. Thus, it was not taught to the students during the intervention. The contents and the grammatical focus of the charts are presented in Table 3.3 below to show the aspects of the passive voice that were taught to the learners during the teaching sessions of the intervention.

	Chart Content	**Grammatical Focus of the Chart**
Chart 1	Active sentences and passive sentences	To highlight the difference between active and passive sentences and explain that each passive sentence should have a form of verb 'be' + past participle.
Chart 2	Tense forms of passive verbs	To explain the method of constructing passive sentences from active sentences in different tenses: simple present, simple past, present perfect, past perfect and future.
Chart 3	Transitive and intransitive verbs	To explain that sentences which have objects contain transitive verbs and can be transformed into passive sentences whereas sentences with no objects cannot be changed to the passive voice.
Chart 4	Using the *'by-phrase'*	To explain how the by-phrase is formed and when it is used.
Chart 5	The passive forms of the present and past progressive	To explain how to change active sentences in the present and past progressive to the passive voice.
Chart 6	Passive modal auxiliaries	To explain how to change active sentences with modal auxiliaries to the passive voice.
Chart 7	Summary: passive verb forms	To summarise all the passive tenses explained in the preceding charts.
Chart 8	Using past participles as adjectives (stative passive)	To explain that the past participle can be used as an adjective to denote a resultant state, as in 'the window is broken'.
Chart 9	Participial adjectives: *-ed* vs. *–ing*	To explain the difference between using the present/past participle forms of the verb as adjectives, as in 'History is interesting' and 'He is interested in history'.
Chart 10	*Get* + adjective; *get* + past participle	To explain that the verb 'get' can be used with adjectives or past participles to express the same idea as 'become', as in 'I am getting hungry' and 'Tom and Sue got married'.
Chart 11	Using *be used /accustomed to* and *get used/accustomed to*	To show the difference in meaning and form between these phrases.
Chart 12	Using *be supposed to*	To explain the way of using 'be supposed to' in the present and past tense.

Table 3.3: Contents of Chapter 11 in Azar (2003)

It should be noted that the participants already had some existing knowledge of the passive form of English verbs which they had acquired from their English classes at school, where they were taught English according to the proactive focus-on-form method. However, this knowledge was both scant and dim. Only the simple passive tenses were taught as a single grammatical point in the whole textbook. A few of the other passive tenses appeared only incidentally and very rarely in the curriculum. Consequently, the intervention provided them with new detailed rules about almost all passive tenses and forms.

In addition to the fact that passive sentences require much processing because of their non-canonical syntactic structure (Ferreira, 2003), the difficulty of the passive voice for Saudi learners could be attributed to many factors. For example, Saudi students are being taught at schools that the past participle is only a verb along with the present and past, whereas other uses of the past participle (e.g., as an adjective) are introduced to them only when they start to take more complex structures at the university level.

Another reason which might have led to this difficulty for the confusion associated with the passive construction is the difference between English and Arabic in subject-verb positions in the sentence since in Arabic the word order VSO is more common than SVO. According to Altmann et al. (2005), the most important difference between English and Arabic is the directionality of orthography. Whereas the subject precedes the verb in English active or passive sentences, the reverse is the case in Arabic, which usually has the verb in the initial position. The following example illustrates this point.

(Active) SVO	Sara sent the letter
(Active) VSO	أرسلت سارة الرسالة [arsalat saratu rrisalata]
(Passive) SV	The letter was sent
(Passive) VS	أرسلت الرسالة [ursilat irrisalatu]

Moreover, Arab learners are occasionally faced with confusion when using the English passive voice because changing a sentence from active to passive may sometimes change its propositional meaning. For example, there is no meaning equivalence of the active and passive sentences below:

They can't teach Jim = (they are unable to teach Jim)

Jim can't be taught = (it's impossible to teach Jim / Jim is unable to learn)

Furthermore, Arabic differs from English in the change made to the form of the verb when converting a sentence from active to passive or vice versa. Arabic uses

diacritics to indicate voice whereas the English passive is periphrastic (i.e., composed of an auxiliary verb plus the past participle of the transitive verb). Consequently, to change sentences from active to passive seems easier in Arabic because unlike English, it generally does not change the spelling of the verb or add more words to it. The only change effected is in the diacritics of the sentence elements. Examining how Arabic words are formed and how passive sentences are constructed in Arabic clarifies this point.

Arabic words, as Hansen (2010, pp. 568-69) notes, are basically formed by a root of three consonants and then combined with a pattern of prefixes, infixes, and suffixes to constitute verbs or nominal words which are associated to the semantic value of the root. Table 3.4, adapted from Hansen (ibid, p. 569) provides some examples of this combination of roots and patterns in Arabic morphology. It also illustrates how letters are used to represent consonants and long vowels whereas diacritics represent short vowels.

Root الجذر	**Basic Form of Verb** الفعل	**The Actor** إسم الفاعل	**Place of the Action** إسم المكان
ك ت ب [k-t-b]	كَتَبَ [kataba] (wrote)	كَاتِب [kaatib] (writer)	مَكْتَب [maktab] (office)
د ر س [d-r-s]	دَرَسَ [darasa] (studied)	دَارِس [daris] (student)	مَدْرَسَة [madrasah] (school)
س ك ن [s-k-n]	سَكَنَ [sakana] (inhabited)	سَاكِن [sakin] (inhabitant)	مَسْكَن [maskan] (habitat)

Table 3.4: Example of Word Formation Based on Roots and Patterns in Arabic

Constructing a passive sentence from an active sentence in Arabic is also a simpler procedure than in English. It involves the following changes (Alhashmi, 1935, p. 120; Alhamlawi, 1957, p. 90):

1) The subject of the active sentence is omitted and is rarely included in the passive sentence, so no by-phrase is needed.
2) The object changes to the subjective nominative case.
3) The verb is changed only in terms of diacritics on the basis of the tense and root form of the verb as follows:

a) The passive of past tense verbs is formed by putting a damma (ُ) on the first letter of the verb (i.e., pronouncing the letter with a short /o/), and adding a kasra (ِ) under the letter before last (i.e., pronouncing the letter with a short /i/):

كَتَبَ [kataba] (wrote) كُتِبَ [kutiba] (it was written)

كَتَبَ الولد الدرسَ [kataba alwaladu addarsa]

(the boy wrote the lesson: Active)

كُتِبَ الدرسُ [kutiba addarsu] (the lesson was written: Passive)

b) The passive of present tense verbs is formed by putting a damma (ُ) on the first letter of the verb (i.e., pronouncing the letter with a short /u/), and adding a fatha (َ) on the letter before last (i.e., pronouncing the letter with a short /a/):

يَكتُبُ [jaktubu] (he writes) يُكتَبُ [juktabu] (it is written)

يَكتُبُ الولد الدرسَ [jaktubu alwaladu addarsa]

(the boy writes the lesson: Active)

يُكتَبُ الدرسُ [juktabu addarsu] (the lesson is written: Passive)

The above reviews, which are taken from prominent reference books of grammar, namely, Alhashmi (1935), Alhamlawi (1957) and Quirk et al. (1985), show how both Arabic and English passive constructions represent complex grammatical categories with subtleties and intricacies which make it difficult for most people to fully comprehend the concepts underlying those constructions. However, it is generally the simple and most common types of the passive voice that are taught to students, as shown above by the content description of the chapter on passives in the book used both as the course book in the language centre and for teaching the passive voice in the intervention.

Nature of the Interaction in the Sessions

The intervention sessions took place in a teacher-led form-and-accuracy context where FonFs is the normal teaching method for English grammar. Therefore, the interaction had specific characteristics peculiar to that type of context. Generally, the teacher was the leading speaker and most of the time the turn-taking took place between the teacher and a single learner, as the students took turns to perform activities and answer questions. Because these grammar classes did not follow CLT pedagogical

recommendations, there were no group discussions or pair work. In all of the groups, except the ZRG, the interaction demonstrated a reflexive relationship with a pedagogical focus on the learners' production of grammatically correct linguistic sentences in the passive or active voice, while the experimental focus varied between the groups according to the intervention conditions. The experimental focus in the ZRG was on error tolerance and bypassing repair of syntactic errors. However, in the other four repair groups, the experimental focus was on the teachers' use of the following: corrective recasts in the CRG, prompts in the PG, explicit correction in the ECG and all of these types in the ERG. Whenever a learner in any of these groups made a syntactic error, the teacher would immediately respond to it employing a type of RT. This focus, which proscribes error tolerance, justifies the overwhelming presence of other-initiated other- or self-repair in this type of teaching context, with the latter being more frequent (McHoul, 1990, Seedhouse, 2004), since teachers usually prefer to elicit learners to self-correct.

Measurement

During classroom hours and with the help of the teachers, a pre-test (Appendix D) was administered before the start of the intervention and a post-test (Appendix D) after its completion. This pre-test/post-test procedure typically measures the response of the students to the intervention. Since grammatical structures that appear infrequently in spontaneous speech are usually best assessed through the use of specifically designed tasks (Cole et al., 1996), the pre-test and the post-test were two versions of a grammar test adapted from the standardized Structure tests generally used in the language centre to assess students' learning and achievement in grammar. These tests had undergone analysis and were validated before they were set as official tests.

Each of the two versions of the test used in this study consisted of three activities in order to test three skills of grammar learning, as discussed in the following paragraphs. In addition, the test was designed in three activities which were similar to the activities that were usually given to the students. Thus, they were intended to be relevant to the class content and linguistic focus of the lessons usually taught in that setting. Moreover, they were used to cover all points on the passive voice which were included in the curriculum and were taught to the students as part of their grammar class.

The first activity, which was designed to assess recognition of correct passive and active verb forms at sentence level, included twenty multiple-choice items in the form of randomly ordered sentences with a missing verb form. The sentences contained eight passive verb forms. There were two sentences on each form, making up 16 sentences,

in addition to four active sentences. The answer choices included the correct answer and two wrong answers as distracters. This activity helped to test how students draw on critical thinking to recognize correct grammatical forms. The second activity tested learners' ability to recognize objects of transitive verbs in statements, negative sentences, and question forms. In order to incorporate different forms and tenses, this activity consisted of fifteen identify-the-object sentences, which required participants to circle the object, if any, in the sentence. These were active sentences in varied tenses, eight of which contained transitive verbs and seven of which contained intransitive verbs as distracters. In this activity, learners were tested on how they employed their analytical skills of a specific grammar point. The third activity was designed to test learners' ability to form verbs in active and passive voice within a given context. Therefore, it offered a text-completion task that consisted of a modified rational cloze passage with ten gaps representing missing passive or active verbs. Deletions were made according to the choice of the researcher to test the students' awareness of correct tense production of the simple verb forms provided and their ability to use the passive or active voice at text level. In other words, this activity helped to test how students could establish relationships among form and meaning while applying a grammar rule within a specific discourse structure. For the sake of clarity, the sentences in the first two activities contained relatively high frequency words and the passage in the third activity was of a familiar topic and an average level of difficulty.

In order to identify and iron out any potential practical problems prior to the study, both versions were reviewed by five Structure teachers from the department and an external PhD graduate who used to teach Structure in the language centre. It was also piloted on a 30-student sample from the same context. Piloting helped to enhance the reliability, adequacy and relevance of the instrument, to ensure the clarity of the items and to gauge their difficulty, as well as to establish how much time would be required for the test. Next, the two versions were validated by an expert panel consisting of the aforementioned five teachers, an external EFL PhD graduate, and two PhD students working as ESL teachers.

Because the test consisted of 45 items, the total score was 45 marks. Each correct answer in the three activities was awarded one mark, whereas wrong answers did not gain any marks. In the third activity, which was a text-completion task, each gap was marked as follows: one mark was awarded for a correct answer (i.e., if a suitable verb was chosen from the list and formed in the correct tense) in each gap; half a mark was

deducted if the choice of verb was wrong or the verb tense was incorrect. A quarter of a mark was deducted for any spelling mistake.

After the tests had been marked, the students' scores were subjected to statistical analysis, as will be discussed in Section 3.6. In the next sub-section the instruments and procedures used for the qualitative data collection are described in detail.

3.5.2 Qualitative Data Collection Instruments and Procedures

Using audiotape recording of naturally occurring interaction, as Sacks (1994) points out, is sufficient to provide reliable primary data. Therefore, four digital voice-recorders were used to capture the students' spoken interaction. Moreover, because videotape recording is extremely effective in capturing visual gestures and non-verbal actions and in depicting "the immediate context and meaning of the talk" (Peräkylä 2003, p.169), this tool was also used to record the teacher's verbal and non-verbal behaviour. The students, however, preferred not to be visually recorded. It was possible by using this instrument to collect about 16 hours of primary data in the form of recordings of naturally occurring classroom interaction.

In the previous sections the methods of collecting both types of data have been described. In the following section the procedures used to analyse the collected quantitative and qualitative data are discussed.

3.6 Data Analysis Procedures

Since the quantitative and qualitative data analyses will be described in detail in Chapter 4, they are presented only briefly in this section.

Quantitative data obtained from the tests in the form of test scores were organized into a data set before being analysed using a standard Statistical Package for the Social Sciences (SPSS). The first essential step in the statistical analysis was to examine and summarize the data using descriptive statistics before making any estimates and inferences. Therefore, an exploratory descriptive data analysis (EDDA) was conducted to provide a statistical summary of the quantitative data (the test scores). In the next step, an inferential comparative data analysis (ICDA) was performed to compare the students' pre-test/post-test scores so that the researcher could make judgments about the students' classroom performance as a product of learning the passive voice. If the performance of the students in the experimental groups was found to be higher than that of those in the comparison group, the improvement could then be related to the experimental conditions (the manipulated variable). Therefore, when a statistically significant change was found, it was assumed that this change was a consequence of the intervention. The results of the analysis are reported in Chapter 4.

In the qualitative analysis the raw data from the recordings were first transformed into basic transcripts. After that, repair sequences were transcribed according to CA transcription conventions (Atkinson & Heritage, 1984) and analysed qualitatively in CA terms in order to investigate the students' classroom performance as a process of learning. Such a process can never be represented quantitatively through test scores but can only be revealed qualitatively as the interaction unfolds. The CA-transcribed repair episodes displayed the social action of error treatment during problem-solving exercises and activities.

This qualitative analysis, which actually began with the process of transcribing the raw primary data, was initially performed in terms of the interactional organization types used in CA in order to produce a data-driven analysis which included no prior theoretical assumptions or postulations about any contextual details. Repair episodes started to be revealed at the outset of the analysis process, which examined the sequential accomplishment of actions by referring to the basic units in the construction of turns and how these turns were allocated (Hall, 2007). In other words, the interaction in the sequences was analysed in terms of orderliness, structure and sequence by observing the interactional consequences of different types of RT and their connections to classroom learning processes.

The next step was to classify the repair episodes found by the qualitative CA into different types of RT in accordance with the categories found in Lyster and Mori (2006): recasts, prompts and explicit correction. However, during this undertaking and while the instances of RT were being sequentially analysed, interactional components started to emerge which needed to be incorporated into the model. Therefore, a more elaborate pattern of the sequence organization was needed to analyse the new components. Accordingly, a new model of the repair sequence was devised by the researcher to incorporate and analyse the data obtained in this research and to explain the variety of responses produced in the turns subsequent to the trouble-source turn (a discussion of the model is provided in Chapter 4, Sub-section 4.2.1).

The next section explains the ethical considerations followed in this research.

3.7 Ethical Considerations

According to Greenfield (2002) and Mason (2002), ethical issues should be considered at every stage of the research in order to produce reliable knowledge. Since recordings of the interactions of individuals were used in this research, it was of primary concern to follow certain codes of ethics so as to maintain the participants' dignity and protect their rights. Drawing on BAAL (2006) recommendations for good practice and

BERA (2004) guidelines for educational research, these codes were implemented as follows:

- Approval to apply the intervention and collect data was obtained from the institution where the study was to take place.
- Before the start of the study, an informed consent form was signed by each of the research participants after they had been provided with a reasonable amount of information about the research and after they had been assured that their participation would be voluntary.
- The participants were provided with the full contact details of the researcher.
- The teachers were assured of their right to obtain information about their recorded lessons and accounts of the findings on request.
- The participants were promised that arrangements would be made to safeguard confidentiality and anonymity by notifying them that the interaction would be recorded and used for academic purposes only and that all identifying information would be removed. They were assured that any information about them would be treated with absolute confidentiality.

The risk of harm to participants in qualitative research usually takes the form of possible infringements on participants' privacy rights. Wengraf (2001) argued that a researcher should be able to ensure and distinguish between confidentiality and anonymity when considering ethical issues. To guarantee confidentiality in the present research, the participants were assured that information relating to them would be kept secret, and in order to ensure anonymity they were disguised by referring to them as 'teacher' and 'learner' or 'student'.

One crucial aspect of the intervention which seemed almost unethical was the necessary condition of ignoring learners' errors in the ZRG. Singling out a zero-repair group raised a concern that this procedure would affect the students' general learning and harm them by depriving them of access to knowledge, which is their chief right in an academic setting. However, this seeming threat was controlled for by assuring the students that the teaching during these sessions was intended solely for the purposes of the research, and that all the material covered in these lessons would be repeated to them later after the termination of the intervention sessions.

The next section discusses the ways in which the reliability and validity of this research were maximized.

3.8 Reliability and Validity

Practically speaking it is virtually impossible to produce a piece of research that conforms to all validity and reliability requirements. Nevertheless, it is essential to consider these issues at all stages of any study (Blaxter et al. 2001, p.221) in order to guarantee that the research is well founded and solid. Issues concerning the reliability and validity of the present study are discussed below.

3.8.1 Reliability

In the current thesis, the constructs have been clearly defined and the data collection methods and procedures explained in detail. Moreover, all possible measures were adopted to maximize the reliability of the testing instruments and eliminate potential causes of unsystematic variation. Cronbach's alpha coefficient was calculated for the tests and was found to be acceptable at 0.85. This satisfactory value was a consequence of using reliable standardized tests which were checked and validated, as mentioned above, by a panel of experts and piloted with other learners.

Issues concerning the clarity of the test items, wording, length and complexity of the instructions were all considered before administering the tests proper. Additionally, the test activities were designed to be marked objectively by the teachers and the researcher. All of these precautions ensured the reliability of the quantitative measures.

With regard to the qualitative data, the CA methodology employed in this research fulfils the reliability (i.e., dependability) condition by incorporating the primary data and the analysis in the research corpus so they are accessible to readers and available for scrutiny (Seedhouse 2004, pp.254-5). Furthermore, to determine reliability in the identification of repair sequences and types, a sample of 12% of the transcripts was coded by another researcher, whose coding results were almost identical to those made by the researcher, giving a high inter-coder reliability coefficient of 0.99.

Moreover, in order to guarantee the reliability of the methodology, the present study used more than one source for the data collection and employed two research methods to compensate for any deficiency in reliability.

Thus, all the above precautions ensured the reliability of the study, which is "a necessary precondition of validity" (Cohen et al. 2007, p. 133).

3.8.2 Validity

The term 'validity', when applied to a piece of research, refers to the integrity of the conclusions of the research (Bryman, 2008). In other words, the validity of a study is measured according to the extent to which the methods, approaches and techniques actually measure the issues the study is intended to explore (Bell, 2005).

In the present research, validity was maximized through the use of consistent measuring instruments, the application of suitable statistical procedures for data analysis, the collection of an adequate amount of data and a thorough investigation of the topic under study. This research sought to achieve four types of validity: internal validity, external validity, ecological validity and construct validity.

Internal Validity

Experimental research, as Bryman (2008, p. 35) asserts, tends to have strong internal validity because it "engenders considerable confidence in the robustness and trustworthiness of causal finding." In this research, establishing a comparison group helped to eliminate all potential threats to internal validity, thereby enhancing confidence in the finding that the use of different types of RT did influence students' performance and discounting any prospect of a rival interpretation. The research also attempted to eliminate threats which could jeopardize its internal validity in the areas of history, testing and instrumentation.

With respect to history, careful examination was made of the learners' background and exposure to English outside the classroom in order to control in advance for any noticeable differences among them. As far as testing is concerned, the test-retest effect was reduced by designing similar tests which only differed in choice of lexis. Moreover, to ensure that no variation would occur in administering the tests, both tests were scheduled for the same place and the same time of day. Furthermore, to guard against any threats to instrumentation, each item in the tests allowed for one answer only, thus avoiding the possibility of biased judgements or misunderstanding on the part of the markers. Additionally, test marking was performed by both the researcher and the teachers.

On the other hand, the qualitative data analysis also enhanced the internal validity of the research in terms of three points. Firstly, by adopting an emic perspective and invoking concepts solely in relation to particular extracts, CA research basically ensures internal validity as it demonstrates that "the participants themselves are oriented to such concepts" (Seedhouse 2004, p. 255). Thus, the perspective of the participants, not the analyst, is accessed from the details of the interaction (Freeman, 2007; Markee, 2000; Mori, 2007). Secondly, as previously mentioned, the use of CA methodology helped to test the validity of the quantitative data by providing a moment-by-moment analysis of the interaction and by enabling the researcher to check whether the teachers were implementing the type of RT assigned to them. Thirdly, by carrying out the research

"according to the canons of good practice" (Bryman 2008, p. 377) and by using triangulation, the credibility of the findings was established.

External Validity

External validity pertains to generalizability, or representativeness: that is, whether the findings are likely to have broader applicability in other, similar contexts (Blaxter et al., 2001). In this research, precautions were taken to control for any interfering variables. The tests were reliable and valid and were administered in a normal educational setting, which is the students' classrooms, during their regularly scheduled Structure class and in the presence of their own teachers. This helped to produce a natural routine test effect with no interfering outside factors.

Qualitative studies are often criticized for a lack of generalizability because they are bound to particular contexts; this can pose a threat to external validity. It could be argued that the thick description of the interactional organization provided by the CA methodology used in this study shows how the findings could possibly be transferable and generalizable to other, similar milieus, i.e., similar Saudi female EAP settings. This is because institutional interaction, in general, is normally organized in relation to the institutional goal (Levinson 1992, p. 71). In other words, the study setting does not differ considerably from other EAP programmes in other Saudi female universities. Hence, by explicating the organization of the micro-interaction in that setting, the analysis operates on both micro and macro levels simultaneously (Seedhouse 2004, p. 256), making the qualitative investigation generalizable to similar contexts.

Another potential threat involves the claim that experimental designs are deemed impractical to study interaction owing to the unpredictable nature of the latter. Hauser (2003) claims that they give the impression that speakers are providing distorted and impoverished versions of their natural interactions (p.167). However, it could be argued that the quantitative methodology of the present study is validated because it focused on the learning of a specific L2 structure inside the classroom, rather than on how language is used to communicate. In effect, this study did not employ coding schemes which categorize individual elements or discrete units in the interaction in order to extract quantified data, which might have resulted in abstracting interactional contingencies into a finite set of categories and "reducing interaction to collections of standardized data-points" (ibid., p. 179). Rather, a qualitative analysis was applied to the interaction and the quantitative analysis was used only to measure learners' performance in tests in order to determine how much learning of the passive voice had been produced.

Ecological Validity

According to Bryman (2008), quasi-experimental studies yield compelling results because they have very strong ecological validity, which deals with the applicability of the findings to people's everyday life. This is closely related to external validity because it concerns the degree to which the findings mirror what can be observed in the real world. In this study, the CA methodology was based on recordings of authentic naturally occurring talk, and depicts how participants perform their social actions through talk by developing an emic holistic perspective, which is a unique feature of CA methodology, giving it strong ecological validity. In other words, the current research examines how repair is actually performed in the classroom, rather than how it should be conducted, so any findings it reveals are properties of naturally occurring everyday classroom talk. Mackey (2006, p. 425) asserts that studies which uncover aspects of the interaction-learning relationship "may be used to inform more ecologically valid classroom research." By conducting the intervention in an authentic classroom setting, the ecological validity of the research was enhanced.

Construct Validity

The quantitative and qualitative strategies worked in tandem to enhance the validity of the variable construct in this study, which is the type of RT.

In the quantitative method, the measure was a carefully designed test employed to sample exactly the contents of the materials taught to the learners and was carefully structured to balance the selection of the test activities and items. The activities were varied to avoid redundancy and also to cover some commonly used activities in the students' usual Structure tests. The level of difficulty was also considered in that all the items in the sentences and the cloze passages were of average difficulty. Furthermore, piloting the tests enhanced their validity. As a result, the tests provided an accurate measure of classroom learning of the passive voice. Moreover, designing a zero-repair condition, as noted earlier, enhanced the construct validity of the study because it demonstrated that the change in the dependent variable (i.e., learning outcomes) was attributable to the independent variable (i.e., the use of types of RT).

The use of a qualitative CA methodology, on the other hand, helped to verify the fact that the type of RT always represented the variable construct in the study by examining the interaction generated in each class. By using CA it was possible, as previously mentioned, to check whether the teachers were putting into practice the interaction conditions assigned to them. Therefore, CA was actually a way of enhancing the construct validity of the study.

The above discussion has described in detail all the steps carried out to maximize the reliability and validity of the study and to consolidate the results of the data analysis, which will be presented in Chapter 4.

3.9 Chapter Summary

The aim of this chapter was to discuss the research design and the methodology adopted in the research. The research questions were first presented in Section 3.1. The next section, 3.2, discussed the overall research paradigms and epistemology in order to explicate the quantitative and qualitative aspects of the research. It was explained how these two distinct research approaches were brought together as complementary paradigms that converge to enable the researcher to explore one phenomenon (i.e., the RT) from the perspectives of two methodological approaches. In Section 3.3 the quantitative aspect of the study was introduced, while CA was also introduced as the qualitative aspect. In Section 3.4, it was shown how the use of these two methodologies in tandem in this study reflects the current penchant for methodological eclectism, rather than for a purist approach to research. Next, Section 3.5 elaborated on the data collection methods and procedures. It was explained how, in a quasi-experimental research approach and a conversation analytic approach, two instruments of data collection (tests and audio-/video-tape recording) were used. Section 3.6 stated the ethics of the research and described how the subjects and the research setting were accessed. Finally, the last section, 3.7, discussed the measures that were adopted to enhance the reliability and validity of the research. In the following chapter the analyses of the collected data will be presented and the results will be discussed in order to answer the research questions and to indicate the findings of the study.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION OF RESULTS

In this chapter the quantitative and qualitative data analyses are presented and the results of the analyses are discussed. The chapter is divided into two sections corresponding to the methodological approaches used. The students' pre- and post-test scores were compared in order to determine the rate of the students' language development in their learning of the passive voice. The statistical description and comparisons are presented in Section 4.1. A qualitative analysis of the RT sequences in accordance with CA methodology was also conducted and presented in Section 4.2 in order to explore the classroom learning processes that occurred during the interaction.

4.1 Quantitative Data Analysis

This analysis was performed in order to answer the first research question, which asked, 'Which type of RT is more beneficial to the development of the target language structure, in this case, the passive voice (i.e., classroom learning product)?' The initial task in addressing this question was to explore and summarize the quantitative data using descriptive statistics before making any judgements or drawing any inferences. Quantitative data collected through the experiment tests were organized into a data set and analysed using SPSS. The analysis started by testing two hypotheses:

1) The null hypothesis (H_0):

   There is no relationship between learners' test scores, which represent their language development or linguistic performance (dependent variable), and the teachers' responses to learners' syntactic errors (independent variable).

2) The research (alternative) hypothesis (H_1):

   There is a relationship between learners' test scores and the teachers' responses to their syntactic errors. Therefore, lack of repair negatively affects learners' performance (dependent variable) whereas different types of RT (independent variable) produce various positive effects on learners' test performance, and hence on classroom learning (dependent variable).

This means that quantification was used to test the prediction that students' learning of the passive voice would improve only with the help of the different types of RT, namely, recasts, prompts and explicit correction, which are hypothesized to produce different degrees of classroom learning. It was also hoped that the analysis would demonstrate which type of RT was the most effective in developing knowledge of the target structure (i.e., the passive voice). The research hypothesis expected that a

directional relationship would be found between the two variables. The results of the statistical tests would determine which of the two hypotheses explains any observed differences between the RT types.

A data set was prepared by entering the lists of the pre-test and post-test scores into a database using SPSS. Descriptive analyses were then performed in order to obtain data status reports. The types of RT were set up as levels of the independent variable represented by the group labels. The learners' performance, represented by their scores in the pre-test and post-test, was set up as levels of the dependent variable. Next, the analysis was conducted in two stages: exploratory descriptive data analysis (EDDA) and inferential comparative data analysis (ICDA). Each stage is discussed in detail below.

4.1.1 Exploratory Descriptive Data Analysis (EDDA)

In this stage, the basic features of the data obtained from the pre-test and post-test scores (i.e., levels of the dependent variable) in relation to the groups (i.e., levels of the independent variable) were described by performing an exploratory descriptive statistical analysis which helped to provide simple summaries and reveal the hidden patterns of the data when they were in numerical form. This analysis (i.e., EDDA) was also employed to serve the following purposes:

- Reveal features of the dataset, e.g., symmetry, skew, scatter.
- Test for a normal distribution.
- Determine whether to use parametric or non-parametric tests.

An essential procedure at this stage was to test each group of data for normality distribution, using the Shapiro-Wilk test, which is generally employed when there are fewer than fifty cases in each group. As Table 4.1 shows, this test was run for each group with each level of the dependent variable.

Group	Variable	Sig.
ZRG	Pre-test	.912
	Post-test	.140
CRG	Pre-test	.750
	Post-test	.000
PG	Pre-test	.013
	Post-test	.147
ECG	Pre-test	.323
	Post-test	.292
ERG	Pre-test	.375
	Post-test	.036

Table 4.1: Shapiro-Wilk Test of Normality

The results shown above reveal varied distributions of the data. For the CRG, for example, the significance value for the post-test is less than 0.05, which indicates that the distribution is not normal, whereas the high P-value found for the pre-test, p = .750, indicates normal data. The results for the PG and the ERG also show inconsistent distributions of the data. However, in the ZRG and the ECG only, the results for both tests show a symmetrical distribution of the data, with high P-values of .912 /.140 and .323 / 292 respectively, indicating a Gaussian (i.e., normal) distribution for both tests in both groups. In view of this varied data distribution, the test of normality result was used as a criterion for selecting the inferential data analysis tests in the next stage.

The rest of this section explores summary statistics through EDDA for all the groups, with specific reference to the mean, which is a measure of central tendency, and the standard deviation (STD), which is the most common measure of variability. This is done in order to give a clear picture of the features of the data set, as presented in Table 4.2 below.

Group	Dependent Variable	N	Mean	Std. Dev.
ZRG	Pre-test	36	26.65	7.75
	Post-test	36	26.25	8.88
CRG	Pre-test	40	27.87	8.21
	Post-test	40	38.10	4.09
PG	Pre-test	40	16.52	6.24
	Post-test	40	25.25	4.99
ECG	Pre-test	35	23.27	7.48
	Post-test	35	31.81	6.44
ERG	Pre-test	38	27.49	7.98
	Post-test	38	35.69	4.99

Table 4.2: EDDA for the Pre-test and Post-test in the Five Groups

As shown in the table above, the following results were found for each group:

EDDA for the Zero-repair Group (ZRG)

It is evident from the mean values obtained for this group that there was no improvement at all. The mean value was 26.65 in the pre-test and decreased to 26.25 in the post-test, revealing some decline in the learners' performance. Therefore, it can be concluded that the students' exposure to the intervention condition (i.e., zero repair) actually had a somewhat adverse effect which indicates that the instruction in the

intervention did not provide them with any additional knowledge of the passive voice and may even have confused them with regard to knowledge they already had. This result is also suggested by the values of the STD which increased from 7.75 to 8.88 between the two tests, indicating a higher spread of the scores in the post-test and suggesting varying performance levels among the participants.

EDDA for the Corrective-recast Group (CRG)

In this group, which received corrective recasts, the value of the mean in the post-test (38.10) reflects an immense change and a sharp increase compared to the pre-test mean (27.87) and suggesting a high performance level in the post-test. Therefore, the pos-test mean indicates that the learners' exposure to the intervention resulted in a substantial increase in their knowledge of the passive voice. The values of the STD give further evidence of the improvement in test performance by showing a much lower dispersion level in the post-test (4.09) than in the pre-test (8.21).

EDDA for the Prompt Group (PG)

The values of the mean obtained for this group show that the majority of the students performed better in the post-test than in the pre-test, as it increased from 16.52 to 25.25. With regard to the STD, there was a decrease from 6.24 in the pre-test to 4.99 in the post-test, indicating that more students scored closer to the average in the post-test than in the pre-test.

EDDA for the Explicit-correction Group (ECG)

The mean values for this group show a big difference between the pre-test and the post-test (23.27 and 31.81), indicating an increase in the learners' performance level between the tests. This progress is also suggested by the measure of variability which showed a decrease in the spread of the scores reflected in the values of the STD, which went from 7.48 in the pre-test to 6.44 in the post-test.

EDDA for the Eclectic-repair Group (ERG)

The analysis of the scores obtained for this group, where the teacher employed her normal eclectic correction style to treat syntactic errors, shows a fairly high gain. For example, the mean of the scores in the pre-test was 27.49, increasing to 35.69 in the post-test. Likewise, the STD values reflected a higher performance in the post-test. The STD decreased dramatically from 7.98 to 4.99 suggesting a smaller amount of score variability and less deviation from the mean in the post-test.

Following the above presentation of the EDDA results for each group, the most common measure, which is the mean, has been chosen to be represented in a bar graph

(Figure 4.1) below to help the reader visualize the learners' performance level across the different groups.

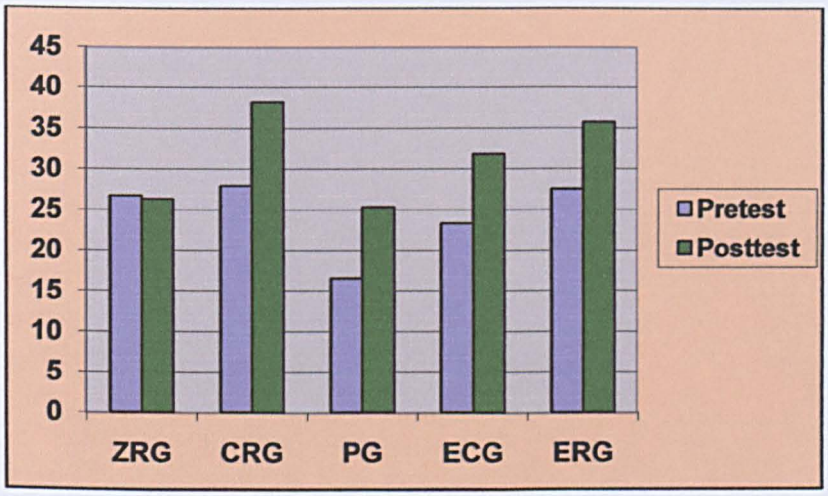

Figure 4.1: Pre-test and Post-test Means in the Different Groups

As shown clearly in the graph above, all the four RT groups improved after the intervention. This improvement is visible in the difference in length between the bars representing the pre-test means and those representing the post-test means. In contrast, the post-test bar for the ZRG is slightly shorter than the pre-test bar, which suggests a minor decline in the learners' performance.

The above analysis addressed the issue of whether the students' performance differed between the pre-test and the post-test in each of the groups. The other important issue to be examined was whether the observed difference in the pre-test/post-test comparison in each group was statistically significant and whether there were statistically significant differences between the study groups. This was accomplished by applying an ICDA, as described in the next sub-section in which the statistical tests used to compare the performance rate in the different groups are discussed. These tests were selected on the basis of the variability of the data distribution tested above by the Shapiro-Wilk test of normality.

4.1.2 Inferential Comparative Data Analysis (ICDA)

The main goal in this stage was to determine the performance rate, first in each group and then between the groups. Only the experimental groups were exposed to the manipulated variable: the three types of RT and the zero repair, whereas in the comparison group (i.e., ERG), no experimental condition was implemented. Thus, by conducting an ICDA, inferences from the data would be used to make judgements regarding the probability that observed differences in the groups and between them were

reliable, or that they might have happened only by chance. Therefore, in order to determine whether there were significant differences among the learners' performances, the pre-test and post-test scores were compared for all the groups. The aim was to test the research hypothesis, which predicted a directional relationship between the variables. Any divergence in the results either within the groups or among them is assumed to be a consequence of the intervention. For this purpose, specific non-parametric statistical tests were chosen according to the results obtained from the Shapiro-Wilk test of normality, which proved that some of the data variables violated the normality assumption underlying the commonly known parametric methods. Table 4.3 presents the non-parametric tests used to perform the subsequent inferential analyses. The two tests and the results obtained from them are described below.

Number of Conditions	Non-parametric Test
Two (related)	Wilcoxon signed-ranks Test (Differences within groups)
Two or more (independent measures)	Kruskal-Wallis Test (Differences between groups)

Table 4.3: Non-parametric Tests Used in ICDA

Differences within Groups: The Wilcoxon Signed-ranks Test

This non-parametric technique assesses the differences between two related variables, e.g., paired members of groups, such as the same people measured before and after an intervention (Siegel & Morgan, 1996). It was selected in order to evaluate the levels of the dependent variable in matched pairs. Table 4.4 below shows how the comparisons were performed.

Variable Levels		N	Mean Rank	Sum of Ranks
ZRG Post-test/Pre-test	Negative ranks Positive ranks Ties	18 18 0	19.83 17.17	357.00 309.00
CRG Post-test/Pre-test	Negative ranks Positive ranks Ties	1 39 0	1.00 21.00	1.00 819.00
PG Post-test/Pre-test	Negative ranks Positive ranks Ties	2 38 0	1.75 21.49	3.50 816.50
ECG Post-test/Pre-test	Negative ranks Positive ranks Ties	1 34 0	2.50 18.46	2.50 627.50
ERG Post-test/Pre-test	Negative ranks Positive ranks Ties	2 36 0	1.50 20.50	3.00 738.00

Table 4.4: The Wilcoxon Signed-ranks Test for the Dependent Variable

Five comparisons were made between the pre-test and post-test scores obtained for each group. The absolute differences between the variables were ranked and the ranks split into three groups:

- The negative ranks group contains those cases for which the value of the second variable (pre-test) exceeds the value of the first variable (post-test). For example, the table shows that the negative ranks value for the CRG is 1 which means that in this group, one student scored higher in the pre-test than in the post-test.
- The positive ranks group contains those cases for which the value of the first variable exceeds the value of the second variable. The positive ranks value for the CRG is 39, which indicates that 39 students scored higher in the post-test than they did in the pre-test.
- The Ties group contains cases for which the two variables are equal. So in the CRG, no student scored the same in both tests.

A thorough inspection of all the negative and positive ranks shows that in all the groups where repair was used more students scored higher in the post-test than in the pre-test. Further, in these four groups, the values of the mean rank and the sum of ranks for the positive category are much higher than those for the negative category. According to Sprent (1993), the sums of ranks for positive and negative categories should be nearly equal if null hypothesis, which assumes that there is no significant difference between the variables, is true. The results for these four groups show that the values for these categories are not equal, which indicates that the null hypothesis is not true and that the groups achieved a statistically significant improvement in the post-test. By contrast, in the ZRG, half of the students' scores declined in the post-test and half increased, as they scored higher than they did in the pre-test. Moreover, the values of the mean rank and the sum of ranks are approximately equal (357.00 and 309.00), which indicates that for this group there is no significant difference between the variables.

The test then proceeded to test the null hypothesis. If the P-value was found to be less than the 0.05 level, then the null hypothesis that the paired variables are not distinct would be rejected in favour of the research hypothesis, which states that the levels of the variables do differ. The test results for the significance value are presented in Table 4.5 below. The P-values for all of the matched pairs (i.e., the post-test/pre-test pairs) in all the groups except the ZRG are statistically significant at the 0.01 level, indicating that the two levels of the dependent variable (i.e., the students' scores in the pre-test and

post-test) in each pair differ significantly and that this difference is due to the independent variable. The ZRG result, however, shows a high P-value, $p = < .706$, indicating no statistically significant difference between the post-test and the pre-test, which means that the students were not affected by the intervention and that their knowledge of the passive voice did not change with instruction alone.

Group (Repair Type)	Matched Pairs	Sig.
ZRG	Post-test / Pre-test	.706
CRG	Post-test / Pre-test	.000
PG	Post-test / Pre-test	.000
ECG	Post-test / Pre-test	.000
ERG	Post-test / Pre-test	.000

Table 4.5: Significance Values for Matched Pairs in Wilcoxon Signed-ranks Test

Considering the above results, it can be argued that the intervention had a statistically significant effect on the groups in which types of RT were employed and that this effect is unlikely to be owing to chance. Hence, the null hypothesis is rejected in favour of the research hypothesis. In other words, the students' knowledge of the passive voice in the RT groups developed in the presence of the different types of RT and not as a result of instruction alone.

With this in mind, the next step was to compare the groups in order to rank them according to their performance rate or degree of improvement. The Kruskal-Wallis test was selected for this purpose.

Differences between Groups: The Kruskal-Wallis Test

Since the Wilcoxon signed-rank test indicated a statistically significant change in each group, it was important to see if these groups differed statistically from each other. For this purpose, the study employed the Kruskal-Wallis test, which is a non-parametric method that performs a comparison between the study groups in terms of the already found statistically significant differences in the gain scores of the groups. Then it ranks the groups using the difference between their mean ranks. Thus, this test was selected to find out if there was a statistically significant difference between the groups and also to rank these groups in terms of their performance.

In order to perform a comparison between the groups, this test needed a new variable to get the difference between the dependent and the independent variables by subtracting the pre-test scores from the post-test scores. The significance result obtained

through running this test is illustrated in Table 4.6 below. It shows that the calculated P-value (0.00) is below 0.01. This means that there is a statistically significant difference between the groups at the 0.01 level and thus clearly indicates that the null hypothesis should be rejected. Therefore, it can be concluded that the differences in the influence of the various types of RT on learners' test performance and classroom learning were found to be statistically significant.

New Computed Variable	Asymp Sig.
Difference Between Post-test and Pre-test	.000

Table 4.6: Significance Result of the Kruskal-Wallis Test

Since the groups were found to be significantly different, it was of central interest to explore further to see where the differences lay. In other words, if there are significant differences between the groups, they can be classified in relation to each other by looking at the mean rank values calculated by the Kruskal-Wallis test to help determine a rank order of their development. Table 4.7 presents the mean rank analysis performed in the Kruskal-Wallis test in the current study.

Group (Repair Type)	New Computed Variable: Mean Difference between Post-test and Pre-test	Mean Rank
ZRG	-0.4	28.92
CRG	10.23	119.66
PG	8.73	110.48
ECG	8.54	108.10
ERG	8.2	103.29

Table 4.7: The Kruskal-Wallis Test - Mean Ranks for the Groups

The Mean Rank lists the average rank for the difference between the post-test and the pre-test in each group. A new variable, as mentioned above, was computed before running the test to obtain this difference (N.B. the mean difference was calculated by subtracting the pre-test mean from the post-test mean; therefore, the higher the value of the mean rank, the greater the development). In Table 4.7 above, the values of the mean rank for the groups are shown to be very similar, with the exception of the ZRG which has a much lower value. This provides an indicator of a statistically significant difference between this group and the rest. The highest mean rank value, 119.66, was

recorded for the CRG, indicating that this group had the highest improvement rate. The next highest achieving groups were the PG and the ECG, with quite similar values of 110.48 and 108.10 respectively, suggesting that the intervention had an almost identical effect on the students in these two groups. The value of the mean rank found for the ERG is 103.29, which indicates that it comes last amongst the four repair groups. Generally speaking, it could be said that all the four RT groups improved to varying degrees, with the recast group improving the most. This answers the first research question.

4.1.3 Summary of the Quantitative Data Analysis Results

The quantitative analysis findings may be summarized in the following points:

- The EDDA showed that the performance of the learners in all the four RT groups improved in the post-test. However, that of the students in the ZRG showed a slight decrease, suggesting a negative outcome as a consequence of the withholding of feedback which could have affected the students' performance (see p. 157 for a discussion).
- The ICDA proved that a directional relationship existed between the variables, which is explained as follows:
    - A statistically significant difference was found between the pre-test and post-test scores for each of the RT groups. This means that there were statistically significant differences in the influence of different types of RT on learners' test performances and classroom learning.
    - The CRG recorded the highest rate of improvement.
    - The PG group was the second highest after the CRG.
    - The ECG came third in improvement.
    - The ERG recorded the lowest rate of improvement among the four RT groups.
    - The ZRG was the only group in which a slight decline in performance was registered.

At this point, it should be made explicit that the quantitative data analysis presented in this section of the chapter examined learning as a product, by analysing learners' performance on the tests and by recording whether their knowledge of the target structure had increased or decreased. Although this analysis helped in the practical

guidance of the research development, it did not examine learning as a process. To do this it was necessary to examine the true nature of the interaction in order to see what really happens in the teacher-learner interaction and in order to portray the interaction-learning relationship. This was the task of the qualitative data analysis, which is described in the following section.

4.2 Qualitative Data Analysis

The results of the quantitative analyses presented in the previous section indicated that lack of repair had a negative effect on test performance, and that different types of RT were beneficial in differing degrees to the learning of a L2 grammatical structure, with corrective recasts being the most effective. Therefore, to uncover the learning processes which may have contributed to these different results, the qualitative analysis described in this section examined the different patterns of interaction generated by each condition of the independent variable, i.e., the types of RT and the zero repair. The ways in which CA tools and methodology were applied to the recorded classroom interaction of the different groups are demonstrated and discussed. The findings obtained from the qualitative data analysis were used to address the second research question and its three sub-questions.

The reason for using CA rather than any other qualitative methodology is that CA has direct relevance to classroom interactional content, in addition to the fact that repair is seen as a method of working within the learners' language systems: that is, it affects their language development (Lyster & Mori, 2006). Moreover, since the quantitative data analysis offered only an etic perspective on the nature of the interaction, there was a need to explore the interaction internally in each group and examine how it unfolded and developed, with the aim of uncovering the emic logic of the organization and the order of the repair phenomenon as a social action (Firth & Wagner, 2007; Markee & Kasper, 2004; Seedhouse, 2004; Walsh, 2006).

Before describing the analysis of the data obtained from each group, it is first necessary to elucidate the principal features of the interaction that took place in the study context in order to gain an overall idea of the nature of the interaction in all the groups. The analysis of the interaction that took place in each group is then presented separately.

4.2.1 Main Interactional Features of the Different Groups

The high level of detail offered by CA made it possible to uncover features of the structure of the talk between the participants in the study. Classroom interaction that took place could generally be described as consisting of interactional sequences of turns between the teacher and individual learners within a context in which the sole focus was

on language form and repair. Because the study was conducted in a form-and-accuracy (FonFs) setting, learners were expected to produce correct and precise patterns of interaction which corresponded to the pedagogical focus on accuracy of language form. Accordingly, if the learner production was inaccurate or not identical to that targeted by the teacher, it became subject to repair, which was performed only in the RT groups according to the research design.

A typical sequence started with the teacher's prompt or initiation followed by the learner's response or production. If this response was linguistically consistent with the pedagogical focus, an optional turn might then be produced by the teacher to confirm the accuracy of the learner's production and give reinforcement. An example of this sequence is contained in Extract 4.1 below.

(4.1)

1	T:	↑yes (.) Shua
2	L7:	the teacher has helped Joe (.) Joe has been helped by the teacher.
3	T:	very good (.) Joe has been helped by the teacher.

Prior to this extract, learners start taking turns to answer items in this exercise in which they should change active sentences to passive sentences. The teacher produces an initiation in Line 1, nominating a learner, L7, to answer an item. L7 responds in Line 2 by transforming the active sentence into a passive form which is linguistically correct and in accordance with the pedagogical focus. Then, in Line 3, the teacher provides reinforcement of L7's response.

Sometimes, this third turn is not produced, yielding a two-part (i.e., initiation-response) sequence organization which is, as Seedhouse (2004) notes, predominant in form-and-accuracy contexts where the lack of repair work "is understood by all parties as signifying that the learner has produced the targeted string of linguistic forms" (p. 107). Although this pattern is normally used only with learners' correct production, it formed all of the sequences in the ZRG because the teacher did not give any response to the students' errors.

On the other hand, when the learner's production is erroneous, the sequence then includes repair, as was apparent in the interaction of the four RT groups, where the teachers responded to learners' errors by employing the different types of RT, which either supplied repair or prompted the learners to self-repair.

In the first case (i.e., supplying repair), it is clear that the third turn which contains the repair is usually the turn that delivers sequence closure. Nevertheless, in this study it

was found that sometimes the learner supplied an optional fourth turn in which she repeated the proffered correction or questioned its validity (the former can be called 'repair-reiteration' and the latter 'repair-interrogation'). This turn represents display of successful uptake which this thesis calls an 'acknowledgement' (A) and suggests adding it to the sequence organization template, as will be shown in the new sequence model devised in this study. Extract 4.2 illustrates display of successful uptake (i.e., acknowledgement) in Line 4.

(4.2)

1	T:	number seven	
2	L6:	last week I was involved (.) with (.) a three-car ? (.) WITH	
3	T:	I was involved in a three-car accident.	
4→	L6:	in a three-car accident.	(Successful Uptake/acknowledgement)
5	T:	yes (.) number eight.	

In the beginning of the activity, from which this extract is taken, the teacher asked the learners to complete the sentences by supplying the past participle form of the verbs to be used as adjectives (stative passive) with suitable prepositions when necessary. The learners then start taking turns to complete the sentences whether or not they are prompted by the teacher. In the extract above, the teacher provides an initiation for each learner by reading the sentence number as shown in Line 1 or sometimes she calls out the learner's name as demonstrated previously in Extract 4.1. Then, L6 who has the turn to answer, responds to the teacher's initiation by producing a correct verb 'involved' but with a wrong preposition which she repeats twice, first adding emphasis and then saying it loudly to make sure the teacher hears it. In response to the learner's error, the teacher conducts repair in the subsequent turn. By repeating the proffered correction, L6 displays successful uptake (i.e., acknowledgement: repair-reiteration) as the arrowed turn illustrates.

In the second case (i.e., prompting learners to self-repair), after the learner produces self-repair (i.e., display of successful uptake of the repair initiation), the teacher might produce an optional fifth turn to confirm the accuracy of the learner's production by supplying reinforcement.

Thus, this elaborate pattern (see Figure 4.2, p. 90) renders a five-turn RT sequence: initiation – production – response (i.e., repair or repair-initiation) – acknowledgement – reinforcement, which is clearly illustrated in Extract 4.2 above. However, it is important to note that a student's production in the second turn of the sequence can be sometimes interpreted as a repair initiation and the teacher's production, in this case, is interpreted

as an answer to a question. This CA interpretation is acceptable only when the learner is either in doubt or is aware of his/her error and refers to this in his/her talk because CA cannot take any preconceptions into account except when they become visible in the orientations of participants in their interactions (Hauser, 2005; Heritage, 1995; Psathas, 1995; ten Have, 2006). If this happens (i.e., a learner initiates other-repair in the same turn which contains the error), his/her turn and the following repair turn would be interpreted as an insertion sequence. This repair trajectory (i.e., self-initiated other-repair), which is common in task-oriented contexts (Seedhouse 2004), did not occur in the data of this research.

It was revealed in the data that sometimes the first turn, which contained the teacher's initiation, was abandoned. This happened when the pedagogical focus was introduced by the teacher at the outset of the lesson or the onset of an activity, and learners started taking turns to produce strings of linguistic forms. An example is supplied in Extract 4.3 below.

(4.3)

1	L4:	actually uh: she didn't say uh: that she (.) ↑she didn't say that (.) she said she was bored.
2	T:	she said she was (.) bored.
3	L5:	but I knew it was a frightening movie for her.
4	T:	< I knew (.) it was a frightening movie (.) for her. >

Prior to this extract, the teacher gives an initiation at the beginning of the activity to introduce the pedagogical focus to the students who are required to take turns to complete sentences with the past participle form of the supplied verbs. As Lines 1 and 3 show, L4 and L5 produce utterances in response to the teacher's initiation at the onset of the activity. The teacher's subsequent turns, in Lines 2 and 4, are only produced to give reinforcement and reproduce the correct linguistic turns for the benefit of the whole class.

Of note also is the fact that two of the four repair trajectories suggested by Schegloff et al. (1977) for the second and third turns after the trouble source represented almost all of the repair sequences in the data. In the CRG, the ECG and the ERG data, other-initiated other-repair was used, whereas in the PG, other-initiated self-repair was used when the teacher prompted learners to self-correct. By contrast, self-initiated self-repair occurred only on one occasion while self-initiated other-repair did not occur at all.

RT types were used in the data to repair linguistic, phonological and procedural errors and to deal with trouble caused by mishearing. However, the focus in this study is

only on repair sequences that treat syntactic errors using one of the types of RT discussed earlier.

In the course of analysing the interaction in the different groups, it became clear that repair sequences could not be appropriately described using Sinclair and Coulthard's (1975) three-turn IRF (initiation-response-feedback) cycle, which they claim to be the predominant sequence organization of classroom interaction. This etic top-down realization of the sequence organization (see Seedhouse, 2004) could not provide an emic description of the internal organizations and multi-layered intricacies of the learning processes on which this qualitative analysis was concentrated. Additionally, the three-part cycle was not practically useful for analysing most of the data in this study because the third turn, which follows the trouble-source turn, comes in a range of different productions which need to be clearly defined and described from an emic perspective, instead of being encapsulated in the broad term 'feedback'. Moreover, as discussed in Chapter 3, Sub-section 3.5.1 and Section 3.6 above, while analysing the repair sequences, different interactional turns started to emerge. The analysis revealed that repair sequences consisted of more than three turns when they incorporated a learner's acknowledgement or a teacher's reinforcement, or both.

For these reasons and with the help of the CA methodological approach, a model representing a new pattern for sequence organization in form-and-accuracy (i.e., FonFs) contexts was devised to cover all of the data and provide a more sophisticated understanding of them by accommodating the range of alternative responses appearing in the third turn and the resultant subsequent turns, which yielded a four- or five-turn construction of repair sequences depending on which type of RT was being used. This model is illustrated in Figure 4.2 below. It is followed by a brief discussion of the repair sequence organization. The different turns were explained in detail above.

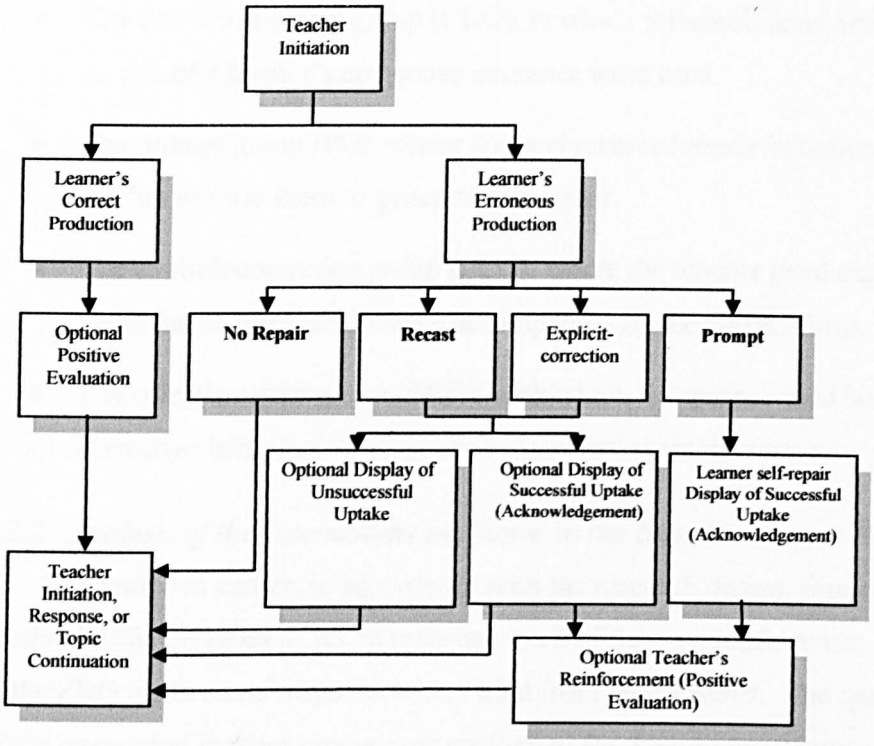

Figure 4.2 Repair Sequence Organization in FonFs/Form-and-accuracy Contexts

The flow chart above shows how the sequence commences with the teacher's initiation followed by the learner's production. If this production is correct, it might receive an optional positive evaluation (reinforcement) from the teacher. However, if it is erroneous, the teacher's response to the error in the third turn, if supplied, can take one of two forms: a complete repair action (i.e., other-initiated other-repair) using a recast or explicit correction, or just an initiation of the repair using a prompt (i.e., other-initiation). The former form might be followed by an optional learner's acknowledgement (i.e., display of successful uptake) and the latter form is followed by learner self-repair, which is also a display of successful uptake of the repair initiation (i.e., acknowledgement), but is not optional here. Then both cases can be followed by an optional turn consisting of a teacher's reinforcement. All of these might be followed by one of three interactional possibilities: a) a teacher's next initiation, which also might appear after the learner's erroneous production when the teacher ignores it, b) a teacher's response to an enquiry, or c) topic continuation.

It will be helpful at this point to remind the reader of the five different groups and their main interactional focus before beginning to analyse the interaction that occurred in each of them.

- The zero-repair group (ZRG), where learners' errors were never treated.

- The corrective-recast group (CRG), in which reformulations or rephrasing of all or part of a learner's erroneous utterance were used.
- The prompt group (PG), where learners received repair initiations from their teacher to push them to generate self-repair.
- The explicit-correction group (ECG), where the teacher gave explicit signals about the ill-formed utterance accompanied by the correct form.
- The eclectic-repair group (ERG), with which the teacher used her normal corrective behaviour in response to learners' syntactic errors.

4.2.2 Analysis of the Interactions as Shown in the Data Relating to Each Group

As mentioned earlier, in accordance with the research design, four of the groups received different types of RT in response to all of their syntactic errors. Only students in the ZRG received no response of any kind from their teacher. The qualitative analysis of the interaction in these groups was performed for the purpose of answering the second research question, which asked, 'How do different types of RT promote opportunities for language development of the target language structure (i.e., classroom learning processes)?' The answer to this question was found by addressing the following three sub-questions:

a) How do types of RT differ in terms of their sequential organization and use in a form-and-accuracy (i.e., FonFs) context?

b) How do learners display uptake of the types of RT?

c) What are the interactional features produced by different types of RT?

The data analysis for each group is organized into three sections addressing each of these three sub-questions, as follows: a) the organization of repair sequences, b) learner uptake of repair and c) the interactional features produced by the RT used in each group. However, before doing this, it is necessary to relate the learning outcome represented by the mean gain obtained for each group to the volume of each type of RT used and the percentage of successful uptake. Table 4.8 in the following page gives a brief and clear picture of this information, which makes possible a comparison of the groups before the data relating to each group are analysed separately in the following sub-sections.

The Study Groups	Mean Gain (Development)	Recasts	Successful Uptake	Prompts	Successful Uptake	Explicit Correction	Successful Uptake
ZRG	- 0.4	0	0	0	0	0	0
CRG	10.23	93	13 %				
PG	8.73			183	84 %		
ECG	8.54					40	47 %
ERG	8.2	39	18 %	46	76 %	7	14 %

Table 4.8: Mean Gain, Number of Repairs and Percentage of Successful Uptake in the Groups

The table shows that successful uptake followed 13% of the total number of recasts in the CRG and 18% in the ERG. Eighty-four per cent of the prompts in the PG and 76% of those in the ERG were followed by immediate successful uptake (i.e., self-repair appeared in the next turn after the other-initiation turn). Successful uptake of explicit correction appeared in only 47% of the total number of instances in the ECG and in only 14% in the ERG. Comparing these percentages with the mean gain in each group, it can be seen that although the PG has the lion's share of repair volume and the highest amount of successful uptake compared with the other groups, it did not outperform the CRG in test performance or with respect to the promotion of the learning of the passive voice. Moreover, despite the fact that the ERG had a higher percentage of successful uptake of recasts (18%) than the CRG (13%), it also demonstrated the lowest degree of improvement, as seen in the mean gain (8.2). Furthermore, the CRG had the lowest percentage of successful uptake, but the highest mean gain (10.23).

On the whole, three conclusions can be drawn from the information presented in this table. Firstly, prompts encourage far more display of uptake than other types of RT. This finding could basically be attributed to the organization of turns in prompts, which give the turn back to the learners to perform self-repair and hence display successful uptake. Secondly, in the context of the present study, prompts were more frequently used than other RT types, yet they lead to less learning than recasts. This could be attributed to the fact that recasts provide the learners with immediate teacher modeling of the correct form (Loweon & Philp, 2006), whereas with prompts learners are constantly struggling to self-correct, probably over several turns. Thirdly, recasts promote less display of uptake but more learning than other types of RT. This may be attributed to the fact that in addition to their numerous advantages (see Chapter 2, Sub-section 2.2.4), their corrective intent is enhanced in a form-and-accuracy (i.e., FonFs) context. It has been argued that recasts help learners to focus on the form (Doughty, 2001; Farrokhi, 2003) and are highly effective in producing accuracy when they are noticed (Lightbown & Spada, 2006; Philp, 2003; Trofimovich et al., 2007). Moreover, it

could be said that recasts, unlike prompts and explicit correction, are not accompanied by any form of negative evaluation or contradiction, both of which can influence the efficacy of the RT.

In summary, it can be concluded that the number of repairs and the display of successful uptake do not necessarily affect language development.

The qualitative analyses of the different interactional groups in the next sub-sections follow the same order as the quantitative analyses which appeared in Sub-section 4.1.2.

Analysis of the ZRG Data

Because the experimental focus in this group was to disregard any syntactic error and withhold correction, no RT was employed. Consequently, no repair instances occurred in the interaction, which consisted of the process of exchanging turns between learners and teacher. The analysis of the data obtained from this group showed that the learners made 61 grammatical errors, only six of which were corrected, and by other learners, not by the teacher. The average rate of occurrence of these errors was about ten errors per lesson and four errors per activity. The goal behind applying this condition was to find out how interaction is developed when errors are tolerated and to describe the effects of this practice on students' language development and learning opportunities (see Guénette, 2007). The outcome of using this error-indifferent method also sheds light on the results obtained for the other types of RT used with the other groups.

Sequence Organization in the ZRG

As in other form-and-accuracy contexts, the interaction in this group was oriented to the production of correct strings of linguistic forms by the learners. Nevertheless, in the absence of the teacher's response to errors, the organization of all the sequences was a rigid two-turn pattern consisting of a teacher initiation and a learner production. As mentioned above, this might be an ordinary phenomenon in language classrooms if the learner's utterance is well formed and not in need of repair (Seedhouse, 2004). However, this pattern was used in this group with both correct and incorrect utterances, so the interaction consisted of consecutive invariable cycles of this pattern and, as a result appeared mechanical and monotonous. In short, the sequence organization was unusual in the lack of a response when there was an error that entailed correction. An example is provided in Extract 4.4.

(4.4)

1	T:	Rawan.
2	L2:	uh the teacher uh helped me (3.5) I was been helped by the teacher.
3	T:	next.

4	L3:	the teacher helped them. (.) we (.) we were (.) we were help (.) by the teacher.
5	T:	next.

In this extract, the learners are taking turns to change active sentences to passive sentences. In Line 1, the teacher asks L2 to do one sentence by calling her name and in Line 3 she just prompts L3 to do the next sentence. As Lines 2 and 4 demonstrate, neither learner is able to produce the correct passive sentences. Following the research instructions for the ZRG, the teacher does not respond to the errors and merely acts as a director by selecting learners to participate in the next item of the activity.

Owing to the absence of repair, the three other subsequent turns in the five-turn RT sequence pattern (see p. 87) did not appear in the sequential organization of the interaction. Therefore, learners' participation in the interaction consisted solely in the production of linguistic strings without attending to their accuracy. An interesting finding concerning this situation was that the learners, in contrast to other learners in the other groups, were reluctant to initiate other-repair or conduct peer-repair, and when they did (six instances only of peer-repair), it was done timidly in a low voice or as a result of teacher-initiated learner-repair (Seedhouse, 2004), when a learner was delegated by the teacher to respond to another learner's error (one instance only). These two cases are illustrated in Extracts 4.5 and 4.6 respectively.

(4.5)

1	L5:	uh: the accident (.) was saw (.) by people (.) by many people.
2	L6:	°was seen °
3	T:	number eight.

(4.6)

1	T:	ok (.) so number six,
2	L4: →	the first (1.0) the first computer [invite] (3.2)
3	T:	next girl please (.) ↓ can you ((looking at L5 and nodding)) (1.4) ↑ Ala (.) number six
4	L5:	when was the first computer (.) in (.) ven (.) ted.

In Extract 4.5, L5 produces an incorrect form of the main verb when she is converting an active sentence to the passive voice. Another learner, L6, provides peer-repair in the next turn, although in a very low voice.

In Extract 4.6, the teacher in Line 1 prompts L4 to change the sixth item in the exercise which is a question from active to passive voice. L4, at the arrowed turn, makes an unsuccessful endeavour to form a question in the passive voice and terminates her utterance by a long pause. The teacher responds to the delay in the subsequent turn

by selecting L5 to perform peer-repair. In Line 4, L5 succeeds in producing the accurate string of linguistic forms and completes the other-initiated other-repair. Thus, by initiating repair, the teacher seems either to have forgotten to apply the intervention instructions or she has not perceived her utterance as feedback since she has not supplied correction of the erroneous item herself. Whatever the explanation, this is an example of the few occasions when the teachers seemed unable to follow the instructions precisely. It should be noted here that this is also an example of how the qualitative analysis was used to cross-check the validity of the quantitative findings (see Chapter 3, Section 3.4).

Zero Repair and Learning Processes

It is to be expected that no uptake would be displayed by the learners in this group, since they received no response to their errors. This cannot in itself be considered as an indication of a lack of learning, however (see Ammar, 2008; Braidi, 2002; Gass, 2003; Mackey & Philp, 1998; Oliver, 2000). Rather, conclusive evidence for this is found in the result of the quantitative analysis, which showed that there was no significant improvement in test performance for this group, with a small mean rank of 28.92 and a negative value of the mean gain (-0.4). This implies that absence of repair was unfavourable in this context. It is essential to note that this result could be interpreted as a consequence of the change from the normal classroom routine where the teacher usually provides feedback. However, the drop in scores could be better explained by noting that the withholding of feedback would normally be interpreted as indicative that the student's prior contribution was acceptable (see p. 157). Seedhouse (2004) states that the lack of repair work "is understood by all parties as signifying that the learner has produced the targeted string of linguistic forms" (p. 107). Accordingly, lack of repair work in the ZRG could have made learners' contributions seem acceptable even though they contained errors.

Additionally, the mechanical nature of the interaction prevented any opportunity for potential interactional processes to emerge, possibly because the learners found this interaction strange or because they assumed that lack of repair is an indication that their utterances were acceptable; hence they were reluctant to engage in the other-repair or peer-repair typical of this setting and which was found in the other repair groups. Thus, the fluid and dynamic properties of classroom interaction seemed to be suspended in this unusual context and this affected classroom learning negatively.

Analysis of the CRG Data

The analysis of the interaction in this group revealed 93 instances of repair in the form of corrective recasts that were used to treat errors of syntax. These recasts were

performed at an average rate of approximately 15 recasts per lesson and three recasts per activity. There were only a very few instances during the whole span of the interaction when the teacher did not adhere to the experimental instructions, using three prompts and one instance of explicit correction. Since the total number of these instances is relatively small it does not affect the validity of the study.

Sequence Organization in the CRG

The sequence organization used for recasts in this group was a five-turn construction where the first, fourth and fifth turns were optional (see Sub-section 4.2.1). Therefore, most of the repair sequences consisted of two or three turns. A close examination of the repair sequences shows that a recast in the form of other-initiated other-repair is used in the turn immediately following the trouble-source turn. The recasts found in all of the data were full or partial reformulations of the learners' non-target output with the following characteristics:

1. They are all isolated declarative recasts (Lyster, 1998b) except for two instances in which the reformulation is accompanied by a move of agreement.
2. They do not perform any other social action apart from correcting the error.
3. They are performed in only one turn, which contains a full or partial repetition of the utterance with rectification of the repairable item.
4. They are performed by only one party: i.e., the teacher, a learner, or a group of learners collectively.
5. They may or may not be followed by an uptake-display turn.

An example of the repair sequences of corrective recasts demonstrating these characteristics is given below in Extract 4.7.

(4.7)

1	T:	((pointing at L8)) number eight
2	L8:	when I arrived at the airport yes- (.) yesterday (.) I met by my cousin and a couple of her
3		friends.
4	T:	when I arrived at the airport yesterday (.) I was met by my cousin and a couple of her
5		frien:ds (.) ↓ number <u>ni:ne.</u>

In the activity, from which this extract is taken, the learners are taking turns to fill blanks by supplying active or passive forms of verbs in sentences of different tenses. In Line 1, the teacher prompts L8 to answer because it is her turn and L8, in Line 2, produces an incorrect passive verb form when she misses out the auxiliary verb. As a

result, a recast is produced by the teacher in the next turn; she initiates and performs repair in the same turn by repeating the learner's whole utterance and repairing the error. The recast given by the teacher does not expand on L8's utterance; that is, it does not include any other move apart from the recast, so it is an isolated recast (Han & Kim, 2008) which does not perform any other action apart from correcting the error. This recast assumes the form of a statement, not a question; therefore, it is a declarative recast (Lyster, 1998b). It is also a full repetition of L8's utterance with rectification of the repairable item performed by the teacher and is not followed by an uptake-display turn.

As noted above, a recast can also be partial in that it contains a reformulation of only the problematic part of the learner's utterance, as Extract 4.8 demonstrates.

(4.8)

1	T:	number four.
2	L5:	my boss is pleased of my work.
3	T:	pleased (.) <u>with</u> my work (1.2) ↑ number five

In this activity, L5 is supposed to use a suitable preposition with the participial adjective 'pleased', which takes a passive form but is not the passive voice (see p. 60 for definition of this passive form). However, she uses 'of' which is not a concordant preposition. The teacher then performs other-initiated other-repair to treat the trouble using a partial recast in Line 3 by repeating the erroneous part and adding emphasis. The sequence is then ended by the teacher, who initiates another sequence in the same repair turn.

The analysis revealed that most of the sequences in the data followed a recurrent turn-taking structure. If learners produced errors, the teacher gave recasts in the following turns. However, if the learners' production was consistent with the pedagogical focus, the teacher opted for providing reinforcement by repeating the correct linguistic string to confirm their contribution. This structured pattern reflects the teacher's interactional role, which is characterized by a tight control of the turn-taking system (Ellis, 1994). Extract 4.9, which contains most of the sequence patterns used in the CRG, illustrates this tightly controlled pattern. It includes four repetitions of correct learners' production and one recast.

(4.9)

1	L1:	I saw the most interesting movie last night.	
2	T:	next (.) I saw the most in (.) <u>interesting</u> movie last night	(Repetition)
3	L2:	it was so exciting.	
4	T:	it was so exciting.	(Repetition)

5→	L3:	I wanted the movie (.) movie to continue forever (.) uh: but uh my friends was	
6		scared actually.	
7→	T:	I wanted the movie (.) but my friend was (.) sca:red.	(Recast)
8	L4:	actually uh: she didn't say uh: that she (.)↑she didn't say that (.) she said she was bored.	
9	T:	she said she was (.) bored.	(Repetition)
10	L5:	but I knew it was a frightening movie for her.	
11	T:	< I knew (.) it was a frightening movie (.) for her. >	(Repetition)

In this activity, the learners are filling in blanks orally with either past or present participle forms. The turns are exchanged between the five learners and the teacher in a very structured manner. In each learner's turn a string of linguistic forms is produced (Lines 1, 3, 5, 8 and 10) and then the validity of these strings is confirmed by the teacher's subsequent turns in Lines 2, 4, 9 and 11. However, at the arrowed turn in Line 5, L3 makes an error by using a plural noun which does not agree with the singular verb. In response, the teacher, at the second arrowed turn, conducts other-initiated other-repair in the form of an isolated declarative recast, incorporating it into the homogeneously ordered sequence organization. The teacher's repetitions of correct learners' utterances might seem interesting and strange; however, her behaviour is normal practice for teachers in this context, designed to ensure that the whole class receives the correct production, taking into account the inevitable presence of noise associated with the large numbers of students in these classrooms.

Although corrective recasts are, in essence, embedded correction (Jefferson, 1987), they can be highly beneficial when they are noticed (Lightbown & Spada, 2006; Philp, 2003; Schmidt, 2001; Sheen, 2004, 2006). An important question here is how learners can know they have made an error if the teacher repeats the correct utterances and reformulates their erroneous ones. It could be argued that the teacher's repetitions of the correct utterances enhance the corrective intent of the recasts provided for erroneous utterances. Put differently, the basic logic behind the repair sequences in the CRG interaction is that explicit positive or negative evaluation is not provided, but if the teacher's production does not include any change to the learner's utterance, then positive evaluation is implied, as in Lines 2, 4, 9 and 11 in Extract 4.9 above. However, when her production does include a change (i.e., reformulation), then the implication is that there is an error in the preceding turn, which is corrected in the current turn by the teacher, as in Line 7 in the same extract. In this fashion, recasts were made salient and noticeable and consequently their corrective element was consolidated.

This method of operationalizing recasts contradicts any previous claims that it is generally difficult for learners to notice recasts. In other words, the onus here was on the learners to detect the corrective intent and consequently notice the recasts. Moreover, all of the corrective recasts used in this context were isolated declarative recasts (Lyster, 1998b), which were found by Han and Kim (2008) to be easily perceived by learners as corrective. Additionally, recasts were easily noticeable because they are regularly used in this type of context, where more attention is directed to the language form. This is consistent with the findings of Ellis et al. (2001) that adult ESL learners responded with a high rate of uptake after recasts because they paid more attention to them.

The analysis also revealed that the tight control exerted over the speech exchange system rendered the interaction mechanistic and may have in some cases resulted in depriving participants of their right to extend the repair sequence in order to obtain clarification concerning the linguistic forms at hand, as can be seen in Extract 4.10 below.

(4.10)

1	L10:	uh: when I went downtown (.) I got lost.
2	T:	when I went downtown (.) I got lost.
3→	L11:	got?
4→	T:	< when I went downtown (.) I got (.) lost.>
5	L12:	last night I was very tired.
6	T:	last night I was very tired.

In this extract the learners are orally correcting wrong verb forms in sentences from an error-correction activity. The organization of the interaction appears in structured sequences represented by the turns exchanged between the participants. After each learner's production turn in Lines 1, 3 and 5, the teacher produces a turn which is a mere repetition of the learner's correct string of linguistic forms to confirm its accuracy as in Lines 2 and 6. However, it should be noted that the teacher's repetition at the arrowed turn in Line 4 is a second pair part which should supply clarification to L11's enquiry in the first pair part at the arrowed turn in Line 3 because this adjacency pair is a question-answer pair containing a clarification request produced by L11 about the preceding linguistic string. Instead of supplying clarification, the teacher mechanistically repeats her utterance from her previous turn verbatim. The teacher then continues the pattern of repeating learners' correct utterances as the next learner, L12, produces a new string of linguistic forms in Line 5 and gets the teacher's confirmation in Line 6. With regard to

norms of preference, it is clear that the teacher's production in Line 4 is not the preferred utterance required by L11, who expects to receive some explanation which will resolve her uncertainty about the verb 'got'. Consequently she is deprived of her interactional right to acquire more knowledge. One possible explanation for the teacher's strange action is that as a result of her determination to repeat the learners' correct utterances, she automatically reiterates the utterance regardless of preference norms.

With regard to who is the agent of the repair action, it is usually the teacher who conducts repair. However, a unique and interesting finding of this thesis is that in 17 instances of repair found in the data (i.e., 18% of the total number of recasts), an unusual type of repair was used. Learners gave recasts to correct other learners' errors while the role of the teacher was only to confirm their production by repeating the corrective recast in the next turn. This type of repair, which has not previously been reported as common in other contexts, is in fact typical of Saudi female university contexts, as will also be seen in the analyses of the other repair groups. However, this does not mean that the interaction in the present data is particularly context-specific, even though it does possess its own unusual features. Extract 4.11 illustrates how a partial recast is given in overlap by another learner.

(4.11)

1	T:	number four?
2	L3:	uh: the secretary is going to fax the letter (.) the letters is [going to] be faxed (.) by the
3		secretary
4→	L4:	°[are (.) are]°
5	T:	the letters are going to be <u>faxed</u> by the secretary (.) number five.

In this extract, learners are changing sentences from active to passive voice. After being prompted by the teacher, L3 makes an error in the subject-verb agreement 'letters is' in Line 2. Before she finishes her utterance, L4 conducts other-initiated other-repair in a partially overlapping recast, supplying the correct verb. The teacher in the next turn validates L4's contribution and produces a confirming corrective recast in which she repeats the whole correct linguistic string.

Moreover, there were other instances of recasts given collectively by a group of learners. These instances, along with single-learner peer-repair, provide an interesting finding about the interaction in this group, showing that the teacher's role in this case was often to produce an approved version of the string of linguistic forms for the benefit of the whole class. Extract 4.12 is an example of this type of collective peer-repair.

(4.12)

1	L6:	uh: the security =
2	L7:	= the secretary.
3	L6:	the secretary (.) uh: (.) uh being typed (.) the report.
4 →	LL:	IS TYPING!
5 →	T:	the secretary IS TYPING the report.

The repair episode in this extract illustrates how peer-repair is conducted in this form-and-accuracy context. L6 is starting to convert a sentence from the passive to the active voice in Line 1. Nevertheless, when she misreads the word 'secretary', she receives a latching peer-repair in the form of a recast in Line 2 by another learner, L7. L6 immediately displays uptake of the peer-repair in her next turn by repeating the corrected item, but she makes another error in the rest of the utterance, using an incorrect verb construction. Again peer-repair is conducted at the first arrowed turn to treat the trouble but this time the performing agent is a group of learners producing the correction collectively. The teacher's contribution is clearly suspended till the end of the sequence, when it takes the form of a reiteration of the whole correct linguistic string with an emphasis on the corrected item to validate the learners' contribution and provide the targeted version for the benefit of the whole class.

In contrast to the large number of instances of peer-initiated peer-repair, there is only one occasion recorded in the CRG data on which a learner was chosen by the teacher to perform delegated-correction (Hauser 2003, p. 98), or teacher-initiated peer-repair (Seedhouse 2004, p. 147). This repair strategy seems to be acceptable and effective in the study context as a means of promoting cooperation between learners as well as encouraging them to get into the habit of reflecting on language form. An example of this is shown in Extract 4.13.

(4.13)

1	L2:	uh: this pen is belong to me (3.1) the pen uh: is belong (.) uh: put [ai en dɜi:]
2 →	T:	this? ((points at L3))
3	L3:	the pen belongs.
4	T:	this pen (.) belongs to me.

This extract is taken from an error-analysis activity in which learners were supposed to locate and correct errors in sentences. As the turn in Line 1 demonstrates, L2 can neither locate nor correct the error in the sentence 'this pen is belong to me' from the error-analysis task. She makes an error as she suggests adding the '-ing' ending to the verb 'belong'. The teacher, in the subsequent arrowed turn, gives a

prompt in the form of elicitation and non-verbally selects L3 to perform delegated peer-repair. Of interest is the teacher's use of a type of RT which was not assigned to this group, although, as mentioned above, this was only a rare occurrence. It is important to note that, by providing a prompt and delegating a learner to supply the repair, the repair action is transformed from recasting to explicit correction. That is, the teacher's prompt, in this case, acts as the contradiction part of the explicit correction, while L3's recast acts as the replacement part. This provides an example of how the intended RT type could sometimes change to another, unintended type (see Seedhouse's discussion on the 'split personality' of the research construct in Chapter 3, Section 3.4, p. 51). That is, it represents the teachers' occasional violation of the intervention conditions, as they were not able to use distinct repair types all the time. Occasionally, the teacher might employ a type of repair different from the one assigned to her, as evident in the above extract when, instead of using a recast, she employs a prompt, which also changes to explicit correction by virtue of its sequential organization.

Despite the minimized role of the teacher in the sequences that contain peer-repair, it is important to mention that this situation applies only when the peer-repair is in line with that envisaged by the teacher and corresponds to the pedagogical focus of the lesson. If a learner or a group of learners attempt repair but instead produce another repairable item, the teacher's role in the next turn will be maximized, and she will be performing a different social action. Extract 4.14 illustrates this point.

(4.14)

1	T:	okay (.) number three?
2	L2:	you don't supposed to [take] to (.) to Alan about (.) uh: the surprise (.) uh: (.) you
3		aren't supposed to [take] to Alan about the surprise.
4	L3:	you weren't
5 →	T:	you aren't supposed (.) you aren't supposed to talk to Alan about the surprise, ↑why do
6		you want to change it to the past tense?

The teacher in Line 1 prompts L2 to do the third sentences in an error-analysis activity. When L2 tries to correct a mistake in a sentence, she produces the targeted correction but makes a pronunciation error in the word 'talk' in Line 2. In the next turn, L3 attempts to repair what she misconceives as an error and produces a recast which is in itself erroneous. The repair sequence could be completed at this turn if L3's contribution were not faulty. However, the actual repair action takes place at the arrowed turn, in Lines 5 and 6, when the teacher conducts a dual-function repair in that it is oriented to the two preceding learners' turns and treats two trouble sources in two

turns by two speakers: i.e., L2's phonological error in Line 2 as well as L3's grammatical error in Line 4. By this means, the authoritative role of the teacher is not only recovered but also maximized in this turn as she regains the floor and can once again be seen performing her institutional role of teacher. It is worth noting here that the teacher's response at the arrowed turn starts as a recast; yet, by including the metalinguistic comment at the end of her utterance, she changes the repair action to explicit correction. This is another example of the teachers' violation of the intervention conditions and of the transformation of the RT from one type to another. This case is also exemplified when negative evaluation is produced in a preceding turn, making the recast function as the replacement part of explicit correction. For example, in Extract 4.15 below, the teacher's use of the negative token 'No' is a negative evaluation directed at L3's production: 'the plane was supposed'. In such a case, it could be said that the repair has changed from a recast to explicit correction since it contains a contradiction part (i.e., the negative evaluation) and a replacement part in a subsequent turn, as suggested by the definition of explicit correction.

(4.15)

1	T:	number three.
2	L2:	people expect the plane to arrive at six o'clock (.) the plane sup (.) uh: the plane is
3		supposed to arrive at six o'clock.
4	T:	the plane is (.) supposed to arrive at six o'clock.=
5→	L3:	=was (.) (should be) WAS supposed to.
6→	T:	NO.
7	L4:	people expect the plane.
8	T:	the plane is supposed to arrive at six.

In the activity from which this extract is taken, the learners are producing sentences with 'be supposed to' from given active sentences. The teacher, in Line 1, prompts L2 to answer the third item in the activity and confirms L2's correct production in Line 2 by repeating it in Line 4. However, L3, at the first arrowed turn, does not agree with the tense of the auxiliary verb in L2's production or with the teacher's confirmation in the preceding turns. Therefore, she suggests using 'was' in place of 'is', providing an alternative linguistic string which thus contains an error. The teacher in the next arrowed turn then produces a direct negative word 'NO' and puts off the recast until the last turn in Line 8 after L4's comment. By doing this, the teacher is actually performing explicit correction in two turns. Thus, because of the presence of the negative word in Line 6, the recast in Line 8 is considered as the second part of the explicit correction.

This is also another example of the fact that a clear distinction between the different types of RT was not always maintained.

Learner Uptake of Repair in the CRG

An in-depth analysis of the organization of repair sequences revealed the development of intersubjectivity in the interaction. That is, through normative reference to interactional organization, the participants cooperated to display the meaning of their social actions to each other and to interpret the social actions of one another, as well as to treat trouble that hindered communication (Mori, 2004; Nakamura, 2008). This finding is consistent with Wong's (2000) contention that other-repair initiatives form a resource in service of the co-management of talk and the co-construction of intersubjectivity. In fact, displaying uptake of repair is a proof of the development of intersubjectivity in the CRG interaction.

Earlier in this thesis it was argued that, in the case of recasts and explicit correction, display of uptake could be realized by a fourth turn, when the learner repeats the correction given in the preceding turn, that could be called 'acknowledgement' and that could be added to the sequence template. Uptake in the CRG was manifested in learners' responses to recasts as a next-turn proof procedure (Sacks et al., 1974) or understanding display mechanism (Schegloff, 1991). However, as found in most of the repair episodes in the data, the absence of a response implies neither lack of noticing (Mackey, 2006; Mackey & Philp, 1998) nor lack of learning (Braidi, 2002; Gass, 2003). In fact, this absence could be attributed to an interactional possibility identified by Ammar (2008), which indicates that no interactional space was provided to the error-producer to display uptake owing to the opening of a new sequence or initiating negotiation of the proposed recast.

Following Mackey and Philp's (1998) taxonomy of uptake categories, display of successful uptake is found in this thesis when a learner repeats a recast or responds with an enquiry about the proposed correction. On the other hand, if the learner repeats her error, this is considered to be a display of unsuccessful uptake. Extract 4.16 is an example of successful uptake which is the repetition of the recast and Extract 4.17 demonstrates successful uptake in the form of an enquiry about the recast, whereas Extract 4.18 illustrates unsuccessful uptake.

(4.16)

1	T:	acquaint.
2→	L13:	are you acquaint (.) acquaint in (.) in Sue's (1.2) Sue's

3	T:	are you acquainted (.) with Sue's roommate =
4	L13:	= are you acquainted with Sue's roommate.

In this activity, the students are taking turns to complete sentences using the past participle form of the given verbs and adding prepositions where necessary. At the arrowed turn, L13 cannot supply a correct preposition that concords with the adjective (stative passive). This error is treated in the teacher's subsequent turn, Line 3, where she supplies a recast which is latched by L13's display of successful uptake in Line 3 as she repeats the teacher's utterance (cf. repair-reiteration). This display of uptake is a proof of noticing, as noted by Ellis et al. (2001), Loewen (2002, 2004) and Mackey (1999), among others.

(4.17)

1	T:	fifteen (6.1) yes.
2	L15:	I will be accepted by Shoreline Community College (3.0) I am (.) I am going (.) I am
3		going to be accepted (.) by Shoreline Community College.
4→	T:	I've been accepted (.) by Shoreline Community College.
5→	L15:	I am going,
6	T:	I have been accepted (.) ↓number sixteen
7→	L15:	Miss (.)↑why I have been accepted?
8	T:	beca::use (.) you won't (.) you don't know ? (.) how can you know (.) whether you're
9		going to a particular college unless you have already been accepted? (.) right? It's not
10		possible (.) to say where you were going unless you've already applied and have got
11		(admission) ok? So number sixteen (.) yes (.) Shua (3.2) sorry Rua (.) is it?
12	L16:	No (.) Deema
13	T:	ok (.) thank you Deema
14	L16:	I think football is too violent (.) I agree with you I prefer baseball.

In this activity, the learners are completing sentences with active or passive forms of verbs provided for them in the simple form. In this extract, Line 2 shows that L15 is unable to produce the correct passive tense that conforms to the teacher's targeted linguistic string. The teacher initiates the repair and performs it at the first arrowed turn in Line 4 by giving a recast which reformulates L15's ill-formed utterance. The recast is not accepted by L15 as she repeats the erroneous item at the second arrowed turn, displaying unsuccessful uptake. In response, the teacher, in Line 6, again conducts repair, producing a recast with added emphasis targeting L15's preceding production. At this point, uptake is accomplished when L15 ultimately displays uptake of the teacher's repair by asking for justification of the proposed recast at the third arrowed turn. L15's question in Line 7 is a clear example of successful uptake (cf. repair-

interrogation, p.87) as she is trying to understand the reason for using the present perfect form in the sentence she is completing. This type of response, which interrogates the provider of the repair about the prescribed correction, reflects display of successful uptake, according to the taxonomy suggested by Mackey and Philp (1998). Therefore, it could be argued that even successful uptake in the form of an enquiry is a proof of noticing since it indicates the learner's attention and accordingly a response is produced, even if it is in an interrogative form, as shown in this extract. The detailed analysis of the interaction in this group found only two instances of this type. Unsuccessful uptake, on the other hand, is demonstrable by ineffective repair attempts as illustrated by Extract 4.18 below.

(4.18)

1	T:	b (4.1) yes
2	L2:	does the news surprise you (.) were you surprised by the news.
3	T:	are you surprised by the news.
4→	L2:	were you surprised by the news.
5	T:	(2.2) the news (.) number THREE (3.0) ((pointing to L2)) yes
6	L3:	Steve will be shocked by the news.

The students in this activity were required to change active sentences to passive sentences with the same meaning and tense. The teacher, in Line 1, is prompting L2 to do part (b) in the activity. In Line 2, L2 is heard reading a question and changing it to the passive form, but she uses a wrong tense. Therefore, the teacher conducts repair in the subsequent turn by producing a recast that reformulates the erroneous utterance with emphasis added. However, at the arrowed turn in Line 4, L2 displays unsuccessful uptake as she repeats her error. In the next turn in Line 5, the teacher only repeats part of L2's utterance and moves on to the next sentence in the activity asking another learner, L3, to answer it.

Furthermore, socially distributed cognition was found to be operating in the interactional business taking place between the participants in a way reminiscent of Ohta's (2001) finding concerning the ability of learners to display uptake of recasts which are not addressed to them personally. The learners in this group were found to display uptake of recasts addressed to other learners. Extract 4.19 illustrates this scenario.

(4.19)

1	L8:	students are learning a lot.
2	L9:	learned a lot.

3	T:	students learn a lot.
4→	LL:	((simultaneously)) learn (.) learn
5	T:	ok (.) ↑next.

In this activity, the learners were supposed to find and correct errors, if any, in sentences then change the sentences from active to passive voice if possible. In the above extract, L8 produces a grammatically correct active sentence in Line 1, using the present progressive tense, which L9 believes to be a wrong choice and offers an alternative past tense by initiating and performing repair in Line 2. However, both learners' utterances are considered erroneous by the teacher because they do not conform to the pedagogical focus of forming sentences using the simple present tense to express general states. Therefore, in Line 3, the teacher conducts repair and immediately after that, as shown in the arrowed turn, the learners display uptake collectively, although the recast is not addressed to them. By virtue of displaying uptake of the teacher's repair, the learners' social action manifests the operation of socially distributed cognition and demonstrates the development of intersubjectivity.

The last point of interest to this argument is the learners' attitude to peer-repair. In this group, learners seemed to assimilate peer-repair and teacher-repair in the same manner, as illustrated in Extract 4.12 above, to the extent that they may even adopt the proposed peer-repair in spite of its inaccuracy, as illustrated in Extract 4.20.

(4.20)

1	L9:	children are fa- (1.0) =
2	L10:	=[fascinit ° ed °]
3→	L9:	[fascinit] by (.) helicopters.
4	L10:	fascinated
5	L11:	°fascinated °
6	T:	children are fascinated by helicopters (.) number eight?

Being unable to complete the string of linguistic forms while changing an active sentence to the passive voice, L9 cuts off her production in Line 1. Then L10 immediately produces a latching recast in the next turn, providing an inaccurate and unclear production as she pronounces the last syllable quieter than the rest of the word. Although L9 mishears L10's peer-repair, she adopts it immediately producing a phonologically wrong contribution at the arrowed turn. Interestingly, L10 and a third learner, L11, assume the teacher's role in the subsequent turns and conduct repair to treat the problem. The teacher, having provided the learners with some interactional space, confirms the repair by reiterating the whole linguistic string.

Interactional Features in the CRG

It was revealed by the analysis of the CRG interaction that 18% of the recasts were produced as peer-repair either by a single learner (see Extract 4.20 above), or collectively by a group of learners (see Extract 4.12 above). This action of conducting repair and adopting the teacher's repair policy was not seen as objectionable by the teacher, who might even encourage it, as shown above in Extract 4.13 when she delegates another learner to perform the repair action. In fact, this delegated-correction (Hauser 2003, p. 98), which Seedhouse (2004) considers unusual and specific to form- and accuracy contexts, appeared to be acceptable to the learners in the context of the current study. Its presence could be attributed to the abundant occurrence of peer-initiated peer-repair, as a consequence of which learners become attuned to being corrected by their peers as a form of peer-assistance (Foster & Ohta, 2005). Hence, they accept delegated repair in the same manner regardless of the initiation source. It is clear that both terms denote other-initiated other-repair; however, in the delegated repair the agent of other-repair does not self-select. Thus, when learners are selected by the teacher to give correction, their social action may be equally interpreted as peer assistance and consequently their correction is readily accepted.

An interesting finding of the analysis is the context-sensitive and context-shaping interactional scenarios which emerged in the interaction owing to the presence of peer-repair. Each of these scenarios is examined below with an illustrative extract.

Firstly, a recurrent phenomenon was found in the data of learners illegitimately taking the floor to participate in an ongoing two-party talk without being invited, as shown in Extract 4.21.

(4.21)

1	T:	number seven (.) yes?
2	L6:	many of the older people uh in the neighbourhood were growing vegetables to help with
3		the war effort (.) vegetables were be (1.1) uh: were being, (1.7)
4 →	L7:	grown.
5	L6:	grown.
6	T:	good (.) were being grown.

The teacher, in Line 1, prompts L6 to change an active sentence to the passive voice. L6 then reads the sentence and makes a successful start by providing part of the targeted linguistic string; yet pausing before she completes it. The arrowed turn, in Line 4, shows how L7 takes the floor to produce a recast to help L6 complete her utterance. In response, L6 displays uptake of this peer-repair by repeating it in the subsequent turn.

The point to be emphasized here is that L7 uses the recast to express her empathy and provide assistance to L6.

Secondly, another unusual classroom scenario that occurred in this type of interaction was the learners' use of direct negative evaluation. Extract 4.22 provides an example of this phenomenon.

(4.22)

1	T:	number five
2	L5:	uh he is in the house (.) the object is the house (.) uh: the verb transitive.
3 →	LL:	NO
4	T:	shh (.) wait (.) wait
5	L6:	خطأ! *[khata]* ((tr.: wrong!)) (.) ↑even number four, (.) should be English is the object.

In this activity, the learners are identifying objects in transitive sentences. After being prompted by the teacher in Line 1to answer the fifth item in the activity, L5 mistakenly decides that the verb 'is' is transitive and wrongly identifies the noun 'house' as an object. Responding to the error and assuming the institutional role of the teacher, the learners, at the arrowed turn, collectively produce an emphatic, direct, negative evaluation. The teacher in the next turn shows disapproval of their action by requesting silence and patience. Instead of supplying repair, the teacher uses her turn to attain classroom order. Interestingly enough, L6 disregards the teacher's command and issues another direct and bald negative evaluation in the subsequent turn, stressing her disagreement by producing an emphasized Arabic equivalent of the word 'wrong' in L1 and referring to a previous error which the teacher has passed over.

Thirdly, a more strange and interesting finding, albeit very rare, was that learners would occasionally even evaluate the teacher's utterance, as can be seen in Extract 4.23, or draw the teacher's attention to a learner's error which she has disregarded, as in the above extract.

(4.23)

1	T:	next.
2	L2:	the mouse was being [flwed] by the elephant.
3	T:	the elephant (.) was being followed by the mouse.
4 →	LL:	no:: no
5	T:	((examining the picture and smiling)) ↑the mouse ! was being followed by the elephant?
6	LL:	yes.
7	T:	yes.

The pedagogical focus in this activity was on matching sentences to pictures. In this extract, the trouble source is actually in the teacher's utterance. In Line 2, L2 describes a picture and produces a grammatically correct sentence, which the teacher mistakenly believes is factually wrong in terms of the position of the agent in the sentence. Therefore, she conducts repair in Line 3, using a recast which in itself has the wrong propositional content. In disagreement, the learners, at the arrowed turn, produce direct, emphatic, negative evaluation. This finding appears to be peculiar to this setting since no similar phenomenon has yet been reported elsewhere.

Fourthly, another emergent very unusual and striking scenario that has not been reported in any other setting was also found in the data. Learners may not only assume the role of the teacher by giving evaluation, but they may go even further, exceeding their actual role as recipients of knowledge and adopting the teacher's role as a knowledge source in order to answer another learner's enquiry. This is illustrated in Extract 4.24.

(4.24)

1	T:	you need to convert the sentences (.) into the active. (1.2) ↑right (.) number one
2	L1:	your friends made this awful mess.
3	L2:	MY friends
4	L3:	my friends.
5	L4:	your.
6	T:	<your friends (.) made (.) this awful mess.>
7→	L2:	we can say my friends?
8→	L4:	no.
9	T:	why? why do you want to change the pronoun ? (.) did your friends make the mess?

After L1 has produced the targeted string of linguistic forms in Line 2, a conflict arises between L2, L3 and L4 over which possessive pronoun to use. Although the disagreement is resolved by the teacher in Line 6, L2 is still in doubt and poses a question to the teacher at the first arrowed turn, speculating on the alternative pronoun. In the subsequent arrowed turn, L4 takes the floor and assumes the teacher's role as a knowledge source, producing the second part of the adjacency pair to answer L2's question.

Recasts and Learning Processes

By analysing the repair sequences in this group, it was possible to track the learning process that occurred in the presence of the recasting RT. It showed how this type of RT helped to foster the learners' involvement in learning the grammatical structure and

highlighted how they improved in a context where recasts were mainly employed to repair their syntactic errors. Recasts were the type of RT found to be most conducive to learning the passive voice in this context. The analysis of the CRG data above clarified how recasts were made salient and benefited learners. It explained that almost all of the recasts that were used in the CRG were isolated declarative recasts which are perceived by learners as corrective (see Han & Kim, 2008). These recasts also focused learners' noticing on the reformulation immediately, therefore, they were very beneficial to learning (see Lightbown & Spada, 2006; Philp, 2003; Sheen, 2006). It also expounded how the teacher's repetition of learners' correct utterances to ensure that the whole class received the correct production helped to enhance the corrective intent of the recasts and made them salient. Moreover, about 18% of the recasts in this group were produced by learners, which could have helped to consolidate the noticeability of these recasts and made it easier for learners to remember them. Consequently, they may have led to learning.

The quantitative analysis in Section 4.1 also gave evidence supporting recasts represented in the CRG mean gain (10.23) which is the highest among the means of the other groups. In addition, Table 4.8 on p. 92 shows that the number of recasts in the CRG and the percentage of learners' display of uptake are much lower than the number and percentage of prompts used in the PG, yet their mean gain indicates that the CRG outperformed the PG in both test improvement and classroom learning. This provides evidence that it is the type, rather than the amount, of RT which influences learning.

Analysis of the PG Data

In this group, the teacher used prompts in response to learners' syntactic errors as a repair strategy in order to generate self-repair. The total number of prompts which occurred in the interaction was 183, while 11 recasts and two instances of explicit correction appeared as a result of the teacher's digression from the intervention instructions. These prompts were conducted at an average rate of approximately 30 prompts per lesson and nine prompts per activity.

Sequence Organization in the PG

According to the sequence organization model used in this thesis, the predominant repair sequence organization in this group was mainly a five-turn construction (see Sub-section 4.2.1). However, this construction was always elongated by the inclusion of successions of insertion sequences in the form of question-answer adjacency pairs, yielding long repair episodes with an average length of nine turns.

The repair trajectory employed to treat trouble in this group was other-initiated self-repair, represented by the prompt RT assigned to this group. When a learner's turn included a repairable problem and no self-initiated self-repair was performed during the same turn-constructional unit (TCU) or at the next transition relevance place (TRP), the teacher then conducted the next-preferred option, namely, other-initiation of self-repair. In this type of repair, as Panova and Lyster (2002) note, prompts are used to negotiate form until learners are able to produce their own modified output. The analysis of the repair sequences showed that a prompting TCU has the following characteristics:

1. It consists of one part only, which is the other-initiation of the repair.
2. It is performed by one participant.
3. It is often followed by successful uptake, which is the self-repair (i.e., acknowledgement of the repair initiation).

The first and second characteristics are demonstrated in Line 2 in Extract 4.25 below where the teacher prompts L3 to self-correct by providing metalinguistic choice. The third characteristic is also illustrated in the same extract in Line 21, which is actually the self-correction and the acknowledgement (i.e., successful uptake) at the same time. This extract also exemplifies the abundant use of prompts in the PG data. Since prompts do not provide a ready correct version to learners, several prompting sequences may be employed by the teacher gradually to aid them to notice the difference between their developmental language level and the correct L2 target form (Doughty, 2001; Gass & Varonis, 1994; Philp, 2003; Schmidt, 2001) and finally attain self-repair. With a focus on form, prompting TCUs were used successively by the teacher and this allowed for much negotiation of form (Lyster & Ranta, 1997) and yielded very long repair sequences, as in Extract 4.25 which consists of 17 turns.

(4.25)

1	L3:	the teacher helped them (.) they was helped by the teacher.
2→	T:	they WAS or WERE? (.) we have to,
3	L3:	was.
4→	T:	no (.) you have uh you should try (.) Anwar ((goes to the board)) do you forget ?(.)
5		do you forget uh that they IS (.) plural (.) don't get confused please (.) don't get
6		confused (.) you see? ((writes on the board)) THE (.) TEACHER (.) HELPED (.)
7		THEM (.) ok now↑ what is my <u>subject</u> here (.) Anwar?
8	L3:	the teacher.
9 →	T:	the teacher is my subject, what is my <u>verb here</u>?
10	L3:	helped.

11→	T:	helped (.) ok (.) and this is (.) past tense (.) ok? this is help helped helped ok? and them
12		is my (.) ↑object here (.) so? THEM (.) when you change it from an object into a
13		subject (.) it will become (.) <u>they</u> (.) ok? the pronoun will become the::y (.) and then
14		they (.) is ↑singular or plural?
15	L3:	Plural.
16→	T:	plural (.) so people put (.) <u>they were</u> (.) and then?
17	L3:	helped.
18→	T:	helped (.) by whom? they were helped by the::?
19	L3:	teacher.
20→	T:	got it? Yes:: (.)↑ now say again (.) I want you to say it again.
21	L3:	they were helped by the teacher.
22	T:	they were helped by the teacher (.) do you understand?
23	L3:	yes.

At the start of the sequence, L3 makes a grammatical error in subject-verb agreement and the teacher conducts repair throughout the sequence using a number of prompting TCUs represented by the seven arrowed turns in Lines 2, 4, 9, 11, 16, 18 and 20. She first initiates the repair in the first arrowed turn by offering an alternative verb. However, L3 is not able to identify the precise problem and repeats her error. Consequently, in her next turn in Lines 4-7, the teacher gives a negative evaluation 'no' followed by a series of eliciting TCUs in the form of questions and comments which mitigate the bald evaluation and show affiliation. The teacher continues to use prompting TCUs in the rest of the arrowed turns, employing a succession of initiation-response-reinforcement sequences in which she exchanges turns with L3, who finally produces the whole correct linguistic string in Line 21.

Obviously, the succession of prompts elongates the interval of the repair work and results in excessive correction, which Lightbown and Spada (2006) warn against, claiming that it might affect learners' motivation and attention. Therefore, it could be argued that although prompts have advantages, such as providing cognitive development (Lyster & Ranta, 1997) and pushing learners to retrieve already internalized representations from long-term memory (de Bot, 1996), they also have some drawbacks. The long span of form negotiation, for example, might affect the repair recipient and possibly the rest of learners as they might become distracted and hence be prone to lose the thread of the argument, especially in the setting examined in this study, which included a large number of learners who needed to be constantly reminded to pay attention and not become distracted. In Extract 4.26 below, repair is accomplished in a transaction where form is negotiated over 35 turns.

(4.26)

1	T:	next. students learn a lot. really
2 →	L6:	students (.) students uh are learned a lot.
3	T:	↑Fatema (.) Fatema
4	L6:	yes.
5 →	T:	((with hand gesture like about to attack)) don't change me into a cat (.) think (.)
6		students?
7	L6:	are.
8 →	T:	why are (.) Fatema? do we have [ai en d3i:]? (1.2) if I have [ai en d3i:], then I will say
9		students are learning a lot (.) this is a right sentence, Fatema? (.) or a wrong sentence
10		(.) use your mind (.) use your مخ *[mukh]* ((tr.: brain)).
11	L6:	it's wrong.
12	T:	is it a right sentence (.) or a wrong sentence?
13	L6:	wrong.
14	T:	↑ Fatema (.)والله *[wal:ahi:]* ((tr.: I swear to God)) if I am in the hospital (1.2)
15		سكتة قلبية *[sakta galbi:a]* ((tr.: heart attack)) (.) you see? (.) I explain so much (.)
16		↑ students
17	L6:	are.
18	T:	yes (.) students (2.4) you see? students, ((writes on the board)) ok no problem (.) I am
19		generous (.) I will help Fatema (.) ↑ students (.) learn a lot (.) what is students? (.)
20		subject (.) ↑learn?
21	LL:	verb.
22	T:	a lot?
23	LL:	[object.]
24	T:	[object.] (.) ok so (.) yes this sentence in itself is a correct one. You can say yes if I am
25		asking you (.) is it a correct one? Is it a correct one now?
26	L6:	yes.
27	T:	yes (.) it is a correct one. (.) and if I have to change it into passive (.) Fatema? (.) now
28		how will I do it? (.) a lot?
29	L6:	a lot,
30	T:	a lot is واحد *[wahid]* ((tr.:one)) or جمع *[gama]* ((tr.:plural))? singular or plural?
31	L6:	plural.
32	L7:	No.
33	LL:	((simultaneously)) plural (.) singular.
34	T:	lot (.)مجموع *[mugama]* ((tr.: group)) is singular or plural?
35	LL:	is
36	T:	IS (.) yes (.) it is a collective noun (.) ↑ a lot (.) is?
37	L6:	learn.
38→	T:	now are you saying the t or not? my problem is to hear (.) LEARN or LEARNT?
39	L6:	[learnt.]
40	LL:	[learnt.]

41 L: [i:di:]

42 T: yes yes (.) you can (.) uh sometimes yes sometimes students say the ed (.) yes (.) a lot is

43 learnt (.) by(.) students. (.) ↑yes Fatema (.) now do me a favour (.) read this whole

44 sentence again.

45 L6: er a lot is learn (.) learnt by students.

46 T: a lot is <u>learnt</u> by students. (.) ok? did you say t? (.) yes (.) good.

In the activity, from which this long extract is taken, the learners were required to find and correct errors, if any, in sentences then change the sentences from active to passive voice if possible. At the first arrowed turn, L6 is unable to change a sentence from active to passive. As a result, the teacher uses a variety of prompting methods in the arrowed turns. For example, there is an elicitation in Line 5, metalinguistic clues in Line 8 and a clarification request in Line 38. However, it is not until the penultimate turn in Line 45 that L6 produces the self-repair targeted by the teacher.

It should be noted here that the analysis of prompts in the data resulted in a very striking finding of a recurrent prompting strategy which is not mentioned in the SLA taxonomy of prompts. It differs from other strategies listed in the taxonomy because it provides a more specific procedure for eliciting self-repair by helping learners to contrast their production with the target L2 form. As illustrated in Line 2 in Extract 4.25 and in Lines 12 and 38 in Extract 4.26 above, in this strategy, the teacher offers a choice of two alternatives: the error and its repaired version. In this manner, it is easy for learners to generate self-repair as they are pushed to choose the item that is not their own. The present thesis labels this strategy 'providing choice' and includes it as a fourth sub-category of elicitations in the classification. Hence, this study contributes to the SLA field by providing an improved version of the taxonomy of prompts, as will be shown below in the discussion of the types of prompts found in the data.

The data analysis also found instances of all the different strategies of prompts, as can be seen in the extracts quoted so far. More examples of each type are given below.

(a) Clarification Requests

Prompting TCUs in the form of clarification requests were sometimes used by the teacher in this group. An example of clarification requests is shown in Extract 4.26, Line 38, above. Another example is presented below in Extract 4.27.

(4.27)

1 T: yes , ↑a new hospital has been built by the government

2 L1: the government (1.2) ha:s buil (.) build (.) the (.) uh: a new hospital.

3→ T: yes (.) the government has built a new hospital (.) for Iman (.) to work as the head nurse

4 there (.) yes very good (.) very good ((claps)) (.) HAVE YOU SAID BUILD? or built

5		with t? or
6	L1:	built.
7	T:	very good (.) شـطـورة [shat:ora] ((tr.: brilliant)) ve::ry good (.) she has to be the head
8		nurse (.) yes.

In this activity, L1 is transforming a sentence from the passive to the active voice, but she makes an error in the form of the verb in Line 1. Because the teacher does not notice the mistake, she gives positive evaluation and reinforcement at the subsequent arrowed turn. However, she seems to be in doubt about the accuracy of the verb in L1's utterance, so at the end of the same turn she produces a clarification request 'have you said build or built with t?' to elicit a more certain version of the verb form.

(b) Repeating the Learner's Error

Repeating the learner's error with rising intonation was employed by the teacher as a prompting RT in the PG data, as illustrated in Extract 4.28 below.

(4.28)

1	T:	yes ↑next (.) if you plan an event it is called a (.) it is called ↑a
2	L2:	(planning event)
3	T:	uh Kaltham I cannot hear you (.) I am sorry ((goes closer to L2))
4	L2:	pla-=
5	T:	((goes closer to L2)) =↑yes yes?
6	L2:	it is called a planning event
7→	T:	planning?
8	L2:	event.
9	T:	planning?
10	L2:	event.

In this activity the learners were required to supply either present or past participles and use them as adjectives. In Line 2, L2 makes an error by choosing the present participle to describe the noun 'event'. At the arrowed turn, the teacher tries to generate self-repair from L2 by repeating her error with a rising intonation. However, L2 does not comprehend the prompt and thinks that the teacher is just asking for repetition as a result of mishearing her utterance. Hence, she displays unsuccessful uptake in Lines 8 and 10 by repeating the error.

(c) Metalinguistic Clues

Metalinguistic TCUs were used abundantly by the teacher as a self-repair initiation strategy. Extract 4.29 below is an example.

(4.29)

1	T:	the secretary is going to fax the letters.
2	L1:	the letters is going (.) to be faxed =
3→	T:	= my dear (.) just look at the (.) letters (.) letters are singular or plural?
4	L1:	plural.

L1 makes an error in subject-verb agreement when converting a sentence from active to passive voice in Line 2. The teacher then initiates repair at the subsequent arrowed turn using two prompting metalinguistic TCUs.

(d) Elicitation

This type of prompt was the most frequently used by the teacher to elicit self-repair from the learners by means of one of four methods or categories, one of which is proposed by this thesis:

1) Using a question

When learners in the PG made errors, the teacher used questions to elicit the correct forms, as can be seen in Extract 4.30 below. This method prompts the learner to self-repair; however, in this instance the trouble source is not located and the learner has to determine which item in her utterance is the repairable item.

(4.30)

1	L1:	I am agree with you.
2	T:	no (.) uh: you think it is right I am agree?
3	L1:	I agree with you.

This extract is taken from an activity in which learners were supposed to complete sentences using active or passive verb forms. L1 makes an error in Line 1; therefore, in the subsequent turn the teacher produces an elicitation in the form of a question to prompt L1 to self-correct. Successful uptake is displayed in L1's next turn as she succeeds in producing the targeted linguistic forms.

2) Request for reformulation

The second category of elicitation which was recurrent in the PG data is to ask the learner to reformulate the erroneous utterance. Extract 4.31 below is a clear example of this type.

(4.31)

1	T:	I think u:h Aseel should answer (.) ↑someone is eating the apples (.) now. Yes Aseel
2	L1:	the apples are being eat uh:: now.
3	T:	again (.) think.
4	L1:	the apples are,

5	T:	being
6	L1:	being eat

L1 supplies an incorrect form of the verb when attempting to change the sentence from active to passive in Line 2. The teacher in the next turn urges her to reformulate her output by means of a non-specific open repair-initiator, asking her to rethink her previous production in order to locate the error and self-correct.

3) Locating error as next word

In this category, when a learner produced an error, the teacher repeated the utterance and stopped at the error point to allow the learner to complete the utterance using a correct version, as can be seen in Extract 4.32, which demonstrates how this type of elicitation makes the repair business concise and more specific by precisely signalling the error.

(4.32)

1	L1:	uh: he is marry (.) uh: with my cousin (.) he is marry (.) TO my cousin.
2 →	T:	no (.) uh: you (.) ↑again you think (.) uh marry::?
3	L1:	married.
4	T:	yes (.) we have to think (.) married (.) yes.

In this activity, the learners were supposed to correct mistakes in sentences. The sentence 'he is marry with my cousin' includes two errors, only one of which is corrected by L1 when she supplies the correct preposition but overlooks the incorrect form of the verb. As a result, the teacher, at the arrowed turn, gives direct negative evaluation and conducts other-initiated self-repair using a specific repair initiator in which she repeats the word 'marry' with a rising intonation and an elongated vowel sound. Ultimately, L1 performs self-repair in Line 3. It is concluded from this extract that the prompt here is more than a simple repetition of the learner's error. It is virtually a strategy to locate the trouble source and thereby it is made easier for the learner to notice the gap.

4) Providing Choice

In this category of elicitation, which is proposed by this study, the teacher juxtaposes the correct form with the erroneous form, as shown in Line 5 in Extract 4.33 below. Using this type, which occurred repeatedly in the data, the teacher was able to provide a more specific strategy to push learners to perform self-repair.

(4.33)

1	T:	dogs give dog food. now you have to (.)↑yes (.) Layla
2	L9:	dog food is given (.) by dogs.
3→	T:	dog food is given?
4	L9:	by dogs
5→	T:	dog food is given (.) BY DOGS? or TO DOGS?
6	L9:	to dogs.
7	T:	yes.

In this extract, L9 succeeds in forming a passive sentence from a group of given words, but she uses an inappropriate preposition. At the first arrowed turn, the teacher initiates repair when she repeats the learner's erroneous utterance and pauses exactly at the error point, ceding the floor to L9 to perform self-repair. However, L9 displays unsuccessful uptake by repeating her error in Line 4. Consequently, the teacher, at the second arrowed turn, attempts to prompt her again with a more specific strategy by supplying an alternative, correct preposition. In response, L9 is able to make a choice and performs self-repair in Line 6. This extract is an example of an important finding of this thesis that repair work using elicitations becomes more specific as the repair enterprise moves down the preference organization. As turns unfold in this sequence, repair moves from locating the error (which is the more general strategy) in Line 3 to providing choice (which is the more specific strategy) in Line 5. This more specific technique seems to be different from the other types of eliciting, so, as mentioned earlier, it is added to the subcategories of elicitation.

Learner Uptake of Repair in the PG

Through normative reference to turn-taking procedures, the participants in the interaction displayed intersubjectivity and cooperation in producing and interpreting their social actions through talk. This was reflected in the progress of the repair work, represented by the prompts employed by the teacher and the display of uptake by the learners. It should be noted here that display of successful uptake (i.e., acknowledgement) of prompts which immediately followed the teacher's initial prompting turn, as in Line 6 in Extract 4.33 above, forms 84% of the repair instances in the data. In the other 16%, however, there was either a display of unsuccessful uptake or the teacher used a number of different types of prompts successively in the same turn as a cluster for one repair action; therefore, there was a chance for the learner to display uptake of only the last prompt in the cluster. Extracts 4.34 and 4.35 illustrate these two points.

(4.34)

1	L1:	(but he noticed) that she is very depressing.
2	T:	she's very? ((shaking her head)) she's very?
3	L1:	depressing.

In this activity, from which this extract is taken, students take turns to fill in blanks with the present participle or the past participle forms as participial adjectives. In Line 1, L1's use of the present participle instead of the past participle form is erroneous. Therefore, in Line 2 the teacher produces a couple of repair-initiations in which she locates the error as the next word and uses non-verbal behaviour to signal a problem. However, at this point, misunderstanding on the part of learner occurs. L1 completely misinterprets the goal of the teacher's elicitation thinking that the teacher is requesting a repetition of the answer due to mishearing. Consequently, instead of performing self-repair, she displays unsuccessful uptake by repeating her error (cf. error-reiteration, p. 87).

It is important to note that prompts were misinterpreted on eight occasions in the PG data. These instances provide evidence for an important finding of this study regarding the effectiveness and clarity of prompts. They show that prompts, despite the fact that they represent a very effective form of RT, can sometimes become unclear and consequently be misinterpreted by learners as requests for repetition, resulting in confusion and frustration. As L1's turn in Line 3 above illustrates, the prompt used by the teacher in the preceding turn has a tendency to be unclear since it can be interpreted by the learner in two ways: the teacher is locating the error (which is the actual function of this type of prompt), or the teacher could not hear the answer and therefore is requesting repetition. This finding has not been recorded in any of the other literature on the subject, and therefore contributes to the originality of this research.

(4.35)

1	L3:	was.
2 →	T:	no (.) you have uh you should try (.) Anwar ((goes to the board)) do you forget ?(.)
3		do you forget uh that they IS (.) plural (.) don't get confused please (.) don't get
4		confused (.) you see? ((writes on the board)) THE (.) TEACHER (.) HELPED (.)
5		THEM (.) ok now↑ what is my <u>subject</u> here (.) Anwar?
6	L3:	the teacher.

This extract is taken from Extract 4.25 above to demonstrate how the teacher used a succession of prompting types in one turn. The teacher's arrowed turn in Line 2 contains the following prompts: an elicitation in the form of a request for reformulation,

an elicitation in the form of a question, a metalinguistic clue about the plurality of the word 'they' and another metalinguistic clue in the form of a question about the subject of the sentence.

In general, learners displayed successful uptake in the case of prompts by performing self-repair after being prompted by the teacher, who employed one or more of the prompt strategies listed in the taxonomy mentioned above. A display of successful uptake indicated that learners had noticed the repair-initiation (see Ellis et al., 2001; Loewen, 2004). Extract 4.36 below shows how successful uptake of the repair initiation is displayed in the interaction.

(4.36)

1	T:	Nora (.) everyone in need is helped by Faisal.
2	L2:	u:h Faisal is helping everyone in need.
3	L3:	helps (.) helps.
4 →	T:	again (.) think again
5	L2:	Faisal is helping=
6 →	T:	= why? uh is it in the continuous tense? Is it present progressive?
7	L2:	helps.

In Line 1, the teacher asks L2 to answer by calling her name and reading the passive sentence which she wants L2 to change to the active voice. In Line 2, L2 succeeds in changing the sentence into its active counterpart but uses a wrong tense. Although another learner, L3, repairs the trouble immediately in Line 3, the teacher ignores her contribution and initiates repair at the first arrowed turn using a prompting TCU in the form of an elicitation. L2 also seems to be disregarding the peer-repair and still cannot locate the error source; therefore, she displays unsuccessful uptake, repeating the same error. The teacher, in the second arrowed turn, produces another kind of prompt represented by the two metalinguistic questions about the progressive tense. Only at this point does L2 retrieve her already internalized representations of the correct tense from long-term memory (de Bot, 1996) and displays successful uptake of the repair by producing the targeted structure in Line 7.

Interactional Features of the PG

All of the prompting TCUs were used by the teacher to generate self-repair from the error-producer, which is in line with the typical features of prompts. However, some emergent interactional scenarios, such as peer-repair, occurred in overlap or in place of self-repair after a repair-initiation turn. When the teacher prompted a learner to self-repair, another learner or a group of learners performed the action instead. This action

occurred in 23 instances (i.e., 12 % of the total number): 16 instances as collective peer-repair and seven instances as single peer-repair. This phenomenon occurred when the floor was returned to the learner after the repair initiation, as illustrated in Extract 4.37.

(4.37)

1	L2:	when did your [bike steal.
2	T:	[no (.) no (.) just try to see the sentence (.) when (.) your bike (.) steal.
3	L2:	when did your
4	T:	find out the: ((writes on the board)) when?
5→	L3:	was
6	T:	< ok (.) was (.) your (.) bicycle >
7→	LL:	stolen
8	T:	[stolen.]
9→	L4:	[stolen.]
10	T:	ok? ((pointing at the sentence on the board)) < when (.) was (.) your (.) bicycle
11		(.) stolen > (.) ok?

In Line 1 L2 has difficulty changing a question from active to passive. In Lines 2 and 4 the teacher uses prompts but no self-repair is forthcoming. Rather, after the teacher's first prompt in Line 2, L2 displays unsuccessful uptake as she repeats the error. Moreover, she does not respond after the teacher's second prompt in Line 4. In fact, although L2 is the error-producer and the actual recipient of the repair initiation, she withdraws from the interactional scene while her peers take up her role in the three arrowed turns to finish the repair action with the teacher. A fine-grained analysis of the peer-repair in these turns reveals that each one of them performs two interactional functions. First they serve as responses to the teacher's preceding prompts and second they reflect socially distributed cognition and intersubjectivity in that they are aimed at assisting L2.

This action of encroaching on a learner's interactional rights by taking the floor to complete the repair action, something which was also found in a higher percentage (18%) in the CRG data, is worthy of note. It appears to be acceptable to the teacher, who may even encourage and confirm it, as illustrated in the above extract. Moreover, the error-producer may treat it as peer assistance (Foster & Ohta, 2005). Therefore, one interpretation is that learners consider it to be one of their rights as partners in the institutional context to index their roles as legitimate participants in the interaction. The above extract showed peer-repair being performed both by a single learner, as in Line 5, and collectively by a group of learners, as in Line 7.

A strange interactional feature found in this group is the extensive use of the negative token 'no' in response to learners' errors. Although the PG data contained 21 instances of this repudiation sign, in 17 of them this word was followed by prompts, which can help to mitigate and lessen the negative impact, and consequently no loss of face occurs on the part of the learner (see Seedhouse, 2004). In Extract 4.38 below, the teacher is heard repeating the word 'no' five times consecutively, yet she also supplies mitigation using a succession of prompting TCUs.

(4.38)

1	T:	the news surprises (.) Erin.
2	L1:	uh Erin was [surprised by the news.]
3→	T:	[no no (.) no no no (.)] concentrate (.) again (.) think again (.) you know the
4		answer (.) don't get (.) there's a little change.
5	L1:	u:h Erin is.

In Line 1 the teacher reads an active sentence which L1 tries to change to the passive voice in Line 2. At the arrowed turn, the teacher treats L1's erroneous verb tense with overlapping response using five repetitions of the negative word 'no', which could be demoralizing to the learner were they not followed by several prompting TCUs. These prompts serve as a buffer and mitigate the negative effect, rendering the negative evaluation almost inoperative and accordingly non-face-threatening. Thus, the use of prompts in this manner helps to align the evaluative work with the norms of preference organization and can even promote learners' self-confidence by including encouraging remarks like 'you know the answer' in the above extract.

Moreover, in order to indicate trouble in a learner's utterance, on two occasions the teacher employed a strange method of performing negative evaluation by producing a voiced audible in-breath (i.e., a gasp), as when expressing surprise. Extract 4.39 is an example.

(4.39)

1	T:	((writes on the board)) < cats hide under cars (.) ok > so? (.) you have (.) is it a right
2		sentence or a wrong sentence?
3	LL:	wrong.
4→	T:	((audible gasping while putting hand on chest)) .hhhh سكتة قلبية *[sakta galbeea]*
5		((tr.: heart attack))
6	LL:	((laughter))
7	T:	cats hide under cars (.) what do you mean by that?

This extract is taken from an activity where the students were asked to form active or passive sentences from a group of words. In Lines 1and 2, the teacher starts the first item in the activity by writing the words on the board and asking the students about the validity of the sentence. In Line 3, the learners collectively give a wrong answer to the teacher's question. At the subsequent arrowed turn, the teacher uses voiced audible in-breath, a non-verbal gesture and a phrase in L1 to signify a problem in their production. This evaluative work by the teacher is intended to create a friendly atmosphere, which is reflected in the learners' laughter in Line 6. Nonetheless, it could be argued that the teacher's action is acceptable only because it is directed to the whole class. If it had been oriented to one learner, as shown in Extract 4.40 below, this disaffiliative action may actually have created an adverse negative effect.

(4.40)

1	T:	next. students learn a lot. really
2 →	L6:	students (.) students uh are learned a lot.
3	T:	↑Fatema (.) Fatema
4	L6:	yes.
5 →	T:	((with hand gesture like about to attack)) don't change me into a cat (.) think (.)
6		students?
7	L6:	are.
8 →	T:	why are (.) Fatema? do we have [ai en d3i:]? (1.2) if I have [ai en d3i:], then I will say
9		students are learning a lot (.) this is a right sentence, Fatema? (.) or a wrong sentence
10		(.) use your mind (.) use your مخ *[mukh]* ((tr.: brain)).
11	L6:	it's wrong.
12	T:	is it a right sentence (.) or a wrong sentence?
13	L6:	wrong.
14	T:	↑ Fatema (.) والله *[wal:ahi:]* ((tr.: I swear to God)) if I am in the hospital (1.2)
15		سكتة قلبية *[sakta galbi:a]* ((tr.: heart attack)) (.) you see? (.) I explain so much (.)
16		↑ students
17	L6:	are.

This segment is taken from Extract 4.26 above. The pedagogical focus of this activity was on finding and correcting errors, if any, in sentences then changing the sentences from active to passive voice if possible. At the first arrowed turn, L6 tries to correct a sentence which has no error; hence, producing an erroneous utterance. In response, the teacher uses a prompt at the second arrowed turn, yet L6 is unable to produce the correct answer targeted by the teacher. Although the teacher gives a succession of prompts at the third arrowed turn to ask about the validity of the sentence, L6, again, produces a wrong answer. At the fourth arrowed turn in Line 12, the teacher

once more attempts in vain to provide choice to L6 as a prompting way to elicit self-repair from her, but L6 fails to grasp the prompt. At this point the teacher expresses frustration by giving a long stretch of negative evaluation in both L1 and L2 followed by a prompt which is again not grasped by L6 who displays unsuccessful uptake by repeating the error.

Thus far, the analysis has shown that prompts are the only type of RT which on the one hand can be used to provide encouragement, motivation, support and even self-confidence to the learner, as seen in Extract 4.38, or which on the other hand may not be clear to learners and consequently may cause misunderstanding and confusion, as illustrated above in Extract 4.34.

Prompts and Learning Processes

The analysis of the prompting repair sequences revealed how learning occurred when prompts were used to push learners to self-repair. As a result of the positive features and advantages of prompts, such as providing interactional space, affective support, and promoting retrieval of internalized presentations, they were effective and contributed to the process of learning, but to a lesser extent than recasts. Table 4.8 on p.92 demonstrates how 183 prompts were used in the PG with a display of successful uptake percentage of 84%, yet the learners in this group showed a lesser degree of improvement in their test results and in their learning of the passive voice than those in the ECG. This is indicated by the mean gain of this group (19.4).

Analysis of the ECG Data

Explicit correction was employed in this group to treat learners' syntactic errors. It appeared in 40 instances with a distribution rate of approximately ten instances per lesson and three instances per activity. This number represents a very low quantity compared with the number of instances of RT used in the other repair groups (see Table 4.8). In addition to explicit correction, the teacher used 17 prompts on specific occasions to ask for a repetition of a learner's production or as the second part of the explicit correction, as will be discussed below. She also used four recasts on different occasions to complete an utterance when a learner was not able to proceed.

Sequence Organization in the ECG

The predominant sequence organization used for explicit correction was similar to that used for recasts. It was a five-turn construction where the first, fourth and fifth turns are optional (see Section 4.2.1). However, this construction was sometimes prolonged to include insertion sequences and thus it yielded sequences that ranged from 5 to 13 turns. The repair trajectory in this type of RT was other-initiated other-repair in which the

teacher provided the target reformulation of the learner's erroneous output overtly (Panova & Lyster, 2002). Explicit correction sequences that were found in the data have the following characteristics, which are illustrated in Extract 4.41:

1. They normally consist of two parts: a contradiction showing refutation or disagreement and a substitution (i.e., replacement) for the repairable item, with the substitution part almost always succeeding the contradiction part.
2. The two parts may appear in one turn or separated in two turns.
3. They are performed by one or more participants.
4. They may or may not be followed by display of uptake.

(4.41)

1	T:	now ↑next, (.) uh Norhan
2	L3:	that's not my coat (.) its (.) its belongs to Louise.
3→	T:	NO (.) < it belongs > yes you are saying (.) but you should say ↑IT (.) not its (.) it
4		< belongs to: Louise> (.) next number five (.) Ruba

This extract is taken from an activity where learners had to fill blanks with correct active or passive verb forms. L3 produces an erroneous utterance using a wrong pronoun in Line 2. On hearing the learner's erroneous utterance, the teacher, in the next arrowed turn, conducts explicit correction which consists of a contradiction part expressed by the negative word 'no' and a replacement part 'it belongs'. There is no display of uptake, because the teacher starts a new sequence after conducting repair.

A crucial point which should be highlighted here as an original finding of this study concerns the interpretation of explicit correction. The analysis revealed that when explicit correction was performed in two separate parts, the second part could be performed by the learners, since they were given the floor after the teacher had produced the first part. In this case, two interactional possibilities for the replacement part might occur:

1) If it is accomplished by the error-producer, then it is interpreted as self-repair and the teacher's contradiction part as negative evaluation or display of disagreement which has the same function as a prompt. In such a case, it could be said that the explicit correction is no longer operative. This is illustrated in Extract 4.42.

(4.42)

1	T:	ye:s (1.2) the b: in comb?
2	LL:	doesn't (.) doesn't.

3→ T: ((shaking head)) NO: =

4→ LL: = [isn't isn't]

5 T: w [hich is-] yes

In this extract from a fill-in-the-blanks activity, learners supply a wrong missing auxiliary in Line 2. At the first arrowed turn, the teacher produces the contradiction part of the explicit correction accompanied by non-verbal behaviour to signal a problem in the learners' production. Not giving the teacher a chance to perform the second part of the correction, the learners, at the second arrowed turn, immediately produce a collective self-repair which latches the teacher's contradiction part. In this way, the teacher's production in Line 3 functions as a direct, unmitigated negative evaluation and as a prompt rather than as a contradiction part of an explicit correction.

2) If it is accomplished by a learner other than the error-producer or by a group of learners, it is then interpreted as the second part of an explicit correction (i.e., the replacement part). In this case, the explicit correction is said to be operative because there is no self-repair. Extract 4.43 is an example of this.

(4.43)

1 L5: the sh (.) the shocking,

2 T: no (.) no =

3 L6: = shocked.

This extract is taken from an activity in which learners are filling in blanks by supplying present or past participles as adjectives. L5 provides the present participle instead of the past participle. Therefore, the teacher initiates explicit correction, in Line 2, starting with the contradiction using the negative word 'no', which is immediately latched by L6 in the subsequent turn as she produces the replacement part of the correction.

Thus far, the discussion has shown how repair in the form of explicit correction is complex and that the RT types are not totally discrete in all cases as they may change from one type to another, which is reminiscent of the notion of the 'split personality' (Seedhouse, 2005). In summary, it should be noted here as a finding of this study that separating the two parts of explicit correction might have the effect of changing it into another form of repair, such as a prompt, if self-repair is accomplished after the contradiction part.

It was also found in the interaction of this group that explicit correction sequences are usually short, with an average length of 4 turns, particularly when the repair is accomplished by one party in the same turn, as in Extract 4.44 below.

(4.44)

1	T:	someone is eating the apples now (.) the apples?
2	L1:	is eaten (.) by someone.
3→	T:	no (.)↑again (.) you should say the apples ARE BEING (.) eaten now (.) Hiba.

The teacher in Line 1 reads a sentence to L1 and starts its passive counterpart by emphasizing the agent and stopping at that point to generate the remainder of the sentence from L1. Thus, while converting the sentence from the active to the passive voice in the subsequent turn, L1 produces an erroneous utterance which has problems in tense, subject-verb agreement and a superfluous by-phrase. At the arrowed turn the teacher initiates repair and completes it in the same turn employing explicit correction. First, she produces a negative evaluation 'no' and uses a next-turn repair initiator 'again', and, while still holding the floor; she provides the replacement part with the emphasis on the verb.

Learner Uptake of Repair in the ECG

The analysis of the interaction in this group revealed that 47% of the 40 repair instances led to display of successful uptake (i.e., acknowledgement), which is manifested as a next-turn proof procedure (Sacks et al., 1974) or understanding display mechanism (Schegloff, 1991). However, as in the case of recasts, the absence of display of uptake does not imply lack of noticing or lack of learning. Also similar to the case of recasts in the CRG, successful uptake of explicit correction was evident when learners repeated the teacher's correction (cf. repair-reiteration, p. 87), as Extract 4.45 below illustrates.

(4.45)

1	T:	yes (.) Zahra
2	L2:	my parents are disappoint [with me because of-
3→	T:	[disappoint:ed with me (.) you should say=
4	L2:	= disappointed with me because of my low grades.

In this activity, L2 produces an erroneous utterance in Line 2 when she provides an incorrect verb form. At the arrowed turn, the teacher responds to L2's error by conducting other-initiated other-repair in the form of explicit correction, starting with the replacement part followed by a directive as the contradiction part to signal disagreement.

The learner in the subsequent turn displays successful uptake by reiterating the repaired item and completing the string of linguistic forms. It should be highlighted here that L2's display of successful uptake represents the optional learner acknowledgement turn discussed in the model of the sequence pattern on p. 90.

Display of successful uptake was also manifested even when learners questioned the teacher's projected correction and sought clarification (cf. repair-interrogation, p. 87). On the other hand, learners displayed unsuccessful uptake when they repeated their error after the teacher's correction. Extract 4.46 demonstrates successful uptake represented by two learners' enquiry and unsuccessful uptake by a learner who repeats the erroneous item.

(4.46)

1	L1:	Keanu's character is a travelled salesman. =
2	T:	= No (.) you should say (.) a TRAVELLING salesman.
3→	L1:	why?
4→	L2:	why?
5→	L3:	travelled.
6	T:	TRAVELLING salesman (.) it should be (.) a travelling because (.) it is his business (.) it
7		is his profession (.) ok?

This extract is from a fill-in-the-blank activity where learners were supposed to supply present/past participle forms of the verbs as adjectives. In Line 1, L1 uses the past participle form of the verb instead of the present participle. Therefore, the teacher conducts repair in Line 2, employing both parts of the explicit correction in the same turn. However, her contribution is questioned by two learners: namely, the error-initiator, L1, and another learner, L2. In addition, a third learner, L3, displays unsuccessful uptake by repeating L1's error. At the three arrowed turns, L1 and L2 pursue justification of the teacher's correction, whereas L3 insists on the erroneous verb form initially produced by L1 in Line 1.

Considering L1 and L2's orientation to their institutional roles and the teacher's role as the superior source of knowledge, it should be made clear that the social action they perform through their utterances can be interpreted from their own perspective as a request for more explanation, rather than as disagreement or incredulity when it is taken at face value. What should be emphasized here is that the social action of probing the teacher's correction by L1 and L2 represents a way of displaying successful uptake and noticing.

The fine-grained analysis of the interaction revealed that uptake was not displayed in 53% of the repair sequences. This is usually because display of uptake of explicit correction, as in recasts, is optional or because learners are deprived of interactional space (Mackey & Philp, 1998). In the current study, after conducting repair in these instances, the teacher continued holding the floor in order to give further explanation of the correction, add some more information or just close the sequence. By doing so, she eliminates the learner's opportunity to display uptake, whether successful or not, in the next TRP, as shown by Lines 3 and 4 in Extract 4.41 above.

In other instances, however, display of uptake, as mentioned above, did not occur despite the fact that the students were given the opportunity. This corroborates findings in other studies, such as those of Ellis et al. (2001), Loewen (2004) and Mackey and Philp (1998), that in some cases display of uptake is optional and it is the choice of the learner whether to display it or not. Extract 4.47 illustrates this point.

(4.47)

1	L4:	I can be [riched] =
2	T:	= reached
3	L4:	reached (.) in five five- =
4	T:	= ((shaking her head)) no (.) not in (.) AT (.) [triple five-
5	L4:	[triple five (.) uh dash three eight one five.
6	T:	yes (.) three eight one five (.) good (.) very good Yara.

In a fill-in-the-blanks activity, L4 makes a grammatical error in Line 1 using an incorrect preposition. Consequently, in the following turn the teacher conducts latching other-initiated other-repair in the form of explicit correction, which consists of a contradiction part and an emphasized replacement item. The floor is now given to L4 to repeat the correction and display uptake, yet she decides to reject this opportunity and just complete reading the rest of the sentence in overlap with the teacher's utterance. Based on research findings by Braidi (2002), Gass (2003) and Mackey (2006), it could be argued that although L4 has not displayed uptake of the repair, this is not in itself evidence that she has not noticed and assimilated it. Therefore, the emic explanation of the nature of uptake verifies that display of uptake is a participants' construct to which they themselves orient in the particulars of the interaction. Only when the participants themselves give perceptible expression of their cognitive state can it then be included in the analysis of their social actions (Seedhouse, 2004; ten Have, 2006). Accordingly, learners are said to have misunderstood the repair only if they give a clear indication of

their misunderstanding: e.g., when they repeat the same error displaying a lack of assimilation of the repair, as shown above in L3's turn in Extract 4.46.

Interactional Features of the ECG

By examining the interaction in this group, it was revealed that 15% of the repair instances were undertaken by learners in the form of either a collective peer-repair or a single-learner peer-repair supplying the second part (i.e., replacement) of explicit correction while the first part was always supplied by the teacher. In these instances, the teacher's role was merely to confirm the correction. What is worthy of note here is that when learners contribute to the repair work, they are in effect assuming the teacher's role and claiming equal access to the knowledge of the repairable item.

In the case of a single-agent correction, the second part is performed by the teacher, as shown in all the extracts above except for Extract 4.43, or by a learner, as illustrated in Extract 4.48 below.

(4.48)

1	L4:	is belong (.) my-
2	T:	no (.) it's wrong (.) yes Hana?
3→	L5:	this pen belongs to me.

As illustrated in Line 1, L4 was unable to correct the mistake in a sentence from an error analysis activity. In the subsequent turn, the teacher initiates repair using negative evaluation as the contradiction part of the repair but does not provide the replacement item as she delegates another learner, L5, to supply it. At the arrowed turn, L5 produces the second part of the explicit correction by providing the correct linguistic string. This extract is an example of other-initiated delegated-correction (Hauser 2003, p. 98), which occurs when the teacher, after initiating repair, delegates a different learner to complete it.

In the case of repair co-production, or collective repair, more than one agent produce the repair collaboratively. Extract 4.49 is an illustration of this scenario.

(4.49)

1	L8:	and raises their hand- =
2 →	T:	= RAISES (.) .hhhhh =
3	LL:	= RAISE
4	T:	raise (.) this is plural (.) please.

In the activity from which this extract is taken, learners were forming sentences using the construction 'be supposed to', which is not passive but has a passive form. L8

makes an error involving the singular-plural case. At the arrowed turn, the teacher starts the contradiction part of explicit correction (i.e., other-initiation) using an emphatic prompt and voiced in-breath to express disagreement. Immediately, other learners produce a latching replacement part loudly in the subsequent turn.

An issue that is worth mentioning at this point is the teacher's role as the sole participant who is able to direct the conversation and wield the authority to assign roles and tasks in the classroom. Nonetheless, as happened in the other RT groups, learners were found to produce uninvited contributions irrespective of the participants' asymmetrical access to knowledge. They did this on six occasions in this group by self-selecting and joining the ongoing two-party interaction to help in the repair action, as shown above or to perform other social actions, such as answering in place of another learner. Extract 4.50 provides an illustration of this phenomenon.

(4.50)

1	T:	going <u>to help</u> is your verb (.) then (.) WHO IS TIM in the sentence? (.) ↑Tim is <u>the:</u>?
2	LL:	object
3	T:	girls (.) would you please (.) er give her a chance (.) yes? (1.1) yes Hiba (.) now?
4	L10:	Tim (.) er

Prior to this extract, the teacher has been analysing the sentence 'the teacher is going to help Tim' and explaining to L10 the grammatical function of each word in it. In Line 1, the teacher asks L10 about the grammatical position of the noun 'Tim'. L10 is now given the floor to provide the second part of the adjacency pair, but at this moment other learners produce it instead of her. In the subsequent turn, the teacher objects to their unauthorized intrusion and carries on the discussion with L10.

Furthermore, similar to the finding in the CRG, the interaction in the ECG contained an instance when learners assumed the teacher's role to answer a question posed by a learner, as shown in Extract 4.51.

(4.51)

1	L5:	teacher?
2	T:	yes (.) Ala.
3	L6:	can we write is delivering?
4→	LL:	[no]
5→	T:	[no] why can't we write is delivering, because it's our simple <u>present</u> (.) and it's talked
6		about the <u>routine</u> (.) yes (.) who's next? Rukaya

When L6 asks the teacher to clarify a query about the verb form, at the first arrowed turn other learners immediately answer her question without being invited to take the

floor. At the second arrowed turn, the teacher provides the answer in overlap with the learners' production. By their actions, the learners assume the role of the teacher by exercising their right to take the floor and claim equal access to relevant knowledge about L6's query.

Moreover, one finding concerning the ECG interaction, which was also observed in the PG, is the teacher's strange reaction to students' errors. She used negative evaluation represented in a voiced, audible and emphatic in-breath expressing a gasp to show surprise and disagreement and indicate that there was trouble in the learner's preceding turn, as shown in Line 2 in Extract 4.49. Additionally, the teacher used the negative token 'no' on numerous occasions in her response to learners' grammatical errors. The word 'no' prefaced 28 utterances as contradiction parts or negative evaluation and the word 'wrong' was used six times, either by itself or after 'no'. It should be noted that this teacher's behaviour could be an outcome of the research conditions, as any reader might presume. Readers may claim that this teacher does not typically react to learners' errors in this way, but decided that in order to conform to the conditions of the research and apply the type of RT properly she needed to ensure that she marked the prior turn as incorrect using the negative token. However, this interpretation might not be applicable due to a number of reasons. First, the data analysis in all the repair groups revealed that this teacher is the only one amongst the three teachers who used this abundant amount of negative evaluation using these negative words. Second, she used them not only with explicit correction but also with prompts which can be conducted without employing any kind of negative evaluation. Third, the instructions given to the teachers (Appendix C) requested the ECG teacher only to use a contradiction part of explicit correction in which she could employ a variety of methods (e.g., commenting on grammar, using a negative word or any other way of indicating that the utterance was erroneous). Fourth, when the researcher observed the teachers in their usual grammar teaching lessons prior to the start of the intervention to determine their habitual corrective styles, she noticed that this teacher normally used an abundant amount of negative tokens. Thus, taking into account the above reasons and the fact that this teacher had to express disagreement in explicit correction, it could be said that she used her normal way of contradicting which is the abundant use of the negative tokens 'no' and 'wrong'.

The interesting point in this situation is the learners' acceptance of the abundant use of the blunt negative word as an ordinary and normal action pertaining to the institutional role of the teacher as an assessor of their production whose evaluation is

legitimate and easily digested. This situation is in keeping with Hauser's (2003) notions of 'relaxed constraints' on other-correction. Extract 4.52 is an example.

(4.52)

1	L7:	the patient (.) should (.) the patient should take one pill [every eight-
2	T:	[no no no no =
3	L7:	= the patient is supposed to take one pill every eight hours.

The pedagogical focus of the activity from which this extract is taken was on using the phrase 'be supposed to' in a sentence. Despite the accuracy of L7's production in Line 1, the teacher considers it erroneous because it is not the targeted form. Consequently, the teacher interrupts L7 with an overlapping quadrupled emphatic 'no'. Accepting the exaggerated negative evaluation, L7 produces a latching correct string of linguistic forms in Line 3.

Explicit Correction and Learning Processes

By analysing the interaction qualitatively, it was possible to depict the learning processes that occurred in the classroom context. The analysis helped to show how the use of explicit correction was a factor in the students' positive results in test performance, albeit lower than those in the groups using recasts and prompts. A comparison between the volume, successful uptake and mean gain of this group with the other groups (see Table 4.8) draws the reader's attention to the fact that the ECG did not outperform the CRG, despite its higher percentage of successful uptake and the similarity between explicit correction and recasts. This, as mentioned earlier, gives solid evidence that display of uptake is not a necessary factor in learning, although it is a proof of learners' noticing the gap between their developmental language level and the target language (e.g., Loewen, 2002, 2004; Mackey, 1999).

Analysis of the ERG Data

According to the research design, the teacher in this group used any RT she normally employed to treat learners' grammatical errors. She followed her usual corrective pattern, employing an eclectic method, which included all RT types that were appropriate for the situation at hand. Therefore, repair work in this group was varied, yielding 92 repair instances which occurred at an average rate of about 15 repairs per lesson and five repairs per activity. In this group, there were similar numbers of prompts and recasts, 46 and 39 respectively, whereas there were only seven instances of explicit correction. It is worth considering that although this group had more instances of repair

than the ECG, which had only 61 repairs (i.e., explicit correction, recasts and prompts), it did not outperform it (see Table 4.8).

Sequence Organization in the ERG

It is not surprising that since no intervention conditions were implemented in the ERG, the sequential organization was not unusual. As in the other RT groups, the interaction was typical of a form-and-accuracy context, which is oriented to learners' production of correct linguistic forms. Thus, the interactional architecture was a mixture of all the features of the three types of RT discussed in the three groups above.

Although findings of other research have shown that recasts are more dominant than other CF types (Ammar, 2008; Lyster & Ranta, 1997; Nassaji, 2007; Panova & Lyster, 2002; Sheen, 2004), the context of this study showed that prompts are the most frequently used RT in this type of context. All the categories of prompts were found in the interaction of this group. Extract 4.53 is an illustration of the use of prompts in the ERG.

(4.53)

1	L4:	do you like the uh: lecture? it is pretty uh: (1.2) motivated.
2	T:	moti- what?
3	L4:	motivating.
4	T:	((nodding)) motivating (.) ok.

L4 is reading a sentence in which she has to supply either the present or past participle form of the verb. She makes an error in Line 1, so the teacher initiates repair employing a prompting TCU in which she repeats part of the repairable item and using an open repair-initiator. As the floor is given back to L4, she displays uptake by changing her output and performing self-repair.

As mentioned above, 39 recasts were used in this group. They represented 42% of the total number of repair instances. Extract 4.54 is an illustration of a recast in the ERG.

(4.54)

1	T:	okay (.) number two?
2	L2:	u:h (.) this pen belong to me.
3	T:	ok (.) so this pen is belong to me becomes this pen (1.4) BELO:NGS to me (.) ok.

Being asked by the teacher in Line 1 to do the second sentence from an error analysis activity, L2 is able to locate and correct only one error in the sentence. She omits the auxiliary verb 'is' but does not add an 's' to the main verb 'belong'. As a

result, in the subsequent turn, the teacher conducts other-initiated other-repair using a recast in which she emphasizes the corrected version of L2's error. It should be noted that the recast in this extract conforms to the common definition of recasts (Long et al. 1998, p. 358), which suggests that a recast contains a move of agreement in addition to the correction (see Chapter 2, Sub-section 2.2.4 for a full discussion).

Only 7% of the learners' grammatical errors were treated by explicit correction, which appeared in seven instances. This small distribution gives evidence that this type of RT is not preferred by the teacher of this group who had all types of RT at her disposal (see also Doughty, 2001). Researchers have examined some disadvantages of explicit correction which might negatively affect their efficacy. For example, Lyster (1998a) notes that this RT is found to be of little efficacy with grammatical and lexical errors. Moreover, Doughty (2001) states that explicit correction is intrusive, breaks the flow of interaction and does not lead to self-repair. Line 5 in Extract 4.55 illustrates the use of explicit correction in this group.

(4.55)

1	L6:	he is married to my cousin.
2	T:	((nodding)) he's married [to my cousin.
3	L7:	[with
4	L8:	with
5→	T:	not with (.) TO (.) married TO someone.

In this extract which is taken from an error-correction activity, the teacher agrees with L6's production by confirming it with repetition in Line 2. The error occurs when another learner, L7, produces a partial overlap with the teacher's utterance using an incorrect preposition. L8 also repeats the same error in the following turn. Consequently, the teacher responds to both learners at the arrowed turn using explicit correction, which consists of a contradiction and a replacement part with stress on the repaired item.

Learner Uptake of Repair in the ERG

In this group, learners displayed 76% successful uptake (i.e., acknowledgement) in response to prompts, 18% in response to recasts and 14% in response to explicit correction (see Table 4.8). Successful uptake and unsuccessful uptake were displayed in the same fashion as in the other RT groups; therefore, uptake will be discussed only briefly with regard to this group.

In the case of prompts, the analysis showed that students generally assimilated the teacher's prompts and acknowledged them by generating self-repair. However, as in the

PG interaction, there were occasions when unsuccessful uptake occurred because the learner repeated the error as a result of misinterpreting the prompt. In the ERG, there were two occasions when a prompt was unclear to the error-producer. As a result, the learner could not understand the teacher's prompt which was addressed to her and consequently she did not display successful uptake. Thus, it could be said that misinterpreting a prompt can lead to the opposite of the intended outcome. Extract 4.56 shows how this happened on one of these occasions.

(4.56)

1	T:	right (.) number seven (.) whose turn?
2	L5:	last week I was in (.) involved in a three-car (.) accident
3	T:	I was involved?
4→	L5:	with.

In this activity, the students are taking turns to complete sentences using the past participle form of the given verbs as adjectives and adding prepositions where necessary. In Line 2, L5 succeeds in producing a correct linguistic string by choosing the preposition 'in' which is in accord with 'involved'. However, as a result of mishearing the student, the teacher repeats part of L5's utterance in the subsequent turn to prompt her to repeat her choice of preposition. At this point, trouble occurs as L5, at the arrowed turn, misinterprets the teacher's prompt, thinking that she is repeating the utterance to indicate an error. For this reason she displays unsuccessful uptake, providing an erroneous replacement for her initially accurate production.

With respect to recasts and explicit correction, Table 4.8 on p. 92 shows that display of successful uptake was very rare, appearing in only seven instances of recasts (18%) and only one instance of explicit correction (14%). This low percentage is attributed to the fact that in these two types of RT, display of successful uptake is optional. Successful uptake took place when learners, like those in the other RT groups, repeated the correction after these RT types were accomplished or enquired about it (cf. repair-reiteration and repair-interrogation, p. 87). On the other hand, unsuccessful uptake, which is defined above as the repetition of the same error, did not occur with these types of RT. Extract 4.57 below illustrates successful uptake in the form of repair-reiteration after a recast. The only two instances where successful uptake after explicit correction was displayed are illustrated by Extracts 4.58 and 4.59 showing repair-interrogation and repair-reiteration respectively.

(4.57)

1	T:	ok (.) next.
2	L4:	let's stop working and take a break (.) I'm getting- =
3	L5:	= tired.
4→	L4:	tired.
5	T:	tired (.) ok (.) next?

The pedagogical focus of this activity was on supplying a correct form of the verb 'get' and on choosing a suitable adjective from a list. L4 succeeds in providing the correct tense but is unable to choose an adjective, so she cuts off her utterance at that point. L5 immediately tries to solve the problem, producing a latching recast in the subsequent turn. Acknowledging the recast, L4 displays successful uptake by repeating it, as the arrowed turn shows.

The following extract, which will also be discussed in Extract 4.63, illustrates successful uptake after explicit correction in the form of repair-interrogation.

(4.58)

1	T:	hmm? (4.1) what's the correct- =
2	L2:	= you were supposed
3		(5.2)
4	L3:	YES?
5→	T:	((looking at L3)) yes?
6	L3:	u:h (.) you are not.
7	T:	you are not.
8	L3:	uh you aren't.
9	T:	you aren't or NOT (.) supposed to talk to Alan about-
10 →	L2:	why we don't use were?
11	T:	hmm?
12	L2:	why we: (.) put=
13	T:	=where's your verb to be? (2.1) verb be (.) be plus suppo:sed to.

In this extract, which is taken from an error-correction activity, L2 makes an error, in Line 2, when she supplied a wrong form of the auxiliary verb "were". The teacher at the first arrowed turn initiates repair in the form of the first part of explicit correction when she shows disagreement with L2's contribution by delegating L3 to provide the correct answer. Explicit correction is completed in Line 6 when L3 conducts other-initiated peer-repair providing the replacement part. In Line 9, the teacher produces confirmation as she expands on L3's correct utterance. Although the repair is questioned, though noticed, by L2 in the second arrowed turn, she displays successful

uptake by enquiring about the repair and negotiating the possibility of using the verb 'were'. In this fashion, she is actually displaying noticing of the repair and thus her uptake is successful.

As mentioned above, the next example shows how explicit correction was followed by successful uptake in the form of repair-reiteration.

(4.59)

1	L17:	our class composed of immigrants.
2 →	T:	ok? (.) of immigrants is fine, but (.) our class?
3	L18:	is.
4	T:	IS (.) compo::sed.
5 →	L17:	we put is.

In this activity, the learners were supposed to correct mistakes in sentences. In response to L17's erroneous utterance in Line 1, the teacher produces a prompt at the first arrowed turn, which acts as the contradiction part of explicit correction. Responding to the teacher's prompt, L18 supplies the replacement part in the subsequent turn and the teacher confirms it in Line 4. Successful uptake of the explicit correction is displayed at the second arrowed turn by L17 as she acknowledges the correction and includes it in her utterance.

However, as highlighted throughout this thesis, it should be taken into consideration that if successful uptake does not appear after recasts or explicit correction, this does not necessarily mean that uptake did not occur. As in the other RT groups, the main reason for lack of uptake display in this group was sequence closure immediately after conducting repair. Consequently, learners were not allowed any interactional space to display uptake or interact further (Mackey & Philp, 1998). This is demonstrable by taking a look at Extract 4.60.

(4.60)

1	T:	ok (.) next person
2→	L4:	u:h my boss is (.) my boss is pleased by my work.
3	T:	((frowning to show disagreement)) hmm
4→	L5:	pleasing.
5	T:	no (.) pleased is fine (.) is pleased (.) but preposition? (.) pleased
6		with my work, ok

In this activity, the learners were supposed to fill in blanks by choosing suitable participial adjectives (stative passive) and supplying concordant prepositions. In Line 1, the teacher initiates the sequence by giving the floor to L4. Both L4 and L5 produce

erroneous utterances at the arrowed turns. L4 supplies an incorrect preposition while L5 produces an incorrect form of the verb. The teacher, in Line 5, conducts other-initiated other-repair in the form of explicit correction, which includes an overt indication of the error using 'no' in the contradiction part and an emphasized replacement item. The repair serves two functions as it is addressed to both learners and corrects both of their errors. Immediately, in the same turn, the teacher opens a new sequence, giving L4 no opportunity to take the floor and display uptake of the repair.

Interactional Features of the ERG

The interaction in this group occurred in a normal form-and-accuracy context and the types of RT employed were typical of such a setting. The emergent interactional processes are thus not peculiar to any experimental condition and are therefore considered as natural features of the interaction.

The analysis of the interaction in this group revealed that prompts and recasts appeared in similar amounts (46 and 39 instances respectively). However, almost half the recasts were supplied by learners (18 instances). This indicates that there were half as many recasts conducted by the teacher as prompts. It is therefore concluded that the teacher preferred prompts to other repair types in order to negotiate form with the learners and provide some interactional space for them to use their linguistic competence. Nevertheless, the learners negotiated form in minimal and elliptic contributions. Extract 4.61 is an illustration of this scenario from a dictogloss activity.

(4.61)

1	T:	((reads a passage)) ok (1.3) what did you hear?
2	L1:	missing monkey.
3	T:	hmm?
4	L2:	uh staff uh in a zoo are worried about a missing monkey.
5→	T:	are worried about a missing monkey (1.2) ok and (.) how is he missing? how was he?
6	LL:	the cage.
7	L3	the cage was damaged.
8	L4:	damaged.
9→	T:	the cage was <u>damaged</u> (.) ok (.) now we just went through <u>get</u> or got plus adjective (.)
10		and you're all telling me the events (.) with <u>what</u> tense?
11	L5:	past.
12	T:	past (.) which past?
13	LL:	participle.
14→	T:	past (.) verb to be plus participle (2.0) ok (.) so (6.4) you think you could rewrite this
15		text?
16	LL:	no

17	L:	yes
18	T:	((smiling)) you could ? who could (4.3) ok (9.7) I'll read it again staff at Plymouth zoo
19		say they? (.) ↓using the word concerned, what was it?
20	L5:	are concerned.
21	L6:	getting
22	L7:	they are concerned.
23	L8:	were.
24	L9:	are concerned.
25	T:	ok (.) what did they say are?
26	L9:	they are concerned.
27→	T:	are concerned (.) ok (.) they are concerned (.) ok (.) what is that feeling before are
28		concerned?
29	L6:	getting (.) are getting.
30	T:	who said it? are getting (.) concerned ((writes the phrase on the board)) ok.

The pedagogical focus in the activity from which this extract is taken was on producing correct sentences containing a form of the verb 'get' and the past participle form of the main verb. In this long sequence, nine learners and the teacher take turns to negotiate form and only after twenty-six turns is L6 able to produce the targeted construction in the penultimate turn of the sequence, Line 29 although she provides it in Line 21 but is not heard by the teacher. It should be made clear that although all the learners' utterances are grammatically accurate, most of them are considered erroneous because they do not provide the targeted structure (i.e., get and past participle). During the exchange of turns, the teacher repairs the learners' incomplete utterances using some recasts and several prompts to give them more opportunities to interact, but their productions seem to be constrained, consisting of laconic and minimal utterances, as seen in Lines 2, 6, 8 and 11, while the rest of them are limited to simple sentences such as 'the cage was damaged' or phrases like 'are concerned'.

A close examination of the prompting TCUs at the four arrowed turns shows the teacher's ineffective attempts to elicit the targeted structure by employing prompts which are all followed by learners' curt and limited utterances displaying unsuccessful uptake, since none of them supplies the form targeted by the teacher. Although prompts have been claimed to produce language development (Ammar, 2008; Lyster, 2004) and push learners to change their output (Panova & Lyster, 2002), it could be argued, using evidence from this extract, that employing prompts in several turns could have a negative effect as they elongate the period between the time when trouble occurs and its treatment. During the elongated period, the learners are surmised to lose concentration

and might become distracted, while in a form-and-accuracy context such as the one under study here they are focusing on getting the correct linguistic forms directly and without delay. If the teacher at her third turn in Line 5 had used a recast to initiate the first instance of the targeted structure, 'staff are getting concerned', the learners could have provided other instances (i.e., got lost and got damaged) without much delay, as occurred in the above extract. Bearing this in mind, it could be said that prompts might not be as effective in contributing to assimilation as a direct repair in the form of a recast or explicit correction. By and large, the finding reached by this extract about prompts which do not provide a direct and ready version of repair to the learner is in keeping with Hammerly's (1987) claim that comprehensible input results only in "a very defective and probably terminal classroom pidgin" (p.397).

It is also worthy of note that repair of learners' errors in a form-and-accuracy context is naturally and exclusively the province of the teacher. The institutional role of learners does not authorize them to conduct repair in place of the teacher. However, as in the other RT groups, learners in the ERG contributed to the interaction in the form of uninvited peer-repair. The analysis revealed that all the prompts and 88% of explicit correction were performed by the teacher, while the learners acted as an agent performing 45% of the recasts, either collectively as a group or separately as single learners. Learners self-selected and contributed to the ongoing interaction to supply a replacement for the erroneous item, as illustrated by L18's utterance in Extract 4.59, or to advance the paused interaction, as demonstrated in Extract 4.62 below.

(4.62)

1	T:	ok (.) next
2→	L6:	Sam is wearing one brown (.) brown sock and one blue sock today (.) he got- (3.2)
3	L7:	dressed.
4	L6:	(4.6) he got dressed in a hurry this morning and didn't pay attention to the colour
5		of his socks.
6	T:	right, he didn't pay attention to the colour of his socks, seven.

In this activity which is similar to the one in the preceding extract, learners are providing a form of the verb 'get' followed by the past participle of the main verb. At the arrowed turn, L6 is unable to produce the verb, so she cuts off her utterance at this point. The long 3.2-second pause is terminated by L7, who assumes the institutional role of teacher and, without being offered the floor, produces a partial corrective recast. By conducting this other-initiated other-repair, L7 obviously intends to help L6 carry on with her production. L7's action is a learner's strategy employed to aid another learner

(Foster & Ohta, 2005) and reflecting affiliation (Heritage, 1984). Hence, it can be considered as peer-assistance. This extract also draws attention to an important finding concerning the interaction in this group. The teacher is found to provide learners with enough time when they pause to think of the accurate production even if they take a relatively long interval, to the extent that, in some cases, another learner might conduct repair, as shown in Line 3.

Thus, it can be concluded here that when learners perform peer-initiated peer-repair, they abandon their roles as knowledge recipients, assume the institutional role of teacher and claim equal access to knowledge of the repairable item. Conversely, as happened in the other RT groups, learners may be invited to perform other-repair when the teacher delegates them to do so. In the ERG data, there are two instances of this other-initiated delegated-correction, one of which is presented below in Extract 4.63.

(4.63)

1	T:	okay number three
2 →	L2:	((reading a sentence)) you don't supposed to (.) to talk er to Alan about
3		the (.) surprise (3.4) you are (.) you were
4	T:	hmm? (4.1) what's the correct- =
5 →	L2:	= you were supposed
6		(5.2)
7	L3:	YES?
8	T:	((looking at L3)) yes?
9 →	L3:	u:h (.) you are not.
10	T:	you are not.

This extract, which is taken from an error analysis activity, is the beginning of the sequence from which Extract 4.58 was also taken. At the first and second arrowed turns, L2 attempts in vain to correct an erroneous sentence. After a long 5.2-second pause, L3 offers to answer and is delegated to do so by the teacher in Line 8. By doing this, the teacher is actually initiating the contradiction part of the explicit correction, as she explicitly selects another learner to perform the repair and consequently refutes L2's answer. The second part is accordingly produced by L3 at the third arrowed turn in Line 9.

Moreover, a very interesting finding of the analysis which is in line with Seedhouse's (2004, p. 171) finding that teachers avoided unmitigated, overt negative evaluation, is the teacher's disinclination to use the negative words 'not' or 'wrong', whether separately as negative evaluation or accompanied by correction. Such avoidance could be attributed to the fact that the teacher in this group, unlike those in

the other groups, was a native speaker. It has been shown in the data that an abundant amount of negative tokens was employed only by the NNS teachers, a finding which could imply that cultural issues play a pivotal role in this regard, unless it is a matter of personality and individual differences. The only instance of the use of negative evaluation in the ERG appears in Extract 4.60, when the teacher employed the negative word 'no' in the contradiction part of the explicit correction.

Eclectic Repair and Learning Processes

In this group, the interaction reflected the learning processes which usually take place in any form-and-accuracy context in L2 teaching. The data presented in Table 4.8 and the CA analysis of the interaction in this group indicate that employing an eclectic method of treating errors is not as beneficial to the learning processes as concentrating on one type of repair. The mean gain in the ERG test performance was 18.3, which is the lowest compared with the other repair groups, despite high percentages of display of successful uptake. This, again, proves that display of uptake is not necessarily an indicator of learning.

4.2.3 Summary of the Qualitative Data Analysis Results

The salient findings from the qualitative data analysis can be summarized in the following points:

- Sequences of different types of RT can be analysed more accurately using the model (p. 90) devised in this study of the sequence organization pattern which contains different structures for the different types of RT.
- Other-initiated other-repair is used in the production of recasts and explicit correction, whereas other-initiated self-repair is employed to produce prompts.
- Absence of repair to errors produces adverse outcomes and renders the interaction mechanical and rigid. It also discourages learners to interact and engage in peer-repair, which is a common phenomenon in this setting.
- Corrective recasts enable the teacher to exert a tight control over the conversation because they are delivered in short sequences and the learner is not given the opportunity to self-correct.
- One method of operationalizing recasts and enhancing the noticeability of their corrective intent in a form-and-accuracy context is to repeat learners' correct utterances and reformulate their erroneous ones.

- Changing from one type of repair to another may create problems of misunderstanding on the part of the learners.
- Peer-initiated peer-repair is typical of this setting and is acceptable by both teacher and learners. Other interactional phenomena performed by learners, such as producing negative evaluation and answering other learners' enquiries, also occurred in this setting.
- The fact that the teachers occasionally alternated between different types of RT indicated that they were not able to make a complete separation between them.
- Learners displayed successful uptake of repairs by repeating them, enquiring about them, or performing self-repair. On the other hand, they displayed unsuccessful uptake by repeating the errors. The former case is a proof of noticing whereas the latter is not.
- Absence of display of uptake implies neither lack of noticing nor lack of learning.
- Display of successful uptake was found to be realized in a fourth turn that can be called 'acknowledgement' and added to the repair sequence template. Additionally, a teacher's reinforcement after learner's acknowledgement was found to be realized in a fifth turn and this can also be added to the repair sequence template.
- Prompts may be used in succession, either in one turn or over several turns, a strategy which might not be favourable to learning.
- Prompts can either be employed to provide encouragement and motivation to learners or they can have the opposite effect of discouraging and de-motivating them.
- A revised version of the taxonomy of prompts is proposed by this thesis by adding a new category to the elicitation types called 'providing choice'.
- Since uptake is optionally displayed after recasts and explicit correction, the absence of this display does not necessarily indicate lack of uptake, lack of noticing, or lack of learning.

4.3 Chapter Summary

In the two main sections of this chapter, Section 4.1 and Section 4.2, the two types of data were analysed and the results discussed in relation to the research questions.

In Section 4.1 the quantitative data analysis was presented and the results were discussed in order to answer the first question. The main result of this analysis showed that corrective recasts were the type of RT most beneficial to the development of the target language structure.

In Section 4.2 the qualitative data analysis was presented and the results discussed in order to answer the second research question. The results revealed that types of RT differ in terms of their sequential organization, use, display of uptake and interactional features. Consequently, they differed in their contribution to the learning processes associated with the form-and-accuracy context of the study. The properties of the RT types determine their effectiveness in supporting learning and in defining the role they play in promoting the development of the target language structure.

Since much discussion accompanied the presentation of the results in this chapter, a brief discussion only of the general findings in relation to the research questions and relevant literature will be presented in the final chapter, along with the conclusions of the study.

CHAPTER 5: GENERAL FINDINGS AND CONCLUSIONS

In this final chapter, the various threads of the arguments of this thesis are drawn together by summarizing the discussions presented in the quantitative and qualitative data analyses in Chapter 4, and linking them to the overall picture which has been created as the thesis has progressed. This will be done by finalizing and relating the findings to the existing literature in order to draw conclusions from the present research. Since the presentation of the results of the analyses in the previous chapter also included much of the discussion of these results, as mentioned earlier, this chapter will be confined to discussing the salient findings of the study.

The chapter is divided into six sections. Section 5.1 will present each research question and show briefly how it was answered. Section 5.2 will reflect on the methodology and the limitations of the thesis. In Section 5.3 the principal conclusions will be stated, followed by a description of the originality of the study in Section 5.4. The implications of the study for language pedagogy and research will be discussed in the penultimate section, 5.5, and lastly Section 5.6 will conclude the thesis with some suggestions for further research.

5.1 Discussion of the Research Questions

In this section, each research question will be presented and briefly discussed in relation to the existing literature and the results of the analyses.

5.1.1 *First Research Question*

The quantitative data analysis was performed in order to answer the first main question, which asked, **"Which type of RT is more beneficial to the development of the target language structure, in this case, the passive voice (i.e., classroom learning product)?"** The effects of recasts, prompts, explicit correction and no repair on L2 learners' pre-test/post-test scores as the product of classroom learning of the English passive voice were investigated. Statistical analyses of the scores indicated that learners who received repair of their syntactical errors benefited from it to differing degrees depending on the type of RT used, while those who did not receive any response to their errors showed a slight – although not significant – decline in performance.

The analysis of the ZRG data showed that there were no statistically significant differences in test performance, with a negative mean difference (- 0.4) being found in the post-test/pre-test comparison. Moreover, the result of the within-group analysis was not statistically significant, indicating that no statistically significant change occurred as

a result of the intervention. Additionally, the between-groups analysis result was very low, 28.92, representing the lowest level amongst all the groups. These results indicated that the learners' performance had declined; therefore, it can be concluded that their exposure to the intervention had an adverse effect, leading to a slight regression in their knowledge of the target structure. This finding concurs with Lyster's (2004) finding that no feedback on grammatical gender was not facilitative of uptake and, therefore, was not very effective in acquiring the target structure in FFI settings. It is also in line with Ammar's (2008) finding that absence of feedback did not improve L2 learners' acquisition of possessive determiners in ESL primary schools. It also provides solid evidence supporting the claim that without the provision of corrective feedback, L2 learners may disregard the incorrectness of the L2 forms (Niżegorodcew, 2007) and would find it difficult to learn new forms of the target language (Ammar, 2008, Mackey & Philp, 1998).

On the other hand, the results of the quantitative analysis of the students' scores in the four RT groups revealed a statistically significant relationship between the independent variable (i.e., type of RT) and the dependent variable (i.e., test performance), at the 0.01 level. The rate of improvement on the post-test for all these groups reflected an increased grammatical accuracy in the students' performance, represented in the mean gain, to varying degrees. This finding corroborated the already established view that CF is beneficial and essential to language development in terms of learning a grammatical structure (Ammar, 2008; Kang, 2007; Lyster, 2004; Lyster & Mori, 2006; Mackey, 2006, among others). Moreover, the varied mean ranks results of the four groups suggested that learners' test performance depended on the type of RT used. This point is clarified by discussing the results of each group independently below.

Learners in the CRG achieved the highest rate of improvement, with a post-test/pre-test mean difference of 10.23, a statistically significant within-group result ($p < 0.01$), and a mean rank result of 119.66, indicating the highest performance amongst the groups. These results support Sheen's (2004) finding that clear recasts are highly beneficial in FFI. They also align with the findings of many SLA studies that recasts lead to language development (e.g., Dabaghi & Basturkmen, 2009; Lyster & Jesús, 2009; Trofimovich et al., 2007). Ellis et al. (2001) also found that corrective recasts are more effective than other types of CF in FFI contexts. Similar results have been reported with the acquisition of gender agreement in Spanish (Leeman, 2003), verbal morphology in Japanese (Iwashita, 2003) and English questions (Mackey & Philp, 1998;

McDonough & Mackey, 2006).

The PG results indicated the second highest improvement in test performance, with a mean gain of 8.73. A statistically significant within-group P-value at the 0.01 level and a mean rank result of 110.48 indicated conspicuous statistically significant positive results for this group. However, when compared with those of the CRG, the analysis results for this group indicated that prompts were not as effective as corrective recasts in helping learners to develop their knowledge of the target structure in this setting. This result contradicts Lyster's (2004) finding that prompts are more effective than recasts for language development in FFI contexts. Moreover, despite the many findings which claim the superiority of prompts over recasts in ESL classes (e.g., Ammar, 2008; Ammar & Spada, 2006), the results of this study suggest that the opposite is the case, although prompts were found to be of noticeable benefit to the learners in this group.

The ECG showed a lower level of achievement than both the CRG and the PG, but only slightly lower than the latter. This indicates that the interventions using prompts and explicit correction had almost identical effects. The mean gain was 8.54 and the improvement indicated by the within-group analysis was statistically significant ($p <$ 0.01). The mean rank of 108.10 suggests that this group comes third in terms of improvement in the test results. These statistics give supporting evidence to Lyster's (1998a) finding that the use of this type of CF is not particularly beneficial in the case of grammatical errors.

The ERG received all the types of RT and no intervention conditions were implemented; therefore, the gain in the students' test performance was only a result of the eclectic repair technique the teacher combined with instruction. Notwithstanding the improvement indicated by the statistically significant within-group analysis result at the 0.01 level, this group did not outperform any of the three single-repair groups. It registered the lowest rate of improvement in test performance, which is also evident in the low mean gain, 8.2, and the between-groups mean rank of 103.29. This suggests that alternating between different RTs is not as effective as concentrating on one particular type. Considering this group's improvement, it could be said that this finding does, in part, accord with Panova and Lyster's (2002) argument that different feedback types should be selected and balanced taking into account various contextual, linguistic and cognitive factors. Nevertheless, contrary to their suggestion that teachers should not rely heavily on one type of repair while overshadowing the others, it was proved in the context of this research that using a single repair type with learners of similar linguistic and cognitive abilities enhanced their knowledge of the target grammar structure more

than mixing different types. In other words, when the teacher in the ERG selected and balanced RT types to treat learners' errors, they did learn the target structure but to a lesser degree compared with the other groups where the teachers relied heavily on a single type. This finding is unique to this study since no other similar finding exists in the literature.

An issue that should be examined here concerns whether the quantity of repair plays a role in enhancing test performance and classroom learning of the target structure. Ehrlich et al. (1989) argue that the quantity of CF has no vital role to play in facilitating comprehension, whereas a challenging view is proposed by Lyster (2004), suggesting that recurrence of feedback leads to comprehension and finally to automatic processing of knowledge. The discussion of the relation between the volume of a particular type of RT and learners' improvement in the current study (see p. 92) presents clear evidence in support of Ehrlich et al.'s view. For example, even though recasts occurred on only 93 occasions, they led to more improvement in test performance than prompts, which appeared more frequently (183 instances). It can therefore be concluded that recurrence of repair was not a significant factor in learning the grammatical structure.

The main findings which answer the first research question may be summarized as follows:

- Repair enhances immediate learning of a particular structure in the target language in form-and-accuracy (i.e., FonFs) contexts.
- The analysis of the data in the present study indicated that ignoring grammatical errors may have adverse effects on grammar learning in this context.
- Recasts are the type of RT that is most conducive to grammatical development in L2 in form-and-accuracy (i.e., FonFs) contexts. Prompts and explicit correction are slightly less effective than recasts in this regard.
- Concentrating on employing a single suitable type of RT most of the time in form-and-accuracy (i.e., FonFs) contexts might be more beneficial to immediate grammar learning than alternating between different types.

5.1.2 Second Research Question

The second main question, which sought to uncover what actually happened in the teacher-learner interaction that occurred during the intervention asked, **"How do different types of RT promote opportunities for the development of the target**

language structure (i.e., classroom learning processes)?" Three sub-questions were answered in order to address this query by performing a qualitative analysis of the data obtained from the interaction, with the aim of examining the relationship between test performance (classroom learning product) and learners' language development (classroom learning processes). Thus, the interaction was investigated in three areas relevant to the three sub-questions. These were described in detail in Chapter 4 and therefore will be discussed only briefly here.

The first sub-question asked, **"How do types of RT differ in terms of their sequential organization and use in a form-and-accuracy (i.e., FonFs) context?"** and was answered through a qualitative analysis of the interaction using CA tools. The use of CA helped to devise a new model for the sequence organization pattern in order to represent the data obtained in this research. In Chapter 4, the interaction in each group was examined in detail using this model and the results were related to the first sub-question; therefore, only the salient findings are summarized below.

Repair sequences involving the different types of RT were realized by a five-turn pattern (see Figure 4.2, p.90), as follows:

First turn: Teacher's (sequence) initiation.

Second turn: Learner's erroneous production.

Third turn: Teacher's repair (i.e., recasts or explicit correction) or repair-initiation (i.e., prompts).

Fourth turn: 1) Learner's acknowledgement/display of successful uptake (optional in recasts and explicit correction), or 2) display of unsuccessful uptake.

Fifth turn: Teacher's optional reinforcement.

In this pattern, the fourth turn may be optional when a recast or explicit correction is used because learners might not acknowledge the repair by displaying successful uptake. However, in the case of prompts, this turn is not optional as learners are expected to produce self-repair. Teacher's reinforcement in the fifth turn is always optional.

The analysis showed that, in recasts, the repair was initiated and performed in the same turn, whereas in explicit correction, this process could also be performed over two turns which might lessen their efficacy and give other students the opportunity to supply a reformulation that might be erroneous. Prompts were found to be the only type of RT which encouraged self-repair, but in some cases the teacher used a succession of

prompts which made the sequences lengthy and tedious when extended over several turns. Prompts were also found to have a propensity to lead to misinterpretation.

The second sub-question asked, **"How do learners display uptake of the types of RT?"** Very similar to Wong's (2000) finding that other-repair initiatives act as a resource in the service of the co-management of talk and the co-construction of intersubjectivity, the interaction in the different RT groups examined in this study reflected the development of intersubjectivity through repair and display of uptake. Whenever learners displayed uptake, they demonstrated intersubjectivity in an optional acknowledgement turn.

The analysis of the data of the repair groups revealed that uptake of repair was either successful or unsuccessful. Display of successful uptake, which is an optional turn in the repair sequence template, appeared as a mechanism for displaying understanding (Schegloff, 1991). It was represented by a repetition of the prescribed correction (see Mackey & Philp's 1998 taxonomy) or enquiring about it. This mechanism of displaying successful uptake is called 'acknowledgement' in this study. Unsuccessful uptake was manifested by repeating the error.

Similar to most studies on uptake (e.g., Ellis et al., 2001; Loewen, 2002, 2004; Mackey, 1999), this study showed that learners' display of uptake presented a proof of noticing the gap between their linguistic level and the target language. However, the current findings of this research concur with the claims of other research that display of uptake is not a crucial factor in learning, since it was found in the context of this study that there was no relationship between the different percentages of display of uptake across the different RT groups and performance level (see Chapter 4, Table 4.8 and discussion in Section 4.2.2).

An important point revealed by the qualitative analysis is that corrective recasts helped learners focus on the form (Doughty, 2001; Farrokhi, 2003) and were highly beneficial for accuracy when they were noticed (Trofimovich et al., 2007). They were also found to be beneficial not only to the error-producer but to other learners as well. The operation of socially distributed cognition was mainly manifested in the interactional business when display of successful uptake was performed by learners who were not the intended recipients of the recasts. This finding corroborates Ohta's (2001) findings concerning learners who were able to display uptake of recasts which were not addressed to them personally.

Much research has examined factors affecting the amount of successful uptake of recasts. The results of many studies have shown that the instructional setting influences

the extent to which learners repeat recast (Lyster & Mori, 2006; Oliver & Mackey, 2003). For example, abundant successful uptake was observed in adult ESL classrooms in New Zealand (Ellis et al., 2001), whereas infrequent uptake was observed in adult ESL classes in Canada (Panova & Lyster, 2002). By examining the percentages of displayed successful uptake (see Chapter 4, Table 4.8, p.92), this research demonstrates that the instructional setting of focus-on-form (i.e., FonFs) in a Saudi female context was an instrumental factor in producing these percentages.

The analysis of the prompts in the PG and ERG data revealed that almost all of them concluded with self-repair, which is considered as display of successful uptake. Nevertheless, uptake did not immediately follow all of the teacher's prompts because she incorporated a cluster of prompts in one turn, offering the floor to the learner only after the last prompt. Since the intention behind prompting is to give the learner the opportunity to perform self-repair, the prompts in this study produced more successful uptake than recasts or explicit correction. However, they actually led to less learning than recasts. This could be attributed to the different function each type of RT performs. Recasts, as Loweon and Philp (2006) note, provide immediate teacher modeling of the correct form for learners, whereas prompts put the onus on the learners to find the correct form. Moreover, on ten occasions (eight in the PG and two in the ERG), prompts were misinterpreted and led to unsuccessful uptake (see Chapter 4, Extract 4.34). Taking this finding into consideration, it can be argued that prompts do not always accomplish the purpose for which they are intended and can instead sometimes lead to confusion and frustration.

On the other hand, the absence of uptake after recasts and explicit correction was attributed to the lack of interactional space allowed after the repair (see Ammar, 2008; Mackey & Philp, 1998), because a new sequence was opened or negotiation of the proposed correction was initiated instead of the floor being ceded to the error-producer to display uptake in the next TRP. Since such absence implies neither lack of noticing (Mackey, 2006; Mackey & Philp, 1998) nor lack of learning (Braidi, 2002; Gass, 2003), it was not considered to have any effect on the process of learning in the present research.

However, it was found that sometimes uptake was not displayed despite the fact that the students were given the opportunity to do so. This provided evidence that display of uptake is an optional action (Loewen, 2004; Mackey & Philp, 1998) and a participant's construct to which the speakers themselves orient in the particulars of the interaction. Prompts are the only type of repair that necessitates display of uptake represented in the

accomplishment of self-repair, whether immediately after the repair initiation or in a delayed turn. Overall, all the findings showed that display of uptake was not a crucial factor in learning in the context of the present study.

In summary, the contribution of this thesis to the uptake-display issue and the organization of the repair sequence is the realization of uptake in an optional fourth turn which can be added to the repair sequence organization template. Uptake in this turn can be classified into two categories:

1) Repair-acknowledgement (i.e., successful uptake), which is further divided into two sub-categories:

   a) Repair-reiteration: when learners repeat the correction.

   b) Repair-interrogation: when learners enquire about the correction

2) Error-reiteration (unsuccessful uptake): when learners repeat the same error.

The third sub-question asked, **"What are the interactional features produced by different types of RT?"** The use of a CA perspective to examine the nature of the interaction when different RT types were employed in a FonFs context helped to address this question and uncover the interactional phenomena and social actions that were created in consequence. This issue was discussed in full in Chapter 4. The most important finding revealed by the analysis was that different context-sensitive interactional processes were created as a result of implementing different experimental conditions. In brief, five unusual interactional phenomena emerged as context-specific scenarios in the interaction of the five groups in this study. The first three could be attributed to the presence of teacher-initiated peer-repair and the prevalence of peer-initiated peer-repair, which was found to be peculiar to the Saudi female university context. The fourth was a consequence of the error tolerance which was implemented in the ZRG. The fifth phenomenon was attributed as much to culture-bound issues and individual predilections as to contextual factors. These phenomena were discussed in detail in Chapter 4, Section 4.2.2; a brief summary only therefore, will be presented below.

1) Learners participated in an ongoing two-party talk without being invited. They also claimed equal access to knowledge of the repairable item by conducting repair. In such instances, the teacher's role was merely to confirm the correction.

2) Learners copied the teacher's evaluative work by using negative evaluation directed

at other learners' erroneous utterances. By doing so, they crossed interactional boundaries and assumed the institutional role of the teacher, who is the sole authority in the classroom allowed to pass judgement or give evaluation.

3) Learners even overrode and abandoned their actual role as recipients of knowledge to adopt the teacher's role as a knowledge source by replying to other learners' enquiries.

4) Unlike those in the four RT groups, the learners in the ZRG whose errors were not corrected were reluctant to initiate other-repair or produce peer-repair because they possibly assumed that lack of repair indicated that their contributions were acceptable. They also did not participate in the talk as other students in the other groups because they could not identify any collaborative effort from their teacher that would encourage them to participate in any reciprocal verbal activities.

5) Unlike the NNS teachers, the NS teacher gave learners ample time to think of the accurate production after prompts and refrained from using any form of negative evaluation, whether by itself or in conjunction with other utterances, whereas the other teachers used negative words in many instances to give evaluation. Both of these phenomena could be attributed to individual conduct or to culture-bound factors such as being from a Western or Eastern cultural background.

The discussion above has provided the answer to the second research question. The main points of the discussion may be summarized as follows:

- Learners in the ZRG found the interaction unusual and this was reflected in their reluctance to perform any interactional endeavour such as asking questions or producing peer-initiated peer-repair, which are common features of the Saudi female university context. It is therefore concluded that error tolerance can discourage learners and prevent their natural participation in the interaction.

- In the context of this study, corrective recasts were made salient and noticeable; therefore, their corrective element was enhanced and this led to their usefulness for learning a particular language feature. These recasts were effective because they were isolated declarative recasts used in a form-and-accuracy (i.e., FonFs) context and were hence easily perceived by learners as corrective. Moreover, they provided an immediate ready version of the correct form directed to the learners' 'attentional readiness'.

- Despitethe fact that prompts represented the largest number of repairs, they were not as effective as recasts in promoting learning of the passive voice.
- Explicit correction is basically a recast accompanied by a move of disagreement. For this reason, it led to less learning of the passive voice than recasts and prompts. The disagreement element can make explicit correction intrusive and produce a discouraging effect on learners when their errors are explicitly indicated or treated using negative tokens or other forms of contradiction.
- In the context of this study, the method of using an eclectic combination of RT types to correct syntactic errors proved to be less effective than concentrating on one type of repair.

The research questions have thus been answered. However, the discussion now moves to a very important issue in the thesis, namely, the link between the types of RT and the learning processes which were talked into being through the interaction in the different groups. This issue was discussed in detail in the analysis of each group in Chapter 4, Sub-section 4.2.2, and will therefore be examined only briefly in the following section.

5.2 Relationship between types of RT and Learning Processes

Addressing the research questions helped to explicate the relationship between the intervention conditions (i.e., study groups) and the processes involved in classroom learning of the target language structure. This connection between the repair used in the RT groups, or no repair in the case of the ZRG, and the learning processes is discussed below.

5.2.1 Repair and Learning in the ZRG

Ignoring the learners' errors in the ZRG was shown to have an adverse effect (see also Ammar, 2008; Lyster, 2004), since their participation was found to be a one-way process, and this was reflected in the slight deterioration in their performance in the post-test. This means that the intervention (i.e., error tolerance) either detracted from, or confused them regarding any knowledge of the passive voice they already had.

It was also shown by the analysis of the ZRG data that in contrast to the abundant occurrence of peer-repair in the four RT groups, learners in the ZRG refrained from this practice when they realized that their teacher was not performing any sort of repair. As a result, they were reluctant to participate in the interaction. In the context of this group, the teacher seemed to act contrary to the educational norms, which imply that talk

constitutes interactional achievements in which speakers depend on their co-participants' interpretations of their verbal activities in order to produce subsequent contributions. The absence of the teacher's feedback, especially in the presence of errors, gave an unnatural feel to the interaction. Consequently, the students' interest in maintaining reciprocity of perspectives and intersubjectivity was not sustained. Learners produced sentences the accuracy of which they were uncertain about and because their problems were not resolved by their teacher, they tended to pass over them (Niżegorodcew, 2007). Two interpretations can explain this situation. It could be said that the change from the normal classroom routine where the teacher usually provides feedback confused the learners and affected their motivation. The other more logical interpretation which provides a better explanation for the drop of scores was that the students interpreted the zero-response condition as a positive response from the teacher and consequently assumed that the lack of repair work was indicative that the prior contribution was acceptable. As a result, this negatively influenced their learning of the passive construction and led to no improvement in their pre-test/post-test scores. Thus, it can be concluded that error tolerance could discourage learners and prevent their natural participation in the interaction; most importantly, it might lead to educational disadvantages. Furthermore, it could be claimed that if teachers accept errors and withhold repair, they in essence give up one of their educational roles as providers of corrective input and consequently learners might assume wrong information to be right and acceptable.

5.2.2 Repair and Learning in the CRG

To repair learners' errors in this group, 93 corrective recasts were used. The teacher performed 82% of them while the rest were delivered by learners. The findings regarding recasts presented in this thesis are in alignment with the general claim made by proponents of the Interaction Hypothesis (Long, 1996, 2006) that recasts play a pivotal role in promoting language development. This study proved that corrective recasts were effective in promoting the learning of a particular language structure in form-and-accuracy (FonFs) contexts as well. The CRG showed the highest rate of improvement amongst the groups. Table 4.8, p.92, shows that although the number of recasts in the CRG and the percentage of successful uptake were much lower than those of the prompts used with the PG, the mean gains of these groups indicate that the CRG outperformed the PG in both test improvement and classroom learning.

Unlike communicative recasts, which include a move of agreement in addition to the reformulation, the recasts that were employed in this study were isolated declarative

recasts (Lyster, 1998b), which proved to be very effective for the three reasons described below.

Firstly, similar to the finding in Lyster (2004) and Nicholas et al. (2001) that the effectiveness of recasts increases in FFI, in this study it was found that the usefulness of the recasts was enhanced because they were employed in a FonFs context which is a type of FFI. Owing to the emphasis on form in this kind of context, the recasts were made salient and noticeable; therefore, their corrective element was consolidated (Han & Kim, 2008). Thus, their noticeability led to their effectiveness. This finding concurs with the results of many other studies indicating that recasts have a positive effect when used in FFI contexts (Lightbown & Spada, 2006; Philp, 2003; Schmidt, 2001).

Secondly, because recasts facilitate learning of 'late' L2 features (Dabaghi & Basturkmen, 2009), the clear didactic recasts employed in this study worked better than prompts and explicit correction in promoting learning of the passive voice, which is a 'late' L2 feature.

Thirdly, as stated above, the corrective recasts employed in the context of this study were all isolated declarative recasts (Lyster, 1998b), which are easily perceived by learners as corrective because they help focus their attention immediately on the reformulation and notice the difference between their linguistic developmental level and the target language (Han & Kim, 2008). In this study, recasts provided an immediate and ready version of the correct form, which was thus easily noticed by learners. This could be explained in the light of McLaughlin's (1990) discussion of L2 learning from a cognitive-psychological perspective and his assertion that initial attention is necessary for L2 learning. Accordingly, exposure to reformulated linguistic structures supplied by the teacher had an impact on the learners' 'attentional readiness'. This finding also corroborates the results of a study involving adult ESL learners conducted by Ellis et al. (2001). The results showed that a high rate of uptake after recasts was achieved as a result of attentional alacrity.

5.2.3 Repair and Learning in the PG

The analysis revealed that 183 prompts were used in the PG as a repair strategy in order to generate learner self-repair. Table 4.8, p.92, shows that despite the fact that learners in this group benefited from prompts, as indicated by the mean gain, these prompts led to less learning than recasts, which were found to be more conducive to the development of a particular language structure. This finding contradicts the results of many studies which pointed to the superiority of prompts over recasts (e.g., Ammar & Spada, 2006; Lyster, 2004; Panova & Lyster, 2002, Philp, 2003).

The analysis showed that focus on form in the PG interaction led to abundant use of prompting TCUs which created much negotiation of form and yielded very long repair sequences, reaching up to 35 turns on one occasion. Such long stretches of form negotiation can be tedious, with a risk to the student of losing face, and may thus discourage learners (Lightbown & Spada, 2006). This negative effect was manifested in long spans of form negotiation, as illustrated in Extract 4.26 above. In such cases, the teacher's attention is usually focused on a single learner, while other learners might become distracted and have a tendency to lose concentration, particularly in large groups.

This research demonstrated that prompts are the only type of repair that has a two-fold affective property as they can have the effect of either supporting or discouraging learners. In other words, they can provide learners with encouragement, support and even self-confidence within the repair work, as illustrated in Extract 4.38 in Chapter 4, or they can have quite the opposite effect when they accompany harsh negative evaluation, as demonstrated in Extract 4.40. As a consequence, they can either promote learning or hinder it.

5.2.4 Repair and Learning in the ECG

In this group, 40 instances of explicit correction occurred, six (15%) of which were performed by learners. Although this type of RT is similar to recasts in providing the correct form, it also includes refutation of the learner's production which can impede the flow of talk. For this reason, explicit correction is found to be less favoured by teachers and generally described as intrusive (Doughty, 2001).

Explicit corrections also resemble recasts in that they can be followed by display of successful uptake (i.e., acknowledgement) when learners repeat the reformulation provided in the preceding turn or enquire about it. However, despite these similarities and the fact that they led to more display of uptake than the recasts in this study, they were not as useful to learners as recasts. Dabaghi and Basturkmen (2009) studied the effects of recasts and explicit correction on intermediate-level L2 learners and found that recasts were more effective in learning 'late' language features. Similarly, this study showed that the ECG learners did not improve as much as those in the CRG (see Table 4.8, p.92). The lower improvement rate can be attributed to the intrusive nature of explicit correction and the potentially discouraging effect on learners of having their errors explicitly indicated or treated using negative tokens or other forms of contradiction.

5.2.5 Repair and Learning in the ERG

In this group, the teacher used a mixture of RT types: 39 recasts, 46 prompts and only seven instances of explicit correction. As shown in Table 4.8, p. 92, learners in this group improved the least compared with the other RT groups. This indicated that using a normal corrective style was not as effective as concentrating on one type of RT. It could be argued that the presence of different types of RT together negatively influenced learners' attention and familiarity with each type, since they had to adjust to the practices of a different speech exchange system (see Markee, 2004) every time the teacher used a different RT type. It can be concluded here that such a transition may have affected the learners' language processing abilities and made each type less effective than when being used in isolation.

In this group, which represented a natural setting with no experimental conditions implemented in it, the amounts of recasts and prompts were similar. This provides evidence that the frequency of occurrence of these two types in a FonFs context differs from that in other contexts. For example, findings of studies conducted in communicative contexts, such as those of Ammar (2008), Lyster and Mori (2006) and Panova and Lyster (2002), showed recasts to be more dominant than other types of RT. Moreover, the sparse distribution of explicit correction (only seven instances) in this study proves that this type was not preferred by the teachers. Studies such as those of Lyster and Ranta (1997) and Panova and Lyster (2002) also showed that explicit correction is used infrequently. Some researchers (e.g., Doughty, 2001) have attributed this sparse occurrence to the fact that explicit correction is intrusive, and to the fact that it breaks the flow of interaction and does not lead to self-repair. The scarcity of its use generally could also be attributed to its low efficacy with grammatical and lexical errors (Lyster, 1998a).

The next section will reflect on some methodological issues and limitations of the present study.

5.3 Reflections on Methodology and Limitations

This research explored the effects of different types of RT and the absence of repair on learners' test performance and classroom learning processes which occurred as they were learning the English passive voice in a Saudi FonFs context. Recasts, prompts, explicit correction and no feedback at all were the techniques employed in response to learners' syntactic errors in order to obtain findings about classroom learning not only as a product or a skill of classroom practice but also as a process or a social action engaged in by members of the classroom environment.

The first stage of this research involved reviewing much of the literature on repair using the CA approach and on CF in the field of SLA. Many studies (e.g., Ammar & Spada, 2006; Lyster, 2004; Lyster & Ranta, 1997) showed that prompts are more useful than other types of RT in promoting language acquisition. This gave the researcher the impression that prompts could excel over other types in promoting learning of the passive voice. This impression could have represented a limitation if it had affected the data collection or the analysis. Hence, the researcher took care to divest herself of this preconception in order to avoid bias and keep the study value-free. For example, the instructions given to the teachers and any informal discussions with them were completely devoid of any preconceived notions. Thus, no personal values or theoretical inclinations were allowed to sway the conduct of the research or to affect the findings.

The methodological approach adopted in this research was based on two lines of enquiry: a quantitative cognitive approach in the form of a quasi-experimental research design and a qualitative constructivist approach applying a conversation analytic methodology to talk-in-interaction. The two methodologies focused on the same phenomenon and set out to gather different sorts of data to answer the research questions. The study commenced by investigating the direct relationship between employing different types of RT and L2 development and learning, which is one of the current foci of recent classroom interaction research. As mentioned in Chapter 2, most previous SLA studies have emphasized both the existence of this relationship and the fact that certain types of correction are more effective than others in promoting learners' modified output. However, most of these studies have explored corrective feedback from an exclusively quantitative cognitive perspective (e.g., Lyster & Ranta, 1997; Mackey & Philp, 1998). Therefore, the methodological framework of this study employed both quantitative and qualitative investigations in order to forge collaboration between quasi-experimental quantitative research and CA qualitative research. This would provide more insights into the interaction-learning relationship and demonstrate how the amalgamation of these two approaches in one piece of research is an essential step in the CA-for-SLA drive. The quantitative approach showed which repair technique had the most beneficial effect on students' test performance as a product of classroom learning of the passive voice, while the qualitative analysis of the interaction portrayed the processes of learning from an emic perspective and in situ and revealed why some repair techniques might be more effective than others. CA was neither used as a learning theory nor to measure learning but rather to explore opportunities for learning and to examine types of behaviour that could be associated with it. As a result,

this study was able to incorporate a unique feature of L2 classroom interaction, namely, the connection between the pedagogical purposes underlying the classroom activities and their contingent linguistic forms and patterns of interaction in a FonFs (form-and-accuracy) context. The CA methodology approached the details of the interaction in real-time while the intervention conditions were being applied. This facilitated the investigation of the socio-linguistic aspects of error treatment and shed light on the social factors that could have affected the cognitive processes of learning. When repair is viewed in its sequential context, it pulls into the scene the complex discursive arrays of interactional acts which are embedded in the learning process and at the same time are contingent upon learners' production. Hence, in this research CA was applied in order to investigate the phenomenon of repair as a construct that might affect the process of learning a specific grammatical structure in a specific setting. Consequently, the two methods adopted in this research worked in tandem while each one served to answer one research question. Using both methods helped to offer a comprehensive account of the research constructs and their cause-effect interrelationship and was able to provide explanations and increase understanding of human behaviour. Employing two methods also helped to avoid the limitations produced by the use of a single method and compensated for any methodological deficiency. In other words, the limitations of one method are offset by the use of the other (Bryman, 2006, p. 106), as will be discussed below.

Although the results of this research are extremely promising, a few minor limitations associated with the methodology were encountered while conducting the study; however, these were dealt with through the careful and thoughtful application of data collection methods and data analysis techniques. The following points explain the limitations of the study and the procedures that were taken to minimize their effect.

- One limitation of the quantitative method was its inability to depict the true nature of classroom interaction and other social phenomena in the different groups because in this method participants are seen merely as statistics. It was therefore not capable of capturing, describing and explaining how the participants in this research dealt with the grammatical language structure under study. Therefore, to resolve this problem, the qualitative method was adopted as a complementary methodology.
- With regard to the measurements used for the tests, this study employed measures in which the dependent variable (learning the passive voice) required "the application of L2 rules in highly focused and discrete ways" (Norris & Ortega 2000, p. 483),

with no use of communicative oral tasks, a fact that might seem to threaten the validity of the tests. However, it can be argued that this does not represent a limitation in the present study because the tests were not designed to measure implicit knowledge, which is more associated with language use outside the classroom. Rather, they were intended to measure language development inside the classroom as a product of learning using elicited data. Learning of the grammatical structure was measured statistically only in order to determine the effects of different types of RT on the students' learning of the passive voice while relying on the rules pertaining to the context of the classroom. The present study employed oral tasks which were designed to be analysed qualitatively, not as a dependent variable to be quantitatively measured, in which case, they might, as stated by Ammar (2008), have varied in their validity. That is, when tasks that elicit authentic language use are employed to test grammar, "they frequently fail to elicit the structure(s) they have targeted, as learners are adept at avoiding difficult structures" (Ellis 2008, p. 19).

- The fact that time and cost constraints compelled the researcher to undertake this research over a relatively short period of time in only one setting could be regarded as a limitation on its generalizability. Conversely, it could be argued that although the study findings are not generalizable to all kinds of learners, they may be generalized to other similar instructional contexts. This means that since the nature of all teaching contexts is generally similar, analogous types of interaction will be created if teachers in these teaching contexts are asked to apply the same instructions. According to Seedhouse (2005a), the reflexive relationship between pedagogy and interaction is certainly a generalizable feature of L2 classroom interaction since it is directly associated with the institutional goal, which is identical in all situations of L2 classroom interaction. In fact, there was no real reason to assume that the students would perform differently from the general population. Evidence in support of this claim is the similar conclusions regarding the effectiveness of recasts which were drawn in other contexts (see Table 2.1, p. 24). Moreover, confirming the generalizability of natural classroom studies, Seliger and Shohamy (1989) point out that research studies using intact classes are "more likely to have external validity" (p. 149).

- Dealing exclusively with female participants from one university bound the research to a particular milieu, which is, as noted above, representative of similar contexts only. This might render the generalizability of the study questionable despite the

fact that the setting is related to real-world experiences. This limitation may be attributed to the gender-segregated nature of educational institutions in Saudi Arabia, which made it impossible to accommodate male participants. Moreover, it was difficult to sample other female participants from other universities in a limited period of time at a reasonable cost because Saudi universities which accommodate women are few and widely dispersed geographically.

- This research was conducted in relation to the learning of a single grammatical structure in EAP classes at a Saudi female university. The amount of peer-initiated peer-repair in these classes suggests that interaction in this setting has some context-specific features which are not reported elsewhere and therefore need to be taken into account in relation to generalizability. The learners' co-production of repair is another contextual feature which might suggest that the study has limited generalizability. Again, it could be argued that this study is generalizable only to Saudi female university students in similar contexts. However, to maximize the external validity of the study, it could also be argued that all L2 classroom interaction studies are conducted in contexts which have their own peculiar features. Moreover, from a theoretical perspective, it could be argued that the findings of qualitative research, as Bryman (2008) states, "generalize to theory rather than to populations" (pp. 391-2).

- Peer-initiated peer-repair constituted 26% of the recasts, 20% of the prompts and 17% of the explicit correction. This unusual phenomenon was an interactional feature typical of this context and the high level of its occurrence could be claimed to have influenced the results. However, since the principal focus of this research was on the learners' exposure to the types of RT, regardless of the repair agent (i.e., producer), this learner repair need not be considered a variable that affects the findings of the study.

- The qualitative analysis showed that in practice the use of RT types was not always totally discrete, as on a few occasions the teachers were not able to follow the instructions to the letter because of the complex nature of repair, and occasionally employed a type of RT different from the one assigned to them. However, this should not be considered a limitation that might threaten the construct validity of the research because these occurrences represent a small percentage (12%) of the total number of the types of RT that occurred in the interaction.

- Video recording is undoubtedly useful to capture visual and non-verbal details of the interaction and "grasp the immediate context and meaning of the talk" (Peräkylä 2003, p.169). However, owing to cultural considerations, it was only possible to employ this instrument to record the teachers. Therefore, the study might lack a level of detail which includes salient features of the students' oral discourse, such as eye gaze, facial expression, body movement, hand gestures and other aspects of non-verbal communication. Nevertheless, using audiotape recording of naturally occurring interaction, as Sacks (1994) asserts, is in fact sufficient to provide reliable primary data. Therefore, using four digital voice recorders to track the learners' verbal behaviour eliminated any possible limitations associated with this data collection instrument.

The above discussion has shown how careful and thoughtful application of data collection methods and data analysis techniques minimized any possible limitations to this research. The next section presents the conclusions of the study.

5.4 Conclusions

A number of conclusions have been reached by this thesis. These can be summarized in the following points:

1) The principal conclusion of this thesis is that different types of RT exerted varying degrees of influence on students' classroom learning of the passive voice as both a product and a process. This conclusion reflects the multi-disciplinary epistemology of this research, which commenced with a close examination of a specific interactional phenomenon represented in the RT types that occur in didactic contexts. This phenomenon was related to learning both as a product and a process. During the process of undertaking the research, this specific standpoint gradually expanded, while the repair phenomenon was connected to insights from several language disciplines, namely SLA, CA and FLT. Thus, this research stands at the point where these three principal, highly significant language-related fields in L2 pedagogy converge and collaborate.

2) This thesis opposes Krashen's view of the insignificance of correction in language development and emphasizes its role as an essential component in the learning process. Without repair, learners are left to their own devices to process production in either well- or ill-formed utterances. Therefore, this research concludes that L2 grammar teaching should not dispense with repair of syntactic errors.

3) The findings of this research concur with research reports that recasts positively affect L2 development (e.g., Ammar & Spada, 2006; Lyster & Mori, 2006, Mackey & Philp, 1998; McDonough & Mackey, 2006; Nassaji, 2007; Sheen, 2004, 2006; Trofimovich et al., 2007). Repair in the form of isolated declarative recasts was the type found to be most beneficial in the setting of this study. A number of factors contributed to their effectiveness. First, they were produced by the teacher in an immediate and focused way. In other words, they provided immediate repair in shorter sequences than those produced by prompts and explicit correction. Second, they appeared as isolated declarative recasts which were able to stimulate noticing and hence their corrective intent was easily assimilated (see Han & Kim, 2008). Third, they were employed in a form-and-accuracy (i.e., FonFs) context which helped to draw learners' attention to them.

4) Different types of RT worked in different ways. Prompts were often performed over many turns; consequently, they were tedious and affected learners' motivation and attention. Moreover, they did not provide a correct linguistic version ready for noticing. By contrast, because recasts provided a ready correct version in one turn immediately after the trouble-source turn, learners' attention was straight away drawn to their corrective intent. On the other hand, although explicit correction also provided the correct version immediately, it led to less learning than recasts. This was attributed to the incorporation of a contradiction element in this type of RT, which seemed to have a negative influence on its efficacy.

5) Learners' display of successful uptake may be a reliable indicator of noticing and perceiving the corrective intent (Mackey et al., 2000), which is in turn a predictor of learning (Loewen, 2005) and a facilitative factor of language acquisition (Ellis et al. 2001, p. 287). Such display of uptake does not usually follow recasts or explicit correction whereas it is a necessary culmination of prompt sequences represented in self-repair. Prompts in this study had the highest percentage of successful uptake. Nevertheless, corrective recasts were found to outperform them in developing learners' knowledge of the target language structure. Accordingly, display of successful uptake as found in the data was not considered by this research as a key factor in promoting learning of the passive voice.

To sum up, the results of the present study support the view of proponents of the Interaction Hypothesis and the Output Hypothesis that input obtained from interactional modifications is most easily comprehended. They suggest that exposure to the input supplied by the different types of RT, particularly recasts, can promote L2 development in form-and-accuracy (i.e., FonFs) contexts which concentrate only on L2 forms, even if they have little semantic weight in the context of the interaction. This finding is consistent with findings of previous research on recasts (e.g., Leeman, 2003; Long et al., 1998; Nicholas et al., 2001; Mackey & Philp, 1998). In this study, didactic corrective recasts benefited learners at least in the study setting and for the language structure investigated in this research.

The conclusions reached by the investigation show that the purpose of this study has been achieved. It is also hoped that this piece of research will provide new insights into the situation in L2 learning in the Arabic-speaking region, a corner of the globe that is insufficiently researched. In the following section, the originality of the study is identified by explicating its unique aspects.

5.5 Research Originality

The originality of this research which sets it apart as a distinctive study lies in the following points.

First, it was shown in the literature review that findings regarding the effectiveness of different repair types are inconclusive. Therefore, the present study attempted to investigate this issue from a new perspective in order to establish whether a relationship existed between the different types of RT and learners' test scores (classroom product) on the one hand and between these types and the interaction (classroom learning processes) on the other. To explore the product and process of learning simultaneously is an endeavour that has not so far been undertaken by any other study.

Second, the uniqueness and originality of this thesis are apparent in the methodology which it applies to the abovementioned product-process perspective. No other study has yet used both quantitative and qualitative research strategies for this purpose. All research on repair in CA and corrective feedback in SLA has employed either qualitative or quantitative methods or studied repair as either a product or a process with no attempt at examining the interaction-learning relationship from two different perspectives. The absence of studies that use both methodological strategies to investigate this phenomenon represents a limitation in this field of research; thus the current study represents a significant attempt to compensate for this deficiency and presents a study which offers a holistic perspective on repair.

Third, most of the research which has applied CA to the study of SLA (e.g., Foster & Ohta, 2005; Golato, 2002; Hauser, 2003; Jenks, 2006) has investigated communicative contexts. In contrast, the present study was conducted in the context of controlled production of correct language forms: i.e., a form-and-accuracy or Focus-on-Forms context. Thus, it reflects a different perspective when exploring repair within the CA-for-SLA trend in that context. No other study to date has applied CA methodology to this type of context with a product-and-process orientation to learning, or measured language development quantitatively while at the same time qualitatively explaining the change as a developing process. Although there have been CA studies of repair and correction in L2 classrooms, this is the first study that connects both perspectives

Fourth, CA methodology helped to check the validity of the quantification in this study. Only by using CA was it possible to check whether the RT assigned to each group was actually employed, and whether the teachers exactly followed the instructions given to them. Employing qualitative CA methodology to check the validity of quantitative methods is an important research technique that has rarely been used by other researchers.

Fifth, as mentioned at the beginning of the thesis, the present study examined classroom interaction from a perspective different from that adopted by other CF research conducted in Saudi contexts. Therefore, its originality and uniqueness are enhanced.

Sixth, this study produced a number of original findings relating to the interaction organization. Since these were discussed in detail in Chapter 4, they are listed only briefly here:

- An unusual type of repair, i.e., peer-initiated peer-repair, was identified as a common feature of the Saudi female university context. No other study has shown this repair type as a recurrent feature in any other context.
- When successions of prompts were employed, they sometimes started with the more general prompting strategies (e.g., providing metalinguistic comments) and then moved to the more specific strategies (e.g., providing choice).
- A new variety of prompts was identified by this research, called 'providing choice', which was added as a fourth category of elicitation to the prompts taxonomy.
- A fourth turn that follows the repair turn was identified and added to the repair

sequence template. This turn is optional after recasts and explicit correction because it contains display of successful uptake (i.e., acknowledgement), the production of which depends on the preference of interlocutors. However, after prompts, this turn is not optional since it contains self-repair (i.e., display of successful uptake or acknowledgement of the prompt) which should appear if the repair work is successful.

The next section is devoted to discussing how the findings of this research can be applied in language pedagogy.

5.6 Pedagogical Implications

A major aim of any type of L2 classroom research should be to ask whether students' language development is helped or hindered by the way teachers talk to them and repair their errors. Because this study focused on examining different types of RT and studied their organization from an applied perspective to illustrate the way repair is co-managed in L2 classrooms, it represents a context-based approach to repair. Therefore, its findings could definitely inform a number of practical applications in language pedagogy by providing adaptable guidelines for teachers in ESL, EFL and EAP contexts, as well as for practitioners in other L2 classroom-related domains.

Firstly, the usefulness of this research for teachers lies in its ability to heighten their awareness of what is already occurring in teacher-student talk by encouraging them to look closely at the details of the interaction. The study results revealed that students who received repair outperformed students whose attention was not drawn to the mismatch between their linguistic level and the target language. Therefore, it should be taken for granted that repair of syntactic errors is crucial to L2 pedagogy, particularly in form-and-accuracy (i.e., FonFs) contexts.

Secondly, it is very important for L2 teachers to know which particular techniques are effective or ineffective in a specific context (see Seedhouse 2004, p. 160). For example, Extract 4.33 showed that the repair business is made concise when the teacher makes the repair more specific by providing choice immediately after the first prompt has failed. In this manner, learners' attention is directly drawn to the correction without delay. Therefore, teachers could be advised to employ different types of prompts in certain circumstances in L2 classroom contexts.

Thirdly, this study contributes to arguments concerning repair by declaring that the process of treating trouble can be effective on the basis of two pedagogical factors. First, repair should help learners to notice occurrences of the target linguistic structure.

Second, the process of providing repair should not be performed over a large number of turns. Corrective isolated declarative recasts represent the type of RT which meets both these conditions because they help to deliver the target structure in the next turn immediately after the trouble-source turn and hence they draw learners' attention to it (Doughty, 2001). Despite the fact that teachers are constantly advised not to utilize a single teaching method in all situations (Alkhuli, 1976), the present study advocates that teachers should concentrate mainly on using a single RT which is most suitable for them and their students in a FonFs context, while making use of some other types when necessary. This recommendation is not related to the teaching method but to one aspect of teaching, namely, the use of repair techniques to treat syntactic errors in a specific context. Different learners vary with regard to which particular repair techniques are the most appropriate for their individual linguistic needs and unique linguistic developmental stages. Therefore, teachers may practise a variety of repair techniques and try them out to reach more students and help them to become familiar with the different types of RT; the teachers will then be able to decide which type is most suitable for the majority of learners in a specific context. Although this recommendation implies that using a mixture of types of RT in form-and-accuracy contexts might not be the best strategy to promote learning opportunities, it is admitted that the occasional use of other strategies can also help in particular situations while the teacher is attempting to determine which type best suits the pedagogical goals and could gradually become the best corrective style with which learners would then become familiar.

Fourthly, through investigations into the types of RT, their degree of effectiveness and the suitable situations for their use, it is possible to identify the advantages and disadvantages of current teaching methods, materials and assessment formats and then develop them accordingly. For instance, the findings of this research and many other studies on CF have shown that the pedagogical recommendation of CLT to tolerate errors is fraught with problems.

Fifthly, L2 pedagogy can benefit from the use of CA. Mori (2007) suggests that textbook writers can use natural L2 conversations for authentic model dialogues, which can also be beneficial to L2 learners in gauging the naturalness of their L2 utterances. Likewise, the interdisciplinary quality of CA makes it a rich resource for sociological and pragmatic implications. For example, an anthropologically inspired perspective on CA could be applied to utilize CA data to offer an approach for teaching L2 socio-pragmatics (Huth & Taleghani-Nikazm, 2006). Because findings in CA describe action

sequences underlying verbal activities, they deal with the heart of pragmatics. For this reason, CA data, as noted above, could be used as teaching materials to provide L2 learners with authentic examples from L2 social interactions that are based on insights from CA. By doing this, this method can facilitate the development of learners' L2 pragmatic ability because it would offer them opportunities to practise and use the learned L2 socio-pragmatic norms while interacting in the target language. For example, regarding the present study data, learners could be given a teaching lesson on error and types of RT through which they would be enabled to anticipate, interpret and produce the socio-pragmatic norms of the target language in the conditions of real-time talk-in-interaction and consequently produce relevant actions in conversation and verbal activities in the target language. This method, therefore, can help to replace materials which include speech acts that are not based on naturally occurring data samples with CA-based teaching materials (ibid.).

In the final section of the chapter the thesis concludes with some recommendations for future studies.

5.7 Suggestions for Further Research

This thesis contributes significantly to the debate currently raging in theoretical and empirical research concerning the effectiveness of repair types in L2 development. The approach to repair represented in this study has drawn attention to the bigger issue concerning interactional choices and pedagogical preferences in treating grammatical errors. This issue could be researched further to consolidate the findings of this study.

Although the present research examined the short-term effects of repair in a specific setting and provided an emic methodology to determine the participants' perspective which is vital for the FFI project, it focused only on interaction inside the L2 classroom to find a level of interactional organization of L2 classroom discourse that mediates between pedagogy and learning. Therefore, in order to examine SLA outside the classroom it is necessary to investigate longer-term effects in a variety of settings. This could be accomplished by replicating the methodological approach of the current study over a longer time frame (see Mori, 2007) and in different contexts. Such research is needed because SLA is a slow process in which the effect of instruction is gradual and cumulative (Long & Robinson, 1998) and assessing developmental changes in the learner language system is better accomplished over a long period of time.

Moreover, the research framework used in this study, which dealt with repair in teaching English, lends itself to the study of other languages as well. The same research questions can be applied to assess and describe the learning of other languages from a

product-process perspective using the same methodological framework. By researching other languages, grammatical errors might manifest themselves in different ways and different interactional phenomena might emerge in the various language contexts. In addition, this would provide more fine-tuned investigations penetrating into specific aspects of L2 classroom instruction which could affect the repair phenomenon.

Of interest also are the context-sensitive interactional phenomena related to the use of RT revealed by the qualitative analysis of data in the current study: for instance, peer-initiated peer-repair. Therefore, further research could seek evidence of learning of a different interactional kind which is connected to the more open interactional behaviour brought about by the participants in the interaction: the effects of peer-repair on L2 learning. Moreover, describing these phenomena within the whole interactional L2 classroom architecture could make them more fully understood. For example, in this study it was found that in several cases prompts led to misunderstandings because they were misinterpreted by learners. Thus, it would be interesting to investigate the contextual, social and psychological variables and factors associated with this occurrence in order to determine what could help learners to understand the prompting intent of this type of RT more clearly.

Additionally, teacher-researchers who are in search of a methodology to analyse their data could benefit from this study. CA is the analytical method best suited for their purpose because of its ability to describe and interpret naturally occurring data from an internal participant-relevant perspective. They would be able to record their observations and interpretations of how repair works, following the qualitative method in this research, and reach findings regarding the learning processes which they could then use in their own teaching contexts. They may even produce insights that could benefit other teachers and researchers.

With this in mind, this research invokes the need for collaboration between teaching and research. Allwright (2003) notes that there is

> "a perceived need for practitioner research to be *rethought*; to be refocused on *understanding*, and ultimately on a concern for the quality of life in the language classroom, for both teachers and learners." (p.113, emphasis in original)

Applying research to teaching contexts, as has been done in this study, can be of equal benefit to both teachers and researchers. Therefore, teachers are advised to consider their current practices and take time to find out how they currently address learners' errors. If they record their teaching, focusing specifically on their repair techniques, they will be able to enrich the quality of their teaching by seeking

possibilities for improvement, change and re-orientation within their unique social contexts. Teachers would also benefit greatly from reading about various analytical models and consequently becoming acquainted with new scenarios which are valuable to both theory and practice. For instance, with respect to the present research, teachers could use the model of sequence organization pattern devised by this study to reflect on their own practices in treating errors and as a result gain insights that could serve as catalysts for further research.

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APPENDIX A

Transcription Conventions

Extracts from the data in this thesis are transcribed according to the system of transcription available in Atkinson and Heritage (1984). Punctuation marks are employed to capture characteristics of speech delivery.

Extracts taken from different sources are reproduced as they appeared with some modifications to achieve standardization and consistency.

[ ]	Overlapping utterances – (beginning [ ) and (end])
=	Contiguous utterances
(2.5)	Interval between utterances (in seconds)
(.)	A micro-pause (1 tenth of a second or less)
e:::r	Extension of the preceding sound (more colons demonstrate longer stretches)
.	Fall in tone (not necessarily the end of a sentence)
,	Low-rising intonation, suggesting continuation
-	An abrupt stop
?	Rising intonation (not necessarily a question)
!	Emphatic tone
word	Emphasis on underlined words
CAPITALS	Sounds louder than surrounding talk
↑ ↓	High or low pitch in the utterance after the arrow
° °	Talk within is noticeably quieter than surrounding talk
hhh	Speaker out-breath
·hhh	Speaker in-breath
.hh.	Laughter within a word
< slower >	Talk within is produced more slowly than surrounding talk
> faster <	Talk within is produced faster than surrounding talk

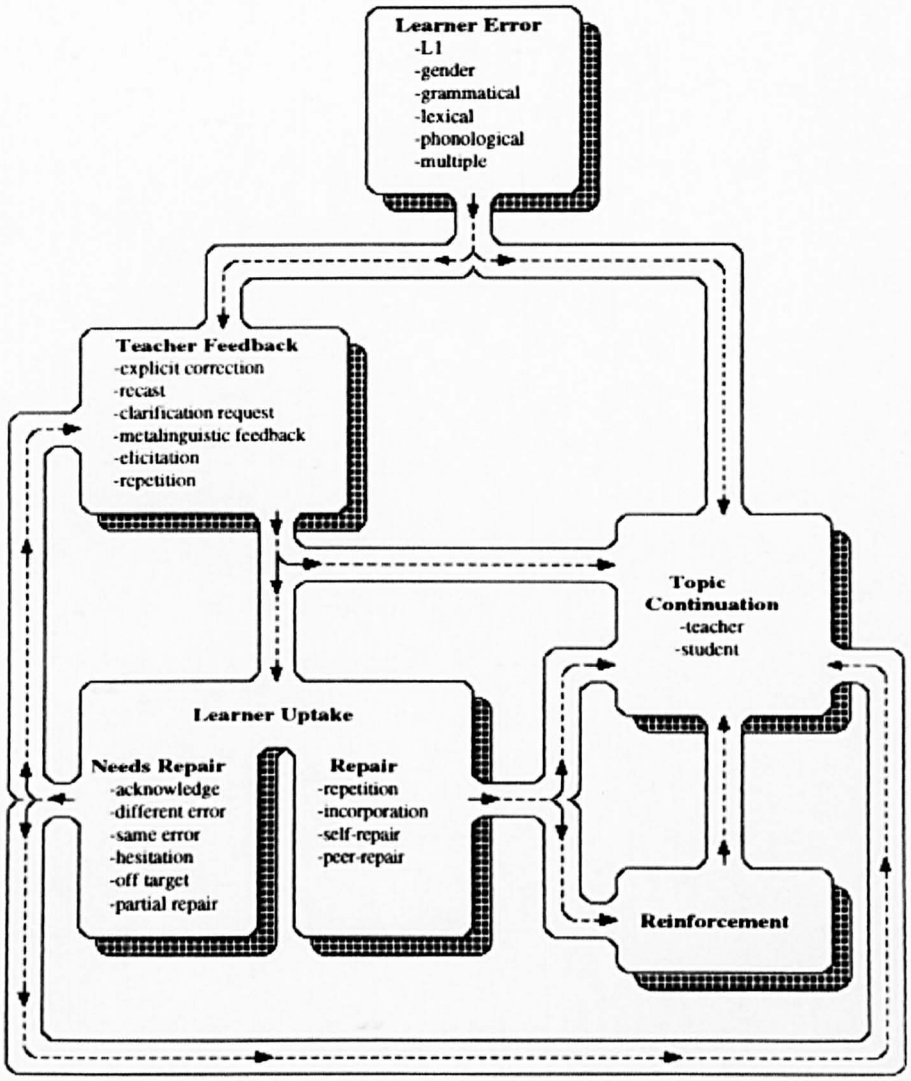
Additional Symbols

((Teacher smiles))	Transcriber's notes
(recast)	Analyst's notes
(official)	Unclear word or stretch of talk

((tr.: wrong))	Utterances in L1 translated into English in double parentheses
[fascinid]	Inaccurate pronunciation of an English word / phonetic transcription of Arabic words
L	An unidentified learner
L1	An identified learner
LL	Several or all learners simultaneously
S	Student
T	Teacher

APPENDIX B

Lyster and Ranta's Model: Error Treatment Sequence



Lyster and Ranta's (1977, p. 44) Model of Error Treatment Sequence

APPENDIX C

Teachers' Guide 3: Instructions Checklist

Each teacher was given the instruction checklist corresponding to the intervention condition assigned to her group. There were four checklists for the four experimental groups only. The teacher of the fifth group (i.e., the control group) did not receive any instructions as she was supposed to use her own corrective style to repair learners' errors. The different checklists are presented here in a single appendix.

Checklist for the CRG Teacher:

1. In response to learners' errors, supply recasts only.
2. Supply a reformulation of a learner's wrong production.
3. Supply an expansion of a learner's incomplete utterance.
4. You may reformulate all or part of a learner's utterance.
5. The reformulation should be accomplished covertly without changing the learner's intended meaning or telling her that she has made an error.
6. Do not use any other type of correction. Use recasts only.
7. Make sure all learners hear your recast

Checklist for the PG Teacher:

1. In response to students' errors, use prompts to push them to self-correct.
2. You may use a variety of prompts which include the following:
    a) Elicitation of self-repair in three ways:
        - Repeat the learner's utterance and stop at the error point to allow the student to complete the utterance.
        - Use a question to elicit a reformulation from the learner directly.
        - Ask the learner to reformulate her utterance.
    b) Metalinguistic Clues: give comments, questions, or information about the erroneous utterance, but do not provide the correct form.
    c) Clarification requests: use phrases to ask the learner to reformulate her utterance.
    d) Repeat the learner's wrong utterance while highlighting the error with intonation.
3. It is important that you do not provide the correct form.
4. Do not use any other type of correction. Use prompts only.

5. Make sure all learners hear the prompt.

Checklist for the ECG Teacher:

1. In response to any student's error, supply explicit correction only.
2. Your correction should include two parts:
    a) A clear indication that the student's production is erroneous. This part comes first to express contradiction and disagreement (e.g., commenting on grammar or using a negative word).
    b) Correction of the error.
3. Try to give the two parts in the same turn starting with the contradiction part first.
4. Do not use any other type of correction. Use explicit correction only.
5. Make sure all learners hear your correction.

Checklist for the ZRG Teacher:

1. When a learner's production is erroneous, ignore the error and do not supply any form of correction at all.
2. Even when a learner's production is correct, do not give any feedback of any type (e.g., reinforcement or explanation).
3. This means that after a learner's production, you should continue with the topic or move to the next item in the exercise without responding to the learner's contribution.

APPENDIX D

Pre-test and Post-test

PRE-TEST: Passive and Active Sentences

Name: _____

I D: _____

PART 1: Circle the correct answer.

1. **The letter _____ to you next week.**
   - **a.** has been sent
   - **b.** will be sent
   - **c.** will send

2. **English _____ by a large number of people.**
   - **a.** is speaking
   - **b.** is spoken
   - **c.** spoke

3. **These dirty clothes _____ soon.**
   - **a.** should wash
   - **b.** should have been washed
   - **c.** should be washed

4. **Mr. Ahmad _____ at the telephone company when he lived in Dammam.**
   - **a.** works
   - **b.** has worked
   - **c.** worked

5. **I _____ with my homework. Now I can go to bed.**
   - **a.** am done
   - **b.** was doing
   - **c.** am doing

6. **The boy was doing his homework while his lunch _____.**
   - **a.** was being prepared

b. prepared

c. was preparing

7. Have you ever _____ the passives at school?

a. being taught

b. been taught

c. be taught

8. My brother's bicycle _____ last night.

a. stolen

b. is being stolen

c. was stolen

9. These books _____ to the library by Monday.

a. must be returned

b. must be returning

c. return

10. Have you _____ studying. We want to go out now.

a. finished

b. finish

c. been finished

11. My car _____ now, so I can't travel to Jeddah today.

a. is fixed

b. was fixed

c. is being fixed

12. The pizza we ordered _____ in half an hour.

a. going to deliver

b. is going to be delivered

c. is going to be deliver

13. The telephone rang while I _____.

a. was sleeping

b. have slept

c. sleep

14. It is starting to rain. Are the windows _____?

a. shutting

b. have been shut

c. shut

15. Many shopping malls _____ in Dammam since we moved to it.

a. have been built

b. were building

c. have built

16. The test _____ by the students now.

a. was being answered

b. is being answered

c. is answering

17. Hamlet _____ by Shakespeare a long time ago.

a. was written

b. has written

c. being written

18. Sara can't go to the cinema. She _____ for an exam now.

a. has been studying

b. is studying

c. have studied

19. Is this ring _____ of gold?

a. make

b. made

c. was made

20. Last month, we stayed in a hotel while our house _____.

a. has been painted

b. is painted

c. was being painted

PART 2: Circle the object of the verb in each sentence. If there is no object, put an X in the space provided.

1. The sun is a star._____
2. We will invite them to dinner. _____
3. I must pay the bill._____
4. The news didn't surprise me._____
5. Sameera has asked a question._____
6. The baby is crying._____
7. What do you do every morning? _____
8. Sally never watches TV. _____
9. She came very late. _____
10. Birds can fly. _____
11. Have you seen my book? _____
12. Shops are closed now. _____
13. Did he take a taxi to the airport?_____
14. He has not lived here since March.____
15. Many students like grammar. _____

PART 3: Fill in the blanks with passive or active forms of the verbs from the list. Use each verb only once and add helping verbs as necessary.

go	**make**	**keep**	**like**	**cook**
eat	**invite**	**add**	**live**	**sell**

The first cheese _____ in Asia four thousand years ago. Since then, cheese has been known by most people in the world as a healthy food. Cheese may be _____ with bread, or may be added to vegetables or noodles. It comes in different kinds and flavors and most people _____ to eat it at any time of the day.

Cheese is a dairy product made from milk and produced in factories. The milk is heated several times. Then, salt _____ to it. After that, cheese is

_____ for weeks or months in special places before it can be _____ to people. This morning, I had two cheese and tomato sandwiches before I _____ to work and tonight I am going to _____ macaroni cheese as soon as I arrive to my flat. I will also _____ my friend who _____ next door to join me for dinner.

POST-TEST: Passive and Active Sentences

Name: _____

I D: _____

PART 1: Circle the correct answer.

1. **The children _____ on a trip to the zoo next Wednesday.**
   - **a.** are going to be taken
   - **b.** were going to take
   - **c.** are going to take

2. **Hotel rooms _____ every day.**
   - **a.** must clean
   - **b.** are cleaning
   - **c.** are cleaned

3. **Mobile phones _____ off in a plane.**
   - **a.** must be switching
   - **b.** must be switched
   - **c.** must switch

4. **Have you ever _____ to Dubai?**
   - **a.** travel
   - **b.** travelled
   - **c.** travelling

5. **The restaurant _____ with people. It is hard to find a place.**
   - **a.** is crowded
   - **b.** crowding
   - **c.** crowd

6. **A lecture _____ in the big hall when we arrived this morning.**
   - **a.** was giving
   - **b.** was being given

c. gave

7. A man _____ by a dog near our house.

a. has bitten

b. has been bitten

c. will bite

8. The letter _____ by Bob two days ago.

a. is being mailed

b. was mailing

c. was mailed

9. A car _____ at least once every two weeks.

a. should wash

b. should be washed

c. being washed

10. This coat _____ to my mother.

a. is belong

b. belongs

c. is belonging

11. A letter _____ to the company now.

a. is faxing

b. faxed

c. is being faxed

12. The winner _____ a thousand-riyal prize.

a. will give

b. being given

c. will be given

13. Everyone _____ 8 cups of water daily.

a. be drinking

b. drink

c. should drink

14. The man is fixing the _____ window.

a. broken

b. breaking

c. broke

15. I _____ to three parties since the beginning of this month.

a. invited

b. have been invited

c. will be invited

16. Our class_____ by Mrs. Fadia today.

a. is teaching

b. taught

c. is being taught

17. Zahra _____ by the news.

a. was surprised

b. being surprised

c. will surprise

18. Julie _____ off her bicycle and broke her arm.

a. fell

b. has been falling

c. falls

19. Cotton _____ in Egypt.

a. is grown

b. growing

c. grown

20. My friend's flat _____ while she was at work.

a. is robbed

b. was robbing

c. was being robbed

PART 2: Circle the object of the verb in each sentence. If there is no object, put an X in the space provided.

1. Jane Goodall is a famous writer._____
2. It will rain tomorrow. _____
3. Sara can play the piano very well._____
4. I did not call Fatema yesterday. _____
5. I have already eaten a sandwich. _____
6. They are watching a movie._____
7. Does the bus stop here? _____
8. My mother is not busy now._____
9. He bought the tickets last week. _____
10. You should study hard. _____
11. Have you ever seen a camel? _____
12. Are you married? _____
13. Did you call me yesterday? ____
14. Dina has never drunk milk. _____
15. The sun rises very early. _____

PART 3: Fill in the blanks with passive or active forms of the verbs from the list. Use each verb only once and add helping verbs as necessary.

come	**describe**	**see**	**complete**	**love**
build	**want**	**keep**	**study**	**die**

The Taj Mahal was built by the Muslim Emperor, Shah Jahan, on the River Yamuna in India 350 years ago. Shah Jahan _____ his wife, Mumtaz Mahal, so much that after she died he _____ to construct a surprising building for her. So, the Taj Mahal _____ and her body _____ in it. Thirty-five years later, when Shah Jahan _____, his body was also added to the Taj Mahal next to his wife. This great palace took 22 years to be _____ by 20,000 people who used thousands of elephants to

carry building materials. Since then, the Taj Mahal _____ by people as one of the most beautiful buildings in the world and every year about four million people _____ from several countries to _____ it. Last week, we _____ about Shah Jahan and the Taj Mahal in our history class.

APPENDIX E

Pre-test and Post-test Scores in the Five Groups

Subjects	ZRG		CRG		PG		ECG		ERG	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	30.5	32.5	27.5	37.75	17.75	30.5	13.25	26.75	39.25	41.25
2	20.25	24.0	33.75	36.5	14.5	26.5	17.0	26.5	33.5	32.75
3	24.5	21.0	17.25	25.25	11.75	25.25	28.75	39.0	16.0	27.0
4	21.75	12.5	24.5	39.0	15.75	20.75	24.25	35.25	21.5	34.5
5	27.25	29.75	23.0	35.25	14.25	25.0	33.5	40.75	24.5	31.75
6	24.25	28.0	36.0	41.25	7.25	18.25	14.5	22.75	24.25	36.25
7	23.0	21.25	28.75	39.25	36.25	34.0	23.0	35.0	26.25	37.25
8	27.5	29.75	40.75	42.25	17.5	29.25	36.25	39.25	36.25	37.25
9	7.25	9.75	36.25	39.0	8.5	18.25	37.5	43.25	27.5	34.5
10	31.75	35.25	27.5	36.25	27.5	26.75	17.0	28.0	39.25	41.75
11	40.5	39.0	30.25	41.0	17.75	27.75	18.5	32.25	20.5	33.0
12	28.75	32.5	31.75	40.5	30.75	35.25	23.0	30.5	29.0	36.75
13	43.25	43.5	14.25	29.75	14.25	26.5	11.25	28.0	15.75	34.75
14	33.5	31.0	27.5	38.0	17.75	25.0	26.0	29.5	39.25	43.5
15	34.5	35.0	26.25	40.75	21.75	29.25	23.0	38.0	37.5	42.0
16	18.75	16.0	24.5	39.25	6.0	11.25	39.25	41.75	30.5	39.25
17	21.75	21.0	23.0	38.0	17.5	25.25	14.25	28.0	23.0	31.5
18	33.25	26.5	21.75	36.5	13.0	25.0	26.25	27.75	28.75	37.5
19	27.5	25.25	39.0	42.5	11.75	22.75	20.25	29.25	24.25	34.5
20	26.0	26.75	15.75	36.75	15.75	26.5	24.25	38.0	21.75	36.25
21	24.5	21.25	33.25	40.75	13.25	23.75	33.5	37.0	33.5	35.25

Subjects	ZRG		CRG		PG		ECG´		ERG	
22	27.5	34.0	10.0	28.0	17.5	26.75	15.75	27.75	17.25	30.75
23	15.75	12.75	43.25	42.5	7.25	18.0	17.25	32.0	24.25	34.75
24	23.0	24.0	26.25	38.0	21.5	25.25	26.0	37.75	30.75	39.25
25	17.0	11.25	37.5	42.25	13.25	20.75	21.5	20.75	41.75	41.5
26	24.5	24.0	27.5	37.5	14.5	25.25	24.5	35.25	31.75	39.0
27	30.75	25.25	36.25	39.25	19.0	26.75	18.5	22.75	11.5	22.5
28	34.5	34.0	40.5	43.75	17.75	23.75	29.0	29.25	34.75	40.5
29	29.0	29.75	33.5	42.5	21.75	30.5	27.5	39.25	26.0	36.0
30	33.25	39.0	17.0	36.5	17.5	28.0	21.75	32.0	24.5	37.0
31	40.75	35.0	33.5	41.0	11.75	24.0	23.0	29.25	36.0	39.25
32	15.75	10.75	24.5	37.75	16.0	25.25	11.5	18.25	39.0	41.75
33	13.0	11.25	14.25	32.5	20.25	29.25	33.25	40.5	24.25	36.0
34	30.75	33.75	20.25	40.75	11.75	22.75	14.5	25.25	13.25	24.75
35	27.5	28.0	27.5	31.0	21.5	23.75	26.25	27.0	33.25	42.0
36	26.0	31.0	23.0	39.25	14.5	20.75			18.5	25.5
37			31.5	35.0	13.0	19.25			24.5	34.5
38			18.5	39.0	10.0	22.75			21.5	33.0
39			28.75	41.25	14.25	25.25				
40			39.0	40.75	27.5	39.25				