

**SEMANTICO-GRAMMATICAL
CONSCIOUSNESS RAISING IN AN ESL
PROGRAMME FOR PRIMARY SCHOOL
TEACHER TRAINEES**

by

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ABSTRACT

This study investigates the effect of multilevelled semantico-grammatical consciousness raising procedures on fossilised verb structures. It is hypothesised that these procedures will reactivate grammaticisation processes leading to the destabilisation of fossilised structures.

The study attempts to establish whether fossilised structures can be destabilised, how processes of grammaticisation may be activated, whether adult advanced learners are still able to improve grammatical accuracy levels, what cognitive processes operate in interlanguage change, and how ESL teaching in the primary school classroom may be improved.

The subjects are first-year ESL teacher trainees who have been learning English in formal classrooms for eight to ten years. They are subjected to pretests, a ten-week consciousness raising intervention programme, and posttests. The consciousness raising activities are set in a primary school teaching context, thus establishing relevance. The varied strategies used are presented progressively on different levels of consciousness.

The theoretical contributions of the study are the insights gained in respect of the psychodynamics of fossilisation and learning theory as it relates to semantico-grammatical consciousness raising within a Cognitive Theory paradigm. According to the findings the total number of verb errors are significantly reduced and self-monitoring and other-monitoring skills significantly improved after the intervention. The semantic value of verb structures evidently acts as a regulator of form: semantically significant structures are destabilised but semantically vacuous structures do not respond to semantico-grammatical consciousness raising strategies. By implication,

semantic significance of structures promotes learnability whereas semantic vacuity is conducive to fossilisation.

A relatively invariant ability gap between self-monitoring and other-monitoring is also identified. Subjects are significantly better at monitoring structures produced by others than their own. Self-monitoring, which is a necessary prerequisite for interlanguage change, is improved by consciousness raising but is apparently affected negatively by conventional analytical rule-based teaching.

This study concludes that multilevelled semantico-grammatical consciousness raising procedures may precipitate defossilisation and that fossilised structures are not necessarily immutable.

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SEMANTICO-GRAMMATICAL CONSCIOUSNESS RAISING IN AN ESL PROGRAMME FOR PRIMARY SCHOOL TEACHER TRAINEES

1. INTRODUCTION

*The drop of rain maketh a hole in
the stone, not by violence,
but by oft falling.*

Bishop Hugh Latimer c.1485-1555

1.0 PREVIEW

In this study an attempt is made to discover how fossilisation in the language of English Second Language (ESL) learners may be addressed within the context of teacher training. The fossilised interlanguage verb structures in the language of first-year teacher trainees are analysed, and an attempt is made to establish whether these fossilised subject-verb agreement (concord) and tense structures may be destabilised and processes of language development reactivated in a multilevelled semantico-grammatical consciousness raising intervention programme. This endeavour constitutes the research problem of the study.

Introduction

The terms used in the study need to be defined and central concepts briefly explained before the research problem and its setting are described.

Semantico-grammatical consciousness raising is defined as a procedure for raising to consciousness underlying principles and processes relating to second language-specific structures. This is done within a context which is meaningful to the learner. This context enables the learner to relate grammatical forms to meaning and so form semantico-grammatical links. Consciousness raising aims to guide the learner to work out the grammatical surface structures of the second language. It does not aim to teach these structures directly. In this way, semantico-grammatical consciousness raising may facilitate language development (see also 2.5.1, p.100).

The consciousness raising procedures used in the intervention programme are **multilevelled** in the sense that they relate to different levels of the learner's consciousness (see Table 3.3, p.161). They also address the same fossilised structures by means of a variety of semantico-grammatical consciousness raising techniques.

In this study, **second language learner** refers to someone who learns a second language in a formal learning situation. When second language learners attempt to learn a second language, they subconsciously test hypotheses about that target language, drawing upon various possible sources of knowledge:

- their limited knowledge of the target language
- their knowledge of their native language
- their understanding of how languages function in general
- their knowledge about the world around them.

Creatively acting upon their linguistic environment, learners construct a structured, although imperfect, set of rules which

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for the time being serves them as a legitimate system of learner language in its own right (Brown 1980:162). This between-stage language is known as an **interlanguage** (Selinker 1972:214), a hypothesised linguistic system, separate from the learner's native language and the target language being learnt (see 2.4.2, p.84, for a discussion of interlanguage). It is a language characterised by the learner's errors which are typically determined by transferring patterns from the learner's native language or overextending patterns of the target language. Ideally, learners gradually adjust their imperfect interlanguage structures to approximate the structures of the target language more and more, until the learner system eventually merges with the target language. Second language learners, however, do not generally attain ideal target language levels. In the approximation process, aspects of the interlanguage system that seem to be impervious to remedial strategies, regardless of further exposure to the target language, are retained. Learners also do not seem to be aware of using structures that are deviant from the target language. These non-targetlike structures or rules are known as **fossilised structures**. According to some researchers, fossilised structures are interlanguage structures, rules or features which have been part of the learner's linguistic repertoire for at least five years (Selinker 1992:258) - a much shorter period even than the ten years of ESL tuition experienced by the teacher trainees in this study. It is widely accepted that these fossilised forms become permanently established in the interlanguage of a second language learner and continue to appear in performance, regardless of any further exposure to the target language - hence the notion of fossilisation.

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In this study, fossilisation is defined as

a process which is an interlanguage phenomenon that precludes linguistic development of interlanguage structures while this phenomenon is operative. When interlanguage structures have remained so stabilised for at least five years, they are regarded as being fossilised.

In terms of this definition it would then be appropriate to refer to interlanguage fossilisation, as natural second language development has been arrested before target language levels have been attained. The term fossilisation, however, will be used to refer to interlanguage fossilisation in this study. The construct of interlanguage fossilisation is operationalised for this study in 1.4.1, p.30.

If fossilisation relates to the cessation of learning when linguistic items, rules and subsystems remain unchanged (stabilised) in a speaker's interlanguage production (Selinker 1972:215), then destabilisation may be defined as

the reactivation of natural developmental processes involving the grammaticisation of structures.

In this study, a distinction is made between the stabilisation of structures, which is seen as a temporary phase in the process of natural language acquisition, and fossilisation.

Stabilisation of structures is a characteristic of normal language acquisition processes which proceed through phases of stabilisation and destabilisation, whereas fossilisation relates to the cessation of learning (see also p.21). Learning here refers to the psychological process of change in language behaviour: the destabilisation of interlanguage structures leading to language development and growth. Broadly defined,

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~~change would imply learning, whereas non-change would refer to the fossilisation of interlanguage structures.~~ In the context of this study, a change in language behaviour constitutes ~~interlanguage change~~. This "metamorphosis of interlanguage" (Rutherford 1987:38) is the observable manifestation of grammaticisation. NS
NB

The notion of **grammaticisation** in English is defined by Rutherford (1987:40) as

a process [when] a learner-language mode in which the form-meaning relationship was maximally direct is giving way to later modes, in unsteady but ever closer approximation to target English, wherein relationships become more and more indirect as the compensatory **grammaticization** principle takes hold.

The process of **grammaticisation** needs some explanation at this point. A sentence becomes more complex when grammatical items are added to the sentence, or when the word order of the sentence is rearranged in such a way that the linear order of the lexical items no longer corresponds directly to the logical order of the concepts expressed in the sentence. A similar complexity arises when morphemes are added to lexical items such as verbs, or when lexical items are clustered to form grammatical structures. This kind of complexification is termed "grammaticisation". The process of grammaticisation may further be clarified by means of two examples: NB

- * *me Jane*
- * *the clock stop.*

The process of grammaticisation implies that, for example, an initially maximally direct **topic-comment** structure such as * *me Jane* gradually becomes the more indirect structure *I am Jane*. Similarly, a maximally direct form-meaning (semantico-

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grammatical) relationship initially exists between an unmarked verb form such as in * *the clock stop* (from the corpus of the data of this study) and the learner's intended semantic value "the clock has been non-functional for some indefinite period". This means that the ungrammaticalised form *stop* is used to signal the learner's intended meaning, but this may not necessarily be interpreted correctly by an interlocutor. A second language learner is able to form a meaning concept, but, lacking the grammaticalised structure that expresses this concept accurately, links the as yet unmarked (unchanged) verb form to the intended meaning. As the learner's second language develops, the unmarked form gradually gives way to the more grammaticalised but more indirect verb form in *the clock has stopped*. This development may proceed as follows:

lexical item (unchanged) [**stop**] **semantic value** (to cease)
-> **verb** (changed to past simple) * [**sto(p)ped**]
-> **aux** (unchanged) + **verb** (unchanged) * [**have stop**]
-> **aux** (agree) + **verb** (past participle) [**has sto(p)ped**] (see p.261 of this study).

The concept of grammaticisation is discussed in more detail on p.101.

If fossilised structures are retained in the second language of teacher trainees, these trainees may eventually re-enter the school system as teachers with grammatically limited English Second Language (ESL) proficiency. If the ESL grammatical proficiency of teachers is low they may contribute to the occurrence of fossilised structures and consequent low grammatical proficiency in the ESL of their pupils.

Grammatical proficiency is one of the four domains often cited as constituting communicative competence (proficiency): linguistic (grammatical) competence, discourse competence, sociolinguistic competence and strategic competence (Littlewood

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1981:6). The term proficiency - the state or degree of improvement attained in a skill or knowledge (Onions 1987:1680) - is the preferred term in this study as the term competence has become too strongly associated with what learners know, rather than with what learners are able to do.

The perpetuation of fossilisation in the context of education may be checked if some form of intervention could destabilise fossilised structures in the language of teacher trainees by reactivating processes of reanalysis and restructuring leading to further ESL development. Such an intervention would need to raise the learner's consciousness in respect of

- the fossilised grammatical structure (linguistic unit) that is unacceptable;
- the acceptable grammatical form (characteristics) of that structure;
- the relationship between that particular grammatical structure and meaning.

The **central hypothesis** of this study, then, is that an intervention programme using various consciousness raising strategies on different levels of awareness will raise learners' consciousness of grammatical structures as well their consciousness of the relationship between grammatical structures and meaning. It is further assumed that in this way destabilisation of fossilised interlanguage structures and reactivation of processes of reanalysis and restructuring may be precipitated, leading to improved proficiency of the structures investigated.

In order to test this hypothesis and the hypotheses that derive from it (see 1.3, p.29), a group of first-year teacher trainees was subjected to an intervention programme based on multilevelled semantico-grammatical consciousness raising strategies.

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The research strategy of the study rests upon several assumptions. These assumptions are based on mainly four observations (see the discussion on the manifestation of fossilisation in education, p.12).

Four **core assumptions** relate directly to the central hypothesis. In the first place it is assumed that fossilised structures can be destabilised. It is secondly assumed that lack of grammatical accuracy in advanced adult learners is mainly attributed to fossilised interlanguage structures. The third assumption is that the phenomenon of fossilisation may be studied in the acquisition of any second language. If the particular second language being studied is irrelevant, then the findings of this study should be applicable to any second language situation. Fourthly, it is assumed that interlanguage change, once achieved, becomes available for use. In this way, the change becomes observable.

Two **background assumptions** relate indirectly to the central hypothesis. Firstly, it is assumed that pupils will retain fossilised structures in their ESL production after they leave school. Secondly, first-year teacher trainees may therefore be expected to have fossilised structures in their ESL production.

The **research problem** of the study is considered in section 1.1. The research problem concerns the possibility that fossilised structures may be destabilised by means of semantico-grammatical consciousness raising procedures. The **research questions** are considered in 1.2. The **central hypothesis** with its seven subhypotheses are formally stated in 1.3 and the **variables** of the study are identified in 1.4. An **overview of the thesis** presented in section 1.5 puts the study into perspective.

I now turn to the research problem of the study and its setting.

1.1 THE RESEARCH PROBLEM AND ITS SETTING

1.1.1 Nature of the research problem

The following is an extract from a first-year student's writing:

But the first day was bad because everyone looks at you and smile or they will say: "lekker first year." Oh yes, the seniors was so kind to us all. They took our lagage up to our room, extreemly with generosity. Our hostel isn't so weard, it is a bit death inside but all the guys stands together. It is not so easy to describe your thoughts.

The writer's lament in the last line reflects his reaction to the inhibiting rigid constraints of the interlanguage at his disposal and the resulting inadequate expression of meaning. Although several limitations may be identified in the example, one of the causes of the student's problem may be related to fossilised interlanguage structures. My observation of many such instances of apparently fossilised writing amongst first-year teacher trainees has led me to conclude that the presence of fossilised structures in students' language production may limit adequate verbalisation of concepts. Such a limitation, in addition to the teacher transfer of fossilised structures already referred to, may eventually seriously inhibit effective teaching by these students. MS

The purported **fossilised status of interlanguage structures** seen in the language of first-year teacher trainees requires some explanation. Examples of interlanguage structures found in the data of beginner learners (Fouchè, 1988) also appear in the data elicited from first-year teacher trainees in the present study. Such interlanguage structures manifested in the language of learners who have been subjected to English instruction for a minimum of ten years may therefore be assumed to be fossilised. Examples [11]-[13] in Appendix i, p.351, illustrate the fossilised NB

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status of structures found in the data of these first-year teacher trainees.

Errors manifested in the data of pupils from Standard 2 (Grade 4, the second year of formal English instruction) to Standard 10 (Grade 12, the tenth year of formal English instruction) include: idiosyncratic morphological markers, interrogative pronoun (PRO) for relative PRO: *what* for *that/who*, double marking, copula deletion, verb control errors and word order errors. These examples serve to illustrate the point that, over a period of at least 9 years (Standard 2 to Standard 10, that is, Grade 4 to Grade 12) the same interlanguage structures tend to appear in the language of ESL learners who have started to learn English formally at approximately the same age. Examples of morphological errors made by first-year students relating to tense and concord are abundantly manifested throughout the data of this study. These forms are the focus of the investigation (see 3.1.2, p.139 for an operational definition of fossilised structures). The set of examples of verb errors in *Appendix i* illustrates that the same interlanguage structures encountered in beginner language are also present in the language of first-year students. This demonstrates the fossilised status of the interlanguage forms found in the language of first-year teacher trainees.

The inadequate grammatical accuracy levels brought about by these fossilised structures relate to the research problem of the study. **Accuracy** here refers to the syntactic and morphological (grammatical) well-formedness of linguistic structures, that is, the formal factors of appropriacy (Brumfit 1984:52).

For learners whose rules and subsystems remain unchanged, grammaticisation of interlanguage structures has been arrested and these interlanguage rules and resultant structures remain a feature of the learner's language. Cummins (1983:121) refers to this state as a "plateau level at less than mastery levels."

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Mastery can here be defined as the level of development attained by second language (L2) learners where their language skills and language knowledge approximate those of a native speaker. According to Klein (1986:50,51), mastery is the ideal "end state" that represents "a perfect command of the language." Fossilisation of certain grammatical features would be reached by the learner when language production has become automatised and "cognitively undemanding" (Klein 1983:120), when stabilisation at a plateau level at less than mastery levels occurs (cf. Klein 1986:50,51). At this stage, the learner may no longer be conscious of effort when putting language together, of forming a sentence, of finding the right morphological structure; structures may then emerge spontaneously and automatically.

Second language acquisition (SLA) is not a monolithic process. Linguistic, psycholinguistic, sociolinguistic, psychological and pedagogical factors all impact upon acquisition processes. It is therefore to be expected that this study, although psycholinguistic in focus, will touch upon several interrelated domains. The core problem, however, will be analysed from a psycholinguistic perspective. In addition, further perspectives will be considered as they bear on the problem:

- linguistic and related sociolinguistic perspectives: the need for acceptable levels of accuracy and the possible role of English for second learners in South Africa;
- applied linguistic perspective: implications for the language development of teacher trainees.

The first-year teacher trainees referred to in this study are Afrikaans-speaking students learning English. They are registered for a teaching diploma course designed to qualify them to teach all primary school subjects, including ESL up to Standard 5, that is the proposed Grade 7 level (Committee of Heads of Education Departments, 1991:21). In addition, many of these teachers may

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have to use ESL as a medium of instruction. The manifestation of fossilisation in education is considered in the next section.

1.1.2 Manifestation of fossilisation in education

The following four observations relate to the manifestation of fossilisation in education:

- the apparent lack of ESL proficiency of school leavers;
- low levels of language proficiency of first-year student teachers who completed their school education the previous year;
- the lack of success of ESL courses in operation at colleges of education;
- the vicious circle of low levels of language proficiency

1.1.2.1 Proficiency levels of school leavers

The first observation concerns the low proficiency levels of school leavers. Two distinctly different kinds of language proficiency relate to the problem: communicative language proficiency and cognitive academic language proficiency.

Communicative language proficiency refers to what Cummins (1983:120) terms **basic interpersonal communicative skills** (BICS) required in undemanding face-to-face situations.

Many ESL pupils do not seem to have attained the proficiency levels required for basic communicative needs at the end of their final school year, let alone the **cognitive academic language proficiency** levels (CALP - Cummins 1983) required for tertiary study. An acceptable level of language proficiency required for tertiary study implies a substantial level of syntactic and morphological proficiency, that is, grammatical accuracy, and an expanded vocabulary. Students who continue with tertiary education are constrained in their studies by the very limits of their language.

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Studies have shown that limited ESL proficiency of teachers is a serious obstacle to pupils for whom English is the medium of instruction (National Education Policy Investigation [NEPI] Language Research Group 1992:89). When English is taught as a subject the benefits to the student depend amongst other things on the quality of the teacher's command of English (NEPI 1992:13). It is therefore a reasonable expectation that teachers should have acceptable levels of language proficiency (NEPI 1992:81) because they are obliged to use language accurately. It is the teacher's task to explain concepts effectively, while having to rely on language that is often context-reduced (Cummins 1983:120). This task requires a level of linguistic mastery that is different from the language proficiency required in informal face-to-face conversation about concrete matters. At this point, the two kinds of language proficiency referred to above need some explanation.

Cummins (1983:120) proposes a theoretical model to describe different kinds of language proficiency in relation to school achievement along two intersecting continua within a developmental perspective. The first continuum relates to the degree of contextual support available in communication.

A context-embedded utterance would be linguistically less demanding to interpret because paralinguistic and non-linguistic situational cues act as supporting vehicles of meaning that serve to illustrate the linguistic items. Furthermore, "interpersonal involvement in a shared reality... obviates the need for explicit linguistic elaboration" (Cummins 1983:120). In an utterance such as

"How do I know that this is your book?"

the speaker and listener share the reality of the ownership dispute and the book is in evidence. At the other end of this

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continuum, such support is not forthcoming from a context-reduced situation. Readers, in the absence of illustrative diagrams and pictures, have to rely on linguistic cues mainly. Lack of a shared reality would require an elaborated linguistic message, such as

In an attempt to settle an argument between two pupils about ownership of a thesaurus, the teacher asked whether the boy could prove that he owned the book that he claimed belonged to him.

The linguistic demands of an utterance or text that is not dependent on knowledge of a given context would require an advanced level of linguistic development for interpretation of the message to be successful.

The second continuum is the developmental continuum, relating to the level of cognitive involvement of the language user. **Cognitive involvement** can be understood in terms of "the amount of information that must be processed simultaneously or in close succession by the individual in order to carry out the activity" (Cummins 1983:121). Cognitive involvement here then refers to the amount of conscious mental processing of linguistic items required in language production.

At the one end of the developmental continuum, language production is cognitively demanding because the learner has to deliberately think about how linguistic items should be produced in order to get meaning across. By the same token, receptive language amounts to working out the message by consciously focusing on decoding linguistic items. If cognitive energy is absorbed in the task of producing and receiving linguistic items, the learner cannot focus effectively on the content which constitutes the object of study. At this level of language

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development, the learner is therefore severely inhibited in academic study.

As language proficiency develops, the learner gradually proceeds along the developmental continuum until a level of mastery is achieved which allows linguistic items such as pronunciation, vocabulary, syntactical structures, concord and tenses to be produced without conscious cognitive involvement. At this level of automatization the learner is cognitively more free to focus on content. Unfortunately not all learners achieve complete mastery of all linguistic items. Most ESL learners reach a plateau at less than mastery level where development ceases and fossilises (Cummins 1983:121). Furthermore, different linguistic items reach their plateaus at different levels. Although these are "less than mastery levels", learners are no longer consciously engaged in working out linguistic items as language becomes automatized at these plateaus. Although cognition is now free for involvement in content, the learner's grammatical proficiency is impaired. I presently return to this point to indicate how this position affects teacher trainees.

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It has often been pointed out that School Certificate (matriculation) results have poor predictive value in respect of use of English. According to Ridge (1990), a final School Certificate pass in ESL (Higher Grade) does not necessarily imply that the candidate can use English functionally or appropriately, nor can, by implication, acceptable accuracy levels (grammatical proficiency) be assumed. The matter of what precisely constitutes **acceptable levels of accuracy** is discussed next.

1.1.2.2 Proficiency levels of first-year teacher trainees

The second observation is that teacher trainees (student teachers) who are accepted into colleges very often seem to lack the level of grammatical accuracy that future teachers need. Teachers require an advanced level of linguistic proficiency,

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including grammatical accuracy, to cope with the demanding linguistic task of precise, comprehensible explanation of concepts to young children, so as to ensure correct and clear understanding. They do not possess those accuracy levels that qualify a teacher to be a language model worth imitating. Students preparing to teach in the primary school seem particularly lacking in the sphere of grammatical accuracy. At eight teacher training colleges in three provinces, language production samples elicited from teacher trainees doing diploma courses qualifying them to teach in primary schools suggest that the problem of poor grammatical accuracy levels amongst this particular group of students is widespread.

Such students have typically acquired English under formal classroom conditions. The term **acquisition** is used in this study as a superordinate term referring to the process of language development and is not to be taken as distinctive from **language learning** in terms of Krashen's differentiation between **acquisition** and **learning** (Krashen, 1981:1). Of the total test population, the small group of students who had proficient control of language structures had acquired language outside the classroom, usually before the age of six. This study focuses on that group of learners who mainly received input provided by ESL teachers in the formal environment of classroom instruction. In many instances, these learners received their initial instruction in ESL from teachers who were themselves ESL speakers.

1.1.2.3 ESL courses at colleges of education

The third observation is that courses currently in operation at training colleges do not produce learners with the desired language proficiency to meet the demands of post-apartheid South Africa.

A very important background assumption is that it seems likely that English may play a more important role in post-apartheid

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South Africa than it did under the National Party government who promoted Afrikaans as a second official language. According to the discussion document of the Committee of Heads of Education Departments (CHED) (November 1991:27,41) and paragraph J4.2 of ANC Policy Guidelines for a Democratic South Africa, the ANC government is committed to providing access to English (NEPI 1992:39,40). English may well serve as an access language for the majority of speakers, and certainly as a linking language for all speakers for many years to come. Eastman (1990:14) believes that the current political context in the RSA favours the use of English. It may be reasonably expected that certain non-standard forms will become acceptable spoken language. However, forms such as deletion of the copula, double past tense marking, the substitution of **what** for **that** and syntactic and lexical violations that cloud meaning cannot be accepted in the teaching profession. Nor will such forms be accepted in formal, written English. It is therefore reasonable to expect that standard versions of verb structures will continue to be expected in the teaching of English at school level (see 2.2.1.2, p.43).

Not all learners of ESL aspire to full linguistic or communicative competence; many do not need to attain high levels of language proficiency and accuracy to function in their particular workplace and many may never achieve high standards of proficiency. However, if English were allowed to deviate too far from the norms of internationally accepted varieties, South African English could act as a barrier, thus hampering access to the international world (see 2.2.1.1 p.42).

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English language teachers here, as in other multilingual countries, have a special responsibility to the people. High standards of language proficiency should be maintained by ensuring that language teachers themselves achieve high proficiency levels. It is an important assumption that all citizens will need a degree of proficiency that will enable them

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to function effectively at school, at tertiary level and in the workplace. English is regarded as a "major means of access to the wider world" (NEPI Language Research Group 1992:5) and people perceive that without it, their "prospects in many fields are limited" (NEPI 1992:17). Proficiency in English is seen as a "salient marker" of that which enables people to be in a position of power (NEPI 1992:19). It is significant that the language used by the first democratically elected multiracial government constituted on 11 May 1994 is English and that the cabinet members are noticeably proficient second language speakers of English.

Pupils who have not achieved adequate levels of English proficiency will be deprived of learning opportunities. A high level of proficiency, which will enable ESL learners, including teachers, to understand the learning content sufficiently and to formulate their ideas relating to the learning content efficiently, is therefore desirable. Macdonald (1990:132) states that adequate explanation of content subject concepts requires "a rich vocabulary, complex syntax, and the ability to link ideas logically."

1.1.2.4 Vicious circle of low proficiency levels

The fourth observation leads me to conclude that low language proficiency relating to accuracy levels is self-perpetuating. Partly in consequence of the situation referred to in the third observation, learners at Senior Primary (SP) level (Standards 2 to 5, that is, Grades 4 to 7) are apparently not exposed to effective pedagogical instruments and acceptable language models to promote the required linguistic development, as is evidenced by the inadequate levels of general ESL proficiency and grammatical accuracy levels achieved by many learners. It is therefore necessary to

- identify particular learner problems

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- develop viable strategies to address the learner problems identified.

The situation indicated above has serious implications for future teaching. This situation is a self-perpetuating vicious circle: inadequate standards of school leavers imply inadequate standards of student teachers which in turn imply future teachers with inadequate general proficiency and accuracy levels in ESL. However, it must be stated that not all primary school teachers manifest inadequate levels of proficiency. Teaching approaches which do not facilitate the acquisition of grammatical accuracy are to blame for inadequate accuracy levels as much as the teachers who themselves lack adequate levels of grammatical accuracy. In the light of this observation, the line of reasoning of this thesis is based on the assumption that poor teaching produces poor products, and so the downward spiral is perpetuated with increasingly negative results (Ellis 1987:83,91; Hartshorne 1987:77; Higgs and Clifford in Valette 1991:326; Valette 1991:326, 327).

Inadequate levels of accuracy do not derive from fossilised verb structures alone but can be related to a constellation of linguistic problems (see example at the beginning of this chapter, p.9). However, this study focuses fossilised verb structures only. When attempting to break the downward spiral of inadequate levels of accuracy, at least two factors may be considered: the point of intervention and the procedures to be used.

Point of intervention

There are three points at which such intervention may occur:

- (1) pupils in the classroom ;
- (2) teachers already in service;
- (3) teacher trainees who have not yet qualified.

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An attempt to address low proficiency levels amongst pupils at school level (1) presupposes the availability of linguistically proficient language teachers. The second possible point of intervention (2) is also problematic. An attempt could be made to improve the proficiency of practising teachers by means of in-service courses. However, such language courses are prohibitively time-consuming. Logistical problems relating to great distances and lack of teacher time available for such extended courses preclude teachers already in service as a feasible intervention point.

In order to change this downward spiral of ever-diminishing ESL proficiency levels of school leavers (see 1.1.2.1, p.12), it therefore seems feasible to break the spiral by improving the proficiency levels of teacher trainees (3). Teacher trainees have three or four years at their disposal to achieve interlanguage change, provided they could be subjected to an effective intervention programme.

Procedures to be used

The second consideration relates to the procedures to be followed in order to achieve the desired interlanguage change. If such a change merely implied informing students of rule structures, there would be no fossilisation problem and no purpose for this study. The situation, however, is far more involved than one which requires merely informing students about rules of language. Teacher trainees often graduate from college still encumbered with most of the unacceptable fossilised linguistic baggage with which they arrived four years previously, despite their having acquired extensive knowledge about language. Such knowledge has not caused fossilised structures to disappear. Knowing about language does not ipso facto imply proficient use of language (cf. Bialystok 1982:183 in respect of learners' accessibility to knowledge). Students use fossilised structures in their very explanation of the rule relating to that same structure of which

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~~they show knowledge~~, as is illustrated by the following two authentic examples produced by first-year teacher trainees:

- (1) "Concord is when the verb **agree** with the subject."
- (2) "... concord is a rule how to write a sentence that **make** sense.... Rules you have to learn ~~is~~ are one subject -> singular verb with a **s** plural -> verb gets no **s**
e.g. she walks home from school
 | |
singular singular"

Although the students' explanations of the concord rule indicate that they understand and know the rule, they have nonetheless produced fossilised concord structures in their explanations.

At this point it would seem that one is obliged to support Selinker's central claim of fossilisation, "that there exist forms which will remain in learner speech permanently, no matter what the learner does to attempt their eradication." (Selinker 1992:252), and no matter what "amount of explanation and instruction he receives in the TL" (target language) (Selinker 1992:33).

Not everybody agrees that the state of fossilisation is final, however. Some would rather see this phenomenon as a state of stabilisation which can destabilise given the right conditions to stimulate change. In terms of this interpretation, **fossilisation** is a misnomer (Tollefson & Firn 1983:31). I shall, however, argue that the alternative term, **stabilised interlanguage structures** (Selinker & Lamendella 1979:374) does not refer to the particular interlanguage phenomenon which is central to this study.

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It is generally agreed that all learning processes are characterised by alternating learning curves and stabilised plateaus. In similar fashion, second language acquisition proceeds through stages of stabilisation and destabilisation of interlanguage structures until the learner reaches a stage of stabilisation, which becomes internalised. When a structure has become internalised, it becomes a part of the learner's acquired rule system. At this point, the learner has reached a state of non-change and the step-by-step developmental process of stabilisation-destabilisation of interlanguage structures ceases. A possible explanation for this state of stabilisation may be that the learner's interlanguage grammar has developed sufficiently to enable him to communicate his prevailing needs adequately. Motivation for change therefore disappears (Larsen-Freeman & Long, 1991:60; Selinker 1992:167). By implication, this view suggests that such a stabilised state is mutable, given the necessary change in learning circumstances and "sociofunctional communicative needs" (Selinker 1992:167). Such a stabilised state is not regarded as final, but rather as an expected phenomenon of normal development. To avoid confusion of normal interlanguage stability expected in all ESL beginner learners with premature cessation of learning, I shall henceforth use the term **fossilisation**, but without the strong claim of immutability.

Having identified the problem of inadequate levels of grammatical accuracy amongst teacher trainees, the next step is to work towards a possible solution. The research problem - whether semantico-grammatical consciousness raising procedures can destabilise fossilised structures - is considered in the next section.

1.2 RESEARCH QUESTIONS

The need to research the problem of low language proficiency levels in teaching and work towards a possible solution cannot be disputed. In this study the possibilities are explored of a procedure that may

- destabilise fossilised structures, and by implication
- reactivate the arrested grammaticisation process.

Indirectly, such a procedure may also

- improve levels of accuracy in the second language production of teacher trainees;
- demonstrate how interlanguage change is achieved;
- suggest instruction procedures for teacher training that may be adapted to improve the teaching of ESL at primary school level.

Five questions are addressed by the study:

- Can fossilised structures be destabilised?
- How might processes of grammaticisation be activated?
- Are adult ESL learners still able to improve accuracy levels?
- What cognitive processes are involved in interlanguage change?
- How might teaching procedures in the primary school classroom be improved?

Let us now examine each question in turn.

1.2.1 Can fossilised structures be destabilised?

The crucial question at the centre of the study relates to the purported finality of fossilised structures. If fossilisation implies a state of finality, then it may be accepted that increasing numbers of teachers in the primary school are likely to have impaired ESL proficiency in terms of accuracy levels. When fossilisation sets in, further development of the relevant grammatical structures is arrested. The development of the

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learner's ability to express meaning (language functions) may be affected by the learner's limited vocabulary and by severe grammatical limitations that preclude extended negotiation of meaning, as illustrated by the example on p.9. If, however, it can be shown that **fossilised** does not necessarily imply **rigid**, **final** or **immutable**, then the widely accepted implication of fossilisation is questionable (cf. Tollefson & Firn 1983:22).

If destabilisation of fossilised structures in adult ESL production can be brought about by a particular teaching approach, the question arises whether such an approach may also circumvent early fossilisation in beginner learners. It is reasonable to expect that a teaching approach that has the potential of destabilising fossilised structures and reactivating processes of grammaticisation (see 2.5.1, p.101 of this study), also may be expected to keep the process of grammaticisation productive in second language acquisition (SLA) in the primary school. Pedagogical investigation into the effects of consciousness raising procedures in the primary school classroom, however, falls outside the domain of the current study.

1.2.2 How might processes of grammaticisation be activated?

Unless the process of grammatical development, or grammaticisation (Rutherford, 1987:40), which is a prerequisite for grammatical accuracy, can be reactivated, students who have an inadequate level of grammatical accuracy may eventually enter primary school classrooms as deficient ESL teachers. In this study, consciousness raising (C-R) (Rutherford 1987 *passim*) is hypothesised to activate grammaticisation.

1.2.3 Are adult advanced learners still able to improve accuracy levels?

The question whether defossilisation is possible has already been identified. The question that now arises is whether interlanguage

change is still possible for advanced adult learners, 17-21 years of age.

The only language growth that seems to occur during the four years of study of teacher trainees is a considerable expansion of study-related vocabulary (cf. Valette, 1991:325). In this respect students are able to write newly-learnt words with an involved spelling quite correctly, but fossilised spellings of simple words dating back to early interlanguage, such as *we* written as *whe*, persist. The same student who consistently writes "I were confused / happy ...", a copulative structure usually acquired in the first year of English instruction, manages more difficult subject-verb agreement structures acquired later quite successfully, such as "The first thing that went through my mind was..." The student who gets a third of all obligatory cases of subject-verb agreement structures (involving addition or omission of third person -s) wrong in a particular piece of writing, gets the subject-verb agreement structure right in the following formulaic sentence, which is reminiscent of the cliches young adults acquire: "Your whole life depends on it; it *is* what you *are* going to make of it." If students manifest the ability to learn difficult structures later, it must follow that the fossilisation phenomenon has not adversely affected their language learning abilities per se; they merely seem unable to consciously control internalised interlanguage structures that have become **automatised** (see p.94). Consciousness raising strategies therefore seem to be indicated.

At this point the notions of **conscious control** and **automaticity** need to be considered.

1.2.4 What cognitive processes are involved in interlanguage change?

According to Cognitive Theory, mental **controlled processing** requires deliberate attention (Schneider & Shiffrin 1977:1), that

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is conscious notice, which makes the execution of tasks relatively difficult and slow. For information to be handled quickly and spontaneously, as in fluent language use, learning involves "automatization of memory nodes" (Ellis 1990:176). Once tasks are executed through **automatic processing**, that is without conscious attention, the mind becomes free to focus on something else. When structures are internalised, they become available for subconscious use, that is for automatic processing. Once structures have become internalised, how might interlanguage change be achieved?

"All things can be mastered by mindfulness" (Buddha), and "[a]wareness is the first step to correction and improvement in any skill" (De Bono, 1967:8). In respect of language, it is widely accepted, however, that knowledge of rules does not guarantee ability to apply these rules. The awareness brought about by conventional direct rule-teaching does not seem to achieve the kind of form consciousness needed to trigger defossilisation.

Lawler and Selinker (1971:35) propose two cognitive structures for rule internalisation: a mechanism that guides conscious problem-solving performance and one that guides "'automatic' language performance...where speed and spontaneity are crucial and the learner has no time to consciously apply linguistic mechanisms." Explicit language knowledge does not seem to affect use of a fossilised structure once a learner has accepted that structure as one that works in communication. If consciousness raising strategies are considered to facilitate the necessary change, how then does the process of consciousness raising differ from conventional teaching? Furthermore: Why does a learner seem unable to benefit from explicit top-down knowledge and in what way might a different approach address the relationship between knowing and applying that knowledge? How has internalisation-of-the-(interlanguage)-hypothesis-that-works rendered learner's

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interlanguage structures impervious to further processing, and what kind of approach might reinstate permeability? Finally, to what extent does the use of fossilised structures over an extended period diminish the likelihood of defossilisation?

A language teaching approach based on semantico-grammatical consciousness raising procedures is expected to present answers to most of the questions raised above. The problem of learner resistance, resulting from previous lack of success or negative attitudes, is addressed because consciousness raising is an indirect teaching approach in that the thing taught is not the thing learnt (Corder 1973:331; Rutherford 1987:17,18). The "thing taught" is therefore not the knowledge which has to be directly applied by the learner, but rather constitutes the underlying knowledge that generates related surface knowledge that may include fossilised structures.

Consciousness raising approaches therefore address the problem of fossilisation at the baseline by sensitising the learner to underlying meaning-related grammatical issues. The learner's response is an inductive process deriving from the learner's own altered hypotheses about linguistic structures. As consciousness raising procedures aim to teach the thing to be learnt indirectly and implicitly by activating the underlying processes that generate the rule concerned, the learner cannot have resistance to the unobtrusive real focus of the instruction as in the case of explicit rule teaching. Learner resistance to something taught which is perceived as not needed is a problem with which teachers are familiar and one that may partly explain the lack of success of conventional rule teaching. This resistance, which may be conscious or subconscious, and which accounts for the lack of learner permeability, is addressed in consciousness raising procedures. The main difference, therefore, between an approach that may be expected to address problems related to

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fossilisation, and conventional direct, explicit rule teaching, is the degree of directness of the teaching focus.

In conventional remedial teaching the new material has to be superimposed on existing erroneous internalised hypotheses, resulting in a misfit, a disjunction between the thing learnt and underlying hypotheses about the thing learnt. According to Rutherford, consciousness raising is a "means to attainment of grammatical competence in another language" (Rutherford 1987:24,104), a *facilitator* of language learning (Rutherford 1987:18), and entails "guiding the learner in mentally working out the surface implications of second language intrinsic formal organization" (Rutherford 1987:149); the object of direct teaching is an end in itself and constitutes "handing [the learner] the inventory of surface constructs 'on a pedagogical platter'" (Rutherford 1987:149). The role of consciousness raising is not to teach a body of knowledge, (the grammatical product) but to teach learners how to learn (aspects of the grammatical process) (Rutherford 1987:104).

It seems feasible then to *mediate* learning by creating appropriate new **thinking routes**, which may trigger a readjustment of the old hypotheses so that structures approximating the target language are produced. In the case of initial second language teaching, consciousness raising strategies aim to mediate the forming of hypotheses. Where processes of grammaticisation have been arrested by fossilisation, consciousness raising strategies aim to reactivate aspects of the grammaticisation process, promoting formal rather than meaning changes.

Rutherford (1987:40) states that in initial interlanguage, form-meaning relationships are direct. The subsequent formal changes that result from continual readjustment of hypotheses in second language acquisition constitute processes of grammaticisation (Rutherford 1987:passim), which cause form-meaning relationships

to become more indirect. These processes of grammaticisation, which are arrested by the onset of fossilisation, have to be reactivated to effect change of fossilised structures. However, according to Rutherford (1992) "conscious-raising cannot be taken at face value; it must be subjected to research."

1.2.5 How might teaching procedures in the primary school classroom be improved?

Although events in the school classroom fall outside the domain of this study, it is expected that some recommendations relevant to the classroom may be generated by the findings of the experiment (see 5.2.2, p.284).

Before the variables of the study are discussed, the hypothesis of the study needs to be operationalised.

1.3 HYPOTHESES OF THE STUDY

The central hypothesis is formally stated as follows:

H₁ There is a positive relationship between the application of multilevelled semantico-grammatical consciousness raising procedures and the destabilisation of fossilised structures.

As the central hypothesis (H₁) is not fully operationable, it cannot be directly falsified. However, it can be falsified in terms of seven subhypotheses that derive from it. The effects of semantico-grammatical consciousness raising on fossilised verb structures may be observed in the language production of the subjects subsequent to intervention. These effects are measurable in terms of the following subhypotheses (H₂ - H₈).

H₂ The total number of verb errors of the experimental group will show a significant reduction relative to the control group.

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- H₃ The concord errors of the experimental group will show a significant reduction relative to the control group.
- H₄ The temporal (time) errors of the experimental group will show a significant reduction relative to the control group.
- H₅ The aspectual errors of the experimental group will show a significant reduction relative to the control group.
- H₆ The correct verb structures of the experimental group will show a significant increase relative to the control group.
- H₇ The number of self-produced erroneous verb structures monitored successfully will show a significant increase relative to the control group.
- H₈ The number of erroneous verb structures produced by someone else which are monitored successfully will show a significant increase relative to the control group.

These subhypotheses are fully operationalised in Chapter 3 (see 3.7.2, p.180). In order to achieve the objectives of the study, the variables relating to the research problem are described, justified and operationalised in the next section.

1.4 VARIABLES OF THE STUDY

The dependent, independent, intervening and control variables of the thesis are presented in this section.

1.4.1 Dependent variable

In the interaction of the two variables of the study, consciousness raising procedures and fossilised structures, the consciousness raising procedures putatively effect change in the

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fossilised structures, while remaining unaffected. The **dependent variable** (fossilised structures) is observed to determine what effect, if any, the other variable(s) may have on it (Brown 1988:10). In this respect, the manifestation of fossilised structures is the dependent, central variable or variable of focus of this study.

In terms of the problem identified, and in respect of the questions raised in section 1.2, **interlanguage fossilisation** (defined on p.4) is the focal construct of the study (see 2.4.3.1, p.86 for a discussion of fossilisation).

Factors that may cause or prevent fossilisation are aspects of the focus of this study. For this reason possible causes of fossilisation and predictions about the finality of fossilisation are not included in the definition presented on p.4 of this study. As the concept of fossilisation will be explored in detail in Chapter 2, all that is required at this point is to relate fossilised structures, the dependent variable, to the research.

Fossilisation, however, is a process that happens inside a learner's head and as such is not visible or directly measurable. It is an abstract, psychological construct, the reality of which can only be established indirectly by identification of the fossilised structures produced by the learner and the learner's ability to make use of his/her metalinguistic consciousness. Not every interlanguage structure can be assumed to be fossilised, however, therefore specific parameters are laid down for the identification of fossilised structures in this study. The evidence of fossilisation is visible and measurable. In this study only one category of fossilisation is addressed: instances of fossilised structures manifesting as verb errors in the written production of teacher trainees are counted and these counts constitute the scores from which statistical data are computed. **Verb errors** are deviant verb structures that violate

the constraints of their obligatory contexts in respect of appropriacy and/or form (see 3.7.4, p.187).

1.4.2 Independent variable

An **independent variable**, by definition, is any variable whose values are independent of changes in the values of other variables. For this reason semantico-grammatical consciousness raising may be regarded as the independent variable of this study. An independent variable may be manipulated so that the effects of the manipulation may be observed (Reber 1985:812).

In this study the process of consciousness raising, which is a theoretical construct, is concretised by means of consciousness raising procedures which are intended to facilitate language learning (Rutherford 1987:18) and which are designed to focus on aspects of underlying grammatical processes (Rutherford 1987:104) of which the learner is made to become aware.

1.4.3 Intervening variable

According to Rutherford (1987:40), interlanguage, with a maximally direct initial form-meaning relationship, gives way to later modes, gradually and unsteadily moving closer to target English, "wherein the relationships become more and more indirect as the compensatory **grammaticization** principle takes hold." It is an implication of the central hypothesis that the application of consciousness raising strategies (the independent variable) will precipitate a process of grammaticisation, which will gradually bring ungrammatical interlanguage structures (the dependent variable) closer to grammatical target language structures. The process of grammaticisation, which is something that occurs between the independent and dependent variable, may therefore be seen as the **intervening variable**.

1.4.4 Control variables

Control variables are those variables that may influence the relationship between the independent and dependent variable (Brown 1988:11), but are regarded as extraneous to the study by the researcher and therefore have to be kept constant, be neutralised or eliminated. These variables are identified and discussed in Chapter 3 (see 3.1.3, p.140). Nine extraneous variables are identified: age, gender, study course, first language, genetic relatedness, socio-economic background, schooling, motivation, and attitude to the experiment. These variables are merely listed at this point for the sake of clarity.

1.5 OVERVIEW OF THE THESIS

In this chapter the problem of low levels of language proficiency amongst teacher trainees is identified and explained. Evidence that first-year advanced ESL students and beginner learners produce the same interlanguage structures suggests that conventional ESL teaching methods have not succeeded in keeping the process of formal language development, that is grammaticisation, viable. Interlanguage structures have consequently fossilised. As fossilised structures seem impervious to conventional teaching methods, an experiment is envisaged to demonstrate what effect consciousness raising strategies might have on fossilised structures. The research questions are then introduced, followed by a formal statement of the hypotheses of the study. The dependent variable (fossilised structures), the independent variable (semantico-grammatical consciousness raising) and the intervening and control variables are subsequently identified.

In **Chapter 2** the study and underlying concepts are brought into focus in the context of relevant literature, thus providing

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support for the line of reasoning taken in this thesis. The literature relating to the question of language standard, the status of English in South African education and the position of English second language teaching in primary schools provides the background to the problem identified in Chapter 1. Key issues such as the theoretical claims relating to SLA, interlanguage, fossilisation and consciousness raising are considered. Discussion and criticism of relevant research studies serve to position this research study in the field of consciousness raising and fossilisation research.

In **Chapter 3** the variables of the study are described and operationalised. In this chapter a description and an explanation are given of the pretest-posttest research design. Details of the methods used to investigate the relationship between semantico-grammatical consciousness raising and defossilisation are given. The subjects of the study who form natural groupings are then described. The treatment is described and explained in detail upon which the verb data are indicated and the obligatory contexts for each component carefully described.

The data analysis of the 7 test variables is dealt with in the first section of **Chapter 4** and the discussion and interpretation of the results in the second section. In the first section, brief reference is made to the exploratory investigation and findings. Statistical techniques used to analyse the data are indicated and the results are described in a paradigm of five comparisons: experimental pretests with control pretests; experimental pretests with experimental posttests; control pretests with control posttests, experimental posttests with control posttests and the pretest/posttest gain scores of the experimental and control groups. The null hypothesis would be rejected in terms of the statistical results shown by the comparison of the pretest/posttest gain scores of the two groups.

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In the second section of Chapter 4 the results described in the first section are interpreted in terms of the hypotheses of the study, once again within the paradigm of five comparisons. The results seem to indicate that concord structures are impervious to change in a consciousness raising intervention programme. Most improvement is shown by the experimental group on temporal and aspectual structures, self-monitoring and other-monitoring. The concept of an ability gap between self-monitoring and other-monitoring is introduced.

In **Chapter 5** the findings of Chapter 4 are placed in a macro-perspective, showing the implications of the study for defossilisation within a cognitive view of language acquisition.

The theoretical contributions of the study concern insights gained in respect of psycholinguistic and pedagogical issues as well as aspects of learning theory. The psycholinguistic issues concern amongst other things the psychodynamics of fossilisation and insights relating to semantico-grammatical consciousness raising. The pedagogical contributions of the study relate the findings of the study to the original problem identified in Chapter 1. The discussion concerning learning theory relates language learning issues to general learning theory.

The limitations of the study put the results in perspective, indicating that the value of the study lies rather in the rich avenues that it explored than in absolute statistics. These explorations suggest several areas for future research. Recommendations deriving from the findings of the study are made.

Finally, the conclusions that multilevelled semantico-grammatical consciousness raising procedures may precipitate defossilisation and that fossilisation is not necessarily a final state complete the thesis. // =

To test the hypothesis that semantico-grammatical consciousness raising can destabilise fossilised structures, an experiment consisting of a set of matched pretests and posttests with an intervention programme of seven units was launched with first-year senior primary teacher trainees at a College of Education. During the first ten weeks of the following academic year, the experiment was repeated with a new set of subjects and a greatly adapted intervention programme. The results suggested that grammatical consciousness raising could reactivate processes of grammaticisation and so destabilise fossilised structures.

2. KEY PERSPECTIVES ON SECOND LANGUAGE ACQUISITION, FOSSILISATION AND CONSCIOUSNESS RAISING

*Particulars are not to be examined
till the whole has been surveyed.*

Dr Samuel Johnson: Preface to Shakespeare

2.0 PREVIEW

In Chapter 2 the problem is placed in the context of the literature, mainly from a psycholinguistic perspective. However, as the topic concerns second language acquisition as well as applied linguistic issues, the research domain is broad-based. For this reason, the literature of a variety of fields is relevant to this study. Sociolinguistic perspectives, although not extraneous, are peripheral to the study and will therefore only be referred to when relevance needs to be shown. The key perspectives are introduced in the next section.

2.1 THE LITERATURE REVIEW IN PERSPECTIVE

Seliger and Shohamy's (1989:1) observation that the field of SLA research is interdisciplinary, drawing on linguistic, psycholinguistic, sociolinguistic, sociological, psychological and educational perspectives is especially relevant to this

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study. The problem of this study - the destabilisation of fossilised verb structures in the second language of teacher trainees - is embedded in the domain of applied linguistics. The problem, however, derives from psycholinguistic issues related to second language acquisition and concomitant fossilisation. The investigation of the relationship between semantico-grammatical consciousness raising procedures and defossilisation places the focus of the study in the domain of language teaching and learning. The findings of the study, however, have psycholinguistic implications for second language acquisition and fossilisation, as well as applied linguistic implications for language learning and teaching.

Jacobs and Schumann (1992:282) state in respect of applied linguistic research that it may be characterised as

the application of various research areas (for example, psychological, sociological, anthropological, neurocognitive) to basic issues in language acquisition, use, analysis, policy, assessment, and several other domains.

The broad-based nature of this study has already been indicated in Chapter 1. I shall now outline the structure of this chapter.

Section 2.2 deals with the prevailing conditions under which ESL is taught in primary schools in the RSA and the related implications for teacher training. These implications form the background of this study. The literature is examined for facts on the current standards of ESL in education in order to demonstrate pedagogical implications of inadequate ESL standards of future primary school teachers for the new South Africa.

Sections 2.3 and 2.4 deal with historical perspectives on the linguistic theories relating to SLA, the notion of interlanguage and the phenomenon of fossilisation in particular, which

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constitutes the main theme of the study. An attempt is made to present the current state of the debate on fossilisation.

Section 2.5 focuses on consciousness raising and related topics. In this section the linguistic constructs and variables relating to a hypothesised solution to the fossilisation problem are examined in the context of the literature and relevant research findings. This section attempts to present support and counter-arguments relating to the central hypothesis of the study as well as the implications of the hypothesis.

The widely accepted notion of the immutability of fossilised structures is examined against various models of fossilisation in section 2.6. A review of past research studies done with fossilised learners gives the reader the background against which this study can be understood and evaluated. Consciousness raising - the second important theme of this chapter - and relevant issues are subsequently considered in this section. The concepts of grammaticisation and semantico-grammatical distance are examined in more detail in order to arrive at an understanding of consciousness raising. The principles of consciousness raising are discussed with reference to the psycholinguistic bases of consciousness raising, language typology and the learnability question. Pertinent cognitive issues that are crucial in language acquisition are examined to clarify the cognitive view that underpins the approaches used in the experiment undertaken in this study. A discussion of the differences between traditional grammar teaching and consciousness raising techniques and procedures illustrates in what way consciousness raising strategies may be applied to serve SLA in the classroom. Issues relating to the experiment are also examined against the available reports on consciousness raising research.

The pertinence of the major concerns of the central hypothesis are considered in 2.7.

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Let us now turn to the first concern: ESL in primary school teacher training.

2.2 ESL IN PRIMARY SCHOOL TEACHER TRAINING - A NEED FOR CHANGE

The apparent immutability of fossilised structures in the ESL production of primary school teacher trainees - the phenomenon identified in Chapter 1 (see 1.1.2, p.15; 1.1.4, p.18) - is one of the factors contributing to inadequate levels of ESL "terminal" proficiency (Valette 1991:326). So many primary school teachers are lacking in this respect that numerous linguists and educators have felt the need to comment on this position in South African classrooms (see pp.47). This purported lack of ESL proficiency raises several related questions. What is "language proficiency"? Do fossilised structures impair language proficiency? Do grammatical inaccuracies such as those manifested by fossilised structures affect the comprehensibility of communication? Do second language teachers have to be linguistically proficient, that is, have adequate control of grammatical structures, in the language that they teach? Is language proficiency a basic requirement for effective teaching of other subjects? I shall attempt to address these questions in the sections that follow.

2.2.1 The need for improved standards

The purported inadequate language proficiency of ESL teachers and learners in South Africa is apparent in African as well as in White education. However, before any criticism can be levelled at existing linguistic (grammatical) standards in education, the constant that serves as a point of reference and comparison should be examined. What exactly is meant by "inadequate linguistic standards"? To answer this question I need to lay the ghost of language liberalism relating to the use of Standard English.

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2.2.1.1 Standard English: an access route

I would argue that grammatical forms as established in Standard English serve as a guide for what may be acceptable in education. This statement raises two questions: Why should Standard English be the norm? Why should the requirement of grammatical accuracy of teachers be necessary in education? Let us turn to the first question.

There are many dialects of English of which one is Standard English. However, Standard English differs from other dialects in certain ways. Standard English refers to that particular variety of English which is freely current throughout the world (Quirk 1990:10) and not bound to any area. The greater part of English grammar is "common to all dialects, educational levels and styles" (Quirk 1968:98), including the grammar used in the speech and writing of educated people (Quirk 1968:99).

A COMMON CORE or nucleus is present in all the varieties so that , however esoteric a variety may be, it has running through it a set of grammatical and other characteristics that are present in all the others (Quirk, Greenbaum, Leech & Svartvik 1985:16).

According to Quirk et al. (1985:21), South African English in educated use is virtually identical with British English in orthography and grammar.

Standard English then is

that system of grammar and vocabulary, firmly established in text, and the underlying system of pronunciation which underwrites all the native varieties of English spoken all over the world (Wright 1993:16).

According to Wright, the international Standard English is the only variety which educational authorities can reasonably implement (Wright 1993:10). It is possible that some may regard

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this statement as "elitist" and exclusive. Using educated English, however, is not "talking posh." Only a "trifling minority" uses Received Pronunciation and

Standard English is spoken equally well by Bill Clinton, Paul Keating, Virginia Bottomley, and John Smith - not to mention Nelson Mandela and F.W. de Klerk (Quirk 1993:31).

It is also a misconception to equate Standard English with "trivial shibboleths" about split infinitives, trailing prepositions and dangling participles (Quirk 1993:31). Standard varieties of English are more differentiated, entering into a wider range of functions and situational domains. Because of this, standard varieties enjoy general prestige. The French regard standard language as "le premier instrument de la liberté" (Quirk 1993:31). So much for the general speech population, but what about second language education? Does proficiency in the standard variety empower the nonnative learner of English?

When teachers believe that "any notion of correct or incorrect use of language is an affront to personal liberty" (Kingman 1988:3) it is a manifestation of "liberation linguistics" (Quirk 1990:7), motivated by understandable idealistic, humanitarian, democratic and highly reputable reasons (Quirk 1990:7). Such an educational ethos, however, traps students in their present social and ethnic sectors, "creating a barrier to their educational progress, their career prospects, their social and geographical mobility" (Quirk 1990:7). It is "exasperating and demoralising to go through one's education only to find that the English one has been using doesn't work with outsiders" (Abbott 1991:56). According to Kingman (1988:3) successful communication depends on recognition and "accurate use" of rules and conventions. Command of the rules and conventions (that is grammar) of Standard English "is more likely to increase the freedom of the individual than diminish it" (Kingman 1988:3). According to Kingman (1988:7), language confers freedom, is

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empowering and bestows competence in any job. For the wider community, "the standard language will be indispensable" (Kingman 1988:7). We may therefore not condemn future generations to a patois that serves no function beyond the mostly unstable local English variety used for limited informal communication only. Accepting a nonstandard variety, e.g. interlanguage forms - Quirk's "variety according to interference" (Quirk et al. 1985:27) - would be imposing and enshrining mediocrity. Every child has a right to Standard English (Brown, in Titlestad 1993b:5). According to Wright (1993:15) South Africa can ill afford the ideological gestures of language liberals who hamper the capacity of English to do its job. Students who were "'liberally' permitted to think their 'new variety' of English was acceptable, would be defenceless before the harsher but more realistic judgement of those with authority to employ or promote them" (Quirk 1990:10).

2.2.1.2 The use of Standard English in teaching

In education there does not seem to be an alternative to teaching the rules and conventions of Standard English and a pursuance of grammatical accuracy. Any tolerant pluralism in respect of grammatical accuracy would amount to defrauding learners. While one fully understands the current predicament of thousands of ESL teachers, the deliberate setting up and promotion of lower standards of ESL must be criticised. Even Alexander (1989:67) concedes the need of high linguistic standards and a "generation of highly-skilled, well-trained [English] language teachers" to be employed as specialists in every primary school in South Africa. This would "raise the standard of English understanding and usage... and would do away with the need for 'remedial' and 'compensatory' education at higher levels." Remedial strategies are only redundant when satisfactory levels of grammatical accuracy have been attained and the conventions of Standard English have been mastered. The question now arises: if

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attainment of grammatical accuracy is one of the objectives of second language teaching, how does this affect teachers?

2.2.1.3 Perceptions about grammatical accuracy

The Kingman Report (1988 *passim*) has reasserted the primacy of Standard English in education. Although embedded in a different context, the main thrust of this report is equally relevant to the South African situation. Teachers, and especially nonnative learners (Quirk 1990:7), need a standard for normative guidance and from which pedagogical materials can be derived (Quirk 1988:236). Dialect grammar is area-bound, containing nonstandard grammatical colloquialisms which occur in the speech of everyone in that area but not in formal language or in print, except in written representations of speech (Quirk 1968:97). Written language is after all not just spoken language written down (Cox 1988:46). The grammar used in the speech and writing of educated people (Quirk 1968:99) is for the greater part common to all dialects, educational levels and styles (Quirk 1968:98). If teachers are to teach Standard English, it follows that they themselves should adhere to the grammatical norms and conventions of Standard English and have knowledge of language (Kingman 1988:70) in order to teach effectively and serve as a language model. Children's entitlement as spelt out in the Cox report (Cox 1988:13) is, for reasons already mentioned, equally relevant to South African children. Children should therefore be "explicitly taught, the functions and forms of Standard English" (Cox 1988:13); they should have a knowledge of language (Cox 1988:17). "As long as Standard English serves as an internationally recognised bench-mark for written language, people must eventually learn its rules or be marked as uneducated" (Jeffery 1993:9). Quirk (1990:9) warns against the serious implications of allowing learners to settle for lower standards than the best. It is a "travesty of liberalism" to tolerate low standards that will "lock the least fortunate into the least rewarding careers" (Quirk 1990:9).

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The question now arises whether accuracy relating to control of verb forms could be classed with the trivial linguistic shibboleths referred to earlier (see p.42 of this study).

Subject-verb agreement is a typical and predictable problem area for most ESL learners (Quirk et al. 1985:757-8), but as concord has little bearing on intelligibility, subject-verb agreement is "vestigial" (Jeffery 1993:9). It is possible that the lack of significant meaning of concord structures may have a bearing on the problem area referred to by Quirk.

Tense structures, more specifically temporal and aspectual structures (cf. Crystal 1980:352,353), however, cannot be regarded as "vestigial" as they are pivotal carriers of grammatical meaning. In this sense grammar plays a crucial role in facilitating effective communication (Chick 1992:36). Grammar, comprising structural accuracy, "assists in narrowing-down the contextual, and, therefore, the interpretive possibilities" (Chick 1992:37). Chick believes that teaching English grammar is particularly important in multi-ethnic societies with disparate contextual backgrounds, and should therefore be taught (Chick 1992:37). It follows that an important component of English courses for teacher trainees must be the explicit study of the grammar of English (Chick 1992:39). The concomitant assumption is that teachers should not only have knowledge of grammar, but should also be able to use it.

What is the position in education in respect of the linguistic abilities of teachers in South Africa? Is there any need for change? These questions are examined in the next section.

2.2.1.4 Language proficiency of teachers in different education departments

As stated before, the fossilisation phenomenon may be studied in the acquisition of any second language. If generalisations in

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Chapter 5 can in this way be expected to extend to all language groups, then it should be possible to consider issues relating to the English proficiency of teachers in only two education departments serving different speech communities: African-language speakers and Afrikaans-speaking learners.

I regard the inclusion of comments about English standards in African education of vital importance as the overwhelming majority of learners in this country are served by African teachers who are ESL speakers. Given the prevalence of the phenomenon of fossilisation, the serious implications of this situation for general learning and for the development of English cannot be ignored. The low level of ESL proficiency in African education fully justifies concerns of this study with grammatical accuracy.

In education of African-language speakers, English is currently the main medium of instruction after Standard 2 (Grade 4), so that it seems likely that overall school performance might be affected by poor ESL standards of teachers and pupils alike. Hartshorne (1987:77) states that governmental language policy and practice since 1953 have lowered the standards of English throughout the system. Kloss (1978:40) reported that he found teachers' English satisfactory as regards vocabulary, but greatly lacking with regard to pronunciation and grammar. Ellis (1987:83), referring to his observation of Standard 6 learners in an African secondary school, comments that African teachers are often unable to use English in a way that promotes learning, although he concedes that the problem may not simply be a lack of communication skills on the part of the teachers and the learners. Odendaal (1990:354) concurs with the lack of mastery in English reported by Macdonald (1990:125,162) in the main report of the Threshold Project.

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I shall argue that fossilised grammatical structures can impair effective explanation of concepts, thereby inhibiting pupils' understanding (see 2.2.1 & 2.2.4, pp. 40, 59). Furthermore, a poor language model in the ESL class perpetuates poor standards of English. According to Valette (1991:326), two factors that can lead to fossilisation in the school environment are contact with inaccurate models (that is, speakers whose productive language manifests inaccurate lexical and syntactic patterns) and acceptance of inaccurate speech production by learners.

The current situation in African education in South Africa, according to the NEPI report on language (1992), is that not all teachers in English-medium schools are proficient in English (NEPI 1992:78) and that limited levels of English as a medium of instruction are a serious obstacle to learners' achievement of academic success. According to this investigation there are not enough proficient teachers in African schools to guarantee that pupils will emerge from the school system linguistically proficient in English (NEPI 1992:18).

2.2.1.5 The circular nature of declining standards in ESL education

The previous argument underscores the circular nature of language proficiency levels identified in Chapter 1 of this study: pupils leave school linguistically impaired; some elect to re-enter the education system as teacher trainees; particular aspects of the language proficiency of these trainees remain unchanged (fossilised) throughout their training; they eventually enter school classrooms as teachers, thus perpetuating the problem of inadequate linguistic standards.

The phenomenon of teaching transfer of limited second language proficiency is not unique to the South African situation (cf. Valette 1991:326). Higgs & Clifford (1982:68) observe that pre-service language teachers at the University of Minnesota who

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produced fossilised "terminal language" had been taught by teachers who themselves had not achieved mastery of the target language.

The problems related to the inadequate ESL proficiency of teachers are also encountered in education of Afrikaans-speaking learners, but only in respect of ESL, as medium of instruction is not an issue in this case. Kloss (1978:32,33), reporting on the declining quality of ESL teachers in White education, states that ESL was often taught by teachers who were themselves second language speakers of English, and this factor contributed to the poor spoken and written English of the younger generation, "even among those in positions which obviously require bilinguality such as language teachers" (Kloss 1978:32,33). The circular nature of steadily declining linguistic standards is evident in the Kloss report. In a report on language planning and language education in South Africa, Kroes (1985:12) refers to the problem of inadequately trained, "insufficiently equipped" language teachers who are themselves second language speakers of the target language and states that language teachers need to be made aware of the main objective of language instruction: "better and more accurate communication" (Kroes 1985:13, my translation and emphasis). This view is echoed by Cummins (1984:141) in his observation that development of learners' ability to "manipulate and interpret cognitively-demanding context-reduced text" is a major aim of schooling. The accuracy requirement in the manipulation of context-reduced text is discussed on p.53 in section 2.2.2. Ellis (1987:91) points out that teachers may even perpetuate their own earlier classroom experience of teaching approaches and formulaic teacher talk.

Given the circular nature of declining standards of ESL proficiency in education there can be no doubt that change is imperative, if it can be indisputably accepted that ESL proficiency is indeed a prerequisite for effective teaching, and

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that grammatical accuracy, that is accuracy of syntactic and morphological structures, is a necessary component of language proficiency. The accuracy-vs-communicative competence issue has constantly been debated since the general demise of the Grammar-Translation method in most educational institutions. The notion **language proficiency** is considered in the next section.

2.2.2 Perspectives on language proficiency

The definition of language proficiency falls into two clearly definable categories: proficiency determined by fluency and effectiveness of the communication, regardless of the level of grammatical accuracy - a position of "linguistic relativism" (Reagan 1984:8), and proficiency that includes accuracy as a necessary component.

2.2.2.1 Linguistic relativism

Proponents of the first position are sociolinguists such as Prabhu (1987), Labov (1972) and Kachru (1985) who believe that SLA research should be "sensitive to the wider context of language teaching" and take account of the findings of "sociolinguistics in language and social identity, and bi/multilingualism" (Kachru 1985:91). Supporters of the Grammatical Accuracy Hypothesis (see p.120 of this study) represent the extreme group that regards accuracy (grammatical proficiency) as a necessary component of language proficiency (Higgs and Clifford 1982:60; Valette 1991:327). In defence of grammatical accuracy Reagan states that

...we may have gone too far in assailing [classroom] linguistic prescriptivism ... efforts to inculcate in students a standard (or standardized) linguistic norm may well not only be defensible, but, at least in pragmatic terms, desirable (Reagan 1984:9).

I would argue that grammatical proficiency considerations are determined by what language is used for, how language is being used and what the subject is doing with his language (Bruner

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1975:71). In this respect Bruner differentiates between communicative and analytic aspects of proficiency. The purpose and content of the communication and the relevant *language situation*, that is status of speakers and their mutual relationships and possible constraints determined by the place of communication (Crystal 1980:323,324), demand a particular aspect of language proficiency. According to Bruner (1975:72) decontextualisation of knowledge in education demands analytic proficiency, which involves extended cognitive operations based on linguistic representations only. Whether a particular speaker actually does have the ability to vary his/her type of proficiency at will in terms of the above distinctions, however, is quite another matter. I shall return to this point presently.

2.2.2.2 A qualitative view of language proficiency

The kind of language proficiency referred to by Cummins (see p.53 of this study) which takes cognisance of a need for accuracy and which makes a different kind of demand on the learner is also described by Bialystok (1982:182,183). Bialystok takes a qualitative view of the description of language proficiency in her research on the relationship between knowing and using linguistic forms (Bialystok 1982: 181). As Bialystok's bidimensional model of language proficiency adds to an understanding of Cummins' view of language proficiency, and furthermore has relevance for an understanding of the underlying cognitive processes that may contribute to fossilisation of interlanguage structures, the model is briefly described at this point.

Bialystok's Cognitive Theory of language learning posits a model with two dimensions of language proficiency: an **analysed factor** and an **automatic factor** (Bialystok 1988:37). According to Bialystok (1988:183), language learning demands on the learner can be described in terms of these two factors: analysed

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representations of knowledge and automatic access to information.

Analysed knowledge is assigned a propositional mental representation which makes clear the structure of the knowledge and its relationship to other aspects of knowledge.

Bialystok (1988) defines unanalysed knowledge - the other end of the knowledge factor continuum - as the "general form" in which we know most things without an awareness (consciousness) of the structure of that knowledge. On the other hand,

The automatic factor refers to the relative access the learner has to the knowledge, irrespective of its degree of analysis (Bialystok 1988:183).

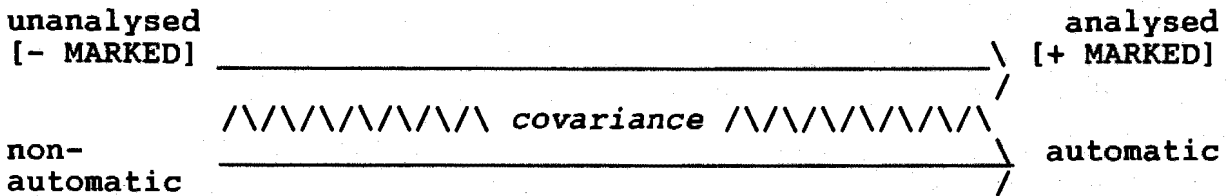
In terms of these definitions, fluent conversation as required in face-to-face communicative situations would require automaticity and control over unanalysed information. The factor **automatic** can therefore not be expected to proceed in a lockstep development with the factor **analysed**. It seems reasonable to assume that, at the beginning of the learning continuum, information would be unanalysed and non-automatic (cf. Cummins' concept of cognitively demanding involvement, on p.54 of this section). In the case of written text, according to Bialystok, the learner is less dependent on automatic control as time pressure is not a factor and books may be consulted if needed. Bialystok (1992:183) links the positive values of the two factors with marked forms such as **had done** and **ran**, and the negative values with unmarked forms such as **do** and **run**, as represented in Fig. 1 below.

Bialystok's model, which is an adaptation of the bidimensional model with two intersecting continua posited by Bialystok (1988:37), illustrates the concept of covarying factors at variable points of intersection inherent in her view of the

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development of language proficiency. It is this relational variability that the Cummins model also attempts to capture (see Fig. ii, p. 54).

Fig. i *The knowledge continuum in a qualitative view of language proficiency*



In terms of the above definition of proficiency Bialystok predicts that unmarked forms of knowledge precede marked forms, a notion of progressive mastery toward the target language, thus.

According to Bialystok different situations impose different social, cognitive and linguistic demands on the learner who can only succeed in meeting those demands in terms of his/her ability. In this respect, Bialystok's view of language development implies that should the learner's ability meet those social, cognitive and linguistic demands, progressive development would cease at a point of non-mastery. Development of proficiency enables the learner to progressively meet more stringent task demands through language, such as formal uses of language for purposes of study (Bialystok 1982:183). In her study Bialystok found that it was especially the combination of analysed information with automatic access to that knowledge, such as specialised uses of language (Bialystok 1988:37), that was the most problematic for the learner (Bialystok 1982:204). I now turn to the implications of two kinds of language proficiency in the school environment.

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2.2.2.3 Implications of language proficiency for learners in the school environment

The linking of pedagogical linguistic requirements to Cummins' notion of language proficiency (Cummins 1993:120; 1984:139) may serve to support my argument for ESL accuracy in teaching.

Cummins (1984:116) points out that Bruner's dichotomous distinction between communicative and analytic aspects of proficiency and his identification of analytic proficiency as a manifestation of a higher cognitive level (Bruner 1975:72, 76) is both dangerous and oversimplified. It is possible to have a cognitively demanding communicative language situation when arguing an intricate point (Cummins 1984:139) just as it is possible to have context-embedded situations at school as in early classroom communication (Cummins 1984:138,139). Unlike Bialystok's developmental model of language proficiency with covarying analysed and automatic factors, Bruner's dichotomous communicative/analytic proficiency distinction does not accommodate the developmental perspective which Cummins also regards as a necessary component of a theoretical framework of language proficiency (Cummins 1983:119).

The theoretical framework of language proficiency proposed by Cummins (*Fig. ii*, below) conceptualises language proficiency along two interrelated continua.

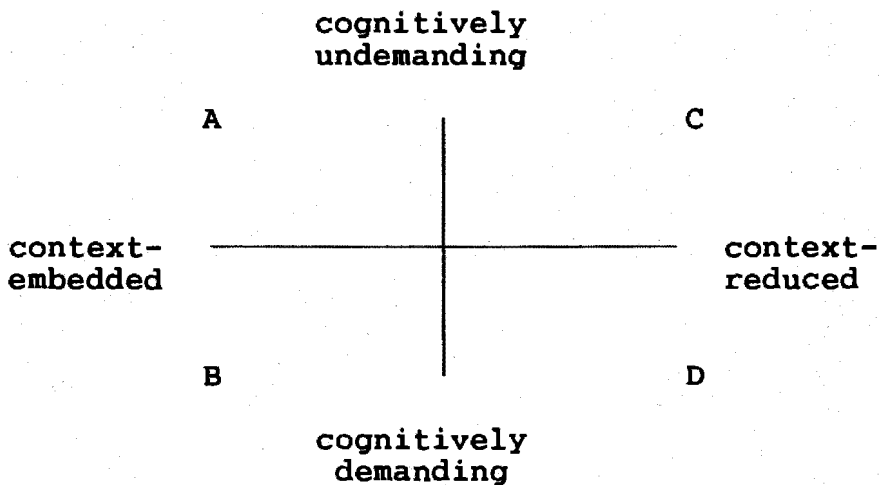
The interrelated continua are designed to integrate the relationship between basic interpersonal skills (BICS) and cognitive/academic language proficiency (CALP), while accommodating second language developmental perspectives (Cummins 1983:119).

The horizontal continuum relates to the range of contextual support in terms of non-linguistic and situational cues available for receiving and expressing language (Cummins 1983:120). At the

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context-embedded end of the continuum meaning can be actively negotiated, but at the context-reduced extreme learners have to rely exclusively on linguistic cues. Any linguistic impairment such as inadequate accuracy levels could therefore be expected to limit language functioning at this level.

Fig. ii Range of contextual support and degree of cognitive involvement in communicative activities



Cummins 1983:120; 1984:139).

The vertical continuum represents the developmental aspects of communicative competence relating to the degree of cognitive involvement which can be conceptualised in terms of "the amount of information that must be processed simultaneously or in quick succession by the individual to carry out the activity" (Cummins 1983: 121). It must be stressed at this point that cognitive involvement in terms of language production relates to levels of language development and automatisisation along the vertical continuum and the amount of conscious effort required to decode or encode language. Cognitive involvement in the sense of information processing of teaching content relates to the

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horizontal continuum (Cummins 1983:121) and the understanding of a concept.

The developmental perspective incorporates the view that some communicative subskills develop more rapidly than others and that these subskills reach their developmental plateaus of mastery at different stages. Some subskills such as grammatical skills and pronunciation may reach their plateaus at less than mastery levels, that is at a state of fossilisation (Cummins 1983:121). When fossilisation has set in, language production becomes automatised and cognitively undemanding (Cummins 1983:122).

In this sense, Klein (1986) supports Cummins' position in respect of mastery of subskills at different levels. Klein (1986:50,51) maintains that no speaker, native or otherwise, can ever be in command of all variants of language. For second language speakers, "acquisition ceases at a point long before true mastery of the language can be claimed" (Klein 1986:51); this is when fossilisation has set in. According to Klein, fossilisation is "selective" in that particular components of language knowledge (in the sense of proficiency) are affected at different points in time (Klein 1986:51).

The theoretical framework of Cummins allows us to postulate that first-year teacher trainees are able to engage in fluent basic interpersonal communication while producing fossilised language. It seems that these trainees are unaware of using inaccurate language. It furthermore seems that after ten years of ESL instruction at school their language production has become automatised and cognitively undemanding. These same "communicatively proficient" trainees may be linguistically limited in academic situations, that is in context-reduced situations that demand cognitively-involved information processing. Why have these learners attained communicative levels that satisfy the demands of context-embedded situations but are

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unable to meet the requirements of context-reduced situations? Furthermore, why are these learners developmentally limited in terms of their automatised less-than-mastery levels of language production? Why is their manipulation of language in context-reduced contexts apparently limited?

Cummins' theoretical framework addresses the perspective so often overlooked by educators (Cummins 1983:110), that is that it takes second language learners considerably longer to develop English academic skills than face-to-face communicative skills (Cummins 1983:119,120). The implication of this perspective is clear: if teachers fail to pay particular attention to the development of academic language skills because they view language proficiency as monogenic, learners can be expected to reach a point in their schooling where they will be proficient on interpersonal levels but unable to cope in cognitive/academic situations. According to O'Malley (1988:44) ESL and bilingual education programmes fail because they do not take the learner from context-embedded cognitively undemanding tasks to context-reduced cognitively demanding tasks. What then are the demands of such cognitive/academic language situations for students?

The major factor affecting the learning and teaching process is whether the medium of instruction (English) can be effectively used by students as a tool for learning and a means to cognitive development" (NEPI 1992:58). As previously stated, schools function in progressively increasing measure in cognitively-demanding context-reduced language situations (Cummins 1984:141). At tertiary level students are totally reliant on manipulation of linguistic text in cognitively demanding situations. Not only are students required to write academic/analytical language, they are also expected to deal with receptive demands of academic language, that is reading context-reduced texts and listening to context-reduced discourse. Students are expected to access texts for study purposes and decode lectures. In lecturing situations

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where students are not provided with supportive explanations and visual backup in the form of charts, pictures and notes, morphological forms with which they are not familiar may render well-known words unintelligible, obscuring meaning. Given that the language development of these students has fossilised and different subskills such as grammatical proficiency have become automatised at less than mastery levels, these students would then lack the linguistic tools required for successful receptive and productive manipulation of text.

If this understanding of language proficiency includes the concept of grammatical accuracy, what then is the impact of the notion of fossilisation on this perception of proficiency?

2.2.3 Fossilised structures and language proficiency

I earlier questioned the ability of some language users to deliberately command different levels of proficiency according to the demands of the situation (see p.50 of this study). I now return to this point. The learner who is linguistically impaired by the fossilisation of particular subskills is unable to manoeuvre freely along the continua proposed by Cummins (see p.54 of this study). Subskills may be represented by, amongst other things,

- the ability to make phonological distinctions;
- recognise and apply morphological forms;
- decode and assemble syntactic constructions;
- select appropriate lexical items and understand them in context.

Fossilisation of any of the subskills would generally hamper productive and receptive language skills, but fossilisation of morphological subskills would limit a learner for the following reasons:

- The learner is dependent on context-embedded situations because he/she cannot rely on linguistic (grammatical) cues alone; not only are linguistic markers that contribute to

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the meaning of a text uninterpretable, but the learner also cannot apply these forms meaningfully in production. Morphological changes such as *lay* [PAST] from *lie* [PRESENT] may even render certain lexical items totally obscure to the learner.

- The learner's language development has reached the point of automatisation at less than mastery levels; the learner is therefore unable to "stretch [his/her limited] linguistic resources in order to achieve [his/her] communicative goals" (Cummins 1983:121).
- To the extent that the learner's language production has become automatic, he or she is cognitively uninvolved in the task of language production and is therefore unaware of the nature of his/her linguistic limitations - a kind of linguistic fool's paradise syndrome. Taking a cart-before-the-horse position, Klein (1986:51) cites reasons for "selectivity" in fossilisation, stating that such a learner "may no longer notice the difference between his own production and that of his environment." Klein nonetheless indicates a relationship between production of fossilised structures and learners' ignorance thereof. Such learners, although unaware of their particular fossilised errors, are however painfully aware of their inability to cope with the academic task at hand: they know that they are receptively and productively hamstrung. Not only is meaning in text and discourse experienced as opaque; they are also unable to formulate concepts accurately in speech and writing, as the second language learner quoted on p.9 reminds us.

If the grammatical accuracy of learners is impaired as a result of fossilised structures that have not developed to levels of mastery and such learners are consequently severely limited in cognitively-demanding context-reduced language situations, what

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are the implications of these limitations for teacher trainees and their future classrooms?

2.2.4 The linguistic requirements for teachers

According to Valette (1991:327) "[accuracy] is the *sine qua non* of healthy language development." Higgs and Clifford (1982:77) believe that grammatical accuracy plays a role in the achievement of true communicative competence, "in which it truly does matter how the message is transmitted." It is for this reason that Valette (1991:327) believes, to prevent early fossilisation, the most proficient (and linguistically accurate) teachers should be teaching beginner classes.

If the primary goal of basic language instruction is to provide a foundation from which progressively higher levels of proficiency can be reached ... then it is important that we focus on minimizing all possibility of fossilization (Valette 1991:328).

Hartshorne (1987:77) declares that he is "stating the obvious" when he stresses the need for teachers to have a level of proficiency in English appropriate to the learning required by the curriculum. Not only is language proficiency a prerequisite for the effective teaching of other subjects, it is also vitally important in the teaching of a second language.

In their submission to CODESA in June 1993, the English Academy of Southern Africa maintains that

[t]o abandon the concept of a standard language is to make the task of the teacher impossible (English Academy of Southern Africa 1993:6).

Furthermore,

... ultimately the teacher does a disservice by not making available an English that facilitates academic and career advancement. (English Academy of Southern Africa 1993:7).

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In their plea for standard accuracy levels, the English Academy of Southern Africa (1993:5) insists that only a sound, internationally viable standard form of English can bring empowerment but concedes that in everyday usage South Africans will speak English multidialectally at various levels (English Academy of Southern Africa 1993:5).

Kachru (1985:100), taking the opposite stance, believes that adopting localised forms of English in education is "justified" and that "research in teaching methodologies needs to be sensitive to the wider context of language teaching" (Kachru 1985:91). With the latter position one can have no argument, but to *indiscriminately* accept non-standard forms into education may prove to be counter-productive in the long run, thereby disempowering learners.

Macdonald (1990:132), referring to the academic linguistic needs of learners, states that "a rich vocabulary, *complex syntax*, and the ability to link ideas logically" (my italics) are prerequisites for effective explanation of concepts of content subjects. It is possible that a non-standard dialect may also exhibit these qualities, but the lack of wide access that a localised dialect would have militates against the promotion of such a form as a widely used medium of instruction. Furthermore, Strevens (1978:188) lists among the minimum requirements of an ESL teacher "adequate classroom command of the language being taught."

Prabhu (1987), although also concerned about the issue of inadequate standards of teachers of English, takes a different position in respect of standards of adequacy. According to Prabhu (1987:98), English in India is taught by non-native speakers of English whose language proficiency is limited or deficient in relation to a native speaker's competence. Prabhu (1987:99) contends that teachers' deficient language proficiency in

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interaction and negotiation involving the spontaneous use of language would be a "hazard rather than a help" to learning. If learners were to be protected from being influenced by this hazard they would have to be presented with predetermined samples of language - preventative pedagogy which Prabhu believes only contributes to a sense of teacher inadequacy in the classroom. Prabhu (1987:99) nonetheless regards the learning benefit derived from the teacher's spontaneous use of language as greater than the loss resulting from lower quality samples. This position seems to be a poor second best. As has been pointed out before, early exposure to fossilised samples precipitates early fossilisation leading to inadequate linguistic standards - a position supported by Higgs and Clifford (1982:68) and Valette (1991:327). According to Larsen-Freeman and Long (1991:129) it seems reasonable to expect that second language learners exposed to deviant, ungrammatical and/or insufficient input would acquire a substandard variety of the language, or, in terms of Schumann (1978a), a pidginised form of language. Prabhu (1987:100), however, argues that

standards of adequacy for a world language are those which arise from its operation as such, not those which arise from its operation in exclusively native-speaking contexts.

It is unlikely that people's attitudes about language are determined by the well-intentioned academic opinions of some politicised sociolinguists. "Bad grammar", in Bloomfield's (1964:396) sense, has always been a marker of low socio-economic status and education level (cf. NEPI 1992:19; Reagan 1984:10). This position is not likely to change at the stroke of a pen; parents in South Africa do not want what they perceive as second-rate education for their children. The resistance of parents, pupils and students in African education in particular to the concept of English *Second Language* is well-known; as a subject,

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ESL is perceived as less prestigious than English First Language with its more demanding syllabus.

Furthermore, inadequate grammatical proficiency has already been shown to limit learners academically (cf. 2.2.2, p.49). Text books are written in Standard English, not in a vernacular form of English. In the RSA, as in America, it is the standard linguistic norm which remains the "sine qua non for success (indeed, increasingly for economic survival) in our society" (Reagan 1984:10). Any acceptance of inadequate linguistic standards in education would only serve to aggravate an already untenable situation. All children must be given the language proficiency in the variety of English that is to be the dominant variety of society and its institutions to ensure access to social, political and economic life (Reagan 1984:10).

In order to justify the need for grammatical accuracy, thereby providing support for the experiment described in this thesis, the requirements for teachers in the classroom need to be examined. What does a teacher, and especially a primary school teacher, have to be able to do? Is the ability to use the verb correctly and an understanding of the factors that lead to incorrect language usage a necessary precondition for effective teaching in the classroom? Let us consider the first question: what do primary school teachers have to be able to do?

What primary school teachers have to be able to do

As stated earlier, teachers in the primary school generally are responsible for the teaching of all content subjects as well as first and second language. The majority of teachers (primary and secondary school) in the RSA have to teach through the medium of their second language. Of the 347 112 teachers in schools in the RSA (Department of National Education, 1990:27), more than 45% are teaching in African schools. The detrimental effects of such a position where the ESL proficiency of teachers is often limited

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and there is no reinforcement of skills in English outside the school environment (NEPI 1992:89) cannot be disputed.

The ESL situation in education of other language groups is somewhat different. Only about 20% of the total number of teachers indicated in the 1990 document are teaching in White schools, where the medium of instruction is Afrikaans or English. Subjects other than English are taught through the medium of many teachers' first language, but many Afrikaans-speaking teachers teach content subjects through the medium of their second language. In Afrikaans medium schools where English is taught as a second language, however, the teachers responsible for this task are mostly ESL speakers themselves, especially in primary schools.

The untenable position that almost 70% of all pupils and students in education are in pre-primary and primary schools where they are taught by teachers whose ESL proficiency is less than adequate (cf. 2.2.1 & 2.2.4, pp.40, 59) holds serious implications, not only for future standards of English in the RSA, but poses a threat to overall academic success in education.

Primary school teachers have the responsibility of developing learners' basic interpersonal communicative skills as well as their cognitive academic language proficiency. Cognitive academic language proficiency is required for study in context-reduced cognitively-demanding (in terms of information processing as well as language manipulation) language situations. This position would likewise apply in a future educational dispensation which has as its basis of learner group differentiation, not first and second language, but rather the linguistic level of English required for use in a real world (cf. CUMSA 1991:19). Language constitutes one of the seven fields of experience envisaged to prepare learners for life (CUMSA 1991:19). Is the ability to use the verb correctly and an understanding of the factors that lead

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to incorrect language usage then a necessary precondition for teaching success?

Hinkel (1992:557) points out that the meanings and forms of English tenses are complex and often difficult for non-native speakers to acquire. Omissions of tense markers constitute a damaging and confusing type of error (Richards 1973:103-106). Teachers' attempts to explain concepts in language impaired in this respect may fail as a result of obscured meaning. This position is supported by Chappel and Rodby (1983, in Hinkel 1992:559) who note that text containing verb-related errors has limited comprehensibility. Not only do teachers require control of the verb for the sake of exactness and intelligibility when dealing with content subjects, but they also need to be good role models as ESL teachers.

How might the vicious circle of declining standards of English in the RSA be addressed?

The kind of preventative pedagogy involving programmes designed to sideline the teacher (cf. Prabhu 1987:100), thereby excluding natural spontaneous language production, is unacceptable as it affects teachers' professional responsibility and deprives learners of the benefits of natural communication. The only alternative is an intervention programme providing the possibility of change in the proficiency levels of either pupils, teacher trainees, or teachers already in service.

The most feasible point of intervention is teacher training, provided that trainees' fossilised structures can be defossilised during their training course.

To establish how the phenomenon of fossilisation of interlanguage structures fits into a theory of second language acquisition, and to find support for the issues raised in this section, current perspectives relating to SLA theories, and interlanguage in

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particular, need to be examined. How feasible is the concept of an interlanguage? Is the purported phenomenon of fossilisation rooted in sound SLA theory? Does SLA theory explain why most second language learners fossilise (Selinker 1992:33)? Indeed, what is the current state of the art in respect of fossilisation?

2.3 HISTORICAL PERSPECTIVES ON SLA THEORY

Current views relating to interlanguage and fossilisation processes are best understood in the context of the developments in SLA theory of the past two decades. Several strands of development contributed to our present understanding of interlanguage and fossilisation. However, in order to lead up to current views on Cognitive Theory and Universal Grammar in the context of SLA, a brief digression into the development of theories of first language acquisition is justified. The first strand begins with Chomsky's seminal *Syntactic Structures*.

2.3.1 New directions

Chomsky (1957) signalled the beginning of the post-structuralist linguistic revolution. For the first time, contrary to behaviourist psychology, arguments about the form of language were used to justify psychological perspectives (Smith and Wilson 1979:9).

Not only did a new understanding of grammar evolve (Chomsky, 1977a:207 in Chomsky 1981:2) but perspectives relating to language acquisition changed. Divergent directions in language acquisition research have been discernable since the Chomskian revolution. One school of researchers proposes a set of innate internal constant factors to explain language acquisition, and the other school invokes a set of external learned variable factors to explain the acquisition process. Proponents of nativist perspectives concentrate on constant internal factors

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such as a Language Acquisition Device and an innate knowledge of principles of Universal Grammar held to be related to language acquisition. Contemporary research in applied linguistics, in contrast, is concerned with research questions as formulated by Spolsky (1985:269) incorporating variable external perspectives related to setting (learning environment, psychological states, input) and motivation deriving from need. It would seem that any theory of SLA, to be an insightful theory, would have to integrate these two directions in a meaningful manner.

It is not unreasonable to assume that every one of the numerous theoretical perspectives relating to SLA must contribute to an understanding of second language acquisition in one way or another. However, to elegantly combine these sometimes contradictory components, views, models and theories into one parsimonious explanatory theory of SLA is quite another matter. The hypotheses of this study relate to fossilisation, the phenomenon argued by some to be precipitated by external factors, as well as to consciousness raising which uses nativist perspectives as a springboard.

Researchers' focus shifted from teaching methodology to language learning. Concerns about bilingualism led to a focus on the differences between the native language and the target language which soon produced a new emphasis and a new field of investigation: second language acquisition. Since the sixties, then, the fabric of SLA theory has become intricately interwoven with the views, perspectives and models of researchers and linguists, thus contributing to the complex tapestry that may yet become a complete theory of SLA that is a "comprehensive, explicit, empirically verifiable account of what is known about a phenomenon" (Larsen-Freeman 1985a:11). According to Larsen-Freeman (1983:4), what is ultimately entailed in a theory of language acquisition is an understanding of how the mind processes input and creates a grammar, and how this in turn

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enables the learner to comprehend and produce the target language. According to Rutherford (1987:2) the cognitive change that language teaching is intended to bring about

is one that is ultimately explainable only by recourse to the kinds of theoretical abstraction that are needed for research in general into how the mind actually works.

Rutherford (1987:13) assumes the learner's innate knowledge of language-universal principles and only questions the extent to which

the biological endowment for language acquisition that shaped the development of our languages in childhood also plays a role in language acquisition during adulthood (Rutherford 1987:3).

A somewhat different position on innateness is taken in this study. I argue in favour of the view that second language learning is made possible by general cognitive abilities and not by any innate language specific cognitive device. I shall digress briefly into nativist theories in order to make my argument clear.

2.3.2 From habit formation to nativist theories

The shift from structural-behaviourist views on language teaching methodology to a focus on SLA in the seventies precipitated the nativist theories of SLA (Larsen-Freeman and Long 1991:227). Innate linguistic notions were invoked to explain first language acquisition.

Chomsky (1980:59), contending that human beings were genetically-endowed with a language acquisition device (LAD), posited the Innateness Hypothesis to explain how learners could acquire first language from insufficiently rich input data (Chomsky 1965:54). Bley-Vroman (1988:41) referred to this phenomenon as the "logical

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problem" of language acquisition. Chomsky (1980:69) thus assumed an innate, specifically linguistic knowledge, or Universal Grammar, which was taken

to be the set of properties, conditions ... that constitute the 'initial' state of the language learner, hence the basis on which knowledge of language develops.

Whether these purported Universal Grammar principles are also operative in SLA is still a much debated issue amongst some researchers (Bley-Vroman 1989; White 1984; White 1989; White 1992).

The innateness strand soon divided. Whereas some researchers, when nativist theories came into vogue, believed innate ability to be related to language specifically, others maintained that cognitive mechanisms responsible for all learning also accounted for language learning. Cluver (1976:377,378) rejected the Innateness Hypothesis almost twenty years ago and argued that if incoming data were structured according to a particular underlying system, and that system corresponded to the way in which other information was processed cognitively, then the learner would be able to recognise and acquire the system subjacent to the data. More recently, researchers such as Jacobs and Schumann (1992:286) stated that "there is no *neurobiological* evidence to support the existence of a distinct LAD [Language Acquisition Device] or UG [Universal Grammar]" and that the "issue of innateness must, for the present, remain unresolved" (Jacobs & Schumann 1992:288). They regard the innate abilities to be general cognitive notions. Temporal sequences, spatial constructions and hierarchical relationships were suggested by Cluver (1976:379) as general cognitive categories underlying human behaviour. Similar categories, such as dependency, adjacency, precedence and continuity, were indicated by Larsen-Freeman and Long (1991:227). These general cognitive categories

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could underlie amongst other things grammatical principles and mechanisms used for all learning. This is also the view taken in this thesis.

Others such as Dulay, Burt and Krashen (1982:45) invoke internal linguistic, psychological and cognitive notions to account for second language acquisition. Two of these internal factors are

subconscious processors ... the 'filter' and the 'organizer', and one is a conscious processor called the 'monitor' (Dulay et al.1982:45)

The filter relates to psychological states and attitudes, the monitor with its "editing function" (Dulay et al.1982:59) to linguistic notions and the organizer to "some mental processor" (Dulay et al.1982:56) responsible for language acquisition but whose operational principles cannot be specified.

The positing of an undefined innate language-specific mechanism in an attempt to account for language acquisition does not explain how language acquisition takes place. It would therefore be prudent to heed Jacobs and Schumann's (1992:286) warning about assumptions of innateness. Relating language learning to general cognitive notions that account for all learning seems to be a more profitable route to follow, which is indeed the direction taken by many researchers in the late eighties and early nineties. It is also the route taken in this study. Klein (1990:219,220) maintains that it is arguable whether an "innate language capacity" is a

language-specific or even a grammar-specific component of our cognitive system or whether it is simply the application of general cognitive capacities to the particular field of language.

According to Klein (1986:39), it is important to recognise language learning first and foremost as

an inherent ability of the human language processor, rather than as a separate ability of the human mind.

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In Klein's opinion, any serious theory of language acquisition, be it first language or second language, must regard the "language learning capacity" as a dynamic system which is constantly changing under the influence of what it is doing (Klein 1990:221,222).

According to Klein (1990:222), a theory of the human mind which does without an extra innate language module but accounts for language acquisition by means of general cognitive capacities, "would be more general and more parsimonious." The view that language is processed by the human mind in the same way as other information is only partly supported by Bialystok (1988:32). It is to the discussion of Cognitive Theory - another strand unravelling from the innateness strand - that I now turn.

2.3.3 Cognitive Theory

Like the nativist theories, Cognitive Theory also focuses on system-internal factors which contribute to an idealised theory of acquisition. Cognisance of what the learner actually does with language is yet to come. The findings of contemporary cognitive psychology are applied to the domain of second language learning which, in this approach, is viewed as the acquisition of a complex cognitive skill (McLaughlin 1987:133). The view of cognitive theorists on how a skill is acquired echoes earlier behaviouristic views of this process as it implies practising of a linguistic feature, a sub-skill, until it is integrated into fluent performance, that is automatised. As the learner progressively gains control over the second language, interlanguage structures are constantly destabilised and restructured until subskills become completely automatised. According to McLaughlin (1987:134) "[t]hese two notions - automatization and restructuring - are central to Cognitive Theory." It is in the internal cognitive strand of development that factors that may be related to fossilisation processes begin to show. If this perception has particular implications for the

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explanation of the phenomenon of fossilisation, it must also inform the understanding of defossilisation (see p.97 of this study). To explain the concept of automatisisation, and how this might relate to the present study, an understanding of aspects of information processing is necessary.

2.3.3.1 Automatic and controlled processing

Mental operations may be viewed in a dichotomous way: tasks that require a large amount of processing capacity and a lot of energy, that is controlled processing, and tasks that require a small amount of processing capacity and little processing energy, i.e automatic processing (see Cummins' views on p.53 of this thesis for related perspectives).

Automatic processing involves the

activation of certain nodes in memory every time the appropriate inputs are present. This activation is a learned response that has been built up through the consistent mapping of the same input to the same pattern of activation over many trials (McLaughlin 1987:134).

According to Schneider and Schiffrin (1977:1) the learned sequence of elements in long-term memory proceeds automatically, "without subject control, without stressing the capacity limitations of the system, and without necessarily demanding attention." A fairly permanent set of associative connections in long-term storage are required for automatic processing. "Once learned, an automatic process occurs rapidly and is difficult to suppress or alter" (McLaughlin 1987:134). It occurs rapidly because conscious or attentional control is not required.

In terms of this view, fossilised structures are incorrect structures that have become automatised, do not require attention and are no longer under conscious control. To be able to consider defossilisation strategies, it seems necessary to understand what controlled processing is.

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Controlled processing

is a temporary activation of [memory] nodes in a sequence. This activation is under attentional control of the subject and, since attention is required, only one such sequence can normally be controlled without interference. [Controlled processes are] relatively easy to set up, alter, and apply to novel situations (McLaughlin 1987:135; Schneider & Schiffrin 1977:1).

In terms of the above definitions, language learning may be seen as the transfer of information to long-term memory, regulated by controlled processes that precede automatisisation. According to Cognitive Theory, second language learning involves gradual integration of subskills as controlled processes initially predominate and then become automatic (McLaughlin 1987:139).

2.3.3.2 Automaticity and restructuring

Karmiloff-Smith (1986:174) sees **automaticity** and **restructuring** as different phases of the same process rather than as different processes. According to Karmiloff-Smith (1986:174) learning continues beyond automaticity; there is more to learning a complex cognitive skill - and second language learning is such a skill - as it involves a constant modification of organisational structures after information has been acquired and "procedural success" has been achieved (Karmiloff-Smith 1986:173).

In terms of Karmiloff-Smith's analysis, defossilisation is possible, as restructuring continues beyond the point of automatisisation. The restructuring process in its initial procedural phase (phase one) is data-driven when components of a task are mastered but there is no overall organisation. Phase two is dominated by internally-generated top-down organisation-oriented procedures which attempt to simplify, unify and gain control over the internal representation (Karmiloff-Smith 1986:174). Phase three - the conceptual phase - involves the integration of the first two phases - the result of restructuring

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processes in phase two. When restructuring has become consolidated, environmental feedback can be taken into account without jeopardising the overall organisation (Karmiloff-Smith 1986:175). According to Karmiloff-Smith (1986:175), however, it is positive feedback and procedural success rather than negative feedback in phase two that result in true representational changes in phase three. In terms of Cognitive Theory, the initial stages of second language learning involve

the slow development of skills and the gradual elimination of errors as the learner attempts to automatize aspects of performance. In later phases, there is continual restructuring as learners shift their internal representations (McLaughlin 1987:139).

These perceptions, idealised as they may be, contribute to an understanding of fossilisation. However, in terms of Karmiloff-Smith's model it is not clear whether learners remain conscious of their internal representations that have become automatised. Karmiloff-Smith also seems to focus only on the procedures that second language learners acquire. The distinction between procedural and declarative knowledge made by Faerch and Kasper (1983) adds the perspective that learners acquire two kinds of language knowledge.

2.3.3.3 Procedural and declarative knowledge

Faerch and Kasper (1983, in McLaughlin 1987:145) differentiate between **procedural knowledge**, which is **knowing how** to use strategies to process second language data for acquisition, and **declarative knowledge**, which consists of internalised rules and memorised chunks of language, the **what** of the learner's system (see 2.5.2.5, p.107 for discussion of the relevance of these concepts for consciousness raising). According to McLaughlin (1987:145), procedural knowledge accounts for learners' accumulation and automatization of rules and restructuring of internal representations to match the target language.

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Consideration of cognitive perspectives alone focuses researchers on learner-internal issues to the exclusion of equally relevant questions affecting second language acquisition, such as language input, learner environment, affective factors and motivation. These were the considerations addressed by researchers who concentrated on the role of socio-psychological factors in second language acquisition - the next important strand in SLA theory. To date, Krashen's Monitor Theory of adult second language acquisition (Krashen 1981) represents the most comprehensive attempt to tie together several different strands in the development of SLA theory.

2.3.4 From teacher focus to learner focus

Informed by behaviouristic perspectives, researchers initially believed that an appropriate teaching method would produce successful language learners. The outcome of the behaviourist-cognitive debate and the Chomskian revolution in linguistics turned this perspective around and researchers then believed that the learner contributed something to the learning situation. This perspective directed their research at the learner and relevant internal as well as external concerns. The only way in which some insights could be gained about what happened inside a learner's head, was to examine not only what the learner produced, but also the sociolinguistic and psychological factors that might affect the outcome of the learning process. The composite central research question became: "...who learns how much of what language under what conditions?" (Spolsky 1985:269). From this point the composite strand frayed out into several directions.

As the scope became too large for multidimensional research including all possible learners in all possible circumstances, researchers tended to diversify by doing SLA research from monodimensional perspectives, henceforth focusing only on selected aspects of SLA.

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Analysis of language produced by second language learners gave rise to the morpheme studies (Burt and Dulay 1975), an attempt to indicate learning order, contrastive analysis (CA) studies which were purported to explain and predict learning difficulty and learner errors, error analysis (EA) studies which searched for patterns and causes of errors in an attempt to explain how a second language was acquired. In addition to the studies that only focused on language produced by learners, several multidimensional views on SLA incorporating two or more dimensions were put forward. I shall briefly review one of these models, Krashen's (1982) Monitor Theory, by way of illustration of researchers' attempts to integrate different dimensions of SLA. Krashen's views on conscious knowledge of rules and on fossilisation have some relevance for this study.

2.3.4.1 The Tridimensional Monitor Theory

Krashen's Monitor Theory addresses SLA from linguistic, socio-psychological and cognitive perspectives (Krashen 1982). The Monitor Theory is comprised of five central hypotheses.

Like Bruner (1975), Bialystok (1988) and Cummins (1983) (see pp.50 to 56 of this study) Krashen also posits a dichotomous language learning structure of which the one component is analytical and conscious and the other is subconscious and unanalysed. The **Acquisition/Learning Hypothesis** posits two distinct processes to account for development of language proficiency: acquisition, a subconscious process akin to first language acquisition (Krashen 1985:1) and learning, which constitutes conscious knowledge of language rules (Krashen 1985:1). According to Krashen (1985:83) learning cannot " 'turn into' acquisition." Krashen seems to suggest that what is conscious knowledge cannot become automatised - a claim that is disputable. If conscious knowledge (Krashen's "learning") cannot turn into automatised knowledge (Krashen's "acquisition"), then the opposite process would also not be possible, that is, it

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would not be possible to raise automatised subconscious structures to consciousness. This aspect of the Acquisition/Learning Hypothesis conflicts with the view on consciousness raising taken in this study.

The **Natural Order Hypothesis** deriving, amongst other things, from the morpheme studies of the early seventies purports a predictable order of emergence of rules (Krashen 1985:1). The natural order is assumed to be the result of the acquired system only, operating free of conscious grammar, the Monitor (Krashen 1980:169). Krashen, recognising the rigidity of such a linear view of language development, postulates "several streams of development ... taking place at the same time" (Krashen 1982:53,54), thereby effectively vitiating the Natural Order Hypothesis (Gregg 1984:85).

The **Monitor Hypothesis**, constituting the fundamental claim of the Monitor Theory, states that learning is available to the learner only as a monitor or editor (Krashen 1981:2; 1982:15). The Monitor, according to Krashen (1982:15) is available only in language production, not in receptive language, as pointed out by McLaughlin (1987:24) as well as Gregg (1984:82), for whom Krashen's claim is "extraordinary". Krashen does not provide any explanation as to why knowledge of rules would not be available to the learner in the comprehension process (McLaughlin 1987:24). According to Gregg (1984:84), the Acquisition/Learning Hypothesis and the Monitor Hypothesis taken together are self-contradictory. If the Monitor is the only way in which conscious rules can be used, and conscious knowledge does not lead to acquisition, then an acquisition/learning distinction is superfluous. However, it cannot be disputed that learners do monitor production and, informed by conscious knowledge, make adjustments to their production, regardless of any other claim that Krashen makes. In terms of the claims of the Monitor Theory, these adjustments cannot become acquired structures. According to Krashen, no

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amount of conscious focus on correction of incorrect structures will lead to acquisition of correct structures. If corrected structures cannot become "acquired" and automatic, then this position implies that defossilisation is not possible.

The **Input Hypothesis** aims at providing a mechanism that will explain the learner's progress from one stage of development to the next. The Input Hypothesis, which relates to acquisition, not learning, pivots on the central concept of a comprehensible input i . Learners use extra-linguistic information to understand language structures beyond their current level of proficiency, $i + 1$. Upon successful communication, the learner progresses to the next level. In this way acquisition is caused by understanding the input and "...speaking ability emerges on its own after enough competence has been developed by listening and understanding" Krashen (1982:27).

The Input Hypothesis has particular remedial pedagogical implications. In terms of its claims, incorrectly acquired interlanguage forms are not affected by negative evidence or explicit teaching of structures; forms can only be changed by more comprehensible input.

[E]radication of fossilized forms that result from the acquisition of intermediate forms will be difficult [and] drill and conscious attention to form will not be a permanent cure - using the conscious Monitor will only cover up the error temporarily, learning does not become acquisition (Krashen 1985:48).

This view suggests that consciousness raising procedures will have no effect on errors and fossilised structures.

According to Krashen (1985:49), fossilised structures can only be eradicated by exposing learners to "large fresh doses of

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comprehensible input, and low affective (input) and output filters", which may be "a way around rather than a way out."

While the acquirer may not be able to forget, or 'un-acquire' the acquired forms, he may be able to acquire a new language, a new version, a new 'dialect' [sic] of the target language (Krashen 1985:49).

Krashen's (1985:48) prediction that fossilisation is caused by the acquisition of interlanguage forms (Krashen's intermediate forms) is a circular argument: fossilisation is the acquisition of interlanguage forms. That the way "around" fossilised (acquired) deviant forms should be the acquisition of a new "dialect" of the target language (Krashen 1985:48) which is acquired in addition to the fossilised structures but does not replace them, seems to be an amazing cure indeed.

The **Affective Filter**, which is the initial component of three internal language processors (Dulay, Burt and Krashen 1982:46) "effectively screens incoming language based on ... the learner's motives, needs, attitudes and emotional states" (Dulay et al. 1982:46). According to Krashen (Dulay et al. 1982:31) fossilisation is caused by a high affective filter that stops input from reaching "that part of the brain responsible for language acquisition, or the language acquisition device." The Affective Filter, however, can only explain learner variability in a very general way.

It is not disputed that SLA may be affected by learners' psychological states and social attitudes. The Affective Filter Hypothesis, however, cannot explain why English "is" should so often be regarded as the default form by Afrikaans mother tongue speakers, nor why the English article system should be incorrectly acquired by Zulu mother tongue speakers. The Affective Filter Hypothesis cannot explain why emotional factors

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should favour any particular aspect of the grammatical system to be filtered out. Krashen's (1985:44) position that the Affective Filter Hypothesis explains fossilisation is therefore not tenable.

Krashen's Monitor Theory is extensive and detailed, attempting to provide all the answers. In the view of Mclaughlin (1987:58), however, such a general, all-inclusive theory is "counterproductive", and what are needed are "more limited and specific theories", quite the opposite of Larsen-Freeman's (1985:11) position that a theory should be a "comprehensive, explicit" account of what is known about a phenomenon.

In order to arrive at a closer understanding of the phenomenon of fossilisation, two aspects of second language acquisition have to be examined in the context of the literature: the notion of transfer and the concept of interlanguage. Is transfer a major learner strategy that impacts on the learning result, and is interlanguage a systematic learner code that allows predictions of learning outcome? As these questions have bearing on fossilisation and the hypotheses of this study, I now turn to an examination of the notions of transfer and interlanguage.

2.4 Transfer, interlanguage and fossilisation

In this section current views on transfer are considered: when and how transfer happens, what is transferred and how the notion of transfer may be related to the fossilisation phenomenon. Key perspectives on interlanguage theory are reviewed with particular reference to fossilisation.

2.4.1 Transfer

According to Selinker (1992:18), language transfer as cross-linguistic influence (CLI) is "central to SLA and IL learning."

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Initially it was claimed that the native language (NL, L1) served primarily a facilitative role in shaping interlanguage where interlingual identifications between native and target language were perceived. According to Gass (1984:115) an explanatory account of second language acquisition cannot be given on the basis of the target language alone. Second language development is influenced by additional factors such as language universals and language transfer, which shape acquisition in a major way: some principles make transfer of some first language structures more likely than others.

In the strong view of the Contrastive Analysis Hypothesis (CAH) it was claimed that predictions of negative transfer (first language interference) and consequent learning difficulty, that is errors, could be based on a comparison of the first language and second language. In terms of this hypothesis there will be interference, that is reliance on prior first language knowledge (Wode 1984:175), only if first language and second language have structures meeting a crucial similarity measure.

According to Schachter (1983:98) language transfer is more appropriately viewed as a constraint on the hypotheses of learners, rather than a process. Transfer would be the outcome of the learner's hypotheses when the learner

- chooses the wrong domain and assumes this preestablished domain to be relevant for second language (negative transfer);
- chooses the correct domain and the correct hypothesis and recognises that the first language and second language structures are identical (positive transfer);
- chooses the correct domain but incorrectly assumes that a hypothesis that is appropriate for first language is appropriate for second language (negative transfer) (Schachter 1983:104).

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Schachter's model of transfer constraints suggests in a principled way how learners produce transfer errors, but does not explain when learners would tend to make the wrong choices or why some errors fossilise and others do not.

Wode's "crucial similarity measure" (Wode 1984:175) and Zobl's identification of first language influences that determine SLA (Zobl 1982:169), however, do indicate when negative transfer and fossilisation may occur. In terms of Zobl's "developmental complexity constraint" (Zobl 1982:180) to which transfer is subject, the pace at which a learner traverses the development of an interlanguage sequence and the number of developmental structures in such a sequence are pertinent to ultimate fossilisation. When a first language form is similar to a developmental one learners may persist longer with the interlanguage form, thus creating a potential condition for fossilisation. They can then also extend the domain of the interlanguage form (Zobl 1984:83). When learners seek development with the smallest possible rule change, the "internal consistency constraint" holds (Zobl 1982:180). Andersen's "Transfer to Somewhere Principle" (Andersen 1983:123) captures the same generalisation which holds that transfer operates in tandem with natural developmental principles and that structural congruence inhibits learning. "In tandem" here does not imply that language learning is a linear process, but rather that transfer processes are reinforced by natural developmental principles (cf. Selinker and Lakshmanan's [1992:198] position on the Multiple Effects Principle, p.91 of this study). In this respect Larsen-Freeman and Long (1991:99) hold that target-like control is achieved more quickly in cases of zero-contrast, that is where the second language possesses a category that is absent in the learner's L1. In terms of this view defossilisation of zero-contrast structures in a consciousness raising programme may be more likely than defossilisation of structures that are similar.

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Similarity constraints do not hold for all structures transferred, however. In some cases less marked first language structures may be transferred to the second language if the second language structures are more marked than the corresponding first language structures (Wode 1984:176), that is core unmarked structures will be transferred before others. According to Eckman's Markedness Differential Hypothesis (1985:3) the degree of difficulty in SLA corresponds to the notion of typological markedness. The areas of difficulty that a second language learner will have can therefore be predicted on the basis of a comparison between first language and second language. In this way transfer in conjunction with markedness may partially explain why some structures are more resistant to further development (and more prone to fossilisation) than others (Wode 1984:176). By implication, these constraints might also indicate what needs to be taken into account in a consciousness raising procedure that attempts to precipitate defossilisation. In terms of the above constraints

- consciousness raising procedures may speed up the learner's passage through a sequence of interlanguage structures, thus avoiding fossilisation at less-than-mastery levels;
- learners' attention may be directed to structures that are similar and prone to negative transfer and fossilisation, such as:

AFRIKAANS

het gestop incorrectly transferred as
[PAST SIMPLE]

ENGLISH

had stopped
[PAST PERFECT];

- marked structures such as subject-verb agreement requiring longer exposure to consciousness raising procedures may be identified;
- strategies of an intervention programme designed to address fossilised structures may be informed by the constraints identified above.

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Larsen-Freeman and Long (1991:106,107) claim that when transfer occurs, learners' encounters with interlanguage sequences are modified by the first language in several ways:

- passage through a sequence may be delayed;
- sub-stages may be added to a sequence to facilitate transition to the second language;
- passage through a sequence may be accelerated;
- period of producing errors in an area which is more grammaticised in the second language (e.g. inflected English verbs) than in the first language (e.g. uninflected Afrikaans verbs) may be prolonged, potentially resulting in fossilisation;
- use of a developmental form (interlanguage structure) similar to a first language structure may occur for an extended time, potentially resulting in fossilisation;
- the scope of the interlanguage structure may be extended.

In addition to accommodation to universal developmental processes, transfer seems to be constrained by linguistic markedness (Eckman 1985:3; Wode 1984:176):

- unmarked forms are more likely to be transferred than marked ones;
- marked forms may be transferred if the second language form is also marked;
- degree of learning difficulty is reflected by degree of markedness;
- transfer is affected by learners' perceptions of L1-L2 distance (cf. Kellerman), and by the perceived transferability of an item, depending on its degree of markedness;
- second language limitations make learners especially dependant on first language so learners are obliged to transfer marked as well as unmarked items.

Selinker (1992:171) refers to language transfer as the "quintessential CA/IL notion." Having considered different

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perspectives relating to the transfer notion and having shown how transfer might impact on fossilisation, I shall now examine the concept of interlanguage. What is an interlanguage? Are interlanguages systematic? Are interlanguages stable or variable? How does fossilisation fit into interlanguage development?

2.4.2 Key perspectives on interlanguage

The deviant linguistic system produced by second language learners has been variously referred to as "transitional competence" (Corder 1967:167), an "idiosyncratic dialect" (Corder 1971:147), an "approximative system" (Nemser 1971:115) and an "interlanguage" (Selinker 1969, 1972).

Corder's (1967:167) term, "transitional competence" refers to the learner's knowledge of the learned system to date. He differentiates between unsystematic errors of performance (called **mistakes**) and systematic errors of competence (called **errors**) which provide evidence of the learner's cognitive strategies at a given time (Corder 1967:167).

Nemser (1971:115) refers to the learner's interim language as an "approximative system" which is the

deviant linguistic system actually employed by the learner attempting to utilize the target language.

For Nemser the learner language is the patterned product of an internally structured linguistic system, distinct from the source language and the target language, representing successive stages of learning that approximate the target language more and more.

Nemser's view of interlanguage is somewhat simplistic in that it does not account for non-systematic synchronic variability, nor does it explain differential learner success and fossilisation.

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When Selinker (1969:n4 in Selinker 1992:18) coined the term **interlanguage**, he defined it as a separate linguistic system which

may be linguistically described using as data the observable output resulting from a speaker's attempt to produce a foreign norm, i.e. both his errors and his nonerrors.

In terms of this definition Selinker saw the interlanguage continuum as a restructuring of the learner's system from native language to the target language at the same level of complexity. The notion of complexification or elaboration of the interlanguage continuum was not entertained at this stage (Corder 1981:88).

Corder's (1981:90) revised version of the interlanguage continuum states that it is a "dynamic, goal-orientated language system of increasing complexity... a developmental continuum." The concept of increasing complexity seems to foreshadow the later notion of grammaticisation of structures (cf. 2.5.2.1, p.101 of this study). According to Corder (1983:91) the starting point of the developmental continuum is a "basic, simple, possibly universal grammar" which the learner then begins to "elaborate" in the direction of the target language (Corder 1981:110), a process which is not one of restructuring but rather of elaboration (Corder 1981:111). Corder also acknowledges the phenomenon of fossilisation in SLA.

These perspectives on interlanguage all contain similar notions: interlanguage is a system that is neither like the first language nor the second language; it is the internalised result of a learner's creative attempts to produce second language (Corder 1983:87), that is evidence of the learner's cognitive strategies and hypotheses, and it is variable.

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At any point along the continuum, the learner's language is systematic, i.e. rule-governed, and common to all learners, any difference being explicable by differences in their learning experience (Larsen-Freeman & Long 1991:60).

It seems plausible that any description of interlanguage must also account for the phenomenon of fossilisation (Selinker 1992; Gass & Selinker 1992).

2.4.3 Fossilisation

This section considers the following aspects of fossilisation and reviews the position of fossilisation in current SLA theory:

- key perspectives
- the psychodynamics of fossilisation
- the Multiple Effects Principle
- cognitive issues and fossilisation.

2.4.3.1 Key perspectives on fossilisation

Various perspectives found in the literature on possible causes, the nature and the purported permanence of fossilisation are considered in this section.

Fossilisation has been variously described in the literature as the "partial outcome" of second or foreign language learning (Davies 1984:ix-xv), "failure of ultimate attainment [of target criteria]" (Rutherford 1988:405, 413), "near-universal failure to attain full target-language competence" (Rutherford 1989:442), "incompleteness" (Schachter 1990 *passim*), "pidginisation" (Schumann 1978b:256), "non-learning" (Shapira 1978:246), "stabilisation" (Selinker & Lamendella 1979:374), "jellification" (Tollefson & Firn 1983:31) and "incomplete end state" (Gergen 1990:3). These characterisations of fossilised language range from linguistic descriptions of form, to psycholinguistic descriptions of process, to sociolinguistic explanations of learner failure. The following definitions illustrate the diverse views on fossilisation in the literature.

Key perspectives

Selinker (1972:215) introduces the notion of fossilisation in his seminal paper on interlanguage, stating that

[f]ossilizable linguistic phenomena are linguistic items, rules and subsystems which speakers of a particular NL will tend to keep in their IL ... no matter what the age of the learner or amount of explanation and instruction he receives in the target language.

Presenting a sociolinguistic perspective, Vigil and Oller (1976:282) argue in their interactional model that the process of fossilisation is "primarily pragmatically rather than syntactically determined" and is furthermore the internalisation of rules regardless of the fact whether these rules agree with the norms of the language being learnt. In their model, external variables are invoked to explain fossilisation. These variables, positive or negative cognitive and affective feedback, operating in conversational interactions between first language and second language speakers, determine whether the interlanguage rule system of the learner is reinforced (leading to fossilisation) or destabilised (leading to interlanguage progress).

In Schumann's (1978a) acculturation model fossilisation is viewed as the cessation of the learner's acculturation to the target society. In this model in which external factors are seen as the central determiner of the acquisition process, social and psychological distance from the target culture predicts a persistence of pidginised interlanguage forms.

Selinker and Lamendella (1987:152) present two biological models to explain fossilisation. The first hypothesises a genetic predisposition toward language acquisition, which purports that it is likely that some learners are genetically predisposed to fossilise further from target language norms than other learners.

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Tollefson and Finn (1983:32) propose two definitions that distinguish between the permanence and non-permanence of fossilisation.

Fossilization... a permanent phenomenon determined by biological factors... must be viewed as being best explained through factors internal to the learner.

Jellification ... has social, psychological, affective, and cognitive factors as [internal and external] primary causal variables and is not necessarily permanent.

Gergen (1990:3), approaching fossilisation from a sociolinguistic perspective, takes account of the learner's learning opportunities, his/her learning ability as well as his/her permeability for cultural factors. Gergen (1990:3) defines fossilisation as

the incomplete end state of second language knowledge and/or performance that is inferred from the data of a second language speaker who has had sufficient opportunity and ability to learn the second language and attendant culture.

This seems to imply that interlanguage structures, used by learners who have been exposed to inadequate teaching and deficient target language models, and who ultimately exhibit an "incomplete end state" of second language knowledge, have not fossilised. Furthermore, given the worldwide spread of English and the millions of English first language speakers who have never had any ties with Britain, absorption of the "attendant culture" as a prerequisite for attainment of full target language proficiency is a somewhat shaky assumption.

The above definitions concur on the point of failure of attainment of target language criteria but they differ in their hypothesised causes of fossilisation. For some, fossilisation

Key perspectives

relates to the product - the linguistic item (Selinker 1972:215; Selinker & Lamendella 1987) - rather than the process (Vigil & Oller 1976; Schumann 1978a), and for others both perspectives are relevant (Tollefson & Firn 1983; Gergen 1990).

The list of definitions represents different views on fossilisation. At this point I turn to the dynamics of the fossilisation process.

2.4.3.2 The psychodynamics of fossilisation

The fossilisation debate revolves around the immutability of fossilised structures. In this section the purported finality of fossilisation is considered and the literature is examined for indications to the contrary.

Several issues are raised in Selinker's definition of fossilisation (Selinker 1972:215). In the first place, Selinker regards fossilised linguistic structures as *interlanguage phenomena*. Fossilisation, by definition, is an "antiquated, rigid or fixed...petrified" state (Onions, 1973:796), a construction that is "no longer productive in a language" (Crystal 1980:152), a "dead" process (Quirk, Greenbaum, Leech & Svartvik 1985:1522).

Secondly, these structures tend to remain part of the learner's interlanguage production. In his early definition of fossilisation, Selinker seems to concede that, although the term *fossilisation* implies irreversible immutability, there is the possibility that fossilised structures may not remain fossilised (Selinker 1972:215). However, taking a less concessionary position in a more recent formulation, Selinker & Lakshmanan (1992:212) assert that "it is difficult, **if not impossible**" to eradicate fossilisation.

In the third place it is claimed that fossilised structures will manifest themselves irrespective of learner age. According to

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Selinker, fossilisation of rules may occur when a second language is learnt. It is also predicted that absence of native-speaking peers of the target language may promote fossilisation (Selinker, Swain & Dumas 1975:140). If fossilisation may be fostered by peers who are second language speakers of the target language (TL) and who constitute the learning environment, it may also be predicted that exposure to teachers who produce fossilised structures (restricted input) is bound to precipitate earlier fossilisation of learners' interlanguage. It is also a reasonable supposition that such teachers would tend to accept interlanguage structures produced by learners, thereby further promoting early fossilisation.

Corder (1981:90) suggests that learners may fossilise because they have reached the degree of complexity (read grammaticisation) which "serves the communicational and integrational needs of the speakers." It seems plausible to expect, then, that learners who function in a first language environment and whose contact with second language is limited to teacher input in the classroom may be expected to fossilise interlanguage structures from the very outset. Examples presented in Appendix i, p.351 seem to support this position.

The fourth claim in Selinker's 1972 definition, that these fossilised structures will remain, no matter what the learner or the second language teacher does, is a widely accepted notion often stated in the literature (Selinker 1972:215; Vigil & Oller 1976:281; Lauerbach 1977:211; Seliger 1979:361; Selinker & Lamendella 1978:185; Selinker & Lamendella 1979:363; Lander 1981:60; Mukattash 1986:187; Schachter 1988:228; Schachter 1990:119; Valette 1991:325). According to Selinker and Lamendella (1978:185) the "permanent failure of the vast majority of adult second language learners to achieve...mastery of TL norms" is an inescapable "factual point."

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Not everybody is convinced of the immutability of fossilised structures, however. Tollefson and Firn (1983) examine three models of fossilisation and conclude that interactional and acculturation models imply that fossilisation is not necessarily a final state; biological models of fossilisation on the other hand claim that fossilisation is permanent. To present a unified account of fossilisation, Tollefson and Firn (1983) propose two types of fossilisation: permanent fossilisation due to biological factors, such as genetic predisposition to learn language and age (Tollefson & Firn 1983:30), and non-permanent "jellification", the cessation of learning as a result of social, interactive or psychological variables (Tollefson & Firn 1983:31). Acton (1984:82) reports on the changing of fossilised pronunciation and concludes that until the psychodynamics of fossilisation has been understood, there is no justification for models which tacitly assume that interlanguage pronunciation of fossilised learners is "etched in stone." Johnson (1992:180) addresses the problem of the "fluent-but-fossilised" intermediate student within a communicative paradigm implicitly conceding that fossilised structures can be defossilised.

At this point there seems to be no comprehensive systematised exposition of the psychodynamics of fossilisation. Selinker's Multiple Effects Principle (MEP) (Selinker & Lakshmanan 1992:198,199) is an attempt to systematise preconditions for fossilisation. In terms of the MEP fossilisation may be irreversible (Selinker & Lakshmanan 1992:202).

2.4.3.3 The Multiple Effects Principle

According to Selinker and Lakshmanan (1992:198,199) interlanguage forms/structures will tend to fossilise if the following two conditions hold:

- (1) The factors responsible for the stabilised interlanguage structures work "in tandem", that is, the potential effect

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of one factor is reinforced by another factor, thereby increasing the likelihood of fossilisation.

- (2) One of the factors is transfer which Selinker and Lakshmanan (1992:211) hypothesise is either a "NECESSARY or at the very least, a PRIVILEGED CO-FACTOR."

When structures fossilise, they are more likely to do so as a result of disparate, unlinked factors, that is when two or more processes work "in tandem" (Selinker & Lakshmanan 1992:198). **In tandem** is not to be understood as "one after another" in linear sequence, but rather as "one *behind* the other," resulting, like horses in tandem, in a combined effect. Given that SLA is a multifaceted process, it is likely that many factors contribute to the acquisition process. If this is so, it follows that the processes that give rise to interlanguage fossilisation must likewise derive from diverse bases. If fossilised structures are to be changed by consciousness raising strategies, these should be multi-levelled to address the polygenous nature of the processes - polygenous in the sense of consisting of many kinds - that invoke fossilisation. I return to this argument later.

The above position suggests that the operative determinant at work here is not the isolated transfer factor involved, nor the effect of unrelated factors in linear sequence, but rather the *reinforcement of the transfer factor from different perspectives*, thus constituting the "multiple effect." *Reinforcement*, although one of the tenets of behaviourism, must here be understood as the multiple repetition of a particular learning condition, that is a particular mapping of a response to a related set of stimuli. According to Cluver (1976:320) children have to be exposed to a "much higher number of repetitions of a particular structure before they acquire it than our [innateness] theories give them credit for." In terms of Selinker and Lakshmanan's MEP view, it is highly unlikely that any fossilisation could be ascribed to one factor alone (Selinker & Lakshmanan 1992:211). Selinker and

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Lakshmanan's MEP, however, does not explain why some learners fossilise and others do not, for all learners must surely encounter at least two factors in tandem.

Given the effect of the MEP, one might then expect fossilised structures to be immutable indeed, and accept the finality of fossilisation - unless the principle of multiple effects could be employed to strengthen a remedial procedure - Selinker and Lakshmanan's MEP transposed, so to speak. In this sense, a reversal of fossilisation may then be precipitated by multiple processes in tandem designed to destabilise structures. This assumption is based on two premises.

Premise (i) : If fossilisation is facilitated by the **automatisation** of interlanguage processes with concomitant stabilisation of interlanguage structures, it follows that if those processes and structures could be brought under **attentional control** again, destabilisation of fossilised structures may result.

Premise (ii) : If automatised processes are reinforced by a consistent mapping of stimuli to responses (Schneider & Shiffrin 1977:51), automatised processes may be brought under attentional control again if the mapping pattern could be modified to facilitate a limited serial comparison process (Schneider & Shiffrin 1977:52; Shiffrin & Schneider 1977:127,135). I briefly turn to the research of Shiffrin & Schneider (1977:127-90) for an explanation of the means by which automatic processing may be modified.

Modification of automatic processing

Shiffrin and Schneider (1977:127) present a two-process theory of detection, search and attention: **automatic detection**, which only demands attention when a target is presented (Shiffrin & Schneider 1977:127) and **controlled search**, which is "highly

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demanding of attentional capacity" (Shiffrin & Schneider 1977:127). The automatic process is largely beyond subject control, but some indirect control is possible through "manipulation of the activation threshold" for automatic processes (Shiffrin & Schneider 1977:156). The threshold for automatisisation can be lowered "by the inclusion of information in the STS [short-term memory store] that is associatively related to the nodes making up the automatic sequence" (Shiffrin & Schneider 1977:156). This suggests that when attention is no longer required to focus on a particular structure in order to produce it, only a deliberate and conscious attempt to refocus attention may foreground that structure and place it under conscious control. Consciousness raising strategies constitute such a foregrounding intervention attempt.

Modification of fossilised structures implies the unlearning (destabilisation) and relearning (restabilisation) of those structures. This means that **automatic processing**, which is the "activation of a learned sequence of events...without subject control...and without necessarily demanding attention" (Schneider & Shiffrin 1977:1), needs to be modified to **controlled processing** which is a "temporary activation of a sequence of elements that ... requires attention... and is controlled by the subject" (Schneider & Shiffrin 1977:1). A modification constituting defossilisation would then require interventive measures that would activate attentional control.

If controlled processes are "highly demanding" of attentional capacity, are usually serial in nature, are easily established, altered and even reversed by the subject (Shiffrin & Schneider 1977:127), then automatic processes, which are difficult to alter or to suppress once learned (Shiffrin & Schneider 1977:127), could only be modified if it were possible to bring such automatic processes under attentional control again. Consideration of the underlying mechanisms of automatisisation

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would illustrate to what extent such a reversal and reactivation of conscious control might be possible.

According to Shiffrin and Schneider (1977:133) then, learning is firmly planted in long-term memory, and the long-term nature of learning underlies the automatic process (Shiffrin & Schneider 1977:137). This being so, it should prove very difficult for a learner to alter or unlearn his automatic response in any short period of time. This is not saying, however, that modification of an automatised process is not at all possible. Shiffrin & Schneider (1977:133) report that a reversal of a "memory ensemble", that is a modification of stimuli, in an experiment caused subjects to revert to controlled processing although a larger than the original amount of training was required to overcome the "negative transfer" effects of the original learning. Even when well-learned over time, however, a reversal in the consistent mapping paradigm which underlies automatization may impair the automatic process (Shiffrin & Schneider 1977:135), causing the subject to revert to controlled processing. How then might unlearning and destabilisation of fossilised structures be brought about?

Automatic processes, largely beyond subject control, utilize a relatively permanent set of associative connections (the consistent mapping paradigm) in long-term store (Shiffrin & Schneider 1977:156). According to the researchers some indirect control is possible through the lowering of the activation threshold for automatic processes "by the inclusion of information in STS [short-term memory store] that is associatively related to the [memory] nodes making up the automatic sequence" (Shiffrin & Schneider 1977:156, *my italics*).

In this study, that associated information is provided by means of consciousness raising processes. According to Shiffrin and Schneider (1977:157) consciousness lies in a subset of the short-

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term memory store that is attended to and given in controlled processing. It would seem plausible then that eventually automatic processes, which veil their constituent elements from conscious perception (Shiffrin & Schneider 1977:160), can be "'unlearned', and new sets of automatic responses learned, but only after considerable amounts of retraining" (Shiffrin & Schneider 1977:185). In terms of the MEP, "considerable amounts of retraining" are to be accomplished not by length of time, but rather by the effects of multilevelled intervention procedures.

Such a **multilevelled consciousness raising approach** which, in addition to incorporating multiple consciousness raising processes, also has those processes applied in progressive levels of awareness (see Table 3.3, p.161) may be expected to reactivate learning processes and to destabilise fossilised structures. A consciousness raising Multiple Effects Principle may then be predicted to destabilise fossilised structures. A **defossilisation principle** analogous to Selinker and Lakshmanan's MEP A (1992:198) may be stated as follows:

Consciousness raising Multiple Effects Principle A (C-R MEP A):

When two or more consciousness raising factors work in tandem, there is a greater chance of destabilisation of fossilised interlanguage forms, than if single consciousness raising factors worked in isolation.

The one factor that may be expected to work strongly against destabilisation is the **length of time** that the learner has been using fossilised structures. Length of time constitutes a self-perpetuating reinforcement condition. A pedagogical supplement of the consciousness raising MEP A is that the longer a learner has been using fossilised structures, the less the likelihood of the consciousness raising MEP having any effect. An analogy of Selinker and Lakshmanan's MEP C might be stated as follows:

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Consciousness raising Multiple Effects Principle B: pedagogical supplement

The likelihood of fossilised structures not becoming destabilised through multilevelled consciousness raising strategies is a function of the length of time that the fossilised structures have been internalised.

Cognitive Theory, while offering some insights into an understanding of the psychodynamics of fossilisation, at the same time might suggest how defossilisation may be precipitated and the process of restructuring, arrested at an interlanguage level, may be reactivated.

2.4.3.4 Cognitive issues and fossilisation

In this section, factors that may lead to fossilisation are considered, as well as how automatised processes may be raised to consciousness.

In terms of the concepts of controlled and automatised processing of information within the framework of Cognitive Theory (see 2.3.3, pp.70, 71), fossilisation would result if subskills were integrated and automatised at an interlanguage level, assuming that no change took place after a subskill had ceased to be under attentional control. The process of defossilisation, if this were possible, would imply retracing the stepping stones that led to automatisation in the first place, before information processing could be under attentional control once again. This study hypothesises that this may be done when **automatised processes** and the structures to which they pertain are raised to consciousness. Such a hypothesis would need to assume that processes of control precede automatisation.

Karmiloff-Smith's (1986:173) view that negative evidence is under-utilised in language acquisition may explain how some subskills become automatised in a form that does not correspond to the target form. Because the learner does not bring all

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interlanguage forms in line with negative target language evidence, circumstances that may precipitate fossilisation are created. In the acquisition of a second language, it seems feasible to assume that restructuring will only continue as long as the learner finds it necessary to shift internal representations relating to a subskill. Once this need is no longer perceived, restructuring of that particular subskill surely ceases, resulting in fossilisation, regardless of whether the target language form has been attained or not. Gains in automaticity are thought to be characteristic of early stages of learning and restructuring of later stages (McLaughlin 1987:143). In the language production of first-year teacher trainees tested in this study, evidence of early fossilisation of some structures, but not of structures acquired later, confirms this position (see 1.2.3, p.25 of this study).

Further support for the above view is provided by Ellis (1985b:165). According to Ellis, the procedural strategies involved in restructuring are those that relate to acquisition when learners tend to override the input evidence by constructing simplified internal representations, whereas in later stages, when inferencing strategies and hypothesis testing predominate, learners attend more closely to new input data. This is not to say, however, that what has been internalised earlier, is necessarily still subject to later attention. This position only holds when learning is still an active process involving a constant modification of organisational structures. According to McLaughlin (1987:147) learner strategies of inferencing and hypothesis testing govern this process of restructuring. If strategies of inferencing govern processes of restructuring, then any remedial teaching procedure should take cognisance of this fact. Any teaching strategy considered to precipitate restructuring would therefore need to be an **inductive procedure** eliciting learner strategies of inferencing and hypothesis

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testing. Consciousness raising as applied in this study is such a procedure.

Ross and Kennedy (1990:42,43) hypothesise that earlier examples promote generalisations about problem types, thereby influencing what is learned about the domain. Learners are "reminded" about a problem previously solved by perceived similarities in the new problem. Ross and Kennedy's (1990:42) **reminding view** claims that

the analogical use of earlier examples leads learners to begin to induce generalizations during problem solving.

According to Ross and Kennedy (1990:43), inductive processes are triggered as a byproduct of using one worked-out example to solve a subsequent problem. However, this does not mean that the initial example needs to be an instance of the subsequent problems (cf. Feuerstein's [1980] position on analogical transfer, p.158 of this study). In terms of these claims, one might then assume that a prototype example which engages particular cognitive processes would precipitate inductive problem-solving procedures in subsequent problems (cf. the discussion of consciousness raising techniques in section 3.4.4, p.162 of this study).

Let us now turn to the main concern of the central hypothesis of this study: consciousness raising.

2.5 CONSCIOUSNESS RAISING: A HYPOTHESISED SOLUTION TO THE PROBLEM

In this section grammatical consciousness raising is defined (2.5.1) and key issues are explained to indicate how consciousness raising may be expected to destabilise fossilised structures and reactivate processes of grammatical restructuring, that is progressive reanalysis of grammatical phenomena (Rutherford 1987:10). In a discussion of the psycholinguistic

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bases of consciousness raising (2.5.2), the concepts of grammaticisation, semantico-grammatical distance, declarative and procedural knowledge and pertinent cognitive issues such as automatisisation and control are related to fossilisation and consciousness raising procedures. Different perspectives on the learnability problem are presented. The learnability problem is linked to the notion of Universal Grammar and a new perspective on learnability, as suggested by Taylor (1993:1), is briefly considered. At this point arguments for and against the central hypothesis are presented (2.5.3). Finally, relevant empirical consciousness raising research (2.5.4) is discussed and evaluated.

2.5.1 Grammatical consciousness raising defined

Grammatical consciousness raising entails "guiding the learner in mentally working out the surface implications of L2 intrinsic formal organisation" (Rutherford 1987:149). In this way consciousness raising aims to facilitate rather than bring about acquisition directly (Ellis 1990:15,16; Rutherford 1987:18).

Sharwood Smith (1991:120), arguing that consciousness raising is a "neat but misleading term" as it is difficult to define exactly what "consciousness" is, suggests that the term **consciousness raising** be replaced by **input enhancement**. The term, **consciousness raising**, however, is retained in this study for three reasons. It is precisely the altered awareness of the learner, the "raised consciousness", which is purported to promote learning. Furthermore, it is possible to see by the altered production of a structure that the learner has acquired an increased awareness of the underlying processes relating to that structure. Lastly, a replacement of **consciousness raising** with **input enhancement** shifts the pedagogical focus to what the teacher does with the input instead of being ideally learner-centred, focusing on the learner's response to the input.

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2.5.2 Psycholinguistic bases of consciousness raising

The psycholinguistic issues that pertain to consciousness raising are discussed in this section. Grammaticisation, semantico-grammatical distance, learnability, language typology and cognitive issues contribute to an understanding of consciousness raising.

2.5.2.1 Grammaticisation

Grammaticisation is a progressive distancing process. Interlanguage in which the form-meaning relationship was previously maximally direct, gives way to later forms,

in unsteady but ever closer approximation to target English, wherein the relationships become more and more indirect as the compensatory **grammaticization** principle takes hold (Rutherford 1987:40).

This process of gradual reanalysis wherein "interlanguage of an earlier phase has become more **grammaticized** in a later phase" (Rutherford 1987:40) is responsible for the progress of learner-language.

Examination of English syntax reveals why English exhibits a less direct form-meaning relationship. According to Rutherford (1987:45) English utilises grammatical devices instead of linear order to maintain the necessary links between form and meaning. In English, the subject-verb-object (SVO) word order is canonical and serves primarily the function of preserving grammatical structure. Because of the "overriding pressure of English to maintain SVO" (Rutherford 1987:120), "English displays an uncommon propensity for obscuring the relationships between form and meaning" (Rutherford 1987:123).

Three implications derive from Rutherford's definition of grammaticisation:

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- (1) interlanguage can be represented as a developmental continuum;
- (2) development proceeds from maximally direct semantico-grammatical relationships to increasingly indirect relationships, that is the **semantico-grammatical distance** increases;
- (3) fossilised structures may be expected to be characterised by more direct semantico-grammatical relationships.

According to Rutherford (1987:41), the language form is 'regenerated,' that is grammaticised, whereas the language function (read meaning) remains fairly constant. In a sense this seems to suggest that, in the course of interlanguage development, **meaning is basic and primary**, and that form, superimposed on meaning, is secondary. I return to this point in Chapter 4. Language development is an uneven process (Rutherford 1987:40). When development of a grammatical structure is arrested and grammaticisation ceases, a temporary stabilised state of "being" (Rutherford 1987:42) of that interlanguage form develops. However, according to Selinker and other researchers (Selinker 1992:258), fossilisation of this interlanguage form may ensue if the state of arrest continues for a period of more than five years. However, it is possible that fossilisation may ensue in a much shorter time than the suggested five year-period. I return to this point in Chapter 4. In a case of fossilisation, reactivation of the process of language development would then require the unlearning of a particular fossilised form-meaning relationship, a task that is more difficult than learning a new principle (Rutherford 1987:44). Shiffrin and Schneider (1975:185) explain that modification of learnt behaviour requires effort (see p.96 of this thesis). Grammaticisation, which embraces a wide range of developmental phenomena, is the most visible manifestation of interlanguage in the process of "becoming" (Rutherford 1987:42).

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Examples of such developmental phenomena in English cited by Rutherford are the learner's reorganisation of early topic-comment constructions as later subject-predicate (Rutherford 1987:42); acquisition of the functions of word order as a means for expressing grammatical relations (Rutherford 1987:44); the learner's capacity to realise grammatically the full set of arguments of any verb (Rutherford 1987:47); the abandoning of early coordinated structure arrangements in favour of subordinated structures (Rutherford 1987:51), and finally, the increasing "distance" between form and meaning as a result of expanding use of formal grammatical resources (Rutherford 1987:45). It is to this last point that I now turn.

2.5.2.2 Semantico-grammatical distance

According to Rutherford (1987:45), all language learners initially "bend" the target language so that form-meaning relationships are rendered as directly as possible, e.g. *My home town Lamgur* (*My home town is Lamgur*) (Rutherford 1987:38). This is what one might term the "Me Jane" syndrome. The learner, in his early struggle to make the target language optimally learnable, will also fill semantic gaps that she/he feels are there in order to bring form and meaning into closer alignment. This makes the target language syntax more accessible to him (Rutherford 1987:46), e.g. *a subject that I am interested in it* (Rutherford 1987:46). The direct form-meaning relationship is a pervasive characteristic of early interlanguage (Rutherford 1987:8), and may be expected to be a characteristic of fossilised syntactic interlanguage structures. Later, the learner's ability to grammaticise is evidenced by the processing of looser (in the sense of less direct) form-meaning relationships. The effect of syntactic movements resulting from grammaticisation processes brings about "a surface 'misalignment' of what in underlying structure was a close 'fit' between syntax and semantics" (Rutherford 1987: 84).

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English allows a looser (less direct) linear relationship between meaning and grammatical form than most other languages (Rutherford 1987:10, 75). This suggests that learners have more to grammaticise in English before they reach target language levels of grammaticisation. Assimilation (internalisation) of grammatical processes may indeed be the "single most challenging grammatical task of [the learner's] English-language learning experience" (Rutherford 1987:75). The degree of syntactic-semantic distance has a bearing on learnability; the more indirect the form-meaning relationships in the target language, the bigger the learnability problem (Rutherford 1987:84), and by implication, the greater the likelihood of fossilisation. The notion of the learnability paradox and its purported relationship with fossilisation requires closer examination.

2.5.2.3 Learnability

The learnability problem, also referred to as the learnability paradox (Taylor 1993:7) relates to the claim that, in first language acquisition, children are not able to work out a complex grammar based on the insufficient and degenerate data provided by adult caregivers (McLaughlin 1987:105; Chomsky 1965:58). The learnability problem, extended to adults and second language acquisition, concerns the gap between available experience and attained proficiency forms - the "logical problem" of foreign language learning (Bley-Vroman 1989:41). The learnability problem is thus concerned with the question: "How does the second language learner work it out?"

A somewhat different perspective on learnability is the one that describes particular linguistic features as inherently difficult to learn (Ellis 1990:27). This perspective is concerned with the question: "What concerning the structure is difficult?" Ellis speculates that the most difficult structures to teach/learn may be those that are both formally complex and that display opaque form-function (meaning) relationships (Ellis 1990:167). Ellis's

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opaque form-function relationships are akin to Rutherford's loose form-meaning relationships (Rutherford 1987:84). Plural-s and copula-be for example are simple to process and have transparent form-function relationships, whereas verb infinitive complements are complex to process and have opaque form-function relationships (Ellis 1990:167). In terms of learnability, processing of the latter structure is more exacting than the former.

The learnability of structures is also affected by the learner's stage of development: the second language learner cannot process structures for which he/she is not yet ready and instruction of such features at an inappropriate stage of his development may be counter-productive, causing backsliding to developmentally 'earlier' forms (Ellis 1990:168).

Chomsky's solution to the learnability problem which is constituted by the fact that abstract linguistic principles cannot plausibly be learnt from observation of linguistic data, has been to propose that these principles do not have to be learnt; they are innate (Chomsky 1965:59). Whether these purported innate universal principles are still available to second language learners is, however, debatable (see p.68 of this study).

If Universal Grammar was available to second language learners, they would apply their first language parameter settings, or sets of grammatical options, to the second language (White 1992:218). On the other hand, if second language learners could only adopt principles of parameter values found in L1, this would indicate that "access to UG is essentially 'incomplete'" (White 1992:218) and would partially explain differences between first language and second language acquisition.

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The learning difficulties experienced by second language learners and their apparent inability to attain native speaker proficiency may be explained by the assumption that Universal Grammar is no longer available to adult second language learners and that this is the "fundamental difference" between first language and L2 acquisition (White 1992:217). The position taken in this thesis is that innate universal principles are not available to second language learners. According to some researchers, the innateness argument does not even hold for aspects of first language acquisition.

According to Taylor (1993:1), the innateness argument cannot be used for all linguistic data. Taylor (1993:1) proposes a semantic explanation

according to which acceptability is a function of the compatibility of the meaning of a grammatical construction with the meanings of the words which participate in the construction.

He shows that the grammaticality of possessive expressions reflects aspects of the semantics of the construction. Taylor's paradigm offers an explanation of how the learner may be able to "work it out", without needing to resort to innate principles already known. According to Taylor (1993:2) certain inherited abilities of a general cognitive nature may make it possible for a person to learn a language. Arguing that language-specific knowledge cannot be genetically encoded, Taylor (1993:5) indicates how a semantic characterisation of a structure, in combination with a detailed semantic analysis of lexical items that are candidates for insertion into that structure, may offer a way out of the learnability paradox. Taylor's discussion not only illustrates the close relationship that exists between form and meaning, but suggests that, at least in the instances cited, meaning is the governing factor that determines grammaticisation.

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Stated differently, the learner grammaticises from a meaning base. The findings of this study seem to support Taylor's position on the relationship between meaning and grammaticisation. The relationship between meaning and form is taken up again in Chapters 4 and 5.

2.5.2.4 Typological systems

Four typological systems or frameworks to which analysis of English syntax can appeal for descriptive power are identified in Rutherford (1987:108,109): **canonical word order**, **subject-prominence**, **pragmatic word order** as opposed to **grammatical word order**, and **syntactic-semantic distance** (see 2.5.2.1, p.101). The basic word order of the sentence constituents of Subject - Verb - Object (SVO) is obligatory in English, which means that English syntax is grammatically rather than pragmatically ordered. In addition, English is typified as being subject-prominent, rather than topic-prominent. The typology of syntactic-semantic distance, related to the "degree of 'transparency' of semantic relations and their syntactic realization" (Rutherford 1987:109), is particularly relevant to the semantico-grammatical consciousness raising strategies used in this thesis.

The next section considers the learner's contribution to the learning of a second language.

2.5.2.5 Cognitive issues and consciousness raising

As cognitive issues have been discussed in an earlier section (see p.70, 71), I shall merely refer here to issues that are pertinent to consciousness raising.

Learners do not come to a language learning task empty-handed. They possess two kinds of prior knowledge: **knowledge that (declarative knowledge)** about the possible organisation of the target language (see 2.3.3.3 p.73), that is innate universal principles and **knowledge how (procedural knowledge)**, that is

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innate universal processes (Faerch & Kasper 1983 in McLaughlin 1987:145; Rutherford 1987:10,13). Procedural knowledge includes knowing how to "temporarily ... 'bend' the new language into forms that will, with maximal efficiency, serve the initial desire for rudimentary communication" (Rutherford 1987:7,8). This "bending" of the language into more direct form-meaning relationships is evidence of universal processes at work in language learning (Rutherford 1987:10). The learner's ability to grammaticise is related to his ability to integrate linguistic factors into his network of "knowledge how" (Rutherford 1987:51). According to Rutherford, language learning would not be possible without these two crucial innate cognitive capacities: **knowledge that** and **knowledge how** (Rutherford 1987:8).

For Ellis (1985), declarative and procedural knowledge are what the learner develops during the course of the learning process; for Rutherford (1987) this is innate preknowledge possessed by the learner. According to Ellis (1985:164), declarative knowledge is constituted by the "internalized rules and memorized chunks of language." Procedural knowledge consists of the strategies and procedures employed by the learner to process second language data for acquisition and for use (Ellis 1985:164). Procedural knowledge furthermore comprises the cognitive processes involved in internalisation and automatisisation of new second language knowledge. These processes involve learning as well as using the L2. (Ellis 1985:165). Consciousness raising procedures, to be effective, would need to address declarative knowledge as well as procedural learning strategies. This means that a consciousness raising intervention programme would have to make the learner aware of what is not possible (conscious of error), and then make him aware of what is possible (conscious of correct structure). Finally, the consciousness raising procedures would have to provide the mechanisms to strengthen the new awareness until stabilisation and internalisation are accomplished.

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2.6 **EMPIRICAL STUDIES OF FOSSILISATION AND CONSCIOUSNESS RAISING**

In this section the findings of recent defossilisation studies focusing on different issues are examined.

- **Persistence of fossilisation:** Empirical studies that report on the outcome of explicit deductive teaching methods that focus on analytical information about rules and structures conclude that fossilised structures are immutable (Gergen 1990; Lennon 1991; Mukattash 1986).
- **Consciousness raising and defossilisation:** The study by Selinker and Lakshmanan (1990) is apparently the only attempt to investigate the effect of consciousness raising procedures on fossilised structures.
- **Defossilisation strategies:** Relatively little empirical research has been done on the experimental application of specially designed intervention programmes to investigate the possibility of destabilisation of fossilised structures. One such study is reported here (Acton 1984).
- **Prevention of fossilisation:** Some studies suggest teaching procedures that are likely to reduce the likelihood of eventual fossilisation (Boulouffe 1984; Hammond 1988; Higgs & Clifford 1982; Johnson 1992; Valette 1991).
- **Explanations of fossilisation:** The majority of fossilisation studies describe the data and attempt to explain the fossilisation process by identifying constraints and relationships that predict interlanguage variability and fossilisation (Dittmar 1992; Perdue & Klein 1992; Schmidt 1990; Slobin 1991).

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The studies in the discussion that follows are organised according to the above five points. The studies - some presented in more detail than others - provide informative perspectives on the experiment described in this study. I now turn to studies reporting on the purported immutability of fossilisation.

2.6.1 Persistence of fossilisation

The studies that report on the non-change of fossilised structures all refer to the lack of success conventional corrective teaching approaches. No amount of negative feedback on a cognitive level seems to make any significant change (cf. the opposite position taken by Vigil and Oller 1976:281). The results of three such studies are presented here.

The study of **Mukattash (1986)** is pertinent to the present study as it is concerned with a similar experimental group with a linguistic background comparable to the experimental group of the present study. For this reason this report is discussed relatively comprehensively.

Mukattash (1986:187) reports a study with 80 Arab fourth-year students studying English Language and Literature at tertiary level. These students had all had at least eleven years of formal grammar instruction which included three years at university. One might therefore assume that the errors discussed in the report had been part of the learners' linguistic repertoires for at least five years and could therefore be considered fossilised. This test group exhibits correspondences with the test group of this study in respect of age, tertiary environment, length of exposure to ESL instruction and to a certain extent study course. According to Mukattash (1986:187) students still committed elementary grammatical errors in tests despite the preceding advanced course in contrastive analysis and error analysis (Mukattash 1986:188) and in spite of the preceding years of explicit grammar instruction.

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In addition to errors in relative clause formation, Mukattash examines five errors related to the verb system.

The first verb error is the incorrect use of the past simple for the present simple. Mukattash (1986:191) cites faulty teaching techniques as a possible cause of the error. The detrimental effects of poor teaching have already been considered in this study (see pp.40, 59 of this study).

The second verb error involves the frequent use of the non-perfective instead of the perfective, especially, as was also found with the subjects of the present study, the use of past simple in contexts that require the present perfect. Mukattash (1986:192) again cites a pedagogic reason for this particular error, relating the problem to the inappropriate (but traditional) description in grammar books commonly used of present perfect as a "past" happening or state with results persisting in the present. The similarity of these findings with those of the present study does not escape one. In addition, Mukattash (1986:192) cites the fact that the English present perfect has no formal correspondence in Arabic as a contributory factor. Transfer is at least a "privileged co-factor" (Selinker & Lakshmanan 1992:211) in this case. Although the Afrikaans present perfect has a surface formal correspondence with English present perfect

	V [AUX]	[PRES]	- PAST PARTICIPLE
<i>Ek</i>	<i>het</i>	<i>reeds</i>	<i>geëet</i>
<i>I</i>	<i>have</i>	<i>already</i>	<i>eaten</i>

the Afrikaans present perfect is not formally distinguishable from the past simple and the use of the non-perfective instead of the perfective form in the present study can equally be related to the mechanism of transfer.

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Mukattash (1986:193) claims that inappropriate use of the progressive form, the third verb error, is due to interference from Arabic. The data of the present study also exhibit this error type, and although the form has a circumlocuted semantic congener in the first language, Afrikaans, there is no formal correspondence.

The fourth verb error concerns the default use of the active instead of the passive form. Mukattash's interpretation of the examples quoted is debatable because, apart from the omission of the auxiliary **be**, the sentences are syntactically correct for passive construction. This error type might therefore have been conflated with the fifth error type: **be**-deletion. Students had subsequently indicated that they had indeed intended to use the passive construction.

The fifth verb error, **be**-deletion, occurs in different linguistic contexts and can be ascribed to different factors (Mukattash 1986:194), the two major contexts being **be** used as a copula and **be** used as an auxiliary in progressive tense constructions - which makes the categorising of the fourth error as an error of voice doubly strange: the error in each case is, in different contexts, the omission of **be**. This error, Mukattash (1986:195) claims, is due to a learning strategy of simplification. In terms of the present study, this kind of error constitutes a reduction of semantico-grammatical distance. Syntactic-semantic distance is one of the four typographical systems identified by Rutherford (1987:108,109) (see 2.5.2.4, p.107 of this study).

Mukattash (1986:201) concludes that certain error types are not susceptible to defossilisation and that there is not much value in explicit and systematic error correction in the case of advanced adult foreign language learners because they are no longer motivated to improve their knowledge or to elaborate their approximative systems. He nonetheless concedes that awareness of

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errors and monitoring, that is self-monitoring, would be "of special relevance" to prospective teachers - a position taken in this study as well. A number of other researchers report similar findings to those of Mukattash (1986).

Lennon (1991) reports on error elimination and error fossilisation in a longitudinal case study of an advanced learner of English. The learner's second language productions were observed over a period of six months. The subject had had 14 years' formal tuition of English prior to her arrival in England. No formal instruction was given during the observation time, however.

Lennon (1991:144) reports that there is no evidence over the period studied of improvement of the erroneous use of present simple forms for future meaning and the non-use of continuous forms, nor is there any improvement of adverb order over time. In respect of the use of **there is/there are**, Lennon (1991:138) indicates that the subject, although still exhibiting erroneous constructions, was in the process of extending her initial restricted proficiency by means of hypothesis testing. Lennon (1991:138) makes the interesting claim that *persistence* of an error is not necessarily an indicator of fossilisation but may indicate development and enlargement of proficiency by a process of trial and error. This seems to be a very tentative finding and raises the question: when then can an erroneous form persistently produced by an advanced learner be regarded as fossilised?

In respect of future time forms, Lennon (1991:148) proposes five criteria that may distinguish fossilised structures and potential candidates for fossilisation from stabilisation. In terms of Selinker and Lamendella's (1979:370) definition, stabilisation represents a point in the course of normal language development, and is not to be confused with fossilisation.

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Distinguishing criteria for fossilisation:

- the item occurs frequently;
- no learning strategy is evident;
- the learner is unaware of any deviant usage;
- the learner does not respond to input;
- the form is regarded as a free alternative with other forms.

These characteristics, according to Lennon, would suggest that a structure is either fossilised or in the process of becoming fossilised. However, Lennon's conclusion that fossilisation may only be setting in for future time is not reasonable as the subject, having had 14 years of tuition in English, had probably already been using the relevant erroneous structures for at least five years.

Gergen (1990, unpublished MS) reports on the variability of fossilised structures and the probability of an "incomplete end state" of second language learners (1990:23) but concedes that under conditions of increased communicative pressures improvement is possible.

Gergen presents a case study of May and Jean, two Cantonese first language speakers who have evidently fossilised in English. The focus of this study is the cross-task and cross-subject variation in the fossilised interlanguage of two speakers. The study does not include an interventive teaching programme. Gergen (1990: 15) claims that the variability shown by the two fossilised speakers should be "linked to particular tasks/domains of L2 usage." Gergen (1990:20) observes that each subject has her own way of getting around a copula-related problem by providing a novel form in different tasks for different verbal constructions. She cites evidence for a " 'communicative sufficiency' strategy of non-improvement" (Gergen 1990:22) with May exhibiting "not much" improvement in the ten month testing period, and Jean

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failing to show an overall increase in accuracy in the morpheme test, thereby tacitly providing support for Selinker's immutability hypothesis (Selinker 1972:177). She concedes that, according to the one subject, improvement is a possibility, should communicative demands change. Gergen (1990:23) concludes that the picture of fossilisation is a complex one and that there are numerous possible reasons why second language learners would reach an "incomplete end state" in their target language performance.

2.6.2 Consciousness raising and defossilisation

Very little formal research has been done to determine any relationship between fossilised structures and consciousness raising strategies (Rutherford, personal communication). To my knowledge the only research relating to the application of consciousness raising strategies to destabilise fossilised structures was done by Selinker and Lakshmanan (1990). It has not been possible to obtain detailed information about this research as the study has not yet been published.

Selinker and Lakshmanan (Selinker & Lakshmanan 1992:199; Selinker 1992:263) researched the effect of consciousness raising strategies on fossilised structures in the rhetoric of writing development and reported virtually no effect (see also 2.4.3.3, p.91).

Apparently fossilized IL structures will not become open to destabilization through C-R strategies when the multiple effect principle applies (Selinker 1992:263).

According to Lakshmanan (personal communication, 1994) the notion of multiple effects had not been extended to consciousness raising strategies as proposed in this study (see pp.96, 281 of this study). In the presentation of their paper at the TESOL conference in 1990, Selinker and Lakshmanan suggested that if

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learners were somehow made aware that multiple effects were operative with respect to their target language structures, that would pave the way for destabilisation. That mere awareness that a problem existed could ultimately lead to destabilisation seems to be a tenuous suggestion. However, in view of inadequate available information on this study at this stage, it is not possible to evaluate the point made by Selinker and Lakshmanan.

In this respect the varied and multilevelled consciousness raising strategies described in the next chapter of this thesis are expected to have a similar "multiple effect" although the learners may become aware of the effects operative with respect to the target language indirectly and inductively rather than through explicit and deductive procedures.

In addition, the consciousness raising activity needed to be a "memorable" experience for the learner. Selinker and Lakshmanan (1990) found that consciousness raising strategies appeared to work best when they were linked to texts in students' content areas (Lakshmanan 1994, personal communication). As the subjects used in this study are teacher trainees for whom teaching is an important issue, these views lend support to the teach-back procedures used in simulated teaching situations (see pp.156, 160, 359 of this study) in the intervention programme described in the next chapter.

A brief examination of some of the findings of other researchers in the field of fossilisation and destabilisation studies reveals conflicting conclusions. Acton (1984) is one of very few researchers to present a case for defossilisation.

2.6.3 Defossilisation strategies

Acton (1984) describes an approach for dealing with the defossilisation of the seemingly fossilised pronunciation of

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fluent but inaccurate advanced learners. According to Acton (1984:72) "significant change" is possible within twelve weeks.

The programme was designed to address the problem of apparently fossilised pronunciation of foreign professionals who had been in an English environment for years. The programme is based on four key assumptions (Acton 1984:73):

- The most important learning and change must happen outside the classroom. The relevance of the learning content is therefore stressed.
- The individual's own resources are constantly tapped, thus actively engaging learners in their own learning process.
- The responsibility for success in the course is placed on the students who have to complete weekly "contracts" committing themselves to practice on a daily basis. Monitoring (self-monitoring in terms of this study) is an integral aspect of the course. The programme attempts to go beyond the course by preparing participants to continue improving their pronunciation after the course is over.
- The course focuses on the problem caused by poor pronunciation, that is lack of intelligibility and resultant communicative ineffectiveness. This meaningful link with experience in a real world enhances the relevance of the programme.

The principles of involvement, relevance, responsibility and significance place the learning in a meaningful context outside the classroom, which favours and justifies change.

Acton (1984:71) claims that conventional teaching methods are ineffective and that a special programme is required for the destabilisation of fossilised structures. This may explain the

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lack of destabilisation success reported in fossilisation studies that incorporated language teaching procedures commonly used in instructional programmes. Acton (1984:82) concludes that until the psychodynamics of pronunciation and of fossilisation have been fully explored, there is "no real justification for models which tacitly assume that the interlanguage pronunciation of fossilized learners is... etched in stone."

Acton's (1984) findings seem to suggest that conventional second language teaching approaches are not likely to lead to defossilisation. Acton's defossilisation procedures which link language production to a meaningful reality in a real world seem to precipitate defossilisation. The intervention programme used in this study also attempts to place the consciousness raising procedures in a meaningful context that is relevant to the learner.

2.6.4 Prevention of fossilisation

Several studies propose teaching procedures aimed at preventing fossilisation from setting in without necessarily providing much linguistic insight into the underlying linguistic processes leading to fossilisation. Little is learnt in terms of what can be done to reactivate processes of reanalysis and restructuring to turn fossilisation around.

Higgs and Clifford (1982:58) in their discussion of communicative competence, align themselves with a definition that embraces the view that proficiency "must adapt itself to the total informational input - linguistic as well as paralinguistic. By implication, accuracy is seen to be a necessary component of successful communication. The question that needs to be asked is not whether the student was able to communicate, but what he was able to communicate, and how well (Higgs & Clifford 1982:60). According to Higgs and Clifford (1982:60) the general categories of language function, content and accuracy should all be under

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the control of a competent communicator. In terms of this view, mere ability to get the message across is not enough. It undoubtedly is not enough for teachers in primary school classrooms.

Higgs and Clifford (1982:67) characterise the typical "terminal 2/2+", that is a learner with fossilised language behaviour, as having a profile of high vocabulary and low grammatical accuracy. The "2+" indicates the level of oral proficiency at which a learner has been evaluated on an eleven-point scale of 0 to 5 including intervening "+" designations. This Foreign Service Institute (FSI) oral proficiency scale was developed by the U.S government (Higgs & Clifford 1982:62). The "terminal 2+" rating is associated with students who enter training with a Level 2 rating, but peak out at Level 2+, in other words, they do not progress to Level 3 and never attain the linguistic skills needed to reach minimum job proficiency standards (Higgs & Clifford 1982:65). The classic profile of the "terminal 2+" is a high level of vocabulary and a low level of grammar, that is grammar that displays fossilised incorrect patterns that are not remediable (1982:67). Remediation in these terminal cases is seldom - if ever - successful, as "inaccurate strategies, which normally consist of fossilized lexical and grammatical structures" (Higgs & Clifford 1982:67) have to be unlearned before functional language ability, that is communicative competence, can be improved.

Higgs and Clifford (1982:68) hypothesise that terminal profiles, that is fossilised language, may be explained by what cognitive psychology calls **proactive interference**: the prior learning of one task interferes with the learning of the next. The greater the similarity between the two tasks, the greater the negative interference of the prior task on the following task. The degree of interference furthermore corresponds to the strength of the prior task, which is determined by the duration and frequency of

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the task. It must be noted here that the effect of prior learning can only be termed **interference** if the effect has a negative result. Interpretation of new information is always facilitated by what we already know and constitutes an initial learner strategy.

The **Proactive Interference Hypothesis** has behaviouristic overtones but may nonetheless be proven to be correct, for is transfer not precisely the interference of prior learning with subsequent learning? Unfortunately the authors provide no direct empirical evidence in support of their hypothesis.

Their report (Higgs & Clifford 1982:68) concerning the investigation of the relative contribution of factors (subskills) however, does indicate the relative importance of communication factors such as vocabulary, grammar, pronunciation, fluency and sociolinguistic factors at different levels of oral proficiency (Higgs & Clifford 1982:63). Grammatical accuracy is ranked a close second to vocabulary for level 1, and the highest for levels 2 and 3. These levels range from the ability to participate in short conversations and ask and answer questions (level 1), through to level 3, described in terms of ability to converse in formal and informal situations, deal with unfamiliar topics, explain, describe and hypothesise - in short, engage in communication at the minimum level that could reasonably be expected of future primary school teachers.

In terms of the findings of this investigation, Higgs and Clifford (1982:73) propose their **Grammatical Accuracy Hypothesis**, maintaining that grammar skills should be an important part of the curriculum. They advocate "accuracy first" programmes for students who intend using English for professional purposes. According to Higgs and Clifford (1982:74) "communication first" programmes lead to terminal 2/2+ learners who will have to be

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content to function only "marginally well" in the target language and who will not be able to develop beyond their terminal level.

The underlying assumption of the researchers is evident: fossilisation, once a fait accompli, is irreversible. Fossilisation can possibly be prevented in a teaching programme that addresses grammatical accuracy and simultaneously develops true communicative competence (Higgs & Clifford 1982:77).

This position is not supported by Lightbown and Spada (1990:432) who claim in a recent study that fluency without accuracy is the outcome of communicative language teaching that excludes form-focused instruction altogether, but that there is little evidence to support the claim that early emphasis on grammar and accuracy is essential if early fossilisation is to be prevented. It must be stressed here that Higgs and Clifford do not argue for a return to grammar translation and audio-lingual methods, merely for

"a systematic recognition of the *ultimate* role that linguistic [grammatical] accuracy plays in the achievement of true communicative competence, in which it truly does matter *how* the message is transmitted" (Higgs & Clifford 1982:77).

It is widely accepted that, in the teaching profession, the way in which a message is transmitted is fundamental to learners' successful comprehension of that message. This means that concepts have to be formulated accurately in linguistic terms if meaning is to be taken unambiguously.

In reaction to the Higgs and Clifford (1982) article, **Hammond (1988)** examined the question whether second language students who acquired grammar inductively through the utilisation of a communicative model failed to learn grammar to the same extent as those who were taught deductively. The question of

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fossilisation of grammatical errors was tested as it may or may not occur in the second language classroom (Hammond 1982:409).

According to Hammond (1982:411) the primary linguistic data analysed in the experimental study did not support Higgs and Clifford's Grammatical Accuracy Hypothesis. Hammond (1982:414) questions the validity of the Higgs and Clifford claim that grammatical accuracy must be stressed before communicative use of the language in the classroom, and that failure to do so would cause fossilisation. Such a process/product relationship between failure to stress grammatical accuracy and fossilisation in early second language acquisition is not supported in the literature. According to Hammond (1982:414) students who learnt grammar inductively, utilising communicative methods without explicit grammatical explanations, demonstrated higher accuracy levels than those who had been taught deductively, with the emphasis on grammatical accuracy.

The validity of this claim is somewhat in doubt as Hammond does not indicate how the experimental and the control groups compared in terms of language proficiency prior to the tests of the experiment. Hammond's (1982:409) experimental design which attempts to test Higgs and Clifford's assertions furthermore assumes that what Higgs and Clifford advocated were grammar-translation methods, despite their explicit statement to the contrary (Higgs & Clifford 1982:77). Seen in the light of this, and even without reference to other weaknesses of the experimental design, Hammond's experimental study is unconvincing.

In similar vein to the Higgs and Clifford (1982) study, the study of **Johnson (1992)** proposes a strategy to prevent fossilisation from setting in rather than proposing a means of defossilising fossilised structures. Although constant reference is made to the fact that the strategy is intended for the "fluent-but-

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fossilized" intermediate learner (Johnson 1992:180), no empirically-tested results are presented in support of the claims.

Johnson (1992:181.182) suggests a modification of the "deep-end strategy" within the communicative language teaching paradigm. The claims of the "deep-end strategy" are that the first stage of communicative teaching would move students on communicatively rather than linguistically and the second stage, the "deep-end strategy" formal teaching, occurs after the need has purportedly been established for it. Fluent-but-fossilised learners - good users of achievement strategies (coping mechanisms) - are thereby encouraged to use their strategic competence (know-how) for the enhancement of their language proficiency (Johnson 1992:182).

In support of the "deep-end strategy" Johnson (1992:183) argues that intrinsic feedback is a "very blunt instrument: it will tell you only what works - and what works may be far from what is correct." This is in accordance with Vigil & Oller (1976:281) who state that positive feedback is the determining factor that leads to stabilisation of interlanguage errors, and unless learners receive appropriate sorts of cognitive feedback concerning errors, those errors may be expected to fossilise. Valette (1991:327) concurs that the key strategy for the prevention of fossilisation lies in providing a "maximum degree of accurate and appropriate input at the early levels of instruction." In the language classroom, extrinsic feedback provided by the teacher provides the only tool that may prevent fossilisation from setting in. Johnson (1992:184) maintains that the "deep-end" approach is "mistimed" and fails to observe the learning requirements of need and attention, thus reinforcing coping mechanisms.

Johnson (1992:184) therefore proposes a modification of the "deep-end" strategy to counteract the problems identified. He

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suggests that achievement of communicative success should be postponed until after new learning has had a chance to occur. She fails to explain how this approach might affect structures that have already become automatized and fossilised on interlanguage levels, unless the suggested procedure (Johnson 1992:186) of goal setting, planning, formal learning and communicating somehow succeeds in stretching learners' linguistic resources, thereby promoting changed communication demands that could lead to reanalysis and restructuring of fossilised structures. Johnson's (1992:189) final comment, "There may be no instant cure for 'intermediate-itis'" adequately sums up the fossilisation dilemma of teachers of advanced and intermediate learners.

The last experimental study referred to in this section is concerned with the stabilisation and destabilisation processes as described by **Boulouffe (1984)**. In her empirical study of eight students aged 13 and 14 in their second year of English study, Boulouffe reports on the fluctuating relationship of intent (meaning) and form purportedly affecting destabilisation processes. The relevance of Boulouffe's findings to consciousness raising strategies is briefly considered.

Boulouffe (1984:70) claims that variability in interlanguage has to take account of stabilisation and destabilisation processes. Destabilisation of errors may be "hindered by a deficient intent, a deficient form or a deficient adjustment of intent and form" (Boulouffe 1984:69). There is a difference between speakers' intent - what they want to say - and their expression - the form they manage to use. This position, well-known to second language teachers, is reminiscent of Rutherford's (1987:8) claim of a direct relationship between meaning and form in interlanguage,

the one pervasive characteristic of early interlanguage that is designed to render the target language optimally learnable.

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At first glance this may seem like the exact opposite of Boulouffe's intention, but according to Rutherford (1987:8), learners "bend" the target language forms to serve the purpose of "rudimentary communication." The consequence of this learning strategy is a mismatch between form and meaning that initially may have served the learner's purposes, but which later in a more involved communication situation constitutes a gap between what the learner wants to say and actually manages to say, unless *adjustment to the form is effected* by the addition and refinement of formal elements that enhance meaning. In other words, destabilisation of the interlanguage form is triggered to make more accurate expression of meaning possible.

According to Boulouffe (1984:83) the trigger to destabilisation is the fluctuation of intent and form. Stabilisation occurs when, in Piagetian terms, assimilation (the speaker imposing his internal system) prevails over accommodation (the speaker receiving the exterior system). Destabilisation occurs when the learner becomes aware of a gap between what he means and what he is able to say. In terms of Boulouffe's hypothesis then, one would expect cessation of accommodation processes to lead to fossilisation. To prevent this from happening, Boulouffe (1984:84) suggests that

skilful pedagogic pressure may be selectively brought to bear on the operation [linguistic process] that needs support.

Such "skilful pedagogic pressure" should evidently serve the purpose of intensifying the learner's intent to the extent that the learner enters into a "profitable interaction with form" (Boulouffe 1984:84). According to Boulouffe (1984:69) it is pedagogically more relevant to "assist the cognitive operation that promotes the destabilization of stabilised IL rules and intake of the target language than provide new exposure or

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feedback." The point implicitly made here is that instruction as such is not a valid pedagogical objective; it cannot be assumed that something taught will therefore be learnt - input does not equal intake. The objective should be to *facilitate* learning by "assisting the cognitive operation" - a point also made by Ausubel (1971:315) more than a decade earlier. This is precisely the purpose served by consciousness raising procedures. Consciousness raising, then, is the focus of the next section.

2.6.5 Consciousness raising and grammaticisation

Several studies concerned with the development of grammatical accuracy are considered in this section in terms of their relevance to consciousness raising strategies. The following three questions are considered:

- Why do some learners fail to grammaticise?
- How is SLA affected by form-focused teaching?
- What is the role of consciousness in second language learning?

Let us turn to the first question.

Why do some learners fail to grammaticise?

Learners' failure to grammaticise is defined by Perdue and Klein (1992:259) as the development of morphosyntactic markers that achieve greater cohesion in discourse by overcoming the communicative constraints of the initial interlanguage variety (cf. Dittmar's views on commencement of grammaticisation, p.128 of this study). This failure is investigated empirically by **Perdue and Klein (1992)** in their longitudinal study of two Italian-speaking adult beginner learners of English, Andrea and Santo.

At the beginning of the two-year period, both learners exhibit a similar **basic variety** (Perdue & Klein 1992:260) that is characterised by clauses consisting mainly of simple noun phrases and adjectives/adverbials and simple verb-argument structures.

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Such a basic variety may be understood as a pragmatic mode of communication. The data taken in the early encounters contain no finite verb structures, excluding a few formulaic expressions, and no case markings. Verbs are used in their "base" form, usually the stem, there are very few V-ing forms and the copula rarely appears (Perdue & Klein 1992:261).

During the subsequent stages, Andrea continues to develop morphosyntactically whereas Santo does not. The grammaticisation of Andrea's production allows him to go beyond the initial constraints of his basic variety, but Santo, faced with the same contexts and the same constraints, does not. Klein and Perdue attempt to provide an explanation for this differential development.

In terms of Bates and McWhinney's (1989) competition model, Andrea was pushed to acquire grammatical options that would facilitate expression of competing semantic and pragmatic roles more cohesively (Perdue & Klein 1992:268). Santo, on the other hand, perfected a contrastive use of patterns and did not develop morphosyntactically but added minor adjustments to existing patterns and their constituents, thus becoming "a virtuoso on a one-stringed violin" (Perdue & Klein 1992:268). Given the initial linguistic similarities between the two learners, the differential success cannot be justified by purely linguistic explanations.

Andrea evidently demonstrated more success than Santo because he used reactive strategies, elaborating on interlocutor input, reacting to native speaker reformulations of his utterances and taking time to plan his utterances (Perdue & Klein 1992:270). He was clearly more receptive to the linguistic environment than Santo whose basic variety served him well. Andrea was pushed to grammaticise by the communicative limitations of the basic

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variety and his need to approximate the target language more closely.

These findings are neither astounding nor unexpected, but the pedagogical implications for second language teachers are clear: to move beyond a fossilised basic variety learners need to perceive a need, relevance and meaningfulness in the target language in circumstances that demand extension of their communicative abilities. This is what the consciousness raising intervention programme described in Chapter 3 attempts to do.

Perdue and Klein (1992) do not indicate at what point a learner might begin to grammaticise, what structures may be defined as morphosyntactical grammaticisation, nor when such a process may be considered completed. Perdue and Klein (1992) also do not explain how the process of grammaticisation may be interrelated with semantics and pragmatics. These are the questions addressed by Dittmar (1992:249,250).

If grammaticisation, by definition, means to "grammaticalize the juxtaposition of L2 words in their utterances" (Dittmar 1992:250), then the simple juxtaposition of two or three words in a learner's initial basic variety should be regarded as syntacticised. This means that once a learner has produced a string of two or three words, this constitutes the beginnings of grammaticisation, even though the form may be non-target-like. The implication of Dittmar's view is that a second language learner's grammaticisation should be viewed on a continuum with a fuzzy beginning and end rather than as a clearly demarcated process. It is a multilevelled process (Ramat 1992:300) of transition from a pragmatic mode of communication to a syntacticised mode of communication. Grammaticisation is neither a theory nor a model of linguistic analysis, according to Dittmar (1992:251) but

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a research program that tries to describe the dynamics of linguistic evolution, change, or acquisition by examining the interaction of grammatical processes with semantic and pragmatic factors and to explain this interaction in functional terms (competition of forms, communicative needs, input resources, motivation, style, to name only a few).

In terms of Slobin's (1991:12) view, the learner acquires "particular ways of *thinking for speaking*" which is more than learning to map meaning to new forms; grammaticisation is the acquisition of general grammatical meanings that

apply across all possible lexical contents, putting the specific content ... into a framework of temporal and spatial relations, modality, voice, illocutionary force, and so forth (Slobin 1991:7).

Slobin's definition strengthens the description of SLA from a functional perspective. If it is function that drives the acquisitional process rather than syntactic properties, (Klein 1990:229), and new morphosyntactic forms adjust to already-known functions (meanings), it is predictable that such adjustments (restructuring and reanalysis) would cease at the point where functions suffice in the learner's needs. This prediction was also made by Perdue and Klein (1991:271). If functional need is the factor determining whether grammaticisation processes continue or cease, how would form-focused instruction affect grammaticisation?

The effect of form-focused teaching on grammaticisation

Lightbown and Spada (1990:443) state that differences that they found in an investigation of the effects of form-focused teaching and corrective feedback are related to the type of instruction provided. This instruction was provided in the context of teaching programmes that were based on communicative language teaching principles. In this investigation, teachers never taught

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"grammar lessons" or rules, but tended to react to errors and difficulties as they arose. Such a pedagogical technique, according to Lightbown and Spada (1990:443) is in accord with the notion that learners can benefit from consciousness raising techniques (Rutherford 1987; 1988; Rutherford & Sharwood Smith 1988). The group of students that had received the most form-focused attention had better accuracy levels than any one of the other groups. Lightbown and Spada (1990:443) hypothesise that "form-based instruction within a communicative context contributes to higher levels of [linguistic] knowledge and performance." According to Lightbown and Spada (1990:443) overall communicative skills are probably best developed through meaning-based instruction which provides guidance through *timely* form-focused activities and *correction in context*.

The last two points - timely feedback and correction in context - are supported by Tomasello and Herron (1989:392) in their investigation of the effects of the "Garden Path Technique" used with college students. According to their findings (Tomasello & Herron 1989:392) students learn best when they receive immediate feedback on their hypotheses because this creates "maximal conditions under which they may cognitively compare their own system to that of mature [L1] speakers."

It is suggested by the preceding comments that second language development - and in particular grammaticisation - benefits from focus on morphosyntactical elements - provided appropriate timing creates conditions for hypothesis-testing and subsequent reanalysis and restructuring. The notion of intentional focus by a teacher on a form implies, for the second language learner, consciousness of that form. The last question addressed in this section then is the role of consciousness in second language learning - a pivotal concept in this study of semantico-grammatical consciousness raising.

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The role of consciousness in second language learning

The crucial and often controversial questions relating to the notion of consciousness according to Schmidt (1990:129) are whether "conscious awareness at the level of 'noticing'" is necessary for language learning, whether it is necessary to 'pay attention' in order to learn and whether learner hypotheses based on input are the product of "conscious insight and understanding."

Schmidt claims that subliminal language learning, referred to as "preattentive selection" by Shiffrin and Schneider (1977:37), is impossible; "noticing is the necessary and sufficient condition for converting input to intake" (Schmidt 1990:129) which is that part - a linguistic form - of the input that the learner notices (Schmidt 1990:139; Van Patten 1990:287). This statement is not to be confused with the unsupportable traditional view that conscious study of grammar is either a necessary or sufficient condition for language learning. Conscious knowledge nonetheless has a role to play, as evidenced in the work of Rutherford (1987) and Rutherford and Sharwood-Smith (1985). According to these researchers consciousness raising - focusing learners' attention on the formal properties of language - facilitates grammaticisation and language learning.

Schmidt (1990:131) hypothesises that the notion of consciousness is useful because it ties together related concepts of attention, short term memory and controlled vs automatic processing. Schmidt claims that

conscious processing is a necessary condition for one step in the language learning process, and is facilitative for other aspects of learning (Schmidt 1990:131).

However, he assumes that both conscious and unconscious processes play a role in second language learning.

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Schmidt (1990:131,132) provides useful distinctions in the definition of **consciousness as awareness** which may have several levels of awareness (see Table 3.3, p.161). **Perception** (including subliminal perception), **noticing** (focal awareness) and **understanding** are three levels of awareness indicated. All cognition - problem solving as well as metacognition - goes on within consciousness (Schmidt 1990:132), but consciousness is not to be equated with knowledge without qualification. Knowledge can be conscious (explicit knowledge that is known) or subconscious (implicit knowledge of which a learner does not know). It may, for instance, be possible for learners to subconsciously abstract from a number of examples in input a set of implicit rules (Schmidt 1990:148). The explicit/implicit distinction is similar to the distinction between declarative knowledge (**knowledge that** on a continuum of analysed to unanalysed knowledge) and procedural knowledge (**knowledge how**, that varies on a continuum from controlled to automatic) (see pp.52 and 71).

Schmidt (1990:149) suggests that in theories of parameter setting (see p.105 of this study) "triggers" required to set parameters in the second language have to be noticed consciously. Schmidt (1990:149) hypothesises that paying attention to language form is facilitative in all cases and may be necessary for adult acquisition of redundant grammatical features such as the 3rd person singular [present tense] marking of verbs. Distinctive features, on the other hand, determine meaning which is what is initially learnt. However, the dilemma of the early stage and intermediate second language learner, according to Van Patten (1990:287) is having to attend to meaning of the content and grammatical form simultaneously. Van Patten (1990:295) furthermore suggests that as input becomes comprehensible (meaning is learnt), available conscious attention and effort are not necessarily released for focusing on form. According to Schmidt (1990:150), investigators have undervalued the role of consciousness in language learning and suggests that learner

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awareness may be profitably researched. At this point a brief reconsideration of the hypotheses of this thesis (see p.29 of this study) within the context of the literature reported in this chapter is indicated.

2.7 THE CENTRAL HYPOTHESIS: ARGUMENTS FOR AND AGAINST

The central hypothesis states that consciousness raising procedures will help to defossilise interlanguage structures in the second language of teacher trainees. The views cited in section 2.5.2 proffer arguments that would support such a hypothesis as well as positions that express opposing views. Pertinent to the central hypothesis, crucial issues addressed in sections 2.4.3 and 2.5.2 relate to the question whether fossilised structures can be destabilised and how such change might be achieved, how processes of grammaticisation might be reactivated, whether language acquisition is facilitated by innate language acquisition mechanisms, and if so, whether adult learners can still avail themselves of innate linguistic knowledge.

One of the basic issues considered is the immutability of fossilised structures (Selinker 1972:215) and the "near-universal failure" of second language learners to achieve second language acquisition success (Rutherford 1989:442; Selinker & Lamendella 1987:152; Lauerbach 1977:211; Seliger 1979:361). Acton (1984:82) and Johnson (1992:180) suggest that defossilisation is possible. Some researchers approach fossilisation from sociolinguistic perspectives that attribute fossilisation to external rather than internal variables and focus on process rather than product. Researchers such as Schumann (1978a); Tollefson & Firn (1983); Vigil & Oller (1976); and Gergen (1990) concede, albeit implicitly in some instances, that fossilisation may be reversed, should changed external variables extend the learner's language

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requirements (cf. Corder 1981:90). Any intervention programme addressing fossilisation would have to take cognisance of this view. In the light of support in the literature for the possibility of defossilisation it seems justified to expect a positive outcome of the experiment and therefore to posit a one-tailed hypothesis, given that the condition of increased communicative pressure has been met in the intervention programme described in Chapter 3.

The second important consideration relating to the central hypothesis concerns the possibility of reactivation of grammaticisation processes. Grammaticisation implies the restructuring of existing internalised forms, that is the reanalysis of earlier grammatical phenomena (Rutherford 1987:10). For restructuring to happen, the learner needs to have processes under attentional control. Once processes have become automatised, forms become internalised, and quick production is possible without the need of conscious focus on forms. This is not to say that attentional control is not possible for production - it simply is no longer necessary. Control before and after automatisation seems different in a fundamental way, however. Control before automatisation allows the learner to adjust hypotheses and restructure forms, whereas control after automatisation does not seem to allow the learner this ready adaptability. Once learned, an automatic process occurs rapidly and is difficult to suppress or alter (Schneider & Shiffrin 1977:51), but modification of learnt structures is not completely excluded, according to these researchers (see 2.3.3, p.70, 71). Their position supports the expectation indicated in this study that change is possible and that consciousness raising procedures may precipitate processes of reanalysis and restructuring, thus destabilising interlanguage fossilised structures.

2.8 SUMMARY

I have argued for the need for change in ESL primary school teacher training. These arguments, supported in the literature discussed in this chapter, seem justified. The brief review of the development of SLA theory over the last two decades places the current study in a historical and psycholinguistic context. Psycholinguistic issues pertinent to fossilisation and interlanguage reported in the literature are considered with reference to the hypotheses of the study, providing support for the position taken in this study that consciousness raising procedures might be expected to precipitate a reanalysis of automatised fossilised structures. An examination of the relevant psycholinguistic issues also reveals opposing positions in respect of the purported immutability of fossilised structures. An attempt has been made in this section to arrive at a reevaluation of the psychodynamics of fossilisation.

The subsequent section explaining the dynamics of consciousness raising in the context of the literature focuses on concepts of grammaticisation, learnability and semantico-grammatical distance - all issues of crucial importance in this study. The discussion of the principles of Cognitive Theory and related cognitive issues attempts to justify the assumptions relating to automaticity and control made in this study.

In the last section of this chapter several research studies are reviewed. An empirical research study relating to the application of consciousness raising strategies to destabilise fossilised structures is considered. This research led Selinker and Lakshmanan to principled statements relating to multiple effects in the process of fossilisation. A counter-position is formulated in this study in terms of Selinker and Lakshmanan's (1992) MEP. Many researchers concur that fossilisation is irreversible, whereas the findings of other research studies focusing on the

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destabilisation of fossilised structures suggest that the purported immutability of fossilised structures is not a foregone conclusion. A review in the context of the literature of the central hypothesis postulating a positive relationship between consciousness raising procedures and the destabilisation of fossilised structures, concludes this chapter.

The following chapter describes the research design of the study set up to investigate this hypothesis.

3. RESEARCH METHODOLOGY

*In research the horizon recedes as we
advance
...and research is always incomplete.*

Mark Pattison 1813-1884

3.0 PREVIEW

The main objectives of this chapter are to

- **describe the design** of the experiment to test whether fossilised subject-verb agreement (concord) and tense structures may be destabilised and processes of language development reactivated in a multilevelled semantico-grammatical consciousness raising intervention programme.
- **describe the structure and explain procedures** used in the intervention programme;
- **justify experimental approaches** taken;
- **relate research questions and hypotheses** to the research design;
- **present variables, subjects, methods and materials** in detail to facilitate replication of the study;
- **indicate analyses of tests.**

The **variables** of the study are addressed in section 3.1. The independent variable (consciousness raising) and the dependent variable (fossilised structures) are defined operationally and extraneous variables are identified and discussed.

Section 3.2 **locates the experiment** in place and time and categorises the type of research. Research limitations concerning

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generalisability of the findings are related to the universality of the identified problem and the comparability of linguistic potential.

In section 3.3, a description of the **subjects** and selection procedures suggests that the results may be generalisable to a larger population than the sub-population from which the test subjects have been drawn. The approach taken in this study is justified as far as possible.

The **treatment**, an intervention programme consisting of seven units, is described and explained in section 3.4. A comprehensive presentation of one intervention programme unit illustrates the content, structure and procedures of the intervention. This section concludes with an explanation of the four consciousness raising techniques and their application procedures.

The **materials** used are described in section 3.5. The Academic Achievement Test: English Second Language used in a preceding exploratory investigation is briefly considered. The pretests and posttests as well as the teaching materials are then described in detail.

The description of the materials is followed by an explanation of the **data** collection procedures in section 3.6. Issues relating to the degree of explicitness, multiple data collection procedures, reliability and validity are discussed.

Section 3.7 deals with matters relating to **measurement**: the test variables, assumptions and analyses of the tests. The obligatory contexts of various verb structures are identified and the five comparisons of the results indicated. A summary of the issues discussed in this chapter is presented in section 3.8.

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Before briefly reviewing the main variables which were described in Chapter 1 (see p.30), the central hypothesis is stated formally:

- H₁** There is a positive relationship between the application of multilevelled semantico-grammatical consciousness raising procedures and the destabilisation of fossilised structures.
- H₀** There is no relationship between the application of multilevelled semantico-grammatical consciousness raising procedures and the destabilisation of fossilised interlanguage structures.

3.1 THE VARIABLES OF THE STUDY

The independent variable, semantico-grammatical consciousness raising, the dependent variable, fossilised structures, and the extraneous variables that pertain to the study are considered next.

3.1.1 Independent variable

Semantico-grammatical consciousness raising procedures constituting the independent variable of the study are applied in a range of four consciousness raising approaches:

- cognitive consciousness raising
- grammatical consciousness raising
- consciousness raising in pedagogical application
- self-monitoring consciousness raising (cf. 3.4.4, p.162).

3.1.2 Dependent variable

Fossilised verb structures, the dependent variable, is operationalised on an interval scale. The number of fossilised verb errors produced in each test are counted. These raw scores indicating the frequency of fossilised verb errors are reflected as a percentage of the total number of obligatory contexts (see 3.7.4, p.187) identified in each test of every subject. The

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control group and the experimental group are tested in four pretests and four posttests to indicate gain or change in the dependent variable, if any. The null hypothesis that the means of the experimental and control groups would be equal at $\alpha < .05$ is tested by means of a one-tailed mean comparison of the gain scores, using the t-test.

3.1.3 Extraneous variables

In classroom language research which uses naturally occurring groups, it is notoriously difficult to control extraneous variables. In this study it was considered that advantages relating to the pedagogical usefulness of findings that derived from natural, authentic language data outweighed considerations of artificial experimental circumstances. The object of this study constitutes by implication the search for a feasible teaching procedure that may address the problem of fossilised structures and also have teaching value in the primary school classroom. The relevance of natural data was therefore preferable to data produced in artificial circumstances.

The following nine extraneous variables identified are considered in terms of controllability and relevance to the outcome: age, gender, study course, disparate first languages, Afrikaans first language, socio-economic background, schooling, motivation, and attitude to the experiment.

- (1) **Age:** Subjects' ages range between 17 and 21 years. This small age difference was not regarded as significant in terms of language development. This variable was therefore not considered as one that might affect the results.
- (2) **Gender:** Members of both sexes are represented in the test groups. Although the possibility of gender differences affecting second language permeability may exist, the small

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size of the test groups precluded the possibility of controlling for this variable.

- (3) **Study course:** The experimental group and the control group were enrolled for different courses. This difference was not expected to affect the results as the research was done at the beginning of the first academic year before the content of the various courses could have affected the outcome.
- (4) **First language:** The first language of all except two English-speaking subjects is Afrikaans. Although the two subjects, both in the control group, were not excluded from writing the pre- and posttests, their results were ignored in the analysis. Their presence in the control group was not considered to have any effect on the outcome of the experiment.
- (5) **Genetic relatedness:** As English and Afrikaans are genetically related (Fromkin & Rodman 1978:343,344; Donaldson 1988:50,51), any effect of the consciousness raising procedures may be facilitated by such relatedness. However, any purported effect would remain speculative until the experiment could be repeated with speakers of non-related languages. This variable may have implications for the generalisability of the findings to speakers of other first languages.
- (6) **Socio-economic background:** All subjects have similar backgrounds in terms of their socialisation, world knowledge and schooling. This variable was therefore not considered to have any potential effect on the results.
- (7) **Schooling:** All the subjects attended either Afrikaans medium or parallel medium (English and Afrikaans) primary

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and secondary schools. As all subjects communicated quite readily in classroom interaction, this slight difference in schooling background seemed negligible. This variable was therefore not regarded to have any potential effect.

- (8) **Motivation:** In the spontaneous writing test which formed part of the pretest, subjects demonstrated high motivation for their chosen career. Although motivation was not tested in any rigorous sense, it was not expected to affect the outcome of the result. This variable, however, could be expected to dispose the subjects favourably to the assignments set during the experiment, thereby possibly invoking something similar to the Hawthorne effect (Brown 1988:32).
- (9) **Attitude to the experiment:** As the subjects could not know that they were part of an investigation, the Hawthorne effect (Brown 1988:32) could not apply. The Hawthorne effect operates when subjects, very aware of being singled out to be part of an experiment, apply themselves more rigorously because they are eager to please the researcher. Such an attitude may bedevil the outcome of an investigation. This variable was not expected to affect the results of this study.

3.2 LOCATION, LIMITATIONS AND TYPE OF RESEARCH

3.2.1 Location

In order to test the hypotheses of this study, an experiment involving first-year teacher trainees exhibiting fossilised structures was undertaken during the first ten weeks of the academic year. This experiment followed on an exploratory investigation done at the beginning of the previous year and which provided valuable input for the design of the new study.

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The new experimental group was subjected to a matched pre- and posttest, and a multi-levelled intervention programme of seven Units employing consciousness raising procedures (see Table 3.2, p.151). The research was done at one particular college of education during normal lecturing time covering part of the set syllabus, but the experimental procedures were presented to the experimental group in lieu of the conventional instruction given to the control group. The limitations of this research are discussed in the next section.

3.2.2 Research limitations

Dictated by practicality considerations, the unavoidable selection of a naturally occurring group research design gave rise to predictable design limitations which needed to be addressed in order to improve the validity and generalisability of the findings.

The major negative implication of naturally occurring groups such as the predetermined course groups used in this study, is that such groups are not statistically representative of the population in the sense that groups randomly selected from the total population would be. Specific limitations relating to issues of validity and generalisability were identified and these weaknesses were addressed as far as possible.

The first limitation affecting generalisability relates to the **universality of the identified problem**: did the problem of production of fossilised structures also pertain to other colleges of education? The second limitation concerns **comparability of grammatical proficiency and accuracy levels**: were students at colleges of education on a comparable linguistic level?

Universality of the identified problem

It was necessary to establish whether the problem identified at the particular college of education where the experiment was to be done was widespread enough to warrant investigation. Furthermore, universality of the problem would give the natural test groups a measure of representative status. In order to determine whether the problem of production of fossilised structures manifested at other colleges, two tests were given to randomly selected test groups at seven colleges of education in three different provinces. As the test was constrained in terms of specific verb structures the subjects could be expected to produce, these elicitation procedures were classified as tests rather than tasks in terms of Corder's definition (Corder 1981:61). The first test was a spontaneous writing test on an educationally related topic with which all subjects would be equally familiar, requiring statements about past, present and future time. These data were analysed for production of interlanguage verb forms. The second test was an informal taped interview which had the same constraints requiring testees to use particular verb forms; the topic of discussion once again related to education. The purpose of the taped version was to provide possible corroboration of the written data. Control of the second test proved to be extremely difficult as some subjects experienced the taped interview as traumatic. In other instances political commemorations interfered with the testing. The oral data were therefore disregarded despite the limiting effect this would have on results deriving from the written data only.

Comparability of linguistic ability

If correlation of linguistic ability could be shown across a representative sample drawn from several colleges of education, generalisability of the results would be improved. It was therefore necessary to determine whether students at colleges of education were on a comparable level linguistically. *The Academic Achievement Test: English Second Language of the Human Sciences*

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Research Council (1989) was administered to the same randomly selected groups mentioned above. This test has the limitation that it has only been standardised for a section of the population to the exclusion of groups outside the white population group - a limitation that did not affect this study. The spontaneous writing test would be used to corroborate such the findings of the achievement test. The achievement test was only used in the preceding investigation, not in the experiment proper. The achievement test was regarded as a control factor to improve generalisability of the results of the current study.

3.2.3 Type of research

The research of this study is primary applied linguistic research (Brown 1988:1) in natural circumstances because issues relating to SLA are investigated and the results of the study have decided pedagogical implications. The focus of the study is psycholinguistic as issues relating to acquisition (fossilisation) are investigated.

The research design of this study falls in the category **quasi-experimental, analytic** and **deductive**. As the control and experimental groups are naturally occurring groups to which subjects have not been randomly assigned, the research is classified as quasi-experimental rather than experimental (Larsen-Freeman 1991:20). The research is also approached analytically as it focuses on a single factor: fossilised interlanguage structures (Seliger & Shohamy 1989:27). The research, furthermore, is hypothesis-driven and is therefore considered to have deductive objectives (Seliger & Shohamy 1989:30).

A pretest / intervention programme / post-test procedure was used with the experimental group whereas the control group was subjected to only the pre- and posttests with conventional teaching of the verb system between tests. It was indicated in

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the previous section how the limitations imposed by natural grouping, which is the only factor militating against true experimental status of the design, were addressed in the research. On a qualitative-experimental continuum the design would therefore be very close to the point of a true experimental design. The components of the experiment are considered next.

The basic components of the experiment (cf. Seliger & Shohamy 1989:136) are

- **the population:** first-year teacher trainees at colleges of education;
- **the treatment or intervention:** application of consciousness raising procedures;
- **measurement of the intervention:** the effect of the application of consciousness raising procedures to the production of fossilised structures.

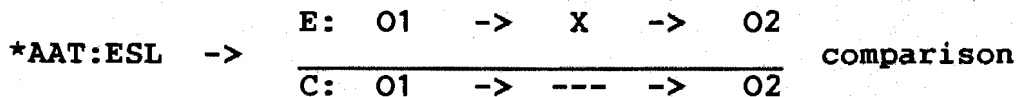
The first two components (population and intervention) are discussed in this chapter. Measurement of the intervention will be described in Chapter 4 which deals with the data analysis and statistical procedures.

Using the symbols of Campbell and Stanley (1963), the research design may be summarised as follows (see *Fig. iii* below):

Application of *Academic Achievement Test: ESL* and spontaneous writing to determine basic levels of comparison, is followed by pretests measuring the dependent variable (fossilised structures, O1) given to the experimental group (E) and the control group (C). The experimental group is subsequently subjected to a 7-unit intervention programme using consciousness raising procedures (independent variable, X), while the control group is exposed to the same content material presented by means of a conventional teaching approach (see 3.4.2, p.149 for a detailed description

of procedures followed in the intervention programme). Both groups are subsequently subjected to posttests matched to the pretests (02).

Fig. iii Research components



* Academic Achievement Test: English Second Language

The first component concerning the population is discussed in the next section.

3.3 DESCRIPTION OF THE SUBJECTS AND SELECTION PROCEDURES

Prevailing circumstances relating to student availability, time and distance constraints, and disruption of lecturing schedules militated against the selection of a representative sample from the total population of first-year teacher trainees at colleges of education across the country. The use of a quasi-experimental design with natural test groups was therefore unavoidable, despite the expected limitations (see 3.2.2, p.143).

The sample consisted of two naturally occurring groups of first-year teacher trainees at one college of education, constituted according to their choice of study course (see 3.1.3 (3), p.141).

3.3.1 Experimental group

The experimental group consisted of 11 subjects. Their ages ranged from 17 to 21. All were members of the middle class white population group, speakers of Afrikaans as a first language and had received a minimum of 10 years of ESL instruction at government primary and secondary schools using syllabi based on

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the same core curriculum. All were enrolled in the Senior Primary Education Course.

3.3.2 Control group

The control group consisted of 9 subjects. The extraneous variable of gender differences has already been discussed (see 3.1.3 (2), p.140). The control group was enrolled in the Secondary Education Course. This extraneous variable has already been explained (see 3.1.3 (3), p.141). The control group was on a par with the experimental group with respect to all other variables mentioned in 3.1.1, although strict matching was not possible.

3.4 DESCRIPTION OF THE INTERVENTION PROGRAMME

The second component of the research concerns the treatment to be administered.

3.4.1 Content of the intervention programme units

The treatment consists of a set of 7 units designed to employ consciousness raising strategies in areas identified in the pretests as problematic, that is areas in which fossilised structures were found.

Unit 1: Subject-verb agreement; present simple tense

Unit 2: Present simple tense; present continuous tense

Unit 3: Past simple tense; past continuous tense

Unit 4: Past simple tense; present perfect tense

Unit 5: Present perfect tense; present perfect continuous tense; past simple tense; present continuous tense

Unit 6: Present, past and future simple tense; present and future perfect; present and future perfect continuous tense

Unit 7: Past simple and present perfect tense; past simple and past perfect tense

3.4.2 Structure and procedures of the intervention programme units

Unit 2 is presented as an example as it best illustrates the various aspects of the intervention programme. Table 3.2 represents the structure of Unit 2 (cf. Unit 2, Appendix ii, p.354 for materials used), summarising the learning content, meaning base, that is the context, activities and tasks, consciousness raising techniques employed, cognitive processes involved and the focus of the teaching which is expected to be affected. Table 3.1 below explains the terms used in Table 3.2. The procedures followed are indicated subsequently.

At this point it may be expedient to differentiate clearly between a **consciousness raising approach**, a consciousness raising **strategy**, and a consciousness raising **technique**. A consciousness raising **approach** to language teaching relates to the general way in which the language teaching is organised, that is, the general teaching method. A consciousness raising **strategy** relates to the plan of action relating to a particular language teaching point. Consciousness raising **techniques** are the means whereby the plan of action is executed, that is, the particular highlighting conventions in a text, activities and procedures designed to promote consciousness raising. Textual highlighting conventions such as dots, underlining, bold underlining, wavy underlining and letters in bold face are used to facilitate the noticing of particular structures and patterns (see Table 3.1, p.150).

Table 3.1 Explanation of abbreviations, terms and symbols used in UNIT 2

semantic field:	context of the text
non-linguistic cues:	non-verbal semantic cues
verbal prompts:	instructions within text
visual cues:	pictures presented on overhead projector
event NOW:	event in the present time
pres:	present
cont:	continuous
progress:	progressive
V:	verb
Q:	question
A:	answer
= :	is the same as
verb stative:	<u>v e r b</u>
verb active (single event):	v e r b .
verb active (habitual event):	v e r b • • • •
verb progressive aspect:	v e r b ^ ^ ^ ^ ^ ^ ^ ^
verb underlined	<u>v e r b</u>
verb in bold face	v e r b

Table 3.2 Structure of UNIT 2

Content: Present simple tense (pres simple);
present continuous tense (pres cont)

CONTEXT	semantic field: situation: non-linguistic cues:	geometric shapes playing a game two games
---------	---	---

TEXT	format: linguistic structures:	dialogue pres simple pres continuous
------	-----------------------------------	--

ACTIVITIES	<ol style="list-style-type: none"> 1. role-play: participation 2. verbal prompts: interacting with test 3. questions: responding to text 4. visual cues: spontaneous writing 5. making inferences 6. forming hypotheses 	
------------	---	--

C-R TECHNIQUES	PROCESSES	EFFECTS
1. VERBS (pres simple) underlined	associating comparing	1. V stative + pres simple
2. VERBS (pres cont) in bold face	associating comparing	2. V progress + pres cont
3. structures of dialogue responses prompted	analysing analogies	1. V (tense) Q= V (tense) A
4. stative V symbol	comparing associating categorising generalising identifying	1. V stative + pres simple 2. event NOW + pres tense
5. progressive aspectual symbol		1. V progress + pres cont 2. event NOW + pres tense

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The following procedures are used in the presentation of each unit, with the exception of units 6 and 7 which constitute consolidation of the treatment. To illustrate the procedures, the presentation of Unit 2 in the experiment is described in detail below. The actual presentation of the intervention programme during the experiment is discussed in Chapter 6.

Procedures of UNIT 2

Continual reference to Unit 2 contained in *Appendix ii* (see p.354) would help to exemplify explanation of the procedures.

Place: Ordinary lecture room

Time length: Two separate sessions of 40 minutes each

Size of experimental group: 10 subjects (one subject deregistered during the course of the experiment.)

Procedures: The procedures are divided into two sessions and presented in 6 stages. Each step indicates the researcher's input and the subjects' reactions. The rationale of the different consciousness raising strategies used is explained in 3.4.3 (p.158).

SESSION 1: 40 minutes

STAGE 1

Warm-up activities which act as a cognitive "tune-in" make subjects aware of particular thinking processes.

Time: 12 minutes

Materials: Copies of the two games. Each pair of games is numbered according to the numbers assigned to each subject.

Step 1: Subjects place themselves so that they can work in pairs. The pairs are kept constant during one unit but may change between units.

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Step 2: All materials are initially with the researcher who will hand them out as they are required. The researcher role-plays the dialogue (lines 1 - 29) engaging subjects in dialogue. As subjects do not respond with the exact words used in the text, slight adaptations are necessary, but the gist remains the same. The researcher holds up the actual game sheets of Unit 2 during the dialogue, pointing to the shapes referred to. During the role-play the researcher uses the actual names of the subjects instead of the names in the text, and refers to "students" instead of "pupils", as in the text.

Step 3: When line 9 is reached, loose copies of the two games are given to one subject to hand out to each subject in the group. The semblance of normal class procedures is maintained as far as possible. Subjects must remain unaware of being part of an experiment.

Step 4: The researcher now continues to explain how the first game is to be played. The word *game* is used in preference to *task* or *activity* in an attempt to minimise negative affect arousal deriving from resistance or fear. The underlying assumption here is that, as in the case of younger learners, a task perceived as "play" rather than "work" is less likely to cause negative feelings (Duminy & Söhngé 1980:53), which, according to Dulay, Burt and Krashen (1982:4) raises the Affective Filter purported to "control entry to further mental processing" (Dulay et al. 1982:4).

The first game is a non-verbal task involving cognitive strategies of analysis and comparison. Subjects are required to match the numbered shapes outside the rectangle to the corresponding shapes in the rectangle. Incorrect numbers appearing in the rectangle are to be crossed out,

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and the numbers provided on the shapes outside the rectangle written on the corresponding shapes within the rectangle. After the researcher's words "Now start the game" (line 29), subjects commence with the task.

Step 5: At this point, subjects, without their realising it, have become an integral part of the role-play activity. While subjects are engaged in the task, the researcher communicates with different subjects in turn, asking questions and attempting to elicit expanded responses requiring present simple continuous and present simple verb structures (lines 30-41).

Step 6: After line 41 the second game, which is a non-verbal task requiring cognitive strategies of analysis, comparison and synthesis, is explained (lines 42-50). Subjects have to combine a shape from the first column with a shape from the second column to get the shape at the top between the two columns. The researcher helps subjects to do the first item and the answer is indicated on the line provided as 1+b.

Step 7: Subjects commence with the second game after line 50 and independently and individually complete items 2 - 6 while the researcher once again attempts to elicit expanded responses containing present continuous and present simple verb structures (lines 51-63).

STAGE 2

Unanalysed input is provided by means of a contextualised text.

Materials: Numbered copies of Unit 2 containing the text and tasks, transparency 1, screen and overhead projector.

Time: 13 minutes

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Step 8: The researcher stops the second game and collects all the game sheets. The researcher hands a copy of the text and verbal tasks of Unit 2 to each subject.

Step 9: Subjects read the text and respond to the questions in writing (lines 1-63). These are the same questions to which subjects had responded orally in STAGE 1.

Step 10: For the next task, a transparency with six line drawings depicting present simple and present continuous tense situations is projected on the screen. Subjects react to the picture stimulus in writing by supplying suitable words for the empty bubbles and, in the case of numbers 1.5 and 1.6, describing each event depicted. This task requires application of the previously used verb structures - present simple and present simple continuous tense - which have up to this point not been consciously identified. This is done in the next stage.

STAGE 3

Input analysed by means of semantico-grammatical consciousness raising techniques. The researcher acts as facilitator.

Materials: as before

Time: 15 minutes

Step 11: The researcher explains the highlighting conventions to differentiate three types of actions in present time:

- single event at a known time;
- habitual event;
- continuous (ongoing, progressive) event.

The verbs in paragraph 2 (p.3 of Unit 2) are highlighted using the highlighting conventions, with the researcher acting as guide and facilitator.

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Step 12: Subjects attempt to identify the learning content provided in the text at the beginning of Unit 2 and respond to questions requiring analytical examination of the verb structures in the text. They also attempt to arrive at generalisations inductively by focusing on **bolding** and underlining of regularities in the text.

Step 13: The researcher collects all the materials and dismisses the subjects. The materials are filed individually in corresponding numbered files containing the completed materials of Unit 1.

SESSION 2: 40 minutes

STAGE 4

Review of items studied. Lecturer mediates learning.

Materials: Transparency 2, screen, overhead projector

Time: 10 minutes

Step 14: Subjects seat themselves as before. The verb structures present simple tense and present simple continuous tense are reviewed. Transparency 2 containing a set of line drawings reflecting seven situations are used as visual stimulus. Subjects react to the visual stimulus (1) by responding to the question "What is Jack doing?" and (2) by beginning their answers with "Jack always...."

STAGE 5

Simulation of a teaching situation by means of a **teach-back procedure** (see p.359 of *Appendix ii*) which constitutes an application of teaching points (items studied). Subjects engage

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in written simulated teacher-pupil interaction, that is written dialogue.

Materials: Numbered copies of Unit 2 previously used

Time: 20 minutes

Step 15: Subjects engage in a simulated teaching situation (teach-back). They work in pairs with members taking the roles of teacher and pupil respectively. They engage in a written conversation on their respective response sheets on which the speech turns are indicated numerically. The "teacher" explains the game played at the beginning of the first session to the "pupil" who responds appropriately to teacher's input. Subjects attempt to incorporate as many of the teaching points listed as possible (that is, items to be taught), eliciting structures by asking suitable questions. The teaching points are taken from the learning content of Unit 1 as well as Unit 2.

Step 16: After 10 minutes the pairs change roles and repeat the exercise.

STAGE 6

Members of the group **monitor the grammatical accuracy** of the oral presentation while the written dialogue done in the teach-back is read to the group by each subject.

Materials: As before

Time: 10 minutes

Step 17: Pairs take turns to read their dialogues to the rest of the group. Subjects listen carefully to the verb structures used, monitoring the reader all the time for form and appropriacy. **Form** here relates to issues of well-formedness, that is the formal grammatical criteria which identify linguistic units (Crystal 1980:149), and

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appropriacy to the suitable matching of a verb form to a particular social situation or type of event (Crystal 1980:29). When an incorrect or inappropriate form is encountered, the subject concerned is corrected.

Step 18: The researcher collects all the materials and dismisses the subjects. The numbered copies of Unit 2, now completed, are refiled for future examination in the respective files of the experimental group.

3.4.3 Rationale of the intervention programme procedures

All the components of the intervention units serve to promote some aspect of consciousness raising, so that consciousness raising becomes the central pedagogic strategy used throughout the intervention programme. The different aspects of consciousness raising may be explained along a **continuum of increasing consciousness** in paragraphs (1) to (6) (see Table 3.3, p.161).

(1) Establishment of thinking pattern

Warm-up activities based on aspects of Feuerstein's Instrumental Enrichment Programme (FIE) are designed to "trigger reflective insightful thought processes" (Feuerstein, 1997:115) and develop problem-solving skills which may subsequently be transferred to new learning situations (Feuerstein 1980: xv). The FIE programme claims to modify cognitive structures of adolescents.

Structural change, according to the claims of the FIE programme, relates to the individual's manner of interacting with and way of responding to sources of information. The intervention programme aims to change the way in which learners respond to and interact with second language information by developing a consciousness of particular linguistic aspects. The rationale of commencing with non-linguistic consciousness raising activities is to avoid pre-empting an awareness "shutdown" in respect of

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fossilised structures. Learners are typically not aware of fossilised errors and are not able to correct them, that is the structures are no longer unstable and changeable. This position is consistent with Shiffrin and Schneider's (1977:51) claim that "[a]utomatic processing operates independently of the subject's control." To the extent that the warming-up activity aims to prompt the learner to look again by examining structures consciously using particular cognitive strategies, the pre-exercise constitutes a form of consciousness raising. Shiffrin and Schneider (1977:51) hold that an automatic sequence can elicit attention "if training is appropriate" that is when stimuli are consistently mapped to responses.

More detailed discussions of the relationships that may exist between particular warm-up activities and SLA strategies are presented in 3.4.4.1, p.162.

(2) Unanalysed subliminal language stimulus

The unanalysed text is presented in a meaningful context. Meaningful in this case is seen in terms of "meaningful for a teacher of ESL". The text represents a meaningful context for the teaching of language. The text not only contextualises subsequent consciousness raising activities but provides a useful context for the teach-back procedure at the end of the programme. The meaningful context comprises the semantic component of semantico-grammatical consciousness raising activities.

(3) Gradual awareness growth

A variety of consciousness raising techniques is used in the intervention programme. A detailed description of the different techniques as they are applied in each unit is presented in 3.5.4. As indicated before, the aim of consciousness raising procedures is to induce "thinking about thinking", that is metacognition. In the case of consciousness raising in language the aim would be to induce "thinking about linguistic

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abstractions", that is to "raise" thinking about language to a level of consciousness so that the subject becomes aware of the linguistic forms being used, in other words, has **metalinguistic consciousness**. At the same time, the meaningful context must act as a baseline facilitating form and meaning links, so that the subject becomes conscious of the semantic significance of grammatical forms. In this study the term **semantic significance** is used to refer to the semantic quality inherent to the grammatical structure. The term is furthermore preferred to semantic **salience** which refers to the learner's perception of a structure. Consciousness raising techniques thus serve to bridge the distance between meaning and target language form, that is the indirectness of target language form-meaning relationships, brought about by processes of grammaticisation. With interlanguage, "it is the language *form* that is ... grammaticised, and it is the language *function* [meaning] that remains fairly constant" (Rutherford 1987:41, my emphasis).

(4) Conscious analysis of structures

The review procedures focus on the items dealt with during the previous analytical stage. This procedure serves to extend conscious focusing on the relevant linguistic items and reinforces retention while filling possible gaps in understanding. The review procedures constitute consciousness raising strategies to the extent that conscious focus on particular linguistic items is required. At the same time the lecturer/investigator acts as a mediator guiding thinking and understanding and so promoting learning. A mediated learning experience is the way in which "stimuli emitted by the environment are transformed by a 'mediating' agent" (Feuerstein 1980:15.16).

(5) Conscious application of structures

The subsequent teach-back procedures constitute a contextual application of the linguistic forms dealt with earlier in the

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unit, as well as an opportunity to engage in a simulated teaching situation. In order to "teach" the "teacher" is required to focus consciously and analytically on the teaching points identified. This conscious focus constitutes another aspect of consciousness raising. Subjects are now expected to not only think about linguistic forms, but to talk about them, explain them and apply them in a teaching situation.

(6) Monitoring of own and others' structures produced

Upon completion of the teach-back component, each subject reads back his/her writing aloud while the other members of the group monitor the written production for grammatical accuracy of VERB structures. Graphological inaccuracies are obviously disregarded and do not feature in the intervention programme at all. Phonological inaccuracies are only addressed where they may interfere with grammatical issues, such as the incorrect pronunciation of 'read' as [rid] in the past simple tense. Inaccuracies which do not relate to VERB structures are dealt with peripherally as they may occur and do not constitute a focal point at any time.

Table 3.3 Levels of consciousness

establishment of thinking pattern ->

unanalysed subliminal language stimulus ->

gradual awareness growth ->

conscious analysis of structures:

conscious knowledge facilitating understanding of:

- structural characteristics of subcomponents

- interaction of subcomponents

- relationship of structures to meaning base ->

conscious application of structures ->

monitoring of own and others' structures produced

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Monitoring, by its very nature, involves a deliberate conscious focus on the structures being monitored. A consciousness of rule structures is therefore implied. The fundamental claim of Krashen's Monitor Theory is that "conscious learning is available to the performer only as a **Monitor**" (Krashen, 1981:2). This claim may be too strong and it is likely that conscious formal knowledge may serve more than monitoring purposes, but the central issue here is that monitoring is made possible by our formal knowledge of language, our conscious learning, and in this way represents yet another aspect of consciousness raising.

3.4.4 Description of four consciousness raising techniques used in the intervention programme

The four consciousness raising techniques explained below are contained in the first five Units.

3.4.4.1 Non-linguistic warm-up activities: cognitive consciousness raising

The rationale of the non-linguistic warm-up activities is to create a cognitive climate involving analytical processes, thus paving the way for the next step: consciousness raising strategies involving similar analytical processes applied to a linguistic text. According to Feuerstein (1980: xv) learners are able to transfer cognitive strategies, once learnt, to other learning tasks requiring similar problem-solving strategies.

Although these activities, such as the matching-up activity of Unit 2, entail comparison on a very simple and superficial level, they invoke basic comparative principles which underpin the making of interlingual identifications in second language acquisition (Selinker 1992:28, 75). The subjects involved in this experimental programme are adult second language speakers manifesting varying levels of fossilisation in different linguistic domains. They would therefore not be expected to make

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interlingual identifications in the way that beginner learners would. Their current view of ESL is determined by their existing (fossilised) proficiency which largely precludes change. Only a different cognitive approach enabling them to see consciously and differently may lead them to make new inferences and change existing hypotheses. Unless fossilised structures are raised to consciousness in a way that will prompt the learner to re-examine the target language afresh, the central claim of fossilisation, "that there exist forms which will remain in learner speech permanently, *no matter what the learner does* to attempt their eradication" (Selinker 1992:252), will probably be borne out. Only parts (surface structures, deep structures, basic linguistic principles) which are consciously noticed by learners can become available for interlingual identifications. Second language learners cannot identify that of which they are not aware. It is in this respect that consciousness raising procedures differ from the traditional teaching of language rules, as in the grammar lessons presented to the control group where the learner is not a participant in the construction of those rules. Consciousness raising strategies enable learners to be participants in the learning process as they are guided to notice those elements that will lead them to reanalyse and reformulate their existing hypotheses.

The SLA task requires of the learner that, via bridging interlingual identifications, he access the target language for use. Interlingual identifications are dependent on identifying similarities between the native language and the target language.

3.4.4.2 Linguistic analysis: semantico-grammatical consciousness raising

The objectives of the application of semantico-grammatical consciousness raising techniques with second language learners who are not beginners and who have been using the same interlanguage forms for at least ten years, are somewhat

different in that they are designed to 'de-fossilise' the subjects, by

- motivating the subjects to *look again, afresh*, so as to become conscious of structures and their existing (erroneous) interlingual identifications;
- facilitating the making of new interlingual identifications related to structures raised to consciousness;
- re-activating processes of grammaticisation.

The assumed effect of semantico-grammatical consciousness raising is the meaning-form link formed in the place of the previous more direct interlanguage relation. The progressively increased levels of abstraction manifested by the seven units aim to facilitate learners' linguistic abstractions.

3.4.4.3 Consciousness raising in pedagogical application

The observation that a difficult issue is only fully understood once it has been explained to someone has often been made by teachers. The task of having to explain requires conscious effort to take the issue apart, that is analyse, compare, categorise, make inferences, generalise, hypothesise and even make analogies to facilitate one's own understanding and explanations to the learner. This is nothing less than a process of raising-to-consciousness those concepts that are a part of unanalysed subconscious knowledge.

When confronted with the teach-back task in the intervention programme, subjects are obliged to engage in selective, controlled (conscious) thinking strategies to deal with the task. In this sense, consciousness raising becomes an inevitable function of the teach-back activity, the pedagogical application of the intervention programme.

3.4.4.4 Self-monitoring as consciousness raising

Selinker (1992:57) maintains that the second language learner will not only cease interlanguage development but will cease the

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"process of comparing his current IL production with expected TL norms." This statement does not necessarily imply that fossilised learners do not monitor their output *in terms of what they know of target language*, but it does mean that they do not monitor their output in terms of target language norms. If "[a]wareness is the first step to correction and improvement of any skill" (De Bono 1967:8) and raising-to-consciousness of structures and linguistic principles implies new awareness of these issues, then selective self-monitoring tasks would serve to reinforce learning and create conscious focus on these issues. In this sense, focused self-monitoring tasks act as consciousness raising. According to Feuerstein (1980:135) "[t]he student learns strategies for the critical examination of his own work through the identification of errors and their source." In this way, errors are used "as a source of further learning" and confronting the learner with intentional errors provokes in him/her a "conscious critical approach" (Feuerstein 1980:135). The self-monitoring task in the intervention programme attempts to promote this kind of consciousness raising.

3.5 MATERIALS

The materials used in the exploratory investigation are the Academic Achievement Test:English Second Language (AAT:ESL) and a spontaneous writing test, similar to Test 1 used in the pretests. The materials used in the experiment consist of a set of four pretests, seven intervention units based on consciousness raising procedures and four posttests, matched to the four pretests. The pretests aim to establish the extent of fossilisation as indicated by the manifestation of fossilised structures in the data. The intervention programme constitutes the treatment which aims to create a consciousness of underlying processes and by extension also of fossilised structures (that is interlanguage structures identified in the pretests). Five

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consciousness raising strategies are applied in all except the last two units which consolidate most of the tasks done in the first five units. The set of four posttests aims to measure any interlanguage change that may have taken place.

3.5.1 Academic Achievement Test: English Second Language

The *Academic Achievement Test: English Second Language (AAT:ESL)* was applied to randomly selected first-year teacher trainees at seven colleges of education in three different provinces as part of the exploratory investigation preceding the research study. These results are presented in *Table 4.1* (see p.201).

The seven colleges were selected according to accessibility considerations rather than on a random selection basis. Proximity of colleges was an additional consideration due to the time constraints of the academic programme. Although it had been my intention to include more institutions functioning under the auspices of a more representative variety of Education Departments, this was not possible as some departments took up to eleven months to respond to my request for permission to run the tests.

Findings of the tests would be generalisable to a larger population if the subjects involved in the study could be regarded as representative of the population of first-year teacher trainees. This implication could be assumed if tendencies suggesting inadequate linguistic standards (see pp.40, 59 of this study) in the AAT:ESL tests were reflected in the results of the experimental and control groups.

The *Academic Achievement Test: English Second Language (AAT:ESL)* is a multiple choice test consisting of 60 items developed by the Institute for Psychological and Edumetric Research of the Human Sciences Research Council (1989) for the prediction of academic success at university. *Achievement* test is perhaps a misnomer as

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the purpose of the test is to predict future academic performance rather than to test what has been learnt in the past (cf. *diagnostic tests*, Duminy and Söhnge 1980:161). However, the researchers (Claassen & Vorster 1991:1) state that the validity of using academic achievement tests and achievement in the Senior Examination for prediction in a variety of university subjects was explored. Although the test had been intended for a university population, I regarded the test suitable for ascertaining comparability levels to serve as a point of reference in a first-year population at colleges of education. This seemed a reasonable position to take as the same criteria, that is school achievement figures, have always been used for admission to university courses as well as education college courses. Moreover, the HSRC researchers had found a significant correlation between the achievement tests and general academic performance (Claassen & Vorster 1991:12). In this study, the standardised test was merely used for purposes of comparison preceding the experiment.

3.5.2 Matched pretests and posttests

These tests consist of four components:

- Test 1:** Elicitation of fossilised structures: Spontaneous writing on a familiar topic to which subjects may be expected to relate. The topic is constrained by obligatory contexts determining the syntactic forms elicited in the test.
- Test 2:** Determining subjects' awareness of and ability to change their own errors: Self-monitoring and editing own writing produced in Test 1 in a separate session within 12 hours of doing Test 1.

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- Test 3:** Determining subjects' awareness of and ability to change erroneous verb structures in someone else's writing: Self-monitoring and editing given text containing verb errors.
- Test 4:** Elicitation of particular verb structures to establish what the subjects know of a particular area of the target language: Discrete item test relating to verb structures.

3.5.3 Teaching materials

Technological apparatus was kept to a minimum as the use of tape recorders had been identified in the preceding exploratory investigation as an extraneous variable that affected results unnecessarily. Materials were therefore kept in line with what could be expected in an ordinary lecture. All tests were in printed form and taken in a known environment, that is lecture rooms familiar to the subjects. The printed consciousness raising intervention programme was provided to the subjects in units containing the text and instructions of activities. Some collaborative activities required the use of transparencies and an overhead projector. The activities contained in the intervention programme were learner-centred. Teacher-fronted instruction was kept to a minimum with myself acting as mediator and facilitator of learning. In this way uncontrolled variables deriving from possible researcher influence could be kept minimal. Units were constructed to enable subjects to function independent of the lecturer as far as possible. This feature was considered to have potentially favourable pedagogical implications in the event of a rejection of the null hypothesis of the thesis.

3.6 DATA OF THE STUDY

3.6.1 The research domain

Before the data can be explained, the research domain should first be identified and contextualised.

A systems view of the research domain suggests tangents and influences of other areas, but also serves to focus the reader clearly on the research domain, showing where it fits in respect of other areas.

When a learner is involved in acquiring a language, the two wider contexts of psycholinguistics and sociolinguistics intersect. Within the larger domain of psycholinguistics lies the sub-domain, SLA. Within the area of SLA, however, the research domain is narrowed to a particular aspect of SLA, that is interlanguage. Within this restricted domain of interlanguage structures the focus of this investigation is on fossilised structures.

Within the sociolinguistic context, issues such as socio-economic background, schooling, motivation and learner attitudes all have a bearing on what happens in the acquisition process. Although the research domain does not include sociolinguistic considerations, these have been identified as extraneous variables.

3.6.2 Purpose of data elicitation

Within the identified research domain, data elicited from five sources were used for different purposes:

- Data elicited in the pretests were subjected to quantification procedures and are henceforth referred to as the **data of the study**.

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- Data elicited in the posttests were likewise subjected to quantification procedures and form part of the data of the study.
- Data elicited in the preliminary testing done at 7 colleges were used to initially discover possible evidence of the problem at other colleges of education. This was done to determine the feasibility of undertaking an extensive study of the problem.
- Data found in the written components of the intervention programme were used as examples to support an argument or illustrate a point.
- Data elicited in an earlier study of learner errors (Fouchè 1988) were also used as illustrative examples.

Data deriving from different sources were at no time "pooled" or "mixed" for purposes of statistical calculations.

3.6.3 Type of data elicited in tests

The data elicited in the pretests and the posttests pertained to fossilised verb structures. This particular focus may be partly justified by the impact of verb structures on meaning.

Examination of the problem of fossilised structures in the exploratory investigation indicated that errors believed to be fossilised structures pertained to several linguistic domains. Non-native pronunciation (phonological errors), misspellings of "easy" words learnt at least 8 - 10 years before (graphological errors), and L1-related lexical and idiomatic errors (lexical errors) were not regarded as serious impediments to communication, as meaning in most cases was not seriously affected. Errors in the syntactic domain, however, affected comprehension more seriously. Verb errors relating to structures

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that did not represent meaning correctly appeared consistently in the data of the exploratory investigation at the various colleges of education. As these errors seemed the most serious in terms of frequency and in terms of posing a threat to successful communication, it was evident that the current study should focus on verb structures. It is well to remember at this point that the population in question is a corps of future teachers whose success in the classroom strongly depends on their ability to communicate accurately as well as appropriately. This is especially true if the teaching content concerns second language where inaccuracies in the language of the teacher may promote fossilisation in the language of the pupils.

Identification of fossilised verb structures was based on

- the length of time that the particular interlanguage structure had been in use;
- recognition of verbal structures that did not conform with native language expectations.

Justification for grammatical judgements was based on the semantics of the verb phrase (Quirk et al. 1985:175-239). If a verb structure was judged erroneous in the obligatory context, it was assumed to represent an interlanguage structure. In addition to assigning interlanguage status to a structure, it was also necessary to judge whether that interlanguage structure was fossilised.

Primary schools have comparable syllabi deriving from a centrally-determined core syllabus for the teaching of English as a second language. In the current school system, first-year students at a teachers' training college have been exposed to formal ESL instruction for a minimum of ten years. If the same interlanguage structures produced by beginner learners during the first three or four years of their instruction are also observed in the ESL production of advanced learners at first-year level

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of their tertiary education, one may assume that these interlanguage structures are fossilised.

The assumption that a learner's verb system can no longer be in a state of normal development, that is in a state of flux where structures stabilise and destabilise in a process of language growth, is not an unreasonable assumption when that learner has been exposed to instruction for a minimum of ten years. One may therefore assume that interlanguage structures manifested in the data of this study are not only interlanguage structures, but must be fossilised as well. Data collected in the 1988 study (Fouchè 1988), as well as data collected in the self-monitoring test, provided additional corroboration for these judgements. The data of this study, then, consist of fossilised syntactic interlanguage structures relating to subject-verb agreement and tense/aspect morphology.

3.6.4 Data collection procedures

The following issues relating to data collection are discussed in this section:

- degree of explicitness
- multiple data collection procedures
- reliability
- validity.

3.6.4.1 Degree of explicitness

The data in research which is deductive and analytic have a high degree of explicitness (Seliger & Shohamy 1989:136). In this study the data collection procedures are formal and structured with the specific focus of the data sought, that is fossilised verb structures, determined in advance. The multiple data collection procedures - discrete point tests, metalinguistic judgement tests and metalinguistic tests - yield an extensive, rich and more valid type of data (Seliger & Shohamy 1989:181).

3.6.4.2 Multiple data collection procedures

The data were elicited in the classroom where the usual teaching was done. The environment was kept as natural as students would expect an ESL lecture room to be. I attempted to treat all subjects in the experimental and control groups in the same way during the experiment. I had no reason to believe that subjects might have been particularly favourably disposed towards me and that the Halo effect might therefore have been operative.

The **pre- and posttests** (see Appendix iii, p.361) which are the **measuring instruments** of the study consist of four components:

Test 1: Spontaneous writing test constrained in terms of topic and tenses, thus creating obligatory contexts for particular verb structures: Subjects were asked to write no less than one foolscap page on their decision to become a teacher: the past events that led to the decision, their present feelings about the issue and their future expectations. (20 minutes)

Test 2: Self-monitoring: A photostat copy was made of the written passage and handed back to each subject the following day. The subjects were asked to edit and correct their writing by

- (1) identifying the error
- (2) explaining why the structure was wrong
- (3) providing the correct form.

Self-monitoring depended on subjects' awareness of errors and explicit rule knowledge. (20 minutes)

Test 3: Other-monitoring: Subjects were asked to edit and correct a passage containing verb errors that were unambiguously wrong in the context. The same procedure used in test 2 applied in this case. Other-monitoring depended on subjects' awareness of errors and explicit

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rule knowledge. However, the underlying process involved in the error recognition in test 2 is different from the process in test 3 (20 minutes) (see p.255 of this study).

Test 4: **Discrete item test:** Subjects wrote a test consisting of three questions. (40 minutes)

Question 1 requires of subjects to relate meaning to a particular verb form. The meaning is indicated by the context of each of the 10 sentences, and subjects have to provide the correct form of a given verb by filling in blank spaces in the sentences. The same verb is used for all the sentences to neutralise possible variability deriving from the use of different verbs internalised at different levels of grammaticisation by the same subject. No clues or multiple choice items are given to avoid prompting the subjects. Only in this way can the test elicit data relating to explicit knowledge and could the results relating to semantico-grammatical distance (meaning-form distance) provide information about the level of grammaticisation. Implicit in this argument is the assumption that successful application of explicit knowledge is an indication of internalisation of that knowledge at a level of automaticity.

Question 2 consists of 5 multiple choice items related to a short passage and elicited information about grammaticisation levels by requiring of the subject to interpret semantico-grammatical relationships. The procedure is the opposite of that in Question 1: the form is provided in a clause from the passage so as to retain a meaningful context and subjects have to identify the meaning related to the form. Question 2

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tests the same element as question 1 by using a converse procedure. In this way validity is enhanced.

Question 3 consists of a passage that is contextually related to the passage provided at the beginning of the test. By keeping the context and consequently also the meaning content stable, possible extraneous variables related to disparate vocabulary development are controlled. Subjects are required to orientate themselves within a given time frame and provide the verb forms that would be correct in terms of meaning and form. In this sense, question 3 represents a conflation of the procedures of the previous two tests. This question, like questions 1 and 2, is designed to elicit data relating to semantico-grammatical distance and the concomitant level of grammaticisation.

3.6.4.3 Reliability

Rater reliability: A researcher acting as the only rater may lack objectivity. Although constant awareness of this unavoidable variable may have controlled for the variable to a certain extent in this study, the involvement of other independent and objective raters may have neutralised any subjectivity. Other raters, however, were not used as a result of practicality considerations. The rating required was also fairly mechanical.

Intrarater reliability was not formally tested as rating did not depend on subjective evaluations. Rating could therefore be done consistently and consequently also reliably.

Test reliability was improved by examining results obtained in the exploratory investigation and adapting and improving tests accordingly. The technique of regrounding, that is repeating the rating of tests, was constantly used during rating to improve

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reliability. The tests have internal consistency reliability in that all items measure the same thing: level of grammaticisation as demonstrated by the production of fossilised structures. No statistical measurement of reliability was done, however.

Parallel form reliability for pre- and posttests was obtained by ensuring that tests had the same format and tested the same underlying construct.

3.6.4.4 Validity

The extent to which the measuring procedures measured what they were supposed to measure predicted the validity of these procedures. Content, concurrent, predictive and construct validity will each be considered in turn. }

(1) Content validity

To the extent that the data collection procedure provided data representative of the content that needed to be measured, content validity was the highest in Test 4, the discrete item test. The constraints of this test prevented subjects from avoiding the verb structures elicited, which would represent the subjects' level of grammaticisation in respect of these verb structures.

Tests 2 and 3, self-monitoring and other-monitoring, amounted to a grammaticality judgement task which invoked underlying issues relating to the level of grammaticisation of the subject. The ability to recognise a structure as correct or incorrect, as well as ability to control the verb structure concerned, would be expected to reflect the level of grammaticisation attained by the subject. These tests were therefore valid tests to elicit fossilised structures. Verb structures that were not monitored were regarded as fossilised. Test 3 was judged less valid than Test 4 because deliberate presentations of incorrect forms in Test 3 may have precipitated variability in the case of subjects who vacillated between two decisions because their language

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development was unstable for some unknown reason. An incorrect grammaticality judgement based on these premises could therefore not be interpreted as an indication of fossilisation. In terms of the explanation presented in 3.6.3, however, (see p.171), this was considered a very weak possibility.

In Test 2, the subjectivity of the subjects in respect of their own writing largely precluded awareness of their own incorrect structures. If a lack of awareness of an erroneous verb structure indicated automatisisation of that structure, then the structures left unmonitored could be taken as an indication of the subject's level of grammaticisation in respect of those verb structures. Given that avoidance strategies may have affected the subject's production of verb structures in the spontaneous writing test (Test 1) in the first place, Test 2 had less content validity than Test 4. As Test 2 was dependent on Test 1, only those structures presented in the first test were subject to scrutiny and self-monitoring. The limitations that applied to Test 1 therefore applied to Test 2 as well.

Content validity was lower in Test 1, the spontaneous writing test. Although Test 1 was constrained in terms of topic and tenses, these constraints could not altogether preclude avoidance strategies. What could be measured was only what the subject chose to show the investigator. A measurement of the level of grammaticisation as indicated by the manifestation of fossilised structures could therefore only represent an incomplete indication of the object measured. In terms of systematicity however, the spontaneous writing test would provide valid data of fossilised structures.

(2) Concurrent validity

It was not possible to compare the measuring instruments with similar ones as, to the best of my knowledge, comparable instruments are not available. It was for this reason that

measuring instruments had to be developed for this particular study.

(3) Predictive validity

The predictive validity of tests only becomes evident in post-post-testing after a period of time has lapsed. Such a test, however, could not be done as a result of the unavoidable situation requiring subjects to continue with their study of the regular ESL syllabus after the experiment. Results of any tests done later to determine the long-term effect of the treatment could therefore not be ascribed to the treatment alone as there was no way of differentiating between effect of the treatment and effect of subsequent ESL teaching. The impracticability of controlling this extraneous variable precluded any prospect of determining predictive validity.

(4) Construct validity

If the tests succeeded in eliciting fossilised verb structures and were consistent with current theories underlying fossilisation, they could be said to have construct validity. It is difficult to obtain evidence of construct validity, but the discussion of content validity (see 3.6.4.4 (1) p.176) suggests that the tests could be expected to have construct validity as well. The tests also seemed to be consonant with current theories on fossilisation.

Having considered reliability and validity factors, I now turn to the analysis of tests.

3.7 ANALYSIS OF THE TESTS

In this section the statistical procedures, test variables, assumptions and analyses of the tests, obligatory contexts and test comparisons are described.

3.7.1 Statistical procedures

The experimental group (n 10) and the control group (n 8) were subjected to the set of four pretests (T1a - T4a) prior to the application of the 7-unit intervention programme. Upon completion of the intervention programme, the experimental and control groups were subjected to the set of posttests (T1b - T4b) matched to the pretests. The means of the pretests and posttests were subjected to t-tests. These results are presented in five different comparisons (see 3.7.6, p.195). Table 4.2 (p.206) reflects the grouped results of Comparisons 1, 2, 3 and 5.

For Comparisons 1, 2, 3 and 4 (see Fig. v, p.195) the SAS/STAT Programme (1988) was used to compare the means of the test scores for each test variable utilising univariate procedures. The results of the t-tests were verified and supported by an independent recalculation using a multivariate two-way repeated measures analysis of variance with interaction test. In addition to the underlying test assumption for t-tests that the groups being compared are of the same size, application of the t-tests requires an underlying assumption of a normal distribution of test scores. However, since the test scores are counts of rare events such as the number of errors in a written passage, they tend to have an approximate Poisson distribution (Kotz & Johnson 1988:314) where standard deviation (or variance) of the test scores is a function of the mean, as is reflected in Table 4.2. The square root transformation for scores with this behaviour is an accepted statistical procedure (Snedecor 1967:326,327; Kotz & Johnson 1988:314; McCullagh & Nelder 1989:22,23). Furthermore, since there are many zero test scores, the appropriate procedure according to Kempthorne (1952:155) is to take the square root of a $\frac{1}{2}$ plus the test score to stabilise the variance and normalise the test scores. The p-values were found from the transformed values.

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For the comparison of the gain scores of the experimental and control groups (Comparison 5), 8 pretest mean scores of the experimental group were paired as closely as possible with 8 pretest mean scores of the control group on each of the 7 feature variables tested (see 3.7.2, below). These scores were similar although not exactly the same. After the posttests the gain scores of the 8 pairs of subjects whose pretest scores had been matched were calculated. These scores formed the raw data of Comparison 5. The statistical procedure used to compare the paired mean scores was a matched-pairs t-test (cf. Seliger & Shohamy 1989:118). The p-values were found from these t-values.

3.7.2 Operationalisation of the seven subhypotheses

The seven subhypotheses of the study could be falsified in terms of the production of fossilised verb structures and monitoring tasks subsequent to the intervention. In order to operationalise these subhypotheses, seven **feature variables** (Variable 1 - 7) were identified. A measurement of the subjects' level of verb structure fossilisation after application of the intervention programme could then be obtained from observations of these feature variables.

In order to achieve this end, four matched pretests and posttests were applied. Measurement of Variables 1 - 4 was obtained from the spontaneous writing test (T1). Measurement of Variable 5 was obtained from the discrete point verb test (T4). Measurement of Variable 6 was obtained from the self-monitoring test (T2) and measurement of Variable 7 was obtained from the other-monitoring test (T3). The results were obtained from

- counts of verb structure errors expressed as error frequencies (F);
- counts of verb structures correctly produced, expressed as a success rate percentage;
- counts of verb structures successfully monitored, expressed as a success rate percentage.

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In this study an **error** is defined as a violation of a grammatical rule in an obligatory context. An incorrect form in terms of the definitions of the obligatory contexts and absence of a form both constitute an error. An **obligatory context** is defined as the environment requiring a particular structure if a well-formed sentence is to result.

I now turn to the operationalisation of the seven subhypotheses. Each subhypothesis is restated before its matching feature variable.

H₂ The total number of verb errors of the experimental group will show a significant reduction relative to the control group.

Variable 1: Total verb errors in T1. Total verb errors subsume concord (S-V agreement), time (temporal) and aspect (aspectual errors). Total verb error frequency was calculated as a function of the number of words of the passage and the total number of errors made:

$$\text{Verb error } F = \frac{\text{n verb errors}}{\text{n words}} \times 100$$

H₃ The concord errors of the experimental group will show a significant reduction relative to the control group.

Variable 2: Concord (subject-verb agreement) errors in T1.

Subject-verb agreement error frequency was calculated as a function of the number of obligatory contexts for subject-verb agreement and the number of S-V agreement errors:

$$F = \frac{\text{n concord errors}}{\text{n obligatory S-V concord contexts}} \times 100$$

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H₄ The temporal (time) errors of the experimental group will show a significant reduction relative to the control group.

Variable 3: Temporal (time) errors in T1. Time error

frequency was calculated as a function of the number of verbs in the passage and the number of time, that is incorrect application of present, past and future time distinctions:

$$F = \frac{n \text{ time errors}}{n \text{ verbs}} \times 100$$

H₅ The aspectual errors of the experimental group will show a significant reduction relative to the control group.

Variable 4: Aspectual errors in T1. Aspect error frequency was calculated as a function of the number of obligatory aspectual contexts and the number of violations of these contexts:

$$F = \frac{n \text{ aspect errors}}{n \text{ obligatory aspect contexts}} \times 100$$

H₆ The correct verb structures of the experimental group will show a significant increase relative to the control group.

Variable 5: Discrete item verb test (T4). The result of this test reflects the percentage of correct answers obtained according to criteria for correct answers based on definitions of obligatory contexts:

$$\% = \frac{n \text{ correct answers}}{n \text{ possible correct answers}} \times 100$$

H₇ The number of self-produced erroneous verb structures monitored successfully will show a significant increase relative to the control group.

Variable 6: Self-monitoring success rate (T2). Variable 6 is a dependent variable in the sense that the corrections in T2 related to the errors made in T1 (see 3.5.2, p.167 of this study). The result of this test indicates ability to identify and correct erroneous verb structures produced in T1 and is reflected as a success rate percentage. This result was calculated as a function of the number of erroneous verb structures and the number of correct changes made:

$$\text{Success rate \%} = \frac{\text{n correct verb changes}}{\text{n verb errors in T1}} \times 100$$

H₈ The number of erroneous verb structures produced by someone else which are monitored successfully will show a significant increase relative to the control group.

Variable 7: Other-monitoring success rate (T3). The result of this test indicates ability to identify and correct erroneous verb structures contained in a given passage and is reflected as a success rate percentage. This result was calculated as a function of the number of erroneous verb structures in the passage and the number of correct changes made.

$$\text{Success rate \%} = \frac{\text{n correct changes}}{\text{n verb errors}} \times 100$$

3.7.3 Pretest/posttest components: test assumptions and analyses

It was assumed that the set of pretests would provide a composite measurement of the dependent variable of the experiment. As the

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posttests were matched to the pretests in that they tested the same dependent variable at a comparable level, it could therefore be assumed that a comparison of pretest and posttest results would indicate post-intervention change in the variables tested. These assumptions had been tested in the earlier exploratory investigation of the previous year and shown to be correct assumptions. The assumptions and analyses of T1 - T4 will now be discussed (see *Appendix iii*, p.361 for examples of test materials.)

3.7.3.1 Spontaneous writing test (T1)

Assumptions of T1

A basic assumption of the spontaneous writing test was that verb errors produced by advanced adult learners who had been involved in learning English for at least ten years represented fossilised structures. A second assumption was that verb structures that were not erroneous could not be taken as evidence of stabilisation of target language structures for then the high incidence of erroneous structures could not be explained. It is likely that correct structures could be correct by chance. The third assumption of the test, that the test would elicit fossilised verb structures, had been shown in the exploratory investigation to be a correct one.

Analysis of T1

Verb errors were quantified by counting the number of verb errors. As subjects wrote passages of different lengths, frequency counts had to be expressed as a percentage of the total number of possible correct instances and were therefore relative expressions of the errors made rather than absolute expressions of error instances.

Variables 1, 2, 3 and 4 of T1 were quantified as error frequencies; higher counts therefore reflect higher levels of verb structure fossilisation.

3.7.3.2 Self-monitoring test (T2)

Assumptions of T2

The basic assumption of the self-monitoring test was that the ability to monitor one's own writing may reflect consciousness of structures as well as awareness of one's own erroneous structures (see 3.4.4.4, p.164 of this study). Ability to correctly identify a structure as erroneous in a self-monitoring task presupposes knowledge of the correct structure. Knowing that a structure is correct may either derive from correctly internalised structures providing an intuitive "feel" for correctness, or from conscious explicit knowledge of the rules. Although accurate awareness of one's own errors presupposes correctly internalised knowledge of structures, the converse position may not necessarily obtain: conscious knowledge of structures (that is knowing the rules) may not necessarily imply awareness of internalised fossilised structures (errors).

The level of self-monitoring success rate indicates the subject's level of correctly internalised knowledge of the structures relating to the errors of which he showed awareness in the test. The success rate is given as a percentage.

Analysis of T2

The success rate was interpreted as a reflection of the subject's self-monitoring ability. If self-monitoring ability was a prerequisite for destabilisation of fossilised verb structures, then a higher self-monitoring success rate would be an indication of destabilisation of those fossilised structures.

3.7.3.3 Other-monitoring test (T3)

Assumptions of T3

The basic assumption of the other-monitoring test is that ability to recognise the erroneous structures provided in the test reflects correctly internalised structures and/or conscious knowledge of structures which have to be evaluated for

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correctness against that conscious knowledge. The assumptions of T3 differ from those of T2 in that in T2 the subject has complete prior semantic knowledge of the contents, that is an internal and subjective meaning base, whereas the subject comes to T3 "cold" and has to rely on syntactic and lexical analysis in addition to his or her schemata to arrive at the meaning (see p.255 of this study). The demands on the subject of T2 and T3 are different and the tests are therefore expected to generate disparate results.

Analysis of T3

The success rate of T3 was interpreted as a reflection of the subject's conscious knowledge and his/her ability to apply that knowledge. Acceptance or rejection of the grammaticality of a structure would demonstrate the subject's ability to monitor structures produced by others.

Although the results of T2 and T3 seemed to test the same ability, the texts differed in that the text used for T2 was internal and subjective (meaning base known to the subject as each subject had written his/her own text) whereas the text for T3 was external and objective. The meaning base of the text in T3 was new to the subjects as the text had been written by someone else on a topic remote from the topical focus of T2. This difference was taken into account in the interpretation of the results.

3.7.3.4 Discrete point verb test (T4)

Assumptions of T4

It was assumed that the discrete item verb test would measure the linguistic items under investigation, as verb structures could be only correct or incorrect in their obligatory contexts. It was further assumed that avoidance strategies would be eliminated as the possibility of optional answers was excluded from the test. Avoidance of an answer was interpreted as an answer not known. A last assumption of T4 was that the contextualised questions

would simulate real-world obligatory contexts for the verb structures elicited.

Analysis of T4

The results of T4 reflected the percentage of correct answers achieved. A higher percentage signified a higher level of grammatical accuracy and therefore a lower level of fossilised verb structures.

Test 1 differs from T4 in respect of the possibility of avoidance strategies as well as in respect of what is counted. Whereas avoidance strategies in respect of verb structures are possible in the spontaneous writing test (T1), the verb structures elicited in the verb test (T4) cannot be avoided. Furthermore, in T1 the number of erroneous verb structures are counted, whereas the number of correct verb structures are counted in T4. Although the two tests are expected to yield different results, the inferences that may be drawn from these results should correspond.

In the next section the obligatory contexts for subject-verb agreement and tenses are described.

3.7.4 Obligatory contexts

Errors were analysed in terms of the following obligatory contexts:

- subject-verb agreement (concord)
- tense: temporal structures (present, past and future time)
aspect (continuous, perfect).

3.7.4.1 Obligatory subject-verb agreement contexts

Addition of **-s** to the verb in particular cases of subject-verb agreement (concord) and the omission of **-s** in other cases

constitute the obligatory subject-verb agreement (concord) contexts.

Subject-verb agreement: the obligatory addition of -s *

* The examples provided in italics below exemplify the contexts described, that is the addition or omission of **-s**. Umlaut and other phonological changes of the verb are not the issue here as all errors in the data relate to the context described, that is **-s** was omitted or added inappropriately. Examples of **copula be** and relevant **full verbs** (lexical verbs) (Quirk et al. 1985:96) satisfying the obligatory contexts taken from the data are provided below in [a] - [l]. Examples of **modal auxiliary verbs** are given in [m] & [n].

- [a] S [singular, 3rd person] + V [present] + s
...it *becomes* harder.... (T1a) (pretest 1)
- [b] S [singular, 3rd person] + COP [to be] [present] + s
It *is* high tide. (T1b) (posttest 1)
- [c] S [singular, 1st person] + COP [to be] [past] + s
I *was* fortunate. (T1a)
- [d] S [singular, 3rd person] + COP [to be] [past] + s
She *was* frightened. (T1b)

Contexts in which -s had to be omitted

The notation + 0 (+ zero) indicates that no **-s** is added to the verb.

- [e] S [singular, 1st, 2nd person] + V [present] + 0
I [you] wait for my parents. (T1a)
- [f] S [plural, 1st, 2nd, 3rd person] + V [present] + 0
They [we, you] remind me of... (T1b)
- [g] S [singular, 1st, 2nd, 3rd person] + V [past] + 0
I [you, she] knew that... (T1b)
- [h] S [plural, 1st, 2nd, 3rd person] + V [past] + 0
As we [you, they] entered ... (T1a)
- [i] S [singular, 1st, 2nd person] + COP [present] + 0
I am free; ...you are up to this. (T1a)

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- [j] S [plural, 1st, 2nd, 3rd person + COP [present] + 0
...until they [we, you] are where I hope to be (T1a)
- [k] S [singular, 2nd person] + COP [past] + 0
You were expected to... (singular form not in data)
- [l] S [plural, 1st, 2nd, 3rd person] + COP [past] + 0
My friends [we, you] were always there. (T1b)

Contexts with modal auxiliary verbs in which -s had to be omitted

Modal auxiliary verbs: can, will, shall, must, may, could, would, should, might (Quirk et al. 1985:120)

- [m] S [singular / plural, 1st, 2nd, 3rd person] + AUX MOD
[pres] + 0
...this college [I, you, we, they] can [will, must, may]
offer... (T1a)
- [n] S [singular / plural, 1st, 2nd, 3rd person] + AUX MOD
(past) + 0
...life [I, you, we, they] would [could, might, should]
take... (T1a)

The number of S-V agreement errors, that is errors with the addition of **-s** in these obligatory contexts as well as inappropriate additions in contexts where **-s** had to be omitted, were counted and the error frequencies calculated. Instances which allowed more than one correct structure, e.g. instances of notional concord (Quirk, Greenbaum, Leech & Svartvik, 1985: 757-759) would not be counted. The data, however, did not contain any clear instances of notional concord.

3.7.4.2 Obligatory time (temporal) contexts

In terms of the instructions of T1 (see Appendix iii, p.361) the following time frame contexts are obligatory:

- (1) present time (NOW context) for reference to the subject's arrival at the college (T1a);
the subject's present surroundings (T1b);

- (2) past time (THEN context) for reference to what happened prior to the arrival (T1a); what happened during the past year (T1b);
- (3) future time (ONE DAY context) for reference to future hopes and expectations (T1 a & b).

3.7.4.3 Obligatory aspectual contexts

The term **aspect** refers to a "grammatical category which reflects the way in which the verb action is *regarded* or *experienced* with respect to time" (Quirk et al. 1985:188)

(1) **Perfective aspect** (Quirk et al. 1985:189-197): refers to a time zone which relates at one end to the time of orientation.

(a) **Present perfective** relates to the anterior time zone immediately prior to and inclusive of the NOW time orientation. (Quirk et al. 1985:193). Situations are regarded as obligatory contexts for present perfective if

- stative verbs and habitual actions relating to this period of time have current relevance;
- the exact time of occurrence of a single event is unspecified and may have occurred at any time within this time zone.

(b) **Past perfective** refers to the anterior time zone immediately prior to and inclusive of the THEN time orientation (Quirk et al. 1985:195). Past perfective facilitates differentiation between situations involving consecutive past times (THEN and BEFORE THEN). The BEFORE THEN time zone is regarded as an obligatory context for the past perfective.

(c) **Future perfective** refers to the posterior time zone following and including NOW, and terminating at some specified future time. A situation involving termination by some specified time in the future is therefore regarded as an obligatory context.

(2) **Progressive (durative / continuous) aspect** (Quirk et al. 1985:197-210) The progressive aspect indicates an activity in progress at a given time in the present, past or future time. This situation constitutes an obligatory context for the progressive aspect.

However, a number of pragmatic considerations render the obligatory context of the progressive aspect irrelevant. Stative verbs denoting psychological states which can only be subjectively verified, that is states of mind, volition, attitude, perception and some states of bodily perception are excluded (Quirk et al. 1985:202-205). Furthermore, an obligatory context cannot obtain for progressive aspect (future time) if a choice exists between progressive aspect and another form, as choice renders the context optional. Other possible uses of the progressive aspect, that is to refer to the future or to the future in the past as well as politeness uses are therefore not regarded as obligatory contexts in the test as these situations pertain to appropriacy in terms of social norms and convention rather than grammatical accuracy.

(3) **Perfective progressive aspect** (Quirk et al. 1985:210-213) constitutes a combination of the features of meaning associated with the perfective and the progressive aspects, and refers to a temporary situation leading up to the present. Such an incomplete situation, typically expressed by means of a durative verb, is regarded as an obligatory context for the perfective progressive aspect.

3.7.4.4 Obligatory simple tense contexts

The term **simple** is used to describe a verb phrase that is unmarked for aspect (Quirk et al. 1985:189). In view of the quality of definiteness of time of the simple tenses, the term **indefinite tense** is regarded as a misnomer and I therefore reject it in favour of **simple tense**.

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(1) Present simple tense (Quirk et al. 1985:179-183)

The following present simple tense contexts are obligatory:

- (a) fact that is currently true in NOW context;
- (b) universal, unalterable truth;
- (c) habitual present;
- (d) instantaneous present;
- (e) statement of future event unalterably fixed in advance.

Certain exceptional pragmatic considerations such as the stylistic choice of the simple present in radio commentaries render the present simple tense obligatory domain inapplicable. The fictional narrative (historic present) is also not regarded as an obligatory context as this use is a stylistic option.

(2) Past simple tense

Two features of meaning constitute the obligatory context of the past simple tense: it refers to

- (a) an event completed
- (b) at an implied or specified definite time in the past (Quirk et al. 1985: 183).

A further obligatory context is

- (c) the hypothetical past in subordinate clauses expressing what is contrary to the belief or expectation of the speaker.

Neither attitudinal past, which is a politeness convention used with verbs expressing volition or mental states, nor reported speech involving backshift (that is moving one step back in time) is regarded as obligatory (Quirk et al. 1985:188, 1027).

(3) Future simple tense

According to the analysis of Quirk et al. (Quirk et al. 1985: 176, 213) *future tense* is not regarded as a formal category, but a variety of grammatical constructions in addition to the modal auxiliary *will/shall + infinitive* are capable of expressing

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future time. For purposes of the experiment future time prediction and volition were regarded as obligatory contexts.

Obligatory verb contexts do not function in isolation but do so in a hierarchical manner, that is an error incurred on one level may precipitate another on the next level. Not only are obligatory contexts hierarchically structured, but they also function in one direction only. The unidirectional hierarchy of verb structures is explained in the next section.

3.7.5 Unidirectional hierarchy of obligatory verb contexts

In terms of this hierarchy, an error presenting as a subject-verb (S-V) agreement error is not necessarily the original error but could be an error which is the result of an incorrect structure at a higher level in the hierarchy. This hierarchy is best explained by means of the following example from the data:

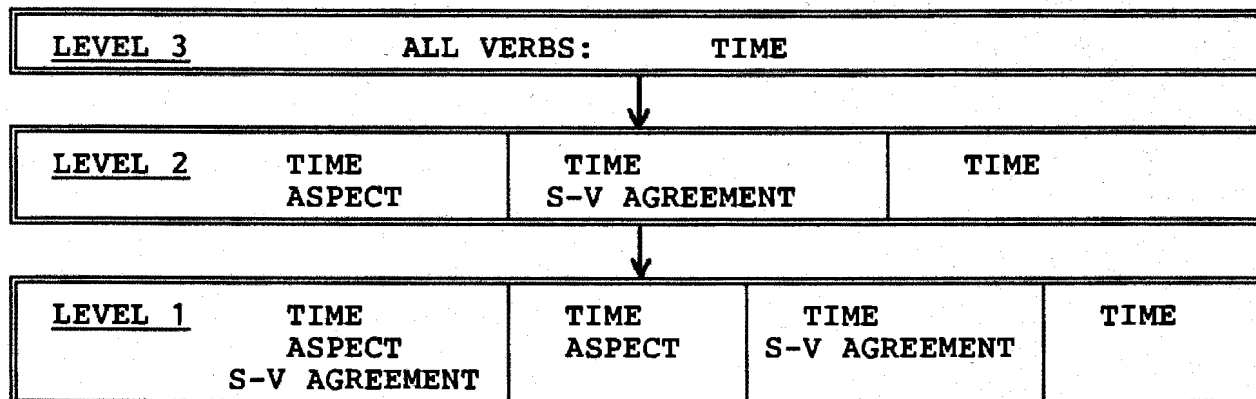
[o] * It look very small. (time context: past)

In the above example one is faced with the decision of whether the error is a time error or a subject-verb agreement error. Two errors have apparently been made: the tense is wrong and the subject-verb agreement requirement has not been satisfied. As the sentence appears in a past tense context the verb should have been **looked**. Had the initial time error not been made, the agreement error could not have arisen as the obligatory addition of **-s** would not have applied.

The hierarchy, furthermore, is **unidirectional**. An error at a higher level (LEVEL 3 in Fig. iv, below) may generate an error at a lower level (LEVEL 2 and LEVEL 1), but the converse situation does not obtain. In example [o] an initial incorrect rendering of the agreement structure could not have precipitated the time error. Temporal obligatory contexts therefore subsume

aspectual obligatory contexts involving agreement constraints and subject-verb agreement obligatory contexts.

Fig. iv Structure of unidirectional hierarchy of obligatory verb contexts



At LEVEL 3, the highest level, all verb structures are morphologically marked for present, past or future time. At LEVEL 2 some verbs may be marked for aspect as well as time, agreement as well as time, or only for time. At LEVEL 1 some verbs may be marked for time, aspect and agreement, time and aspect, time and S-V agreement, or only for time. An error, for example of subject-verb agreement, attributed to a verb structure may therefore be the result of incorrect aspect assignment at LEVEL 2, or incorrect time assignment at the highest level, LEVEL 3.

When the data were analysed, the unidirectional implicational obligatory context hierarchy was taken into account in the error attribution to verb structures as exemplified by the following example:

[p] * He wake up.

On the surface, the error in [p] seems to be an omission of obligatory **-s**, that is subject-verb agreement. However, if the sentence appears in an obligatory context for past tense, the

agreement error would not obtain if the initial time error had not been made at a higher level. The erroneous structure in the example should therefore be counted as a time error, not as a subject-agreement (concord) error.

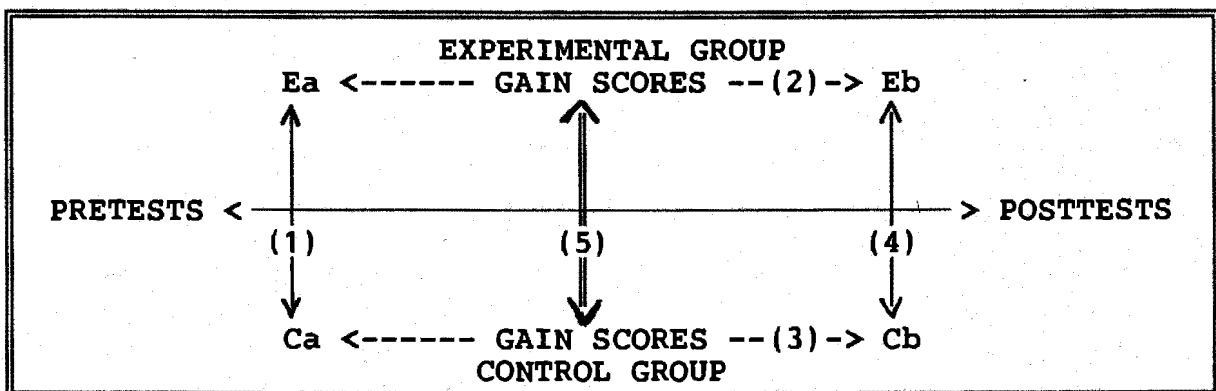
I now turn to a discussion of the way in which test results were compared.

3.7.6 Test result comparisons

Comparisons of the results of the tests were done in five different ways:

- (1) experimental (E) with control group (C) pretests (a);
- (2) pretests with posttests (b) of experimental group;
- (3) pretests with posttests of control group;
- (4) experimental with control group posttests;
- (5) pretest/posttest gain scores of experimental group with pretest/posttest gain scores of control group.

Fig. v Comparisons of results



Comparison 1: The pretest mean scores of the experimental group were compared with the pretest mean scores of the control group to determine to what extent the experimental and control groups differed in respect of fossilisation before application of the

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intervention programme. This comparison also provided the matched scores for Comparison 5.

An even score would enable one to make valid comparisons between the two groups.

A significantly higher score for the experimental group would render post-intervention comparisons with the control group invalid.

A higher score for the control group would allow valid post-intervention comparison of the pretest/posttest gain scores of the two groups.

Comparison 2: Pretest and posttest mean scores for the experimental group were compared to determine change resulting from the destabilisation of fossilised structures presenting in the language production of the experimental group. A positive gain score would indicate improvement whereas a negative score would indicate deterioration for the experimental group. These gain scores provided the experimental group raw scores for Comparison 5.

Comparison 3: Pretest and posttest mean scores for the control group were compared to determine change resulting from the destabilisation of fossilised structures in the language production of the control group. A positive gain score would indicate improvement whereas a negative score would indicate deterioration for the control group. These gain scores provided the control group raw scores for Comparison 5.

Comparison 4: The posttest results of the experimental group were compared with the posttest results of the control group. This comparison was expected to indicate which group performed better in the posttests. However, such a comparison would not

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take account of any imbalances in the pretests nor of the effect of control group improvement. Post-intervention improvement of the experimental group could therefore not be measured in terms of Comparison 4.

Comparison 5: The pretest/posttest gain scores of the experimental group were compared with the pretest/posttest gain scores of the control group on each variable in a paired comparison. This comparison was expected to show whether the experimental group had gained more from the intervention programme than the control group had from the regular grammar programme. Although the two groups did not differ significantly in the pretests, except in respect of aspect, they could not be evenly matched. A comparison of the improvement or gain shown by each group was therefore considered to provide a more valid result than a comparison of the posttest results (Comparison 4).

A gain score difference that was significant in favour of the experimental group would signify that this improvement could be related to consciousness raising.

A gain score difference in favour of the experimental group that was close to the alpha-level of $\alpha=.05$ set for this study would be regarded as an indication of a trend in the expected direction, that is that semantico-grammatical consciousness raising procedures could be expected destabilise fossilised verb structures. An improvement at the levels between $p<.05$ and $p<.10$ would be regarded as an improvement **trend** or **tendency**. According to Hatch & Farhady (1982:119), reports of improvement tendencies are "legitimate".

A gain score difference that was not significant in favour of the experimental group would indicate that consciousness raising procedures could not be related to the destabilisation of fossilised verb structures.

3.8 SUMMARY

In this chapter the problem, objectives and hypotheses of the thesis were related to the research design and an attempt was made to justify the design and the particular line of investigation taken.

The independent variable, semantico-grammatical consciousness raising procedures and the dependent variable, fossilised verb structures, were operationalised first. The possible effects of extraneous variables were also considered. No extraneous variables were identified that could seriously affect the outcome of the results.

In the following section a description of the location situated the experiment in an educational setting with naturally occurring groups. Research limitations relating to the universality of the problem of fossilisation and the comparability of accuracy levels were briefly considered. The research with a pretest / intervention / posttest design was considered to be more analytic and experimental than quasi-experimental. As it was also hypothesis-driven, it was considered to have deductive objectives.

The basic components of the experiment - the population, intervention and measurement- were then considered. It was also indicated how the five comparisons of the results would be done. The size and the selection of the experimental and control groups were considered before the intervention programme was described in the following section.

The description of the intervention programme formed a major part of this chapter. An attempt was made to indicate how this programme was organised, what the content was, and what presentation procedures were followed. Presentation procedures

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of one of the units was systematically described and illustrated with reference to *Appendix ii*. The rationale of the consciousness raising strategies used was carefully explained and each procedure was linked to the notion of a continuum of increasing analytical consciousness of language structures.

In the following sections the materials used in the pretests and posttests were described. After the research domain had been identified, the data of the study were considered. In terms of the discussion of rater and test reliability and the various aspects relating to validity, the tests were considered to be reliable and valid.

The formulas used to calculate the error frequencies of the seven variables and the assumptions and analyses of Tests 1, 2, 3, 4 and 5 were given before the obligatory contexts of the verb were described. This section provided the background for decisions taken with regard to the erroneous status of structures. In this respect the notion of a unidirectional hierarchy of obligatory verb contexts was entertained. The five test comparisons in which the results of the experimental and the control groups were compared were described next. The fifth comparison, indicating the gain score differences between the experimental and the control group, was considered to provide the most valid result in terms of which the hypotheses of the study could be tested.

I am aware of the unavoidable limitations of a small test group. Only a replication of the study with a representative population could provide generalisable results. However, it is hoped that this study may induce other investigations of a similar nature.

The test results are described and interpreted in Chapter 4.

4. RESULTS

*Where observation is concerned,
chance favours only the prepared
mind.*

Louis Pasteur 1922 - 1895

4.0 PREVIEW

The results of two disparate categories of tests are described in this chapter. The first category of tests, presented only very briefly, relates to the exploratory investigation preceding the experiment. These results are presented in section 4.1. The second category of tests comprising the set of pretests and posttests pertains to the tests of the research experiment. These results are presented and described in section 4.2 within the paradigm of the five comparisons indicated in the previous chapter. For the sake of coherence, all measurement parameters and analyses have already been defined in section 3.7 (p.178) of Chapter 3. The test results are then interpreted in terms of each of the hypotheses of the study. The null hypothesis is rejected in terms of total verb errors, self-monitoring and other-monitoring. The notion that a relatively invariant ability gap may exist between self-monitoring and other-monitoring is subsequently explored. The relationship between consciousness raising procedures and analytical knowledge is indicated in 4.4 with reference to illustrative data from this study. The chapter is summarised in 4.5.

Results

4.1 EXPLORATORY INVESTIGATION

Before this study was commenced, an exploratory investigation had been undertaken to establish whether the problem identified at the college where this study was done could be identified at other similar colleges of education.

The AAT: ESL was used to investigate linguistic standards amongst first-year teacher trainees at various training institutions in a preceding exploratory investigation.

Table 4.1 below reflects the test mean scores obtained at the seven colleges representing five major education departments. The results indicated for Colleges 2 - 7 are lower than the results obtained at College 1, the institution where the research experiment was to be done. This suggests that, if linguistic limitations had been perceived as a problem at College 1, the problem was possibly more serious at the other colleges tested in the exploratory study. The results obtained in the exploratory study led me to conclude that the problem identified at College 1 was not unique and that the linguistic limitations of first-year teacher trainees was probably a widespread problem.

Table 4.1 *AAT:ESL mean scores at colleges of education*

COLLEGE	n	mean	SD
1	63	59.78	14.64
2	52	51.77	13.73
3	53	56.25	14.31
4	37	55.62	16.83
5	57	44.58	15.46
6	38	47.08	15.34
7	65	30.98	8.52

Results

At no time did the AAT:ESL figure as an integral part of the experimental testing; it merely served as a reference norm to enhance generalisability and external validity of the findings of the study.

The experimental and the control groups were subsequently subjected to the pretests (indicated as **a** in *Table 4.2*, pp.206 and p.270). After the intervention programme had been applied to the experimental group, the experimental (indicated as **E** in *Table 4.2*) as well as the control group (indicated as **C** in *Table 4.2*) were post-tested (indicated as **b** in *Table 4.2*).

4.2 TESTS OF THE RESEARCH EXPERIMENT

The results of the five comparisons (see *Fig. v*, p.15, 195) between the pretests and posttests and between the experimental and control groups were analysed according to the parameters identified in the previous chapter (see 3.7, p.178). Four of the five comparisons are reflected as grouped mean scores in *Table 4.2*. The organisation of the grouped results is explained in 4.2.1.

4.2.1 Grouped experimental and control group pretest/posttest results

Organisation of grouped results

In this section the grouped results are explained. These results, presented in *Table 4.2* below, are also included at the end of this chapter on p.270 as a fold-out page for the convenience of the reader. This table provides an overview of all the results except the results of the posttest comparisons of the experimental and the control groups (Comparison 4). The set of comparisons of Variable 6 (self-monitoring) with Variable 7 (other-monitoring) is not reflected in *Table 4.2* either as these

Results

results represent the only instances of comparisons of one variable with another. The results of these comparisons are therefore presented separately in *Table 4.3* (see p.218).

The results are graphically represented (*Fig. vi-xii*) with the relevant analyses and discussions. A legend of the abbreviations used in *Table 4.2* and elsewhere is provided with the table. In *Table 4.2* the results, grouped in Comparisons 1, 2, 3 and 5 (see 3.7.6 and *Fig. v*, p.195) of the four pretests (a) and the four posttests (b) of the experimental (E) and of the control group (C) reflect the 7 variables tested. The tests (T1, T2, T3 and T4) in which each variable was tested are shown in the first row above the relevant variables. Each comparison is presented in a block between bold lines in *Table 4.2*.

In the first block (**COMP 1**) the performance of the experimental group (E) is compared with that of the control group (C) in the pretests (a). The purpose of this comparison is to establish the comparability of the experimental and the control groups before intervention. On the basis of this comparison it would be decided whether a gain scores comparison would provide a more valid result to test the hypotheses than a posttest comparison. Comparison 1 also provides the scores to be paired between the experimental and the control groups for the gain scores comparison (Comparison 5). The results of Comparison 1 are described and analysed in section 4.2.2. (see p.207).

In the second block (**COMP 2**) the pretest (a) and posttest (b) results of the experimental group (E) are compared. This comparison is expected to show whether there is any change on any of the variables tested after application of the intervention programme. These results, which represent the gain scores of the experimental group, provide the scores for the experimental group used in the gain scores comparison (Comparison 5). These results are described and analysed in section 4.2.3 (see p.209).

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Comparisons of the pretest (a) and the posttest (b) results of the control group (C) are reflected in the third block (COMP 3). These results, which represent the gain scores for the control group, provide the scores for the control group used in the gain scores comparison (Comparison 5). These results are described and analysed in section 4.2.4 (see p.210).

The last block (COMP 5) reflects the comparison of the experimental group gain scores with the control group gain scores. This comparison is expected to show whether the experimental group has gained more than the control group on the variables tested after application of the intervention programme. Analysis of these results is presented in section 4.2.6 (see p.213). The seven subhypotheses, in terms of which the null hypothesis of this study may be rejected, are tested on the results of the gain scores comparison. The statistical hypotheses and the subhypotheses are formally restated here before the results are presented and described:

- H₁ There is a positive relationship between the application of multilevelled semantico-grammatical consciousness raising procedures and the destabilisation of fossilised structures.
- H₀ There is no relationship between the application of multilevelled semantico-grammatical consciousness raising procedures and the destabilisation of fossilised interlanguage structures.
- H₂ The total number of verb errors of the experimental group will show a significant reduction relative to the control group.
- H₃ The concord errors of the experimental group will show a significant reduction relative to the control group.
- H₄ The temporal (time) errors of the experimental group will show a significant reduction relative to the control group.
- H₅ The aspectual errors of the experimental group will show a significant reduction relative to the control group.

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- H₆** The correct verb structures of the experimental group will show a significant increase relative to the control group.
- H₇** The number of self-produced erroneous verb structures monitored successfully will show a significant increase relative to the control group.
- H₈** The number of erroneous verb structures produced by someone else which are monitored successfully will show a significant increase relative to the control group.

The four comparisons reflected in Table 4.2 may be summarised as follows:

COMP 1	Ea with Ca = a(E-C)	(experimental with control group pretests)
COMP 2	Ea with Eb = E(a-b)	(experimental group pretest with posttest)
COMP 3	Ca with Cb = C(a-b)	(control group pretest with posttest)
COMP 5	E(gain) with C(gain)	= E(a-b) - C(a-b) (experimental gain scores with control group gain scores)

The variables reflected in Table 4.2 are:

- Variable 1: total verb errors (TOT) (subsuming Variables 2,3,4)
- Variable 2: concord (CONC) (subset of Variable 1)
- Variable 3: time (TEMP) (subset of Variable 1)
- Variable 4: aspectual errors (ASP) (subset of Variable 1)
- Variable 5: discrete point verb test (TEST)
- Variable 6: self-monitoring (SELF)
- Variable 7: other-monitoring (OTHR)

Abbreviations used in Table 4.2:

a	= pretest	ASP	= aspectual errors
b	= posttest	C	= control group
COMP	= comparison	CON	= concord
dif	= difference	E	= experimental group
M	= mean	n	= number of subjects
N	= number of pairs	OTHR	= other-monitoring
SD	= standard deviation		
$\frac{S}{D}$	= standard deviation of the differences		
SELF	= self-monitoring		
T	= test		
TEMP	= time	TEST	= verb test
TOT	= total verb errors	VAR	= Variable

Results

Table 4.2 Grouped results of the experiment

TEST:		T1	T1	T1	T1	T4	T2	T3
VAR:		VAR 1 TOT	VAR 2 CONC	VAR 3 TEMP	VAR 4 ASP	VAR 5 TEST	VAR 6 SELF	VAR 7 OTHR
COMP 1 E a n: 10	M SD	33.15 17.33	9.17 10.38	26.85 16.99	2.15 2.04	45.33 14.50	8.55 14.73	25.00 11.79
C a n: 8	M SD	34.38 22.33	9.05 7.76	26.11 20.80	4.56 2.83	53.33 10.67	9.07 11.16	33.75 14.95
p-values of differences		.40	.46	.33	.05	.10	.23	.14
COMP 2 E a n: 10	M SD	33.15 17.33	9.17 10.38	26.85 16.99	2.15 2.04	45.33 14.50	8.55 14.73	25.00 11.79
E b n: 10	M SD	13.64 15.15	6.82 6.27	9.54 14.19	1.30 2.89	49.67 12.01	21.50 32.76	37.33 13.03
p-values of differences		.002	.49	.004	.07	.09	.16	.05
COMP 3 C a n: 8	M SD	34.38 22.33	9.05 7.76	26.11 20.80	4.56 2.83	53.33 10.67	9.07 11.16	33.75 14.95
C b n: 8	M SD	19.97 20.21	4.75 5.77	12.86 22.33	4.45 3.80	55.42 11.40	4.91 9.53	38.34 18.77
p-values of differences		.07	.24	.11	.39	.31	.14	.26
COMP 5 E gain N: 8	M	22.83	2.49	22.82	1.92	4.17	20.36	18.33
C gain N: 8	M	14.41	4.30	13.25	0.11	2.09	-4.16	4.59
E - C gain	S D	3.46	3.34	8.35	1.53	5.04	8.52	6.65
p-values of gain score differences		.02	.30	.14	.14	.35	.01	.04

Results

An additional set of comparisons was done of Variables 6 (self-monitoring) and 7 (other-monitoring) (see *Fig. x, xi & xii*, pp. 220, 221, 222) because destabilisation of fossilised verb structures hinges on the subject's ability to identify a fossilised structure as erroneous in the first place. Self-monitoring was therefore compared with other-monitoring to ascertain whether verb-error identification was affected by the error being self-produced or not (see *Table 4.3*, p.218).

4.2.2 Comparison 1 Pretests: experimental group with control group

The results of the experimental group/control group comparisons for the pretests are represented graphically in *Fig. vi* below.

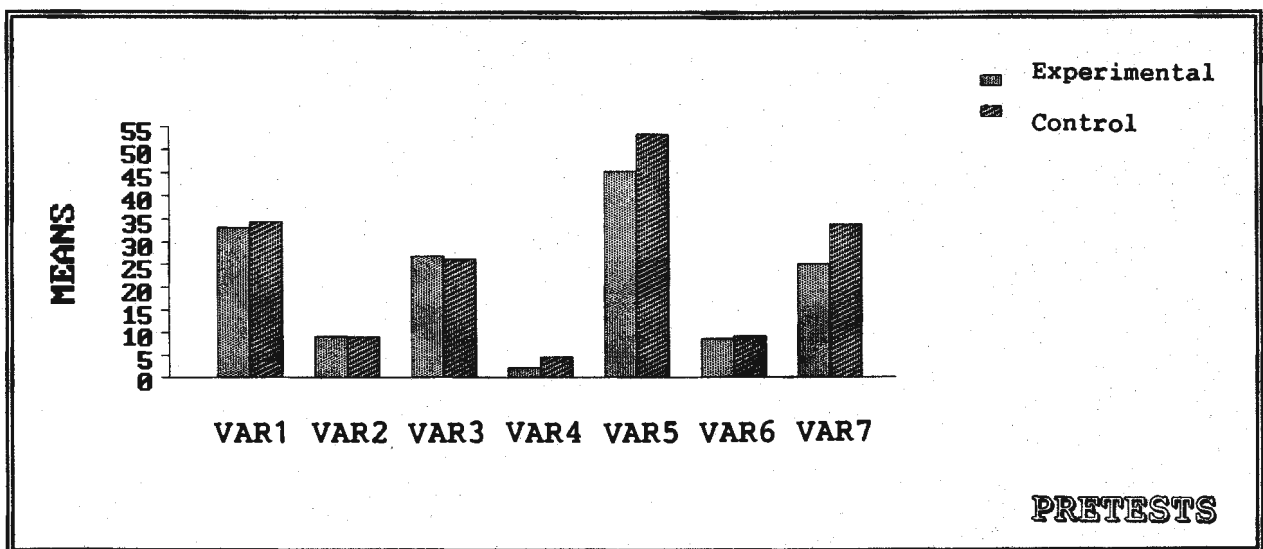
Figure vi reflects the means of the 7 variables of the experimental and the control groups. Scoring was based on error frequency counts for Variables 1-4, and criterion-referenced responses for Variables 5-7 (see 3.7.2, p.180). Improvement or superiority demonstrated by a difference in the mean score would therefore be indicated by a **lower** score for Variables 1-4, and a **higher** score for Variables 5-7. To establish whether these differences were statistically significant, p-values were calculated with a multivariate two-way repeated analysis of variance with interaction.

The degree of homogeneity between the experimental and control groups on the variables tested is evident in *Fig. vi*. There was no statistically significant difference between the experimental and control groups on any variable except on Variable 4 (aspectual errors, henceforth referred to as aspect). On numerical means (see *Table 4.2*, p.206, for pretest mean scores and standard deviations) the control group made twice as many errors on Variable 4, a difference which was statistically significant at $p < .05$ and which accounted for the experimental group's very slight advantage on overall verb control. The two

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groups were therefore regarded as statistically equivalent in respect of their pretest performance on all the variables except Variable 4 (aspect).

Fig. vi *Pretests: experimental and control group differences*



To test the hypotheses of this study, however, a gain scores comparison would be indicated rather than a posttest scores comparison if there were any preexisting differences in the groups (Hatch & Farhady 1982:119). As the comparison of the pretests had demonstrated a significant difference between the groups on one of the variables, it was decided that the hypotheses would be tested on a comparison of the gains demonstrated by the experimental and the control groups, rather than on a comparison of the posttest scores.

Results

4.2.3 Comparison 2 Experimental group: pretests with posttests

These results indicate higher gain scores on the 7 variables in the posttests subsequent to application of the consciousness raising intervention programme.

Results obtained on Variables 1-4 (see *Fig. vii*, below) indicate that ~~considerably fewer verb errors were made by the experimental group in the posttest. The mean scores (refer to the second block of Table 4.2, p.206) demonstrate improvement tendencies on~~ Variable 4 (aspect), Variable 5 (discrete point verb test) and Variable 6 (self-monitoring). The overall improvement on Variable 1 (total verb errors) is statistically highly significant at the level of $p=.002$. Improvement on Variable 3 (time) is statistically highly significant at the level of $p=.004$.

The results also show an other-monitoring (Variable 7) improvement at the statistically significant level of $p<.05$. This result indicates that the experimental group subjects were ~~significantly better at identifying and correcting erroneous verb structures produced by someone else than they had been before the intervention programme was applied. In a subsequent comparison of self-monitoring with other-monitoring, the results indicated that the experimental group was still better at correcting errors~~ of others than at correcting their own errors (see pp.219).

A number of interesting factors emerge from this set of results:

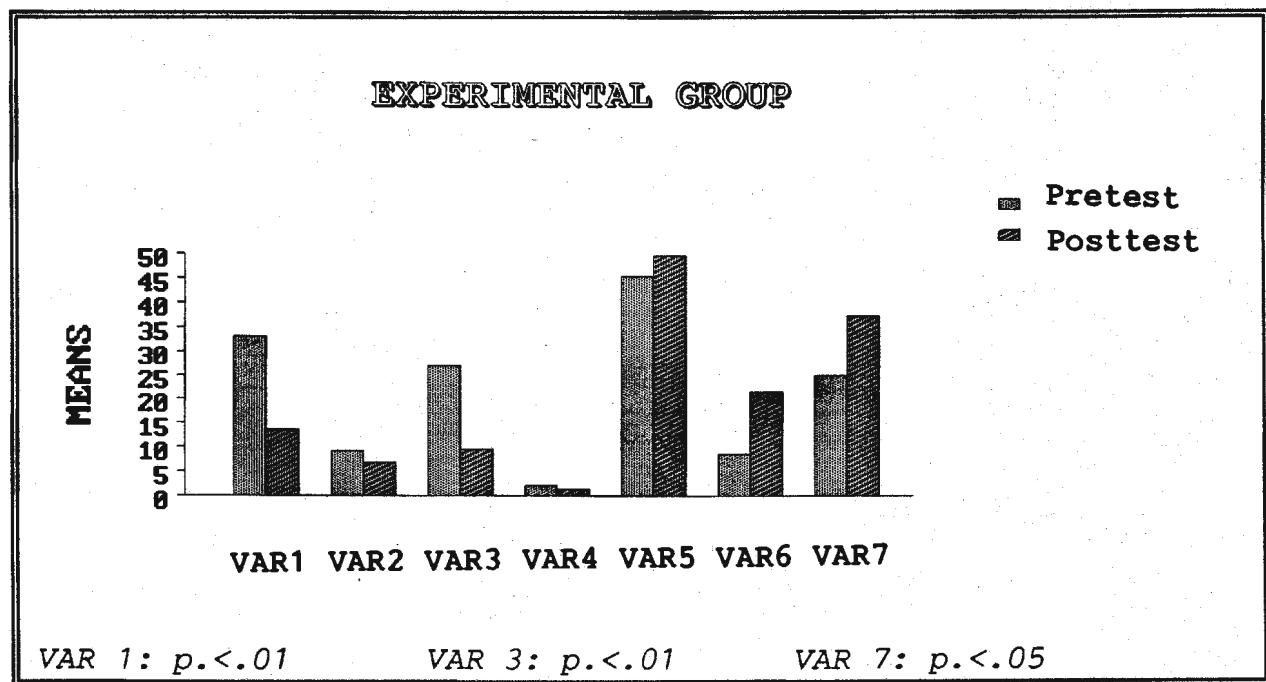
- the lack of improvement in the control of subject-verb agreement despite significant improvement of other aspects of verb control;
- the marked difference in ability to identify and correct own errors and errors made by others;
- the evident but statistically insignificant improvement in self-monitoring;

Results

- the preservation of a comparable ability gap between self-monitoring and the identification and correction of errors made by others in the posttests, despite a statistically significant improvement of other-monitoring;
- the lack of a parallel improvement on discrete point testing of verb control, with the statistically significant improvement on overall verb control, time and other-monitoring.

These factors are discussed comprehensively in section 4.3 (p.223).

Fig. vii Experimental group: pretest and posttest differences



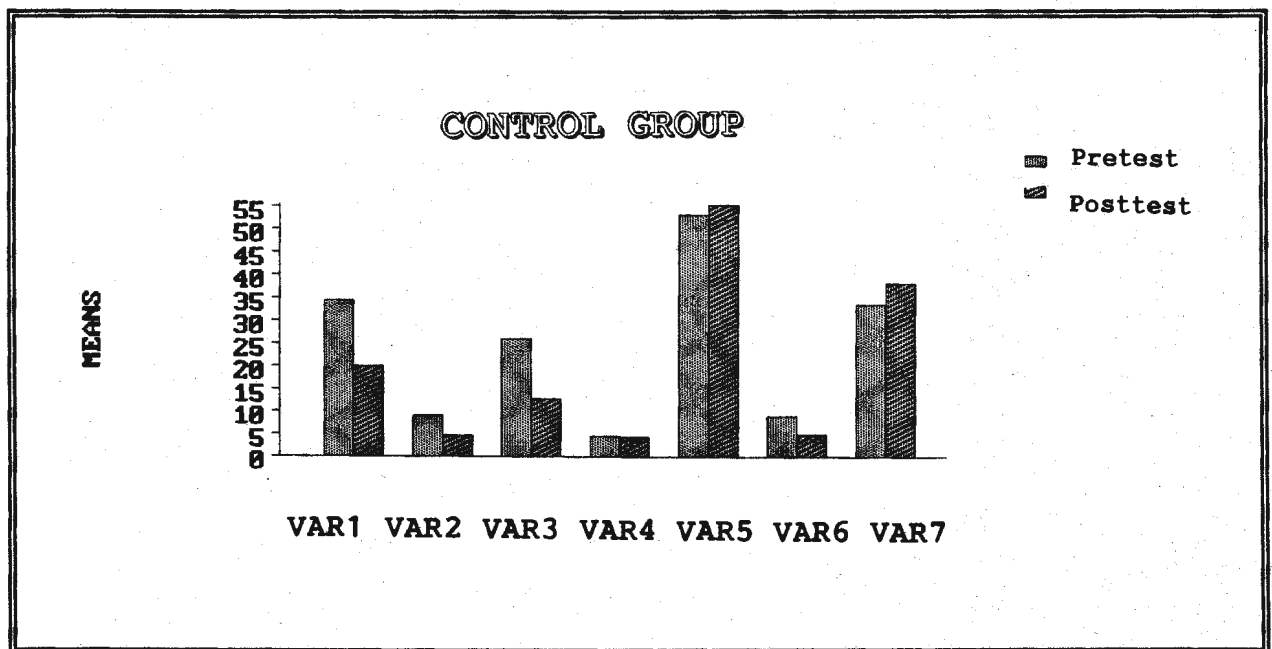
4.2.4 Comparison 3 Control group: pretests with posttests

Not one of the results in Comparison 3 showed any statistically significant gains. According to the mean scores reflected in Fig. viii, the control group had fewer total verb errors in the posttests, mainly as a result of an improvement on Variable 3 (time).

Results

This improvement was not unexpected. In the regular ESL first-year course, tenses were traditionally taught from the perspective of form linked to function, that is meaning. The concept of a timeline was also used to represent temporal concepts graphically. This presentation method shows some similarities with the consciousness raising procedures used in the intervention programme. The regular ESL programme had not been altered in any way for the experiment as it was essential for the control group to be exposed to the ESL programme regularly in use. As the experimental group demonstrated statistically significant improvement on Variable 3 in the posttests, the control group improvement can be explained post hoc.

Fig. viii Control group: pretest and posttest differences



The control group shows deterioration on Variable 6 (self-monitoring), as demonstrated by the lower mean score, although this difference is not statistically significant. This result is

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unexpected at first glance as the control group has fewer total verb errors (Variable 1) in the posttests. More explicit knowledge of verb structures could therefore be assumed and the control group could thus also be expected to have more success at correcting their own errors.

In contrast to Variable 6 (self-monitoring), the control group shows a higher other-monitoring success rate on Variable 7 in the posttest. This particular outcome has been supported by all the results relating to Variable 6 (self-monitoring) and Variable 7 (other-monitoring). In all tests all subjects demonstrated an ability to monitor errors made by others superior to the ability to monitor their own errors.

4.2.5 Comparison 4 Posttests: experimental group with control group

In comparison 4 the posttest results of the experimental group were compared with the posttest results of the control group to show to what extent the experimental group had performed better than the control group in the posttests.

According to these results, the control group made fewer concord errors (Variable 2). The biggest difference between the experimental and the control group is on Variable 4 (aspect) at a statistically significant level of $p < .05$. As the experimental group's performance was already significantly better than the performance of the control group in the pretests, the statistically significant result in the posttests cannot be attributed to the consciousness raising intervention programme. The other variables show no significant differences.

The control group improvement on some variables in terms of the mean scores has affected comparison measures with the experimental group. As a result of control group improvement, comparison with a stable point of reference was not possible.

Results

To show whether the experimental group differed significantly from the control group in their pretest/posttest gain scores, the gain scores of the experimental group (COMP 2) were compared with the gain scores of the control group (COMP 3) in Comparison 5.

4.2.6 Comparison 5 Gain scores: experimental group with control group

Where the p-values of the gain score differences demonstrated in this comparison are statistically significant, or close to the level of statistical significance, interlanguage change in the experimental group which may be related to consciousness raising intervention is indicated. The seven subhypotheses were tested in terms of these results. In each case, the gain scores of the two groups were statistically compared by means of a matched t-test with 8 pairs of scores previously matched between the experimental group and the control group. The gain scores reflected in COMP 5 in Table 4.2 are therefore different from the gain scores reflected in COMP 2 and COMP 3. The degrees of freedom for this comparison is $df=7$. The critical value is $t_{crit} = 1.895$. The outcome on each hypothesis will now be dealt with in turn.

H_2 The total number of verb errors of the experimental group will show a significant reduction relative to the control group.

A statistically significant gain score difference is indicated for the experimental group on Variable 1 (total verb errors) at the statistical level of $p < .05$. This means that the total number of verb errors showed a significant reduction relative to the control group. The observed value for this variable is $t_{obs} = 2.43$. The null hypothesis of H_2 is therefore rejected on Variable 1 as $t_{obs} > t_{crit}$.

This outcome, indicating that the destabilisation of verb structures may be related to the consciousness raising

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intervention programme, is particularly meaningful as it reflects improved general verb performance, despite the lack of improvement on Variable 2 (concord).

H₃ The concord errors of the experimental group will show a significant reduction relative to the control group.

The gain score difference on Variable 2 (concord) is not significant. This means that the concord errors of the experimental group did not show a significant reduction relative to the control group. The null hypothesis of H₃ cannot be rejected on Variable 2 as $t_{obs} < t_{crit}$.

When the numerical mean scores are examined, less improvement is shown for the experimental group than for the control group. This result raises a question: why do the teaching approaches used in the intervention programme and in rule-based grammar lessons affect the learning of concord differently? Other verb structures such as time and aspect seemed to benefit more from consciousness raising procedures than from rule-based teaching. Furthermore, why should concord not be significantly affected when other aspects of verb control have demonstrated interlanguage change which may be related to consciousness raising? These questions, relating to an aspect of verb control known to frequently fossilise, are taken up again in section 4.3.2 (p.226).

H₄ The temporal (time) errors of the experimental group will show a significant reduction relative to the control group.

Although the experimental group improvement on Variable 3 (time) is highly significant at $p=.004$ in the pretest/posttest comparison of this group (COMP 2), the gain scores difference indicated in COMP 5 is not significant. This means that the time errors of the experimental group did not show a significant reduction relative to the control group. The observed value for this variable is $t_{obs} = 1.15$. The null hypothesis of H₄ therefore cannot be rejected on Variable 3 as $t_{obs} < t_{crit}$. However,

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examination of the numerical mean scores of the two groups shows that the experimental group had improved considerably, but that the control group had also improved. The matter concerning control group gains was addressed earlier in 4.2.4, p.211.

H₅ The aspectual errors of the experimental group will show a significant reduction relative to the control group.

The gain scores difference on Variable 4 (aspect) indicated in COMP 5 is not significant. This means that the aspectual errors of the experimental group did not show a significant reduction relative to the control group. The observed value for this variable is $t_{obs} = 1.18$. The null hypothesis of H₅ therefore cannot be rejected on Variable 5 as $t_{obs} < t_{crit}$.

When the numerical gain scores of the experimental and the control group are examined, it is evident that the experimental group had improved on this variable, as in the case of Variable 3 (time). The p-values of the gain score differences shown in COMP 5 for time and aspect are the same at $p = .14$. The question as to why temporal and aspectual structures showed a result that differed considerably from the result on concord structures is addressed in section 4.3.3, p.235 and 4.3.4, p.242.

H₆ The correct verb structures of the experimental group will show a significant increase relative to the control group.

The gain scores difference on Variable 5 (verb test) indicated in COMP 5 is not significant. The correct verb structures of the experimental group did not increase significantly relative to the control group. The null hypothesis of H₆ cannot be rejected on Variable 5 as $t_{obs} < t_{crit}$.

The paired gain scores used in this comparison suggest that the experimental group had gained more than the control group on this variable, although this difference is not significant. However, the experimental group had demonstrated a statistically

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significant difference on total verb errors in the gain scores comparison, an outcome which seems to contradict the verb test result. This raises the question: why did the improved total verb performance not facilitate a similarly improved performance in the verb test? This question is addressed in 4.3.5, p.247.

H₇ The number of self-produced erroneous verb structures monitored successfully will show a significant increase relative to the control group.

The gain scores comparison on Variable 6 shows a statistically highly significant difference at the level of $p = .01$. This means that the self-monitoring success rate of the experimental group had increased highly significantly relative to the control group. The observed value for Variable 6 (self-monitoring) is $t_{obs} = 2.88$. The null hypothesis of **H₇** is therefore rejected on Variable 6 as $t_{obs} > t_{crit}$. The differences reflected for the two groups on Variable 6 (self-monitoring) are of particular interest as the experimental group demonstrated improvement whereas the control group deteriorated.

H₈ The number of erroneous verb structures produced by someone else which are monitored successfully will show a significant increase relative to the control group.

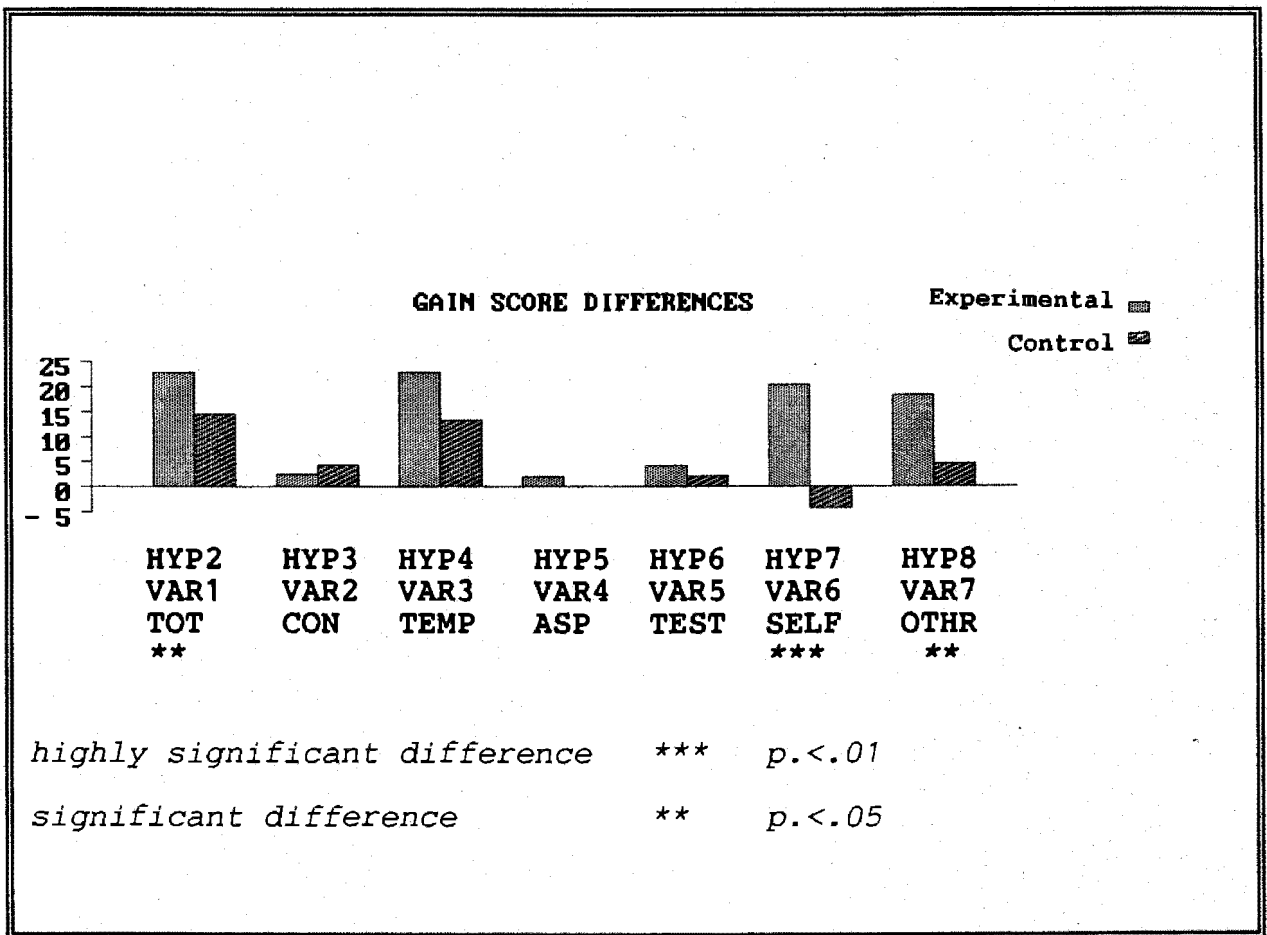
Variable 7 (other-monitoring) shows a statistically significant gain score difference for the experimental group. This means that the other-monitoring success rate of the experimental group had increased significantly relative to the control group. The observed value for Variable 7 (self-monitoring) is $t_{obs} = 2.07$. The null hypothesis for **H₈** is therefore rejected on Variable 7 as $t_{obs} > t_{crit}$.

The null hypothesis of the central hypothesis, **H₁**, is rejected in terms of the findings on **H₂**, **H₇** and **H₈** on the variables total verb errors (Variable 1), self-monitoring (Variable 6) and other-monitoring (Variable 7). Figure ix summatively reflects the

Results

statistically significant findings supporting H_2 , H_7 , and H_8 and illustrates how the experimental and the control groups compared in terms of all their gain scores.

Fig. ix Experimental and control group gain scores



The observed **ability gap** between Variable 6 and Variable 7 (see p.210) suggested that this might be a consistent phenomenon. The pretest and posttest results also showed that subjects seemed to be consistently better at other-monitoring relative to self-monitoring. These observations warranted further exploration. To this end, Variable 6 and Variable 7 were compared with each other in four different comparisons:

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- (1) **Variable 6 compared with Variable 7** in pretests and posttests of experimental and control groups to establish the extent of the ability gap on these variables;
- (2) **experimental group compared with control group** on Variable 6 and 7 differences in pretests and posttests to establish whether there was any significant difference between these two groups in respect of the ability gap;
- (3) **pretests compared with posttests** of experimental and control groups on Variables 6 and 7 to establish to what extent change had occurred in respect of the ability gap;
- (4) **ability gap change of the experimental group compared with the ability gap change of the control group** to establish to what extent the two groups differed in terms of the ability gap in the pretests and posttests.

(1) **Variable 6 compared with Variable 7**

The results of the comparison of Variables 6 and 7 in the pretests and posttests of the experimental and control groups are presented in Table 4.3 below.

Table 4.3 *Comparisons of self-monitoring with other-monitoring*

	PRETESTS				POSTTESTS		
		VAR 6	VAR 7	V6-V7	VAR 6	VAR 7	V6-V7
E	M	8.55	25.0	16.45	21.50	37.33	15.83
	SD	1.62	0.54		1.94	0.33	
	P			0.003			0.008
C	M	9.07	33.75	24.68	4.91	38.34	33.43
	SD	1.42	0.56		1.39	0.51	
	P			.002			0.0001

Results

In the first of these comparisons, the pretest and posttest results on Variable 6 were compared with the results on Variable 7 (see *Fig. x* below). In the comparison of the pretest results of Variable 6 (self-monitoring) success rate with Variable 7 (other-monitoring) success rate it was found that the experimental group's other-monitoring success rate relative to their self-monitoring success rate was much higher at a highly significant level of $p=.003$. In the pretests, the control group's ability to identify other's rather than own verb errors was also highly significant at the level of $p=.002$. As stated earlier, destabilisation of fossilised verb structures hinges on the subject's ability to identify a fossilised structure as erroneous in the first place. A reduced gap between Variable 6 and Variable 7 scores in the posttests would therefore suggest that subjects have become more conscious of their own errors. In this event, subjects may be expected have metalinguistic consciousness in respect of these grammatical structures.

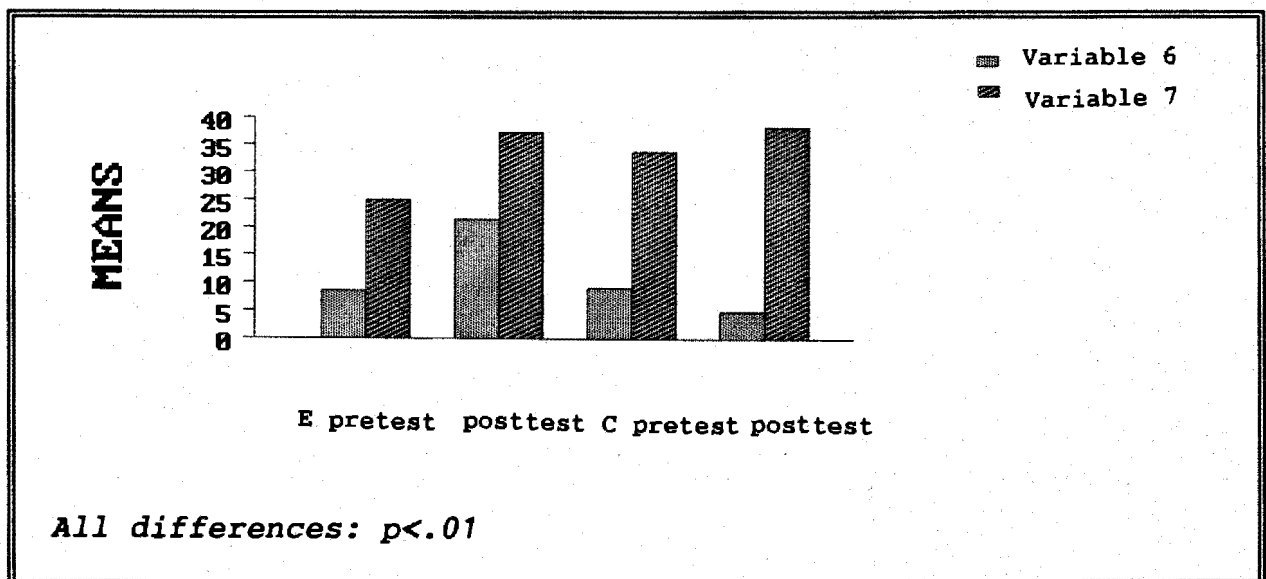
In the posttests, comparison of Variable 6 (self-monitoring) and Variable 7 (other-monitoring) in the experimental group posttests showed a difference at a highly significant level of $p=.008$. As in the pretests, the experimental group was far more adept at identifying other-produced than own-produced verb errors. The control group demonstrated an even bigger discrepancy between Variable 6 and Variable 7 at the highly significant statistical level of $p=.0001$. However, the difference between the pretest and posttest measurements for the control group was not statistically significant.

These results indicate that although both the self-monitoring and other-monitoring success rates had improved for the experimental group, the difference between the two variables was still statistically highly significant, in other words, the **ability gap** has remained relatively constant. The results suggest an increased awareness, that is depth of understanding (Bialystok

Results

1982:205 n3) of own errors for the experimental group, however. The results reflected in Table 4.3 (p.218) show that the ability gap is more marked for the control group whose success rate on Variable 7 had improved but on Variable 6 had actually deteriorated in the posttests.

Fig. x Differences between self-monitoring and other-monitoring of experimental and control groups in pretests and posttests



To establish to what extent the experimental group differed from the control group in terms of the discrepancy shown in the first comparison, a second comparison was done.

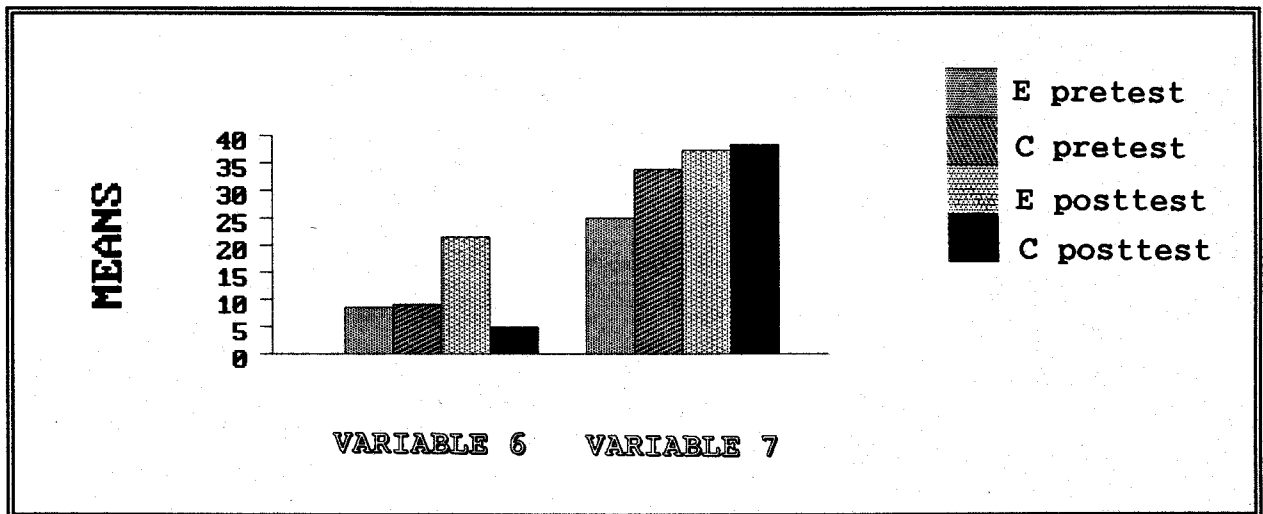
(2) Experimental group compared with control group

In the second comparison, (Fig. xi) the experimental group was compared with the control group on their Variable 6 (self-monitoring) and 7 (other-monitoring) differences. It was found that this difference calculated for the posttests was not statistically significant. These results suggest that even though

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improvement is demonstrated on self-monitoring as well as other-monitoring, the discrepancy between these two abilities (the ability gap) remained relatively unchanged.

Fig. xi Experimental/control group differences in pretests and posttests on self-monitoring and other-monitoring



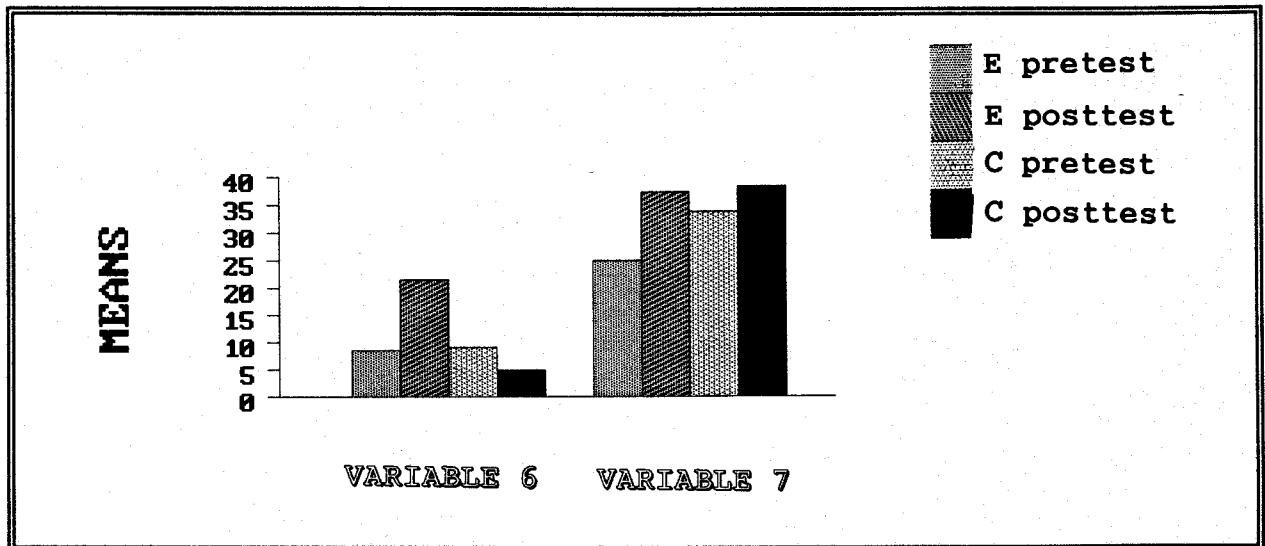
To discover whether the experimental group differed significantly from the control group in respect of the discrepancy between Variable 6 and 7 in the pretest/posttest differences, a third comparison was made.

(3) Pretests compared with posttests

In the third comparison the pretests were compared with the posttests on Variables 6 (self-monitoring) and 7 (other-monitoring) for the experimental and the control groups (see Fig. xii) that is $\{E_a(\text{VAR6}-\text{VAR7})-E_b(\text{VAR6}-\text{VAR7})\}$ and $\{C_a(\text{VAR6}-\text{VAR7})-C_b(\text{VAR6}-\text{VAR7})\}$. According to this graphic illustration, the pretest differences for the experimental group on Variables 6 and 7 are demonstrably greater than the differences for the control group.

Results

Fig. xii Pretest/posttest differences of experimental and control groups on self-monitoring and other-monitoring



This comparison does not, however, indicate whether the observed intergroup difference noted in Fig. xii is statistically significant. A fourth comparison was therefore made to discover whether the observed difference between the experimental and the control groups was significant.

(4) Ability gap change of the experimental group compared with the ability gap change of the control group

To establish to what extent the experimental and control group pretest differences on Variables 6 (self-monitoring) and 7 (other-monitoring) differed from the experimental and control group posttest differences on Variables 6 and 7, the difference between $\{E_a(\text{VAR6-VAR7}) - E_b(\text{VAR6-VAR7})\}$ and $\{C_a(\text{VAR6-VAR7}) - C_b(\text{VAR6-VAR7})\}$ was calculated by means of an analysis of variance (see p.179, for reference to the relevant test done). This comparison would indicate to what extent the discrepancies between the two abilities had become less or more marked after application of the intervention programme,

Results

The results of this test suggest that the difference in the discrepancy between the two variables for the two groups did not change markedly in the posttests. The relative ability gap had therefore remained the same as this difference is not statistically significant. This result suggests that the discrepancy between Variables 6 and 7 (the ability gap) has remained constant despite obvious improvement in the case of the experimental group. As the consistent discrepancy between Variable 6 and Variable 7 despite general improvement may have implications for an understanding of defossilisation, this point is taken up again in the next section.

4.3 INTERPRETATION OF RESULTS IN RESPECT OF SUBHYPOTHESES

In this section, the results described in section 4.2 are interpreted and the findings are related to the hypotheses of this study. It must be restated at the outset of this discussion, however, that the small size of the groups is one of the restrictions of the study. ~~For this reason inferences based on the results are made with caution.~~ *etc*

Given the many linguistic variables that contribute to general language proficiency (Higgs & Clifford 1982:60; see 2.2.2 p.49), the null hypothesis cannot be tested on a general language proficiency score. Furthermore, given the research questions of this thesis which examine discrete aspects of verb control, the findings on each separate variable must be related to the subhypotheses which are tested in terms of the central hypothesis. The null hypothesis is tested in terms of the results of the comparison of the gain scores of the experimental group with the gain scores of the control group (COMP 5). This comparison reflects the experimental group's pretest/posttest gains (COMP 2) relative to the control group's pretest/posttest gains (COMP 3).

Results

The following discussion deals with each one of the seven subhypotheses (see p.204) tested via seven feature variables in the context of five comparisons of which four are shown in Table 4.2. It is suggested at this point that the reader make use of the fold-out table on p.270 to facilitate easy reference. As indicated before, gains are signified by lower scores (fewer errors) on Variables 1 to 4, and by higher scores (success rate) on Variables 5 to 7.

After consideration of the results indicated in Table 4.2, and the implications that derive from them, the results on the inter-variable comparisons, Variables 6 (self-monitoring) and Variable 7 (other-monitoring) are considered. Four variables, Variable 2 (concord), Variable 3 (time) Variable 4 (aspect) and Variable 6 (self-monitoring) are discussed in more detail than the rest because the inferences drawn from their results are particularly informative for an understanding of fossilisation and consciousness raising.

In the comparison of the gain scores of the experimental group and the control group (COMP 5) three factors may have militated against the likelihood of significant findings in all the tests:

- improvement of the control group
- small size of the experimental and control groups
- high standard deviation scores indicating a high level of heterogeneity within the groups.

It is possible that significant findings might have obtained on more tests, had the test groups been larger. The size limitation was the unavoidable consequence of naturally occurring groups (see 3.3, p.147 of this study). Furthermore, the shifting levels of performance of the control group are the unavoidable consequence of a research design that uses natural groupings in an educational context (Seliger & Shohamy 1989:148). Although external validity - and therefore generalisability - is enhanced

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in such research designs (Seliger & Shohamy 1989:149) a degree of internal validity has to be sacrificed. The teaching of students cannot be stopped to accommodate a research programme (Hatch & Farhady 1982:23,24). The control group was therefore exposed to the usual ESL teaching syllabus containing the same teaching points (teaching content) as the intervention programme. Whereas those teaching points were presented to the control group using the traditional, direct teaching method, the experimental group received the same teaching content in the intervention programme employing consciousness raising procedures. It was not unreasonable to assume that the control group would demonstrate that some learning had occurred, but it was expected that the experimental group would benefit more.

4.3.1 Reduction of total verb errors

The hypothesis (H_2) that the total number of verb errors would be reduced subsequent to the application of multilevelled semantico-grammatical ~~consciousness raising~~ procedures was supported at a statistically significant level. The null hypothesis was therefore rejected. ✓

This means that fossilised verb structures including different aspects of the verb had become destabilised in the multilevelled semantico-grammatical consciousness raising intervention programme. By implication, semantico-grammatical consciousness raising procedures may reactivate processes of grammaticisation, thereby destabilising fossilised verb structures. NB

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The experimental group demonstrated a highly significant gain score (COMP 2) after application of the intervention programme. As the total verb error score is made up of concord errors, temporal (time) errors and aspectual errors, the improved total verb score must relate to improved scores on each of these three variables. Total verb control is an indication to teachers of the level of linguistic development of ESL learners. This combined

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variable was therefore included to indicate linguistic improvement or lack thereof in relatively general terms. The variables embraced by Variable 1 (total verb errors) are discussed in 4.3.2 - 4.3.4. The control group demonstrated no significant pretest/posttest gain in respect of total verb errors.

4.3.2 Reduction of concord errors

The hypothesis (H_3) that the concord errors of the experimental group will show a significant reduction relative to the control group could not be supported. The null hypothesis was therefore not rejected. This means that fossilised concord structures were not destabilised in the consciousness raising intervention programme.

Considering the significant findings on total verb errors, the result in respect of concord structures suggests that some factor may have contributed to this disparity. In relation to temporal and aspectual structures included in Variable 1 (total verb errors), concord structures are semantically virtually vacuous. Semantic value (meaning) may therefore be a contributory factor in the process of grammaticisation. It is also possible that the semantic vacuity of a structure renders it less likely to become fully grammaticised and therefore also more likely to fossilise.

In the comparison of the experimental and the control groups in the pretests (COMP 1), there is no significant difference on Variable 2 (concord). Subjects' patent inability to control concord structures raises the question: Why is concord problematic for ESL learners and why do concord structures in particular tend to fossilise?

Erroneous structures with subject-verb agreement are commonly found in the speech and writing of second language learners (cf. Quirk et al. 1985:757,758; Jeffery 1993:9). When the speech of

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second language learners is flawed (excluding non-native pronunciation), that is, not fully developed to the level of target language proficiency, concord errors are often found to be one of the flawed factors. In the pretests, 61% of the subjects in the experimental and control groups exhibited concord errors. Given that a learner, with the exception of the verb *be*, has to select the correct structure from only two possible structures, this percentage seems to suggest that many learners cannot control verb structure in terms of subject-verb agreement constraints. Compare this with the more difficult task of the numerous choices of verb structures that face learners when they have to select the appropriate temporal form (see 3.7.4, p.187 for a description of obligatory temporal contexts). The question is, why does this particular structure seem so prone to fossilisation in an interlanguage form in the language of Afrikaans-speaking ESL learners?

Beginner second language learners use what they already know to deal with any learning task. In terms of the concept of grammaticisation, learners initially start with language in which form and meaning are as directly linked as possible (see *Fig. xiii*, p.234). In respect of agreement of the verb with the plurality of the subject in third person singular contexts, the "directness" may be understood as use of the unchanged form of the verb to indicate the semantic value desired. This means that **meaning** is closely linked in a direct relationship to the agent, the grammatical subject of the sentence, in order to render the sentence optimally learnable (cf. Rutherford 1987:8). In terms of the process of grammaticisation, learners follow a "meaning first, form later" learning procedure (cf. Boulouffe 1984:70). The learning strategy that learners employ is to use what they already know in an attempt to deal with the learning task. Initially learners learn new words, usually taught to them in the unchanged form; this is then the form that the learners will use at first because this is what they know. The following examples

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taken from the pretest data illustrate this kind of form-meaning directness:

- [14] * ...it look very small (T1a)
[15] * ...the fear disappear (T1a)

These two examples fail to meet the requirements of the obligatory context for agreement of the verb with the subject of the sentence: S [3rd PERS][SING][PRES] - V + S {subject [3rd person][singular][present tense]}.

The form-meaning directness illustrated in [14] and [15] would constitute the very first step in the process of grammaticisation (see Fig. xiii for a diagrammatic representation of the grammaticisation of concord structures, p.234). This type of concord error is therefore less likely to be manifested in the language of learners who have been subjected to ESL tuition for a minimum of ten years, than in the language of beginner learners. This prediction would not apply to learners who have received flawed teaching input by teachers who themselves use incorrect concord structures (cf. Valette 1991:326; Ellis 1987:91). The type of concord error that shows evidence of early tuition as well as transfer as illustrated in [16] - [19] is more common. This seems to be the stage at which fossilisation sets in, as is evidenced by the examples of concord errors contained in the data. These errors can be seen as evidence of early stages of grammaticisation. Based on this interpretation, I shall argue that fossilisation of interlanguage concord structures sets in during the early stages of ESL tuition and that first-year teacher trainees have, therefore, probably been using these interlanguage structures for a minimum of eight to ten years.

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} NB
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The following examples illustrate incorrect learner hypotheses relating to concord structures.

Results

- [16] * the guys stands together
- [17] * My expectations for the future is to teach children
- [18] * I were very happy
- [19] * the seniors was so kind

The concord morpheme **-s** which has been added to the verb in example [16] is evidence of grammaticisation resulting from instruction. The learner, who has added the concord **-s** in an inappropriate context **S [PLURAL] + V**, may have found his/her learner hypothesis reinforced by the visual match as well as the consonant sound harmony of plural **-s** and concord **-s** (see Fig. xiii p.234).

The language learning process in a formal classroom environment, simply stated, proceeds as follows:

INSTRUCTION ———> **LEARNING PROCESS** ———> **LEARNING RESULT.**

In order to illustrate how grammaticisation might proceed and how fossilisation (producing the interlanguage structures indicated in [14] - [19]) might come about, a hypothetical teaching syllabus (INPUT 1-4 in Fig. xiii, p.234) for the teaching of concord, not unlike the ESL teaching syllabi commonly used, is posited. This ESL teaching syllabus begins with lexical items, including verbs (INPUT 1). Then, using the new words learnt, simple S-V-O sentences containing verb structures demonstrating the agreement rule in the present tense are added (INPUT 2). Many example sentences are presented so as to familiarise learners with the new structure (INPUT 3). After this, structures with past tense forms demonstrating the agreement rule are presented (INPUT 4). Many of the sentences used contain the different forms of the verb **be**, in the present as well as in the past tense. Traditional teaching methods focus on the rule structures to be taught, especially those that are traditionally expected to be difficult, such as agreement forms of the verb **be**.

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Where then does the difficulty lie that ultimately leads to fossilisation? Why, in the face of correct structures taught, does fossilisation still set in? (cf. Orwell's Problem, Selinker & Lakshmanan 1992:198). For an answer to these questions, we need to examine the learning process.

Learners' initial basic learning strategy "to use what they know", is supported by two factors. The first is an expanding linguistic repertoire resulting from classroom instruction, and the second is the principle of reinforcement. Learners, then, using what they already know, gradually get to know more, assured that what they know is right. Classroom instruction is expected to trigger reanalysis and restructuring of language, causing learners to think again, to form new hypotheses and to adjust their interlanguage structures accordingly. If hypothesis formation, reanalysis, restructuring and adjustment of hypotheses proceeded along a route that invariably produced correct structures, all interlanguage structures would eventually develop to target language levels. This, however, is very rarely the case. The second language usually exhibits some aspect of fossilisation, evidence of incorrect hypotheses having been accepted as adequate by learners. Once these structures are accepted in communication without negative feedback on both cognitive and affective levels, reanalysis and restructuring of interlanguage structures cease and these structures then remain in the learner's language as fossilised structures.

I have argued that fossilisation sets in during the initial years of language instruction and that reanalysis and restructuring cease once structures are accepted in communication. If concord structures are accepted so readily, by implication, meaning cannot be affected much by these structures, in other words, they are virtually **semantically vacuous**.

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To discover whether the interlanguage concord structures found in the data of the pretests did in fact remain resistant to change in the consciousness raising intervention programme, I shall consider COMP 2 and COMP 3. It is to these comparisons that I now turn. NB

Variable 2 (concord) shows the least gain of all the variables in the pretest/posttest comparison of the experimental group. In the posttests, some subjects have produced exactly the same interlanguage structures that appear in their pretests, and four subjects have more concord errors in the posttest than in the pretest. The question that needs to be answered is why this particular variable has shown the least change and in some cases even deterioration after consciousness raising intervention. Before addressing this question, the gain score of the control group (COMP 3) in respect of concord is considered.

The control group shows some improvement on Variable 2 (concord), but not enough to be statistically significant. Interestingly, comparison of the experimental and the control groups in the posttests (COMP 4, not reflected in Table 4.2) shows that the control group performed better than the experimental group.

The lack of concord improvement raises the following question:

- Why did consciousness raising procedures have no effect on these fossilised structures?

Two factors may be invoked to explain this lack of effect: NB

- the **period of fossilisation**, that is the length of time that the fossilised structure has been part of the subject's linguistic repertoire;
- the **semantic vacuity of the concord structure**.

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Period of fossilisation

Examples [14] to [19] above contain interlanguage variants of the concord structures taught during the first year of ESL tuition. As the interlanguage structures that are exhibited in the pretest and posttest data of the subjects are all structures that are initially taught to ESL learners, it is reasonable to assume that these interlanguage structures fossilised during the initial years of tuition. These interlanguage structures have therefore remained unaltered as a part of the subjects' linguistic repertoire for at least eight to ten years. This is not to say that an interlanguage structure always presents in exactly the same form. Variability of interlanguage structures is a phenomenon with which all involved in second language teaching are well acquainted (Kellerman 1983; Ellis 1985b, 1985d). According to Shiffrin & Schneider (1977:133; see p.95), the longer a particular behaviour has been operative, the more difficult it is to change that behaviour. By the same token, the longer a fossilised structure has been in use, the more difficult it is to change (Higgs & Clifford 1982:67,68). The fossilised concord structures would therefore have been resistant to change. To understand how structures can be resistant to change, it is necessary to examine the constructs of learning, unlearning and relearning within the paradigm of Cognitive Theory.

Semantic vacuity of the concord structure

The second factor, semantic vacuity of the concord structure, renders the marking of the verb for concord virtually unnecessary. A lack of any marking for concord or inappropriate marking cannot cause a communication breakdown. The sense of the communication is still perfectly clear in examples in [14] - [19]. In this respect, concord marking is a meaningless marking convention rather than an indispensable grammatical vehicle of meaning. The learner whose main objective is to convey meaning is less concerned about such meaningless formal constraints than the learner whose focus is on correctness of form rather than

Results

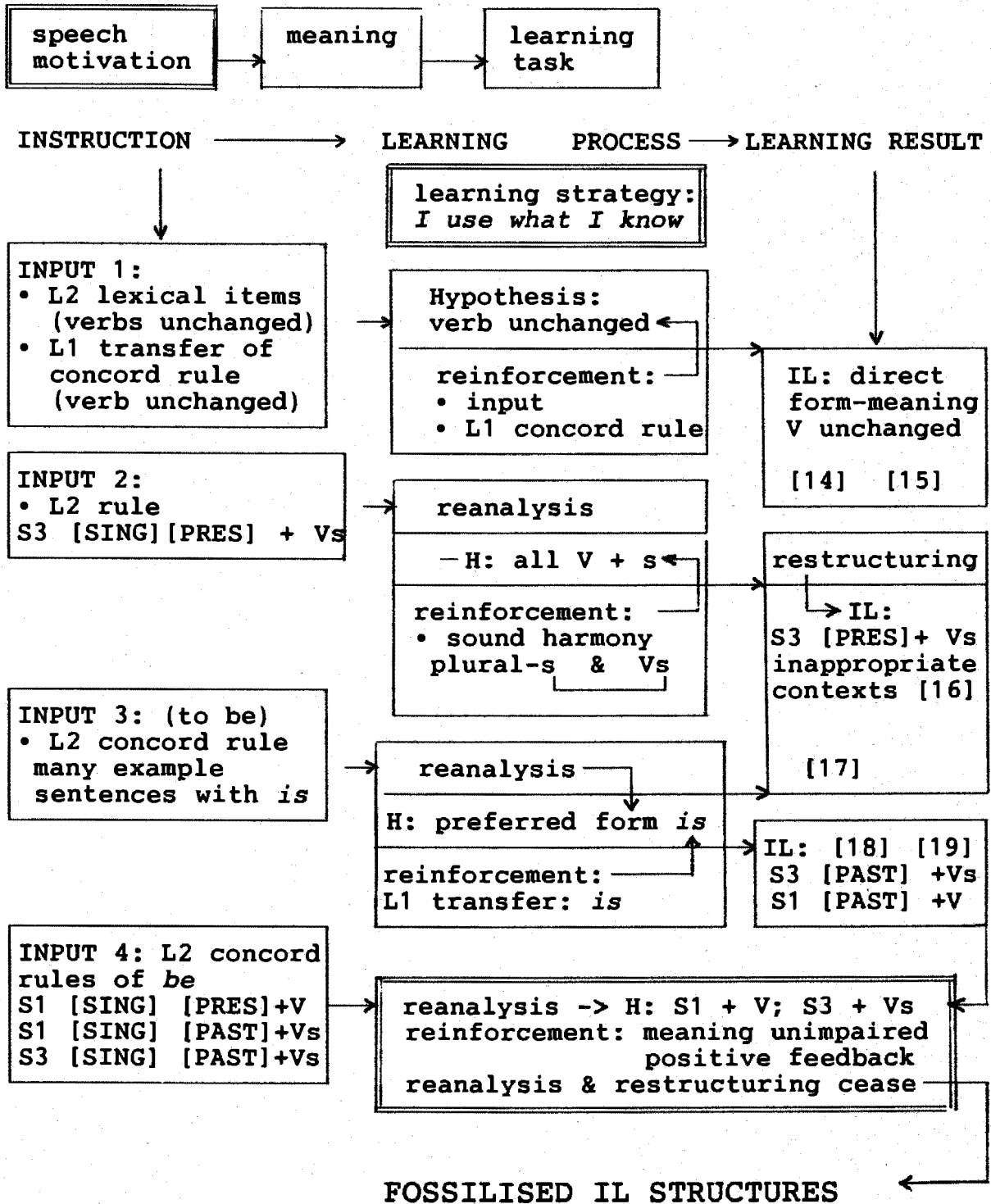
communication of meaning. If meaning is the governing factor that determines grammaticisation (see Taylor's position on learnability, 2.5.2.3, p.104 of this study), and if meaning remains unimpaired regardless of the form of the concord structure used, there seems little reason for learners to adjust the hypotheses responsible for the fossilised concord structures.

As shown by this study, learners are apparently not susceptible to consciousness raising strategies that attempt to raise to consciousness concord structures related to meaningful contexts where the **interpretability requirement** of the communication becomes the trigger for restructuring. Concord structures within a meaningful context remain interpretable, regardless of their form, as illustrated by the example below.

[17] * *My expectations for the future is to teach children*

For consciousness raising intervention to have any effect on fossilised concord structures, it is possible that exposure to visual consciousness raising highlighting strategies that are not linked to meaning for a longer period of time may be needed before any significant change could be expected. Such visual highlighting would categorise structures for the learner on a subliminal level. It lies beyond the scope of this study, however, to show that restructuring of fossilised concord structures is less likely to be precipitated by focusing on meaning than by exposure to concord structures visibly highlighted to categorise structures.

Fig. xiii Learning a concord structure: the process of grammaticisation



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4.3.3 Reduction of temporal errors

The hypothesis (H_4) that the temporal errors of the experimental group will show a significant reduction relative to the control group could not be supported at a level of statistical significance. The null hypothesis was therefore not rejected. However, improvement in the pretest/posttest gain scores of the experimental group was highly significant.

These gain scores seem to support the notion that semantic value (meaning) may be a contributory factor in processes of grammaticisation. Whereas concord structures have little impact on meaning, temporal structures are meaningful. It therefore seems that semantic significance may act as a trigger to processes of reanalysis and restructuring. In this sense, **semantic value of a structure may act as a regulator of form.** There is a considerable difference in meaning between

I am sitting here (statement of a fact which is currently true), and

I was sitting here (I am no longer doing so).

If the semantic vacuity of concord structures may explain the lack of effect of consciousness raising procedures, then the semantic significance of time structures could likewise be invoked as a partial explanation of the highly significant gain score (pretest/posttest) result of the experimental group in respect of Hypothesis 4.

Two types of temporal (time) errors are found in the data:

- structures that are **formally deviant**, that is structures that are malformed;
- structures that are **temporally inappropriate.**

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Formally deviant structures

The data produced in the pretests contain very few formally deviant structures, irrespective of the tense selected being appropriate or not. The following are examples of such formally deviant structures found in the data:

- * wived in [woven in]
- * I went going
- * why do you stood still
- * it does not includes
- * it makes it lives.

Temporally inappropriate structures

Erroneous temporal structures are often inappropriate in respect of the demands of the situation. In such instances the constraints imposed by obligatory contexts in terms of appropriate tense, rather than the correctness of form have been violated. This being so, what processes may have given rise to the inappropriate use of these structures?

Most time errors identified in the data arose as a result of a **time orientation shift** on the part of the subject. Test 1 required a present time orientation with the subject writing about a real event in the past imagined to be happening in the present. Many subjects started off correctly in the present tense but soon slipped into the past time frame [20]. In this particular example (not fully given) the new tense, with one exception, is sustained for 11 consecutive verbs. These orientation shifts cause the subsequent verbs to be temporally erroneous in terms of the obligatory temporal context, that is, the wrong tense has been selected. These verbs, however, are formally correct in terms of the past tense structure selected. In such cases, subjects demonstrated an inability to control tense appropriately in terms of the tense structure selected, rather than an inability to form tense structures correctly. In

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other words, appropriacy rather than formal constraints have been violated, as illustrated in examples [20] and [21].

[20] * The beach is packed.... People are walking to and fro.... The smell of wonderful "braaiwors" tinkles my tastebuds and every enzym in my body jumped up and down..... I looked inside.... I wanted to evaluate....

[21] * While I am sitting here indulging in a large glass of icy orange juice ... I fell asleep ... I am floating on a cloud. This was the best dream I have ever had. The cloud I am floating on looked like cottonwool.

Two questions need to be answered at this point.

- Firstly, can a second language learner's inability to control tense, that is the inability to choose the appropriate tense for a particular situation, and a concomitant inability to sustain manipulation of a particular tense within the required time frame, be regarded as fossilised interlanguage?
- Secondly, what constraint might be identified to explain the difference between data that exhibit a simple temporal orientation shift (with the new tense then sustained within the new time frame) and data that exhibit constant temporal orientation shifts, with tenses used randomly resulting in haphazard tense patterning?

I turn to the first question.

Is the inability to control tense fossilised?

Learners who have produced temporal errors of the kind described above have apparently not fossilised any incorrect interlanguage hypothesis in the way that learners who produce concord errors systematically have fossilised incorrect interlanguage hypotheses

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for the use of concord structures (see Table 4.2, p.270). The temporal errors found in the data display no identifiable pattern, which leads one to conclude that these errors may be unsystematic. In this case, learners apparently do not have any hypothesis about the appropriate application of the different temporal structures. If there is no hypothesis underlying any particular rule structure, and the structures are also not malformed, what temporal feature of interlanguage might then be fossilised?

To answer this question we need to consider the underlying processes that have generated [20] and [21]. The numerous time orientation shifts encountered in the data from the present into the past time frame, as exemplified in [20], suggest that sustaining a narrative in the present tense is more difficult than sustaining a narrative in the past tense, provided learners are able to form past tense structures correctly. In this case it is neither an interlanguage rule structure nor the surface form of the temporal structure that has fossilised. It seems rather that the **degree of control** of temporal structures in terms of their appropriacy may have fossilised at a point somewhere between non-automatic and automatic control (see Fig. i, p.52; Bialystok 1988:37,183). This degree of control can be represented on a continuum (see Fig. xiv, p.240).

How might the haphazard patterning of errors be explained?

The second question is derived from the first. If subjects have not formed any hypotheses for temporal structures, how might the difference between [20], where the tense is sustained after the temporal orientation shift, and [21], where temporal errors seem to be totally random, be explained?

The **degree of verb control** illustrated by the sustaining of a particular tense after a temporal orientation shift in example [20] suggests that this subject has moved further along the

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continuum of grammaticisation than the subject who produced example [21]. Example [21], which is representative of the temporal errors contained in the rest of this particular data sample, suggests that this subject has no guiding hypothesis to enable him/her to sustain any tense form within a particular time frame. The continuum below, representing the process of grammaticisation of temporal structures, suggests points at which fossilisation in respect of examples [20] and [21] might have occurred.

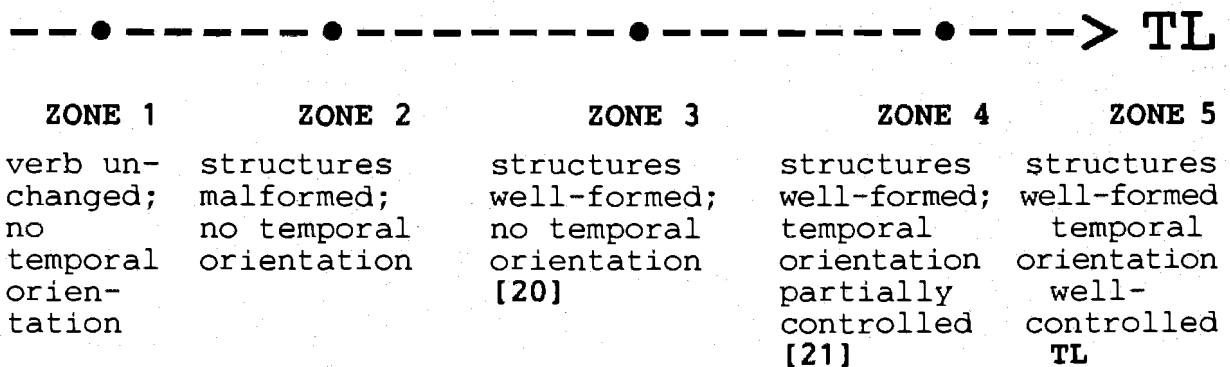
The progression suggested in *Fig. xiv* is based on the presence of certain temporal errors and the absence of others in the data. The relative absence of temporal errors that were structurally malformed may be an indication that grammaticisation was morphologically almost complete on a surface level. The presence of numerous temporal errors which exhibit surface correctness but are erroneous as a result of violation of the temporal constraints imposed by obligatory contexts, is an indication that this aspect of temporality is not yet fully grammaticised. The surface correctness of structures may be linked to a teaching approach that focuses on the teaching of formal structures divorced from the semantic contexts that would enable learners to make the form-meaning links, that is facilitate grammaticisation from a meaning base. Degrees of erroneousousness, furthermore, might occur in each zone indicated. A learner who has been producing errors of the kind defined in zone 2, would have fossilised at that point, that is grammaticisation of temporal structures would have ceased. Temporal structures as defined in zone 5 could be regarded as more grammaticised than those described in zone 1.

Some verb structures may be construed as temporal errors at first glance but are, in fact, misspellings. Misspellings are not regarded as temporal errors. A verb written as **laught** is regarded as a misspelling rather than a temporal error which is formally

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deviant as there would have been no error at all had the sentence been spoken instead of written. A basic spelling strategy of learners is to write as they speak (Fouchè 1988:75). Such misspellings were not counted at all, and the decision whether to regard a structure as a misspelling or a temporal error hinged on what the structure would have sounded like, had it been produced orally.

Fig. xiv Grammaticisation of temporal structures



In terms of the degree of verb control one might then conclude that haphazard patterning of errors may be an indication of a lack of stabilised rule formation.

To establish to what extent consciousness raising intervention could be related to an improvement of temporal structures, Variable 3 is briefly examined in various comparisons.

The highly significant gain score for the experimental group (COMP 2) on Variable 3 (time) suggests that consciousness raising intervention has improved their appropriate temporal orientation. The consciousness raising strategy of a timeline representing the progression of time apparently enhanced the ability of the experimental group to place particular events appropriately within a given time frame and make the appropriate form-meaning links. This consciousness raising strategy evidently also enabled

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them to fix on a temporal point of departure (NOW) from which to view the progression of time, thus diminishing the likelihood of temporal orientation shifts.

The pretest/posttest gain score of the control group (COMP 3) on Variable 3 (time) was not statistically significant, although some improvement was evident. It was previously pointed out that the strategy normally employed for the teaching of tense in the first-year ESL course uses the concept of a timeline, although less pointedly and less expansively than in the consciousness raising intervention programme. It had therefore been expected that the control group would also show improvement on this variable. I had been aware of this problem relating to comparison with the control group from the outset, but the decision to maintain the normal teaching programme for the control group was imperative if consciousness raising intervention was to be weighed up against the normal teaching programme of the institution.

The question that may now be asked is, what exactly has changed after consciousness raising intervention? What has been raised to consciousness in the case of the experimental group is a heightened awareness of orientation in respect of a timeline, a sense of time progression and controlled orientation within an identified timeframe. In addition, particular surface forms have been linked to particular temporal situations. Better judgement of appropriateness within the constraints of obligatory temporal contexts and the concomitant improved control of the verb has led to a reduction in the number of erroneous temporal structures. Where control had previously fossilised at a particular interlanguage level (cf. *Fig. xiv* p.240), reanalysis and restructuring have now facilitated control at a new level, that is, defossilisation has been precipitated.

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The success achieved with the consciousness raising strategy used to raise temporal structures to consciousness can be related to the linking of structures to meaning made visible on a timeline. This implies that consciousness raising procedures that are semantico-grammatical are likely to destabilise semantically significant grammatical structures. The next hypothesis to be considered concerns aspect.

4.3.4 Reduction of aspectual errors

The hypothesis (H5) that the aspectual errors of the experimental group would be reduced relative to the control group was not supported. The null hypothesis was therefore not rejected.

The experimental and control groups were not well-matched in the pretests on aspect (Variable 4). In these tests, the experimental group performed significantly better than the control group. This lead meant that the experimental group had less to gain than the control group. In the gain score comparison (COMP 5) the experimental group improvement was nonetheless evident though not significant.

An examination of the individual posttest scores of the experimental group revealed that 72.73% of the subjects had no aspectual errors at all. The subjects who actually had more errors in the posttests than in the pretests had also deteriorated on other variables, a position that suggests that not all learners respond to a particular teaching approach in exactly the same way. This point is taken up again on p.293 of section 5.2.3.

The control group demonstrates hardly any change in the posttests, with the mean scores almost exactly the same. The virtual absence of improvement demonstrated by the control group in the posttests suggests that the experimental group improvement

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tendency shown in the gain scores comparison may be accepted as relating to the consciousness raising intervention programme.

An explanation of the apparent effect of consciousness raising procedures in respect of aspectual errors may be related to two factors:

- the semantic significance of aspectual structures
- the learnability of aspectual structures.

Semantic significance of aspectual structures

In order to explain the semantic significance of aspectual structures, I digress briefly. Whereas it is possible to convey temporal meaning by means of semantic circumlocution, thereby ensuring that the exact meaning is conveyed regardless of the form of the verb or the appropriacy of the structure, this is not necessarily so easy in the case of aspect. The sentence * *She come yesterday* cannot be semantically misconstrued, despite the temporal error. The mere addition of an adverb of time makes the meaning intelligible. This is less simple in the case of aspect, which refers to a grammatical category "which reflects the way in which the verb action is *regarded* or *experienced* with respect to time" (Quirk et al. 1985:188). To a certain extent, a situational context may contribute to the inference of aspect. However, aspect cannot be inferred from the timeframe context, as it is related to the **manner** in which a specific action or series of actions is perceived. The learner is therefore heavily dependent on morphological information to convey aspectual meaning. This dependency may push the grammaticisation of aspect.

The following examples of perfective and progressive aspect illustrate the previous point. In example [22] the preceding sentences are given to establish the temporal context.

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[22] * I close my eyes I try to relax I want to see my future I want to know what will happen.... I keep seeing a clock. The clock stop(p)ed. It is very unusual.

[23] * I then saw somebody I knew. She was my friend in Primary school.

[24] * When I opened my eyes the most handsome man stood in front of me.

In example [22] the erroneous verb stop(p)ed fails to convey the meaning that the clock is in a non-functional state, brought about at some unknown point in the past and remaining in that condition since that unknown moment until the moment presently experienced. In other words, the verb fails to convey two necessary semantic features:

NB

- the exact time of the verb action is not known
- the verb refers to a period of time not yet terminated at the moment presently experienced, as in example [22].

To convey this meaning may require extensive and awkward circumlocution of the order presented in italics at the beginning of this paragraph. In such cases learners may be pushed to grammaticise verb structures to express aspect, which is semantically significant.

Example [23] conveys the meaning that the speaker is referring to a past incident - which could have happened the day before - when she saw the friend with whom she was in primary school. By implication the speaker is still in primary school. The only information conveyed is that the two verb actions both pertain to a past timeframe. The following semantic features are not conveyed:

- the two actions did not happen at the same time;

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- the sojourn in the primary school preceded the meeting;
- a period of time intervened between when they were in primary school and when the meeting occurred.

As in the previous example, to convey this information would require extensive circumlocution.

The progressive aspectual error illustrated in example [24] fails to convey the meaning of an action that was in progress at the time when she opened her eyes. The *stative* sense (Quirk et al. 1985:177) of the verb **stood** may make the past simple structure of the verb in this particular example more acceptable, but if we replaced **stood** with a *dynamic* verb (Quirk et al. 1985:177) such as **skipped**, the point could be made clearly.

- (1) *When I opened my eyes the most handsome man **skipped** in front of me (He suddenly came from somewhere).*
- (2) *When I opened my eyes the most handsome man **was skipping** in front of me (He had been there for some time, jumping up and down).*

The meaning distinction between a situation where the second verb action is a single action which happened at the moment when she opened her eyes (1), and an action that was already in progress and continuing when she opened her eyes (2), is now more obvious. It is the sense of (2) that the subject wished to convey in example [24]. As in the case of the two preceding examples, the progressive aspectual structure is semantically significant. Let us now consider the learnability of aspectual structures.

Learnability of aspectual structures

In an earlier argument (see p.231) I suggested that structures that are semantically vacuous seem to be more prone to fossilisation; they also seem to be less susceptible to consciousness raising intervention than structures that are semantically significant. As grammaticisation of aspect seems to be the only uncluttered route available to the learner to express

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an intended aspectual meaning exactly, the learner is more pushed to grammaticise aspect for the sake of precise communication than to grammaticise concord, which has little impact on meaning. It is the semantic significance of an aspectual structure that seems to render it more learnable, a view which is supported by Taylor (1992:5). This semantic significance may also make aspect amenable to consciousness raising intervention. This interpretation of learnability related to the semantic **value** of structures differs somewhat from the position subscribed to by Rutherford (1987:84) and Ellis (1990:167) that the learnability of structures is related to the **distance** between meaning and form. It was the semantic significance of perfective and progressive aspectual structures as well as temporal structures that was concretised and made readily visible on a timeline.

Given the above argument relating to the learnability of aspect the question may be asked at this point why the control group demonstrated improvement of temporal structures in their regular course, as indicated in 4.3.3, but not of aspectual structures. The answer may lie in the stress placed on temporal rather than aspectual structures, and the way in which exemplars were used to illustrate temporal structures, thus promoting inductive processes of rule formation, whereas aspect was analytically explained. Subjects in the control group were expected to apply deductively an aspectual rule made explicit by the lecturer/researcher. However, it is not possible to directly relate the differential performance of the control group on Variable 3 (time) and Variable 4 (aspect) to these disparate teaching approaches as the evidence is too transient and scanty. I am merely stating that the teaching procedures used for these two variables differed. A final point to consider is the relationship between semantic value, learnability and fossilisation.

Results

It has already been pointed out that semantic vacuity of grammatical structures may contribute to early fossilisation. By the same token then, semantically significant structures are not expected to fossilise in the early stages. The semantic value of morphological structures may be the factor determining the likelihood of fossilisation, and by extraction, also the susceptibility to semantico-grammatical consciousness raising intervention resulting in destabilisation of fossilised structures. In terms of the above it may be concluded that learnability of a structure may be related to the semantic value of that structure: semantic significance may render the structure more learnable and semantic vacuity may render it less learnable.

4.3.5 Increase of correct verb structures

The hypothesis (H_6) that the verb structures correctly produced in the discrete point verb test (Test 4) would show a significant increase relative to the control group was not supported at a level of statistical significance. The null hypothesis was therefore not rejected.

The gain indicated for the experimental group (COMP 2) was not significant either, and the control group (COMP 3) showed virtually no gain at all. In the gain scores comparison (COMP 5) improvement was evident from the mean scores, but this difference was not significant.

This outcome is surprising in the light of the significant improvement demonstrated by the experimental group in respect of total verb errors in the gain scores comparison (COMP 5). If the experimental group had demonstrated a general ability to manipulate the verb, why was this ability not transferred to the verb test?

Closer examination of the tasks posed in the verb test (T4) shows that whereas *language output is pushed by the need to communicate*

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meaning as in the case of the spontaneous writing task in Test 1, the verb test is an *analytical academic exercise* which asks testees to consciously manipulate structures in terms of their known rule structures. Two examples from Pretest 4 illustrate this point:

- "Change stir in the following sentence so that it fits the meanings suggested in the sentences below" (Question 1).
- "Select the most appropriate response" followed by a sentence that had to be matched with a particular meaning (Question 3).

Similar questions, but based on different passages, were asked in Posttest 4.

The language production trigger in natural communication seems to be the need to convey meaning. In this sense, test tasks that require testees to analyse language structures academically have little **psychological language reality** for testees; it is a non-meaningful "English classroom" exercise. For this reason the verb test may be less valid as a test of subjects' ability to control the verb, and the academic nature of the questions may explain a result which is not in keeping with results obtained on Variable 1, and to a lesser extent on Variables 3 and 4.

The consciousness raising strategies used in the intervention programme purposefully attempted to place manipulation of verb structures within a meaningful context to facilitate semantico-grammatical associations. These semantico-grammatical links were concretised in the intervention programme by means of consciousness raising techniques that provided visible symbols such as systematised highlighting strategies in the text (see *Table 3.1*, p.150) and conceptual representations such as the timeline. The disparate results obtained in Test 1, which tested temporal and aspectual verb control in a meaningful context, and Test 4 (see *Appendix iii*, p.361) which tested verb control in a non-meaningful context that evidently did not relate to subjects'

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own experiences, are therefore predictable in terms of the consciousness raising strategies used. Similar implications relating to semantic value derive from the results on four intervariable comparisons between Variable 6 (self-monitoring) and Variable 7 (other-monitoring). The findings in respect the hypothesis relating to self-monitoring are examined in the next section.

4.3.6 Increase in self-monitoring success rate

The hypothesis (H_7) that the self-monitoring success rate of the experimental group would increase relative to the control group was supported at a statistically highly significant level. In terms of this result in the gain scores comparison (COMP 5), the null hypothesis was rejected. This means that the experimental group identified and corrected significantly more self-produced verb structures than before consciousness raising intervention. This implies that the reactivation of processes of grammaticisation may be dependent on learners' self-monitoring abilities.

Self-monitoring was defined in this study as the act of identifying and correcting self-produced errors. To be able to monitor their own structures, the subjects needed to be conscious of the fact that the structures were erroneous. They also needed to be able to think about the grammatical structures that were required to correct the erroneous ones. This implies that **metalinguistic consciousness** may be a necessary condition for monitoring by learners who do not happen to know by "feeling" that a structure is wrong.

The gain scores of the experimental group (COMP 2) suggest a considerable improvement. Statistically, however, the gain is not significant. The gain scores of the control group (COMP 3) show that this group had been less successful at self-monitoring in the posttests than in the pretests. It is notable that this

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ability of the control group subjects deteriorated in the posttests. When the task shifts from the correction of own errors to the correction of errors made by others, the findings are very different.

4.3.7 Increase in other-monitoring success rate

The hypothesis (H_8) that the other-monitoring success rate of the experimental group would increase relative to the control group was supported at a statistically significant level. The null hypothesis was therefore rejected.

Subjects in both groups consistently demonstrated an other-monitoring ability superior to their self-monitoring ability. Examples [25] and [26] taken from the self-monitoring and other-monitoring posttests of the same subject illustrate this point adequately.

T2b Self-monitoring posttest

[25] * All the work and bad tests was a thing of the past.
Error not corrected or identified

T3b Other-monitoring posttest

[26] * ...Mrs Agnes Radebe, who were in the process of...
Corrected to: ...who was in the process of...

The subject was able to correct the verb structure in [26] despite the more involved syntactical structure.

The experimental group demonstrated significant pretest/posttest gain (COMP 2) but the control group did not demonstrate any significant pretest/posttest gain in respect of other-monitoring (COMP 3). When the gain scores on this variable are compared (COMP 5), the difference between the experimental and control group is statistically significant.

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4.3.8 The ability gap between self-monitoring and other-monitoring

From examination of the results relating to **H7** (concerning self-monitoring) and **H8** (concerning other-monitoring), it appears that the experimental group not only demonstrated considerable improvement after consciousness raising intervention, but that there was a marked difference between the experimental and the control groups' ability to identify and correct own errors and the ability to identify and correct errors made by others. In this section the results of these two variables are juxtaposed in the four comparisons presented in 4.2 (cf. p.217):

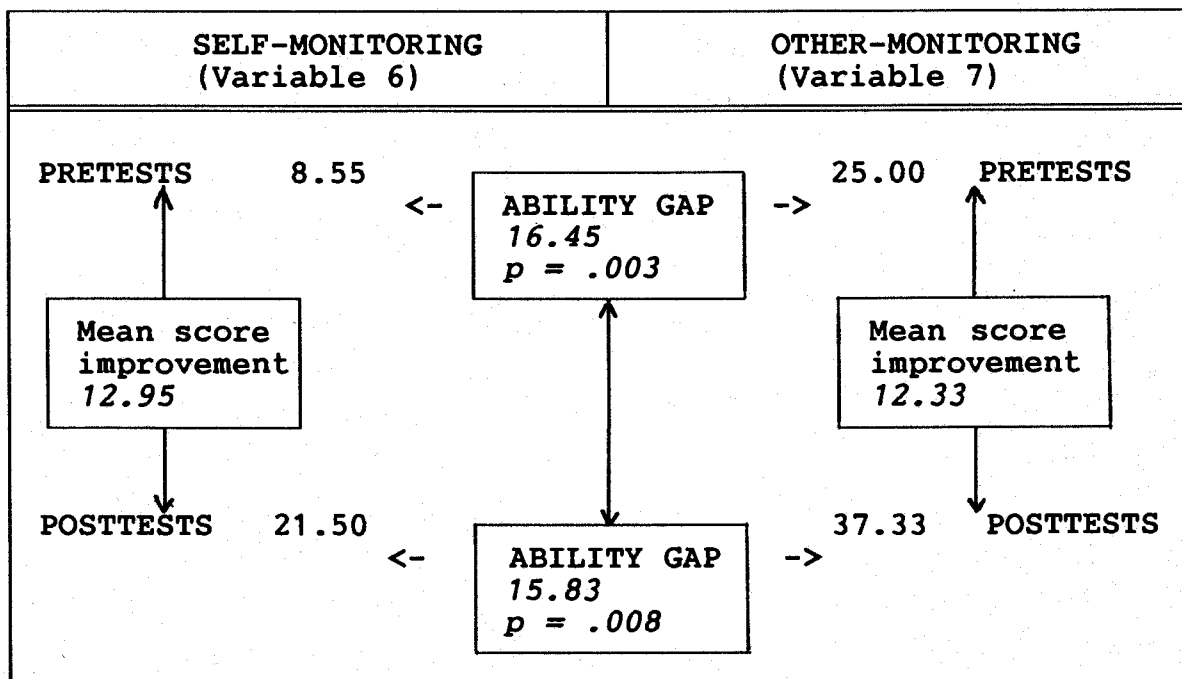
- pretest self-monitoring with pretest other-monitoring of the experimental group;
- pretest self-monitoring with pretest other-monitoring of the control group;
- posttest self-monitoring with posttest other-monitoring of the experimental group;
- posttest self-monitoring with posttest other-monitoring of the control group.

In the following discussion, in which some of the most important findings of this study are considered, these two variables are first examined in a four-way comparison of the results for the experimental and the control groups. The results of this comparison are diagrammatically represented below in *Fig. xv* and *Fig. xvi*. These results show that subjects are significantly better at identifying and correcting errors made by others than they are at recognising and correcting their own errors. The discrepancy between these two abilities is explained in terms of Cognitive Theory. An attempt is made to relate the phenomenon of the **ability gap** identified in this section to aspects of fossilisation and consciousness raising.

Results

The difference in the success rates of the self-monitoring and other-monitoring tasks is highly significant at $p=.003$ in the pretest scores of the experimental group (see Fig. xv, below). It would seem that the process involved in recognising one's own errors is not exactly the same as the process relating to the recognition of errors made by others. The discrepancy between these two ratings suggests that an **ability gap** exists in learners' mastery of these two purportedly different linguistic processes, much in the way that there is a gap between what learners can understand and what they can do in language.

Fig. xv Four-way comparison of self-monitoring and other-monitoring in the pretests and posttests of the EXPERIMENTAL group



According to accepted psycholinguistic theory, learners are always more proficient receptively than productively (Brown 1980:30). All first and second language speakers exhibit such a

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gap in their early learning years and seem to permanently retain a gap between receptive and productive proficiency under circumstances of normal health.

Examination of the control group pretest scores also reveals a discrepancy between self-monitoring ability and other-monitoring ability. In the pretests the control group's ability to identify and correct errors of others rather than own-produced errors is significantly better at $p=.002$ (see *Fig. xvi*, p.254). This finding seems to support the ability gap phenomenon tentatively identified in the pretests of the experimental group. To discover whether the identified gap holds after learning occurs, Variables 6 (self-monitoring) and 7 (other-monitoring) are considered in comparisons of the posttests.

In terms of these two posttest scores of the experimental group, there is still a considerable ability gap between the two tasks. As the mean scores of the two variables have improved to the same extent on Variable 6 (self-monitoring) at 12.95 and on Variable 7 (other-monitoring) at 12.33, the ability gap has clearly been preserved, despite considerable improvement on both variables in terms of the mean scores (see *Fig. xv* p.252). The ability gap is highly significant at $p=.002$ in the pretests and $p=.008$ in the posttests.

These findings suggest that

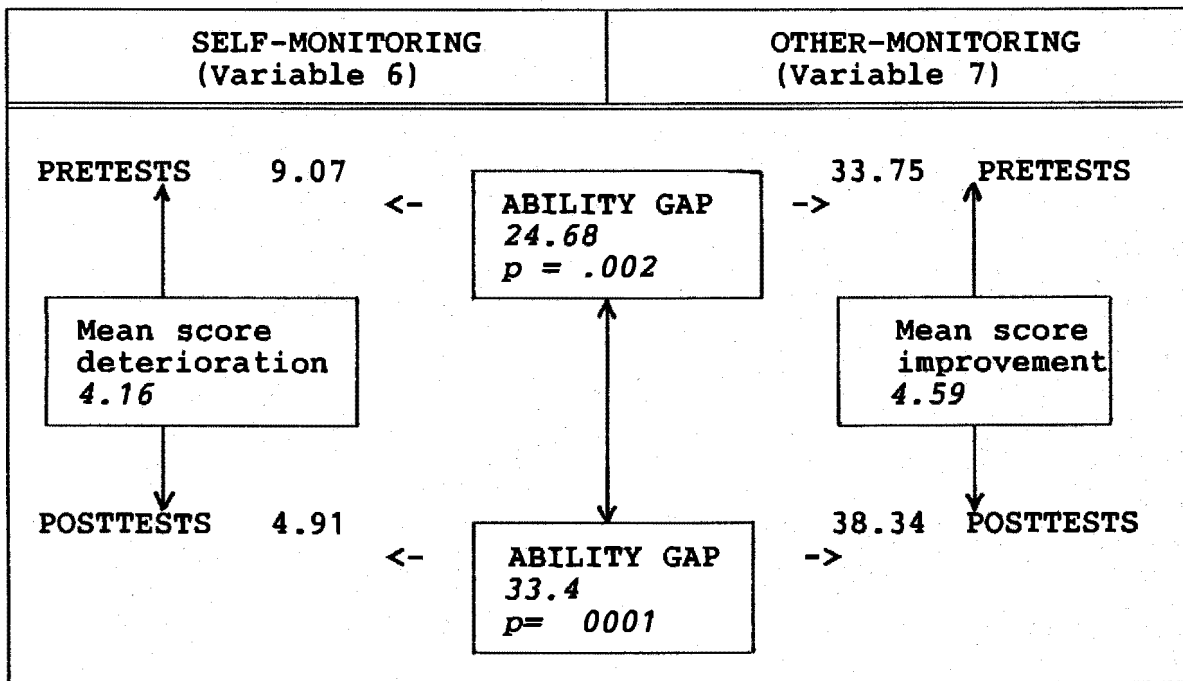
- learners' have a significantly greater ability to monitor the verb errors produced by others than ability to monitor their own verb errors;
- the ability gap may be preserved as language development progresses.

Comparison of the posttest mean scores of the control group reveals that the ability gap between self-monitoring and other-monitoring demonstrated in the pretests has increased in the

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posttests. This observation suggests that the extent of ability gap has not been preserved. However, closer investigation of the posttest scores reveals that the ability gap has increased as a result of deterioration of the self-monitoring success rate score (Variable 6) in the posttest of the control group, while a simultaneous small improvement on Variable 7 (other-monitoring) has contributed to the widening of the ability gap.

Fig. xvi Four-way comparison of self-monitoring and other-monitoring in the pretests and posttests of the CONTROL group



The findings above raise a number of questions relating to the disparate cognitive bases of processes responsible for self-monitoring and other-monitoring. Several questions arise from the evident **ability gap** between self-monitoring and other-monitoring:

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- If the cognitive bases of the linguistic processes involved in monitoring one's own errors and the linguistic processes involved in identifying the errors of others are in fact different, what are the respective cognitive bases and how are these processes then different?
- If such an ability gap relating to the correction of errors exists in learner language, is this gap preserved as language develops?
- What is the effect on the ability gap when fossilisation sets in?
- What is the relationship between consciousness raising intervention and the ability gap?

Further pertinent questions that cannot be addressed here as they lie outside the domain of this thesis, include:

- Does the ability gap diminish and disappear as the development of second language approaches target language levels?
- Is there any discrepancy between self-monitoring and other-monitoring in first language?

I shall now consider the first four questions indicated above.

4.3.8.1 The cognitive bases of the linguistic processes responsible for self-monitoring and other-monitoring

The salient difference between these two processes seems to be that, in the case of self-monitoring the meaning contained in the communication is pre-known, whereas in the case of other-monitoring the meaning is not previously known to the learner to the same extent. Intended meaning is implicit in the learner's own writing. When confronted with the text shortly after writing

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it, the learner experiences a meaning-based "mind set" which diminishes objectivity. The **proactive interference** (Higgs & Clifford 1982:68) of what is already known prevents the learner from noticing new or discrepant information (meaning) provided by an incorrect structure. If the structure does not affect meaning, as in the case of concord, it is even less likely to be noticed. Furthermore, if meaning is already known, the learner is not dependent on the interpretation of grammatical structures to clarify meaning.

This particular "mind set" problem does not operate to the same extent when a text is accessed without any prior information about the content, other than learners' existing schemata. Learners are therefore able to view the text with more objectivity. They have to depend on grammatical structures as well as lexical items for meaning inference - meaning about which they may know very little in advance. Learners' inability to monitor own errors therefore seems to be related to a semantic "mind-set", which may preclude noticing grammatical inaccuracies. In terms of this argument, subjects should be more successful at monitoring someone else's writing, and it is therefore reasonable to expect the two tests to yield different results (see *Appendix iii*, p.361 for examples of these tests).

A corollary of this argument is that learners would possibly be less inclined to monitor grammatical structures that are semantically vacuous, than grammatical structures that are semantically significant.

4.3.8.2 Invariance of the ability gap

The invariance of the ability gap refers to the difference - which apparently remains basically unaltered - between the ability to monitor one's own language production and the ability monitor the production of others.

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The relative invariance of the ability gap may be preserved if self-monitoring and other-monitoring abilities continue to develop on a comparable level. However, it is unlikely that any development of metalinguistic consciousness should facilitate only one kind of monitoring and not the other. It is therefore seems predictable that there will always exist such a gap, with other-monitoring ability always ahead of self-monitoring.

The findings of this study suggest that explicit analytical rule-based teaching apparently does not greatly benefit analytical other-monitoring, whereas semantico-grammatical consciousness raising procedures benefit other-monitoring significantly. Self-monitoring deteriorated in the analytical rule-based teaching programme of the control group (COMP 3) but was affected highly significantly by semantico-grammatical consciousness raising procedures (COMP 2). One is then led to conclude that the improved self-monitoring scores of the experimental group are related to semantico-grammatical consciousness raising procedures and that explicit knowledge of rule structures does not necessarily enable learners to monitor their own grammatical structures.

The increased ability gap demonstrated by the control group that was exposed to an analytical instruction programme (see *Fig. xvi*, p.254) is surprising as analytical rule-based teaching aims to develop metalinguistic consciousness. If explicit knowledge of rules developed in this way failed to improve self-monitoring, one would be wrong to conclude that "conscious learning is available to the performer only as a Monitor" (Krashen 1981:2; 1982:15) in respect of own language production. Quite the contrary, it is accepted that conscious knowledge of rules does not ensure application of those rules, nor does it guarantee other-monitoring, or that learners will or are able to notice their own errors. Paradoxically, for self-produced or other-produced structures to be monitored at all, metalinguistic

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consciousness (conscious knowledge of rules) may be a necessary condition. It is the way in which the learner arrives at this knowledge that apparently makes the crucial difference.

4.3.8.3 The relationship between fossilisation and the ability gap

If reanalysis and restructuring depend on the ability to approach a grammatical structure analytically, recognise it as erroneous and to be able to correct it, then the absence of self-monitoring would imply that no reanalysis and restructuring can take place. One would then expect the status quo to be maintained - if all subskills stabilised simultaneously at the same levels of non-mastery. As this is not the case, and as explicit knowledge of rule structures in an analytical rule-based instruction programme might increase and yet not become available to the learner as a monitor, one might rather expect the ability gap to widen in respect of those subskills that have become fossilised.

4.3.8.4 The relationship between consciousness raising intervention and the ability gap

The experimental group that was exposed to semantico-grammatical consciousness raising procedures increased their ability to monitor their own errors as well as their ability to make grammatical judgements about the errors produced by others. In this way the extent of the ability gap was more or less preserved (see *Fig. xv*, p.15, 252).

4.4 THE RELATIONSHIP BETWEEN CONSCIOUSNESS RAISING PROCEDURES AND ANALYTICAL KNOWLEDGE

The conclusion based on the four preceding arguments relating to the ability gap between self-monitoring and other-monitoring is that analytical grammatical knowledge arrived at through semantico-grammatical consciousness raising procedures is

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available to the learner as a monitor of self-produced grammatical structures. Moreover, it is even more readily available for grammatical judgement of errors produced by others. In contrast, knowledge arrived at through analytical formal instruction is largely unavailable for these purposes. The availability of knowledge as a monitor also seems to be related to the semantic value of the grammatical structure. Concord structures regarded to be semantically vacuous would therefore be less likely to be monitored whereas temporal and aspectual verb structures that have more semantic significance would be more readily monitored. This view is supported by the findings. In counts of the verb errors made by the experimental group and their self-monitoring attempts it was found that only 7% of all concord errors but 15% of temporal and aspectual verb errors were successfully monitored by the experimental group.

The question that must be settled at this point relates to the differential effect of semantico-grammatical consciousness raising procedures and analytical rule-based instruction on self-monitoring and other-monitoring. This finding invites the question: why do semantico-grammatical consciousness raising procedures promote self-monitoring and facilitate other-monitoring while conventional teaching fails to do this? In both learning situations the learner may have metalinguistic consciousness, but this knowledge is arrived at by means of very different cognitive processes.

4.4.1 The case with formal instruction

In the case of **formal instruction** of the control group, rules were consciously learnt. What subjects were taught is what they were expected to learn. This explicit, **analytical knowledge** (knowledge about grammatical structures and rules, or metalinguistic knowledge) has to be applied deductively when the focus is on form in a task such as the grammaticality judgement of structures in sentences produced by someone else (cf. Test 3,

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Appendix iii p.361). According to Bialystok (1982:204) learners are unsuccessful in analytical test situations when their primary exposure has been in formal classrooms, as is the case with the control group. "Although the relevant linguistic information is available to these learners, they cannot use it effectively" (Bialystok 1982:204). Bialystok relates this lack of success to learners' non-automatic access to their analysed information. Stated differently, having been administered "externally", the rules have not been internalised.

4.4.2 The case with consciousness raising

The position with the experimental group is very different. According to the findings of this study, analytical knowledge arrived at through consciousness raising procedures is not only available in analytical tasks, but is more effectively accessed by learners, that is the knowledge is internalised through inductive learning processes. What subjects were taught through semantico-grammatical consciousness raising procedures was not what they learnt; the consciousness raising procedures merely facilitated the learning of something else. In this sense, the knowledge arrived at in the case of the experimental group is "home-grown" and internal rather than externally administered.

The consciousness raising techniques used in the intervention programme are designed to highlight underlying grammatical features which gradually lead learners to make appropriate generalisations inductively. These "beacons" along the route "illuminating" the learner's path to maximal utilisation (Rutherford 1987:58) are presented on different levels so as to promote consciousness raising and to counteract the Multiple Effects Principle. By way of illustration, the implications of multilevelled semantico-grammatical consciousness raising of a fossilised structure manifested in the data are exemplified below.

4.4.3 A case in point: * *the clock stop(p)ed*

Consideration of example [22] from the data illustrates how metacognition of the aspectual structure, the present perfective, is facilitated. It is predictable that one of the effects contributing to the fossilised interlanguage error should be ~~negative transfer from Afrikaans, the subject's first language,~~ as Afrikaans does not have a present perfective with a surface form that is distinguishable from other tense forms.

	PAST SIMPLE	PRESENT PERF	PAST PERF
English	<i>The clock stopped</i>	<i>has stopped</i>	<i>had stopped</i>
Afrikaans	<i>Die horlosie het gestop</i>	<i>het gestop</i>	<i>het gestop</i>

This, however, is an immediate but simplistic interpretation. To evaluate the mechanism of transfer and the mechanism of consciousness raising procedures more precisely, I shall first consider the surface presentation of the erroneous structure, and the underlying structural knowledge required for the correct presentation of the present perfective form. I shall then attempt to show how multi-levelled consciousness raising procedures and varied strategies applied in the intervention programme raise to consciousness those underlying structures required for correct production of the present perfective.

[22] * *I close my eyes I try to relax I want to see my future I want to know what will happen.... I keep seeing a clock. The clock stop(p)ed. It is very unusual.*

The subject who produced example [22] had no way of reflecting the fact that the clock had stopped some time before the experience described and had been in that condition for some time, including the time of the present experience. The only

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information that the subject was able to convey was that the clock was no longer functional.

For the subject to arrive at correct generalisations relating to the erroneous perfective structure, consciousness of the declarative as well as procedural knowledge (Faerch and Kasper 1983) of the following underlying structures was required:

- **S-V-O** canonical word order
- **S-V concord** rule:
S [sing] [3rd pers] + VERB [sing] [pres] [non-modal] + s
- temporal forms of **to have**
- **occurrence of past participles**
- **past participial form of stop**
- present perfective: [to have] + **past participle**
- **semantic value of grammatical structure:** event related to an unknown moment during a period of time which commenced at some moment in the past and which has current relevance (Quirk et al. 1986:189-193).

For the Afrikaans-speaking ESL learner, only the factors **S-V-O** word order and the occurrence of **past participles** are likely to constitute "knowledge that" (Rutherford 1987:10,13) these structures are possible in language. In these instances, "knowledge that" facilitates stabilisation of correct hypotheses in the target language. However, it is unlikely that learners whose first language has no present perfective structure that is distinguishable from other tense forms would, from the very outset, have clear analysed or unanalysed "knowledge that" such a structure is possible. The last factor, the **semantic value** of the present perfective would therefore only exist in their mental representations as an event at an indefinite past time which is somehow different from an event at a known time but which still has present relevance - without any grammatical "handle" on the surface that could denote this semantic value.

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The negative transfer of the underlying structures S-V agreement, past participle formation, present perfective formation and the morphological gap of a structure denoting the semantic value of the present perfective can thus be regarded as either a **necessary or privileged co-factor** in fossilisation of the present perfective. These multiple transfer effects would be variously addressed in the multilevelled semantico-grammatical consciousness raising intervention programme.

4.4.4 Addressing the case

I shall next discuss instances of fossilised S-V concord and present perfective structures to illustrate how multilevelled semantico-grammatical consciousness raising strategies operated in the intervention programme.

4.4.4.1 Using semantico-grammatical consciousness raising strategies to raise consciousness of concord

As concord structures have been shown to be virtually semantically vacuous, consciousness of these rule structures has to be achieved by means of associative processes and a focus on form. To make explicit the S-V concord rule **S [sing] [3rd pers] + VERB [sing] [pres] [non-modal] + s**, the sense that a paradigmatic associative relationship exists between subjects and verbs may be raised to consciousness through several levels of awareness depth by means of illuminating highlighting strategies and focused tasks that are particularly meaningful to the subjects:

- subliminal exposure to highlighted structures;
- cognitive analytical awareness of highlighted structures;
- deepened awareness in teach-back activity;
- critical awareness in analytical self-monitoring;
- reinforced awareness of structures in review session.

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On the first level of awareness the **highlighted structures are experienced subliminally** (see *Appendix ii* p.354) without any reference being made to the highlighting.

On the next level **analytical cognitive strategies** are activated when attention is directed to the highlighting. Subjects are required to compare, note differences and similarities, and identify patterns until a final explicit statement of the 3rd person concord rule structure is reached along a route of inductive reasoning.

On the following level this consciousness is reinforced and awareness is deepened when subjects have to engage in a **teach-back activity** which forces them to focus consciously and analytically on this particular rule structure. The teach-back activity in effect constitutes **teaching to learn while learning to teach**.

The next level of awareness, the **read-back** and **self-monitoring** of language containing S-V concord structures, invokes conscious analytical self-monitoring which is a prerequisite for reanalysis and restructuring, in effect, of defossilisation.

Finally, a **feedback** session one week later reinforces consciousness of S-V concord structures generally in a relevant and meaningful application activity, thus deepening understanding and enhancing long-term memory of the structure.

Repetitive concern with the relevant structure on various levels of consciousness is hypothesised to counteract the Multiple Effects Principle. The second exemplar is the present perfective.

4.4.4.2 Using semantico-grammatical consciousness raising strategies to raise consciousness of present perfective structures

In contrast to S-V concord structures, the present perfective grammatical structure is semantically significant in terms of space-time orientation. The multilevelled semantico-grammatical consciousness raising strategies would therefore be generated from a meaning base. In this example consciousness is progressively raised on several levels of awareness, except that subliminal exposure to structures is preceded by a non-linguistic warm-up activity in this case.

In the **non-linguistic warm-up activity**, consciousness of space-time orientation is raised in a non-linguistic concretised activity that requires subjects to position a figure within a garden according to defined positions. This consciousness raising activity activates higher order cognitive skills relating to spatial orientation.

In the following activity, subjects are **exposed to present perfective structures on a subliminal level** in an unanalysed passage.

The next level involves **analytical cognitive strategies**. Subjects have to analyse the passage and link events in the passage to time-space meaning with the aid of the consciousness raising strategy of a timeline which facilitates visual representation of the time-space value of the present perfective structure.

The fourth level of awareness is the **teach-back activity**. The consciousness raising strategy of a timeline is adapted and related to clock times to situate the intervening period. This activity includes situations that are obligatory contexts for past simple structures to promote generalisations about events occurring at a **known time (simple events)** and events occurring

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at a **time not known (perfective events)**. In a written question-response teach-back session "teachers" ask questions based on situations reflected in pictures and "pupils" provide appropriate responses. The situations depicted in the pictures denote obligatory contexts for the present perfective. These semantico-grammatical consciousness raising strategies attempt to raise the semantic value of present perfective structures and to link form to meaning across an increased semantico-grammatical distance. This distance is brought about by the grammaticisation of the verb from an initial lexical item / semantic value directness to an increased distance. This distance is between the highly grammaticised present perfective form of the original lexical item and the expanded semantic value denoted by the grammaticised structure.

lexical item (unchanged) [**stop**] **semantic value** (to cease)
-> **verb** (changed to past simple) * [**stop(p)ed**]
-> **aux** (unchanged) + **verb** (unchanged) * [**have stop**]
-> **aux**(agree) + **verb**(past participle)*[**has stop(p)ed**]

The above paradigm illustrates that the initial directness lies between the lexical item and the semantic value of that item. The increased distance is caused by grammaticisation of the verb as well as the concomitant expansion of the semantic value denoted by the grammaticised structure, thereby becoming a closer approximation of the learner's *intended* meaning. Differently stated, more can be said with a grammaticised present perfective structure than without it. While attention to meaning is sustained during the teach-back activity, the grammaticised form of the present perfective is linked to the semantic value of the structure, which is visually depicted.

On the next level of awareness **read-back** of the written conversations incorporating present perfective structures

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requires conscious analytical self-monitoring of the structures heard.

Finally, the **review session** one week later requires extensive application of present perfective structures in obligatory contexts represented by situations portrayed in a picture. The review activity reinforces the present perfective structure already raised to consciousness, deepening awareness and promoting long-term memory of the structure.

The results, findings and implications of the study are summarised in the next section.

4.5 SUMMARY

The results of the exploratory tests presented in *Table 4.1* were briefly discussed at the beginning of this chapter. The results of the study, presented in *Tables 4.2, 4.3* and *Fig. vi - xii* of section 4.2, were subsequently described and explained.

The results in respect of the 7 hypotheses were described in five comparisons, of which four were reflected in *Table 4.2*:

- COMP 1 experimental and control group pretests;
- COMP 2 pretests and posttests of the experimental group;
- COMP 3 pretests and posttests of the control group;
- COMP 5 gain scores of the experimental and control groups.

The null hypothesis was tested in terms of the findings on the gain scores comparison. According to the gain score results the experimental group improved significantly on total verb errors and other-monitoring, and highly significantly on self-monitoring. Improvement in respect of time and aspect was evident from the mean scores. The null hypothesis was not rejected in terms of these two results, however. The improvement tendencies

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may well have been supported at a level of statistical significance if a larger number of observations had been possible. The findings in respect of concord showed no relationship between semantico-grammatical consciousness raising. The significant result in respect of total verb errors was expected to predict a similar result on the verb test. However, the null hypothesis relating to the verb test could not be rejected.

As the results demonstrated that both groups were better at other-monitoring than self-monitoring, these intervariable differences were subsequently considered. The experimental and the control groups demonstrated highly significant differences between self-monitoring ability and other-monitoring ability, in the pretests as well as in the posttests. These differences suggested the notion of a relatively invariant ability gap between self-monitoring and other-monitoring.

Given the results of this study, a strong case can be made in favour of consciousness raising procedures in an attempt to reactivate processes of grammaticisation in learners whose language production has become fossilised.

The process of grammaticisation of concord structures was discussed and graphically represented in *Fig. xiii*. The implications of semantically vacuous structures as opposed to semantically significant structures were related to self-monitoring, fossilisation and learnability.

The process of grammaticisation of temporal structures was represented in *Fig. xiv*. The observable improvement on Variables 3 and 4 (time and aspect) was directly related to the consciousness raising strategy of a timeline which concretised abstract semantic values by making meaning visible. In the discussion on the cognitive bases of self-monitoring and other-

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monitoring, an attempt was made to explain the identified ability gap. The relationship between fossilisation and the ability gap was then indicated. It was suggested that formal rule teaching may promote deterioration of self-monitoring, resulting in a widening of the ability gap and subsequent fossilisation at a particular level of control.

Finally, to illustrate the mechanism of consciousness raising in terms of the findings with an authentic example from the data, the case of the * *stop(p)ed clock* was presented.

The implications of the findings of the study were found to be particularly meaningful in terms of ~~pedagogical relevance~~.
Notions concerning the

- **ability gap** between self-monitoring and other-monitoring;
 - learning strategy of learners to **use what they know**;
 - training strategy of **teaching to learn while learning to teach**;
 - learnability of **semantically significant** as opposed to **semantically vacuous** grammatical structures;
 - **regulating constraint of semantic value on form**
- are taken up again in Chapter 5.

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4.6 Table 4.2 AND KEY

The four comparisons indicated in Table 4.2

- COMP 1 Ea with Ca = a(E-C) (experimental with control group pretests)
- COMP 2 Ea with Eb = E(a-b) (experimental group pretest with posttest)
- COMP 3 Ba with Cb = C(a-b) (control group pretest with posttest)
- COMP 5 Eab dif with Cab dif = E(a-b) - C(a-b) (experimental with control group gain scores)

The variables indicated in Table 4.2

- Variable 1 total verb errors (TOT) (subsuming Variables 2,3 & 4)
- Variable 2 concord (CONC) (subset of variable 1)
- Variable 3 time (TEMP) (subset of Variable 1)
- Variable 4 aspectual errors (ASP) (subset of Variable 1)
- Variable 5 discrete point verb test (TEST)
- Variable 6 self-monitoring (MON)
- Variable 7 other-monitoring (GRAM)

Abbreviations used in Table 4.2:

- a = pretest
- b = posttest
- COMP = comparison
- dif = difference
- M = mean
- N = number of pairs
- SD = standard deviation
- S \bar{D} = standard deviation of the differences
- SELF = self-monitoring
- T = test
- TEMP = time
- TEST = verb test
- TOT = total verb errors
- VAR = Variable
- ASP = aspectual errors
- C = control group
- CON = concord
- E = experimental group
- n = number of subjects
- OTHR = other-monitoring

Table 4.2 Grouped results of the experiment

TEST:		T1	T1	T1	T1	T4	T2	T3
VAR:		VAR 1 TOT	VAR 2 CONC	VAR 3 TEMP	VAR 4 ASP	VAR 5 TEST	VAR 6 SELF	VAR 7 OTHR
COMP 1 E a n: 10	M SD	33.15 17.33	9.17 10.38	26.85 16.99	2.15 2.04	45.33 14.50	8.55 14.73	25.00 11.79
C a n: 8	M SD	34.38 22.33	9.05 7.76	26.11 20.80	4.56 2.83	53.33 10.67	9.07 11.16	33.75 14.95
p-values of differences		.40	.46	.33	.05	.10	.23	.14
COMP 2 E a n: 10	M SD	33.15 17.33	9.17 10.38	26.85 16.99	2.15 2.04	45.33 14.50	8.55 14.73	25.00 11.79
E b n: 10	M SD	13.64 15.15	6.82 6.27	9.54 14.19	1.30 2.89	49.67 12.01	21.50 32.76	37.33 13.03
p-values of differences		.002	.49	.004	.07	.09	.16	.05
COMP 3 C a n: 8	M SD	34.38 22.33	9.05 7.76	26.11 20.80	4.56 2.83	53.33 10.67	9.07 11.16	33.75 14.95
C b n: 8	M SD	19.97 20.21	4.75 5.77	12.86 22.33	4.45 3.80	55.42 11.40	4.91 9.53	38.34 18.77
p-values of differences		.07	.24	.11	.39	.31	.14	.26
COMP 5 E gain N: 8	M	22.83	2.49	22.82	1.92	4.17	20.36	18.33
C gain N: 8	M	14.41	4.30	13.25	0.11	2.09	-4.16	4.59
E - C gain	S \bar{D}	3.46	3.34	8.35	1.53	5.04	8.52	6.65
p-values of gain score differences		.02	.30	.14	.14	.35	.01	.04

5. IMPLICATIONS OF THE STUDY

*The will is infinite,
and the execution confined;
...the desire is boundless,
and the act a slave to limit.*

(Troilus and Cressida, III.ii
[85])

5.0 PREVIEW

It is just as well that this study, too, is "a slave to limit", for it is the very restrictions of the study that illuminate the way to future research.

In this chapter the questions asked in Chapter 1 are revisited. The implications for fossilisation within a cognitive framework are considered and explained in section 5.1. Within a cognitive paradigm, defossilisation is subject to the precondition of noticing, the semantic significance of a structure as a regulator of form, and conscious attentional control.

The main contribution of this study is the insight that semantico-grammatical consciousness raising can affect fossilisation. The psycholinguistic and pedagogical contributions of the study are discussed in section 5.2. Insights concerning the nature of semantico-grammatical consciousness raising and language learning, and the psychodynamics of fossilisation are considered in this section. Issues such as the permeability potential of fossilised structures, the analogous Consciousness

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Raising Multiple Effects Principle, and the systematicity of fossilisation add to an understanding of fossilisation and SLA. The pedagogical contributions discussed in this section include insights in respect of learning theory and the relationships between teaching approaches, learning styles and testing.

The limitations of the research indicated in section 5.3 point to the future perspectives which are indicated in 5.4. Further research avenues in respect of semantico-grammatical consciousness raising, fossilisation and related pedagogical issues are suggested, including exploration of the Multiple Effects Principle and of the Defossilisation Hypothesis posited in this chapter.

In terms of the findings of this study, recommendations for pedagogical applications are suggested in 5.5. The conclusions reached in 5.6 are that fossilised structures are not necessarily immutable and that multilevelled semantico-grammatical consciousness raising, as applied in this study, may precipitate defossilisation. The chapter is summarised in 5.7.

5.1 DEFOSSILISATION WITHIN A COGNITIVE VIEW OF SECOND LANGUAGE ACQUISITION

Before considering defossilisation, issues relating to fossilisation should be put into a cognitive perspective of language acquisition. Within a cognitive view of SLA (see 2.3.3, p.70, 71), fossilisation is the internalisation (assimilation) of interlanguage structures. For the learner, this constitutes acceptance and internalisation of the hypothesis-that-works (see p.26). This means that, at less than mastery levels, interlanguage structures become automatised and are no longer under attentional control. This also implies a shift in development of the type of knowledge at the disposal of the

Implications of the study

learner, from declarative knowledge to procedural knowledge. Henceforth such internalised interlanguage structures, that is fossilised structures, would be produced spontaneously by the learner, usually without the learner being aware of any error.

Defossilisation, within the cognitive paradigm, is subject to

- the precondition of noticing
- semantic significance of a structure acting as a regulator of form
- conscious attentional control.

The precondition of noticing

In terms of the findings of this study, **fossilised errors are not necessarily immutable**, but, as pointed out before, fossilised errors are notoriously difficult to change. The purported immutability of fossilised structures may be partly explained by Ausubel's (1971:309) Obliterative Subsumption Hypothesis which states that learners tend to ignore new information that does not accord with their existing knowledge system (Ausubel 1971:320). In this sense a condition of proactive interference (Higgs & Clifford 1982:68) prevails where the knowledge the learner already has (his internalised interlanguage hypotheses) precludes the noticing of new information. Ellis (1990:176), however, believes that this problem can be overcome if a learner receives corrective feedback which enables her to compare her own performance with that of some external model, "*if she notices the difference*" (my italics). This study supports Ellis's crucial proviso. Noticing the difference makes **self-monitoring** possible, which has been indicated as a **prerequisite for interlanguage change**. This study has demonstrated that consciousness raising procedures facilitate *noticing*. Explicit knowledge of rule structures does not promote nor ensure self-monitoring. These rule structures may be available to the learner but are not necessarily used unless the *semantico-grammatical relationship* has been raised to consciousness.

Implications of the study

The semantic significance of a structure acts as a regulator of form

This study also contributes to an understanding of what, apart from meaning, may be noticed by learners. The findings suggest that form is important to learners to the extent that they are dependent on formal structures for the transmission of meaning. In this sense, the semantic interpretability (see p.233 of this study) of a grammatical structure determines whether that structure will remain unchanged or not. If communication is adequate, there is no need for change. If communication is inadequate or unsuccessful, the **interpretability requirement** may trigger reanalysis leading to restructuring of that structure. In terms of psychological reality for the learner, then, **semantic significance of a structure acts as a regulator of form** (see 4.3.3, p.235).

Conscious attentional control

In a cognitive view of SLA, defossilisation of interlanguage structures is furthermore dependent on the **precondition of conscious attentional control** promoted by consciousness raising strategies. Attentional control is initiated by noticing, followed by processes that eventually lead to automatisisation:

- **noticing** the fossilised structure;
- **comparing** the structure with explicit knowledge;
- **reanalysing** the fossilised structure;
- **restructuring** the interlanguage structure to approximate the target language structure;
- **automatisisation** of long term memory nodes (learning) so that the restructured form is then produced spontaneously.

In the light of the preceding insights, the contributions of the study are now considered.

5.2 CONTRIBUTIONS OF THE STUDY

The contributions of this study lie on a psycholinguistic and pedagogical level.

5.2.1 Psycholinguistic contributions of the study

Psycholinguistic insights have been gained about

- the nature of semantico-grammatical consciousness raising and language learning;
- the psychodynamics of the process of fossilisation and the concomitant implications for SLA;
- the invariance of the ability gap between self-monitoring and other-monitoring.

5.2.1.1 Contributions to an understanding of semantico-grammatical consciousness raising

This section revisits the question asked in Chapter 1:

- **How might processes of grammaticisation be activated?** (see 1.2.2, p.24)

Perspectives on the understanding of consciousness raising suggest that consciousness raising as applied in the intervention programme

- is an inductive rather than a deductive process;
- apparently invokes general cognitive skills required for learning.

The findings of this study suggest that, although the null hypothesis cannot be rejected in respect of all the test variables, there are indications that, in respect of grammatical areas tested in this study, consciousness raising strategies serve the purpose of assisting learners to notice features that promote grammaticisation in other areas. This process is indeed a way of coming "as close as possible to replicating in some general sense the nature of language acquisition itself"

Implications of the study

(Rutherford 1987:61). Learners, having "noticed" those features to which consciousness raising techniques have drawn their attention, then gain an understanding in other areas of grammar, or other parts of the sentence, making rule generalisations and grammaticising those aspects of grammar that have been raised to consciousness. Surface features highlighted to be noticed in a consciousness raising technique are attended to from a new perspective: a particular *surface feature is consistently noticed within a particular meaningful context*. This point may be illustrated with reference to example [22] from the data. What is grammatically wrong in this example is the misfit between the verb structure and the intended meaning.

[22] * *I close my eyes I try to relax I want to see my future I want to know what will happen..... I keep seeing a clock. The clock stop(p)ed. It is very unusual.*

In the intervention programme dealing with the present perfective, the surface form **has / have + present participle** was consistently highlighted within the semantic context of Anne, who has lost her purse, telling Sue about her loss. Noticing in this case was facilitated, not by means of textual highlighting, but by means of questions designed to raise the learner's consciousness, initially about the semantic implications, and then about the surface forms, for example:

- (1) When Anne says, "I have lost my purse," what is she communicating to Sue?
 - A. the fact of her loss
 - B. the time of her loss
- (2) When Sue arrives, is the purse still lost?
- (3) Does Sue know when Anne lost her purse?

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- (4) What should Sue ask if she wanted to know when Anne lost her purse?
- (5) What should Sue ask if she wanted to know whether Anne's purse is lost?

By now, the learner would have become aware of meaning as well as formal differences between the past simple and the present perfective. Learners then had to make present perfective meaning visible on a timeline by indicating, for example

- "I have been looking for it all day." (wavy line)
- "I have just remembered." (double bracket)

NOW
V

----->

This task required that learners presented on the timeline the anterior time zone immediately prior to and inclusive of NOW time orientation (see p.190 for a definition of the obligatory context of the present perfective). New semantico-grammatical evidence could thus be noticed. In this way then, underlying processes of reanalysis and restructuring were triggered by attention to surface features in the text interpreted within a meaningful context.

The particular way in which the concept of consciousness raising was applied in this study has led me to interpret consciousness raising as a learner-driven constructive learning process. Although grammar is the "on-line processing component of discourse" (Rutherford 1987:104), this processing is not necessarily brought about by direct teaching. The learner, guided to notice particular features in the text, may arrive at appropriate generalisations through inductive processes. By means of such processes, learners may then learn how to learn (cf.

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Rutherford 1987:104). Furthermore, they seem to achieve this as a result of the acquisition of metacognitive skills, that is by learning to think about thinking as a result of the raising of general cognitive skills such as analysis, noticing similarities and differences, and synthesis.

As cognitive processes cannot be directly observed, such a statement may be considered speculative. However, if noticing leads the learner to "look again", this constitutes a conscious act. If the learner is furthermore led to notice a new perspective in respect of the semantico-grammatical link, this constitutes an analytical act. If the learner then proceeds to consciously adjust his/her hypothesis which no longer matches the newly noticed evidence, this constitutes a metacognitive act resulting in defossilisation. Processes of grammaticisation, then, may in this way be activated by means of consciousness raising procedures (see 1.2.2 p.24).

5.2.1.2 The psychodynamics of fossilisation

The following discussion relates to three further questions asked in Chapter 1 (see 1.2, p.23):

- **Can fossilised structures be destabilised?**
- **Are adult ESL learners still able to improve accuracy levels?**
- **What cognitive processes are involved in changing fossilised structures?** (see 1.2.1, p.23; 1.2.3, p.24; 1.2.4, p.25).

The main contribution of this study is the insight that semantico-grammatical consciousness raising can affect fossilisation. This insight has also added to an understanding of the psychodynamics of fossilisation in respect of

- the permeability potential of fossilised structures;
- the systematicity of fossilised structures;
- the Multiple Effects Principle;

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- the onset time of fossilisation;
- arrest of the process of restructuring;
- the invariance of the ability gap between self-monitoring and other-monitoring.

The effect of semantico grammatical consciousness raising on fossilisation

In this study the notion of consciousness raising as expounded by Rutherford (1987; 1988; 1992), Rutherford and Sharwood-Smith (1985; 1988), Sharwood-Smith (1981) and Lightbown and Spada (1990) was reinterpreted and applied in respect of the morphological features of verb structures, which are typically prone to fossilisation. Application of consciousness raising strategies to verb structures proved to be difficult because the semantico-grammatical relationship of verb structures were not always transparent. Ways had to be found to guide learners to notice surface forms in a meaningful context (see examples discussed on p.276). A variety of consciousness raising strategies on different levels of consciousness were used to guide the learner to make semantico-grammatical links in an area that was semantically less transparent and in a way that, for the learner, had not previously been possible. Moreover, the new semantico-grammatical link involved, in addition to noticing the new relationship, unlearning of a more direct semantico-grammatical relationship that had existed for at least 8 years. Unlearning a fossilised structure required

- noticing something that had previously remained unanalysed;
- reanalysing the existing semantico-grammatical relationship;
- restructuring the existing semantico-grammatical relationship with increased distance between form and meaning.

Implications of the study

The permeability potential of fossilised structures

Deriving from the previous point that fossilised structures can be destabilised, and based on the disparate results of the tests, is the insight that all fossilised structures are not equally susceptible to change. A **permeability potential** of fossilised structures, that is the degree of susceptibility to change of a structure, may therefore be posited.

According to the findings of the study, interlanguage change may evidently be achieved on condition that

- **multiple consciousness raising effects** (cf. Selinker & Lakshmanan 1992:263) are precipitated;
- the grammatical structure is **semantically significant**;
- the consciousness raising procedures can be **repeated over time**.

Although the last condition was not tested, the value of more exposures was pointed out in Chapter 4.

In terms of these three conditions, the degree of susceptibility of a fossilised structure to interlanguage change seems to be dependent on

- the **polygenous effects** related to the fossilisation process of that structure;
- the degree of **semantic significance** of the fossilised grammatical structure;
- the **length of time** that the fossilised structure has been internalised by the learner.

This position may be restated as a **Defossilisation Hypothesis**:

The susceptibility of a fossilised interlanguage structure to defossilisation is a function of polygenous fossilisation-related effects, the degree of semantic significance of the structure and the length of time that the structure has been fossilised.

Implications of the study

The Multiple Effects Principle

A further contribution of this study relates to the Multiple Effects Principle proposed by Selinker and Lakshmanan (1992:198,199). A consciousness raising analogy of the MEP purports that a Consciousness Raising Multiple Effects Principle may function in the destabilisation of fossilised structures. A multiple effects **defossilisation principle** analogous to Selinker and Lakshmanan's MEP A (1992:198) is stated as follows:

Consciousness Raising Multiple Effects Principle A (C-R MEP A):

When two or more consciousness raising effects work in tandem, there is a greater chance of destabilisation of fossilised interlanguage forms.

It is one of the expectations of this study that a multi-levelled and varied consciousness raising procedure may counteract any negative implications of the Multiple Effects Principle. As the results of the study have been positive, although not statistically significant in respect of every subhypothesis, one is tempted to assume that this outcome may be related to the Consciousness Raising Multiple Effects Principle. Such an assumption would be premature, however, one which cannot be made before the effects of multi-levelled consciousness raising procedures have been compared with the effects of a single consciousness raising strategy.

The systematicity of fossilisation

A further contribution to the theory of fossilisation relates to the systematicity of fossilisation. Closely related to the Defossilisation Hypothesis posited above is the notion that there is also a systematic relationship between the semantic value of a morphological structure, fossilisation potential and consciousness raising:

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The more semantically vacuous a morphological structure, the more likely it is to fossilise and the less likely consciousness raising is to have an effect.

The more semantically significant a structure, the less likely it is to fossilise and the more likely consciousness raising intervention is to have an effect.

Semantic significance is therefore *pivotal* in the attainment of success with consciousness raising strategies, as well as in processes of fossilisation and defossilisation. The apparent direct systematic relationship between the immutability of fossilised structures on the one hand, and polygenous effects, semantic significance of the target grammatical structure, and period of fossilisation on the other suggests that fossilisation is systematic.

The onset time of fossilisation

This section relates to the fifth question asked in Chapter 1:

- **How might teaching procedures in the primary school classroom be improved?**

As the length of the period of internalisation of interlanguage structures relates to the susceptibility to destabilisation of fossilised structures, the onset time of fossilisation is pertinent to the initial teaching of a second language. Examples quoted in this study (see *Appendix i*, p.351) suggest that fossilisation of structures sets in during the early years of instruction, a view corroborated in the literature by Higgs and Clifford (1982:78) and Higgs (1984:7). Although criticised by Van Patten (1988:243-247) for failing to provide adequate evidence in support of their claims for "accuracy first" in initial ESL teaching to counteract early fossilisation, Higgs and Clifford's conclusions nonetheless sparked off research and interest in fossilisation, ushering in a new era in language teaching. Van Patten (1988:247) has humorously dubbed this the era of "*fossilophobia*". The position that fossilisation sets in during

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the first year or two of initial ESL instruction may have decided implications for first-year teacher trainees' learning potential, given that the period of fossilisation affects the susceptibility of structures to defossilisation. According to the findings of this study, however, adult ESL learners may still be able to improve at least some aspects of linguistic accuracy.

The arrest of the process of restructuring

A further contribution to the theory of fossilisation is the understanding of what it is that fossilises. In terms of the findings of this study it is the learner's hypotheses giving rise to developmental processes rather than the surface structure that fossilise. It is the arrest of the process of restructuring at a level of non-mastery that is responsible for the "fossilised" surface form. The surface form, however, is the observable product not only of restructuring, but also of the absence thereof when restructuring has ceased. Restructuring ceases when a hypothesis has been accepted by the learner as the hypothesis-that-works and has become internalised. Reference to a *fossilised* structure is consequently merely metonymical for **fossilised interlanguage hypothesis**.

Within this process view of fossilisation any attempt at defossilisation should therefore address the process, not the product. Any focus on form for its own sake will be less likely to achieve any meaningful results, than intervention that is directed at reactivation of the processes of reanalysis and restructuring. Consciousness raising procedures used in this study aimed to change the learner's hypotheses and thereby reactivate *underlying* processes of reanalysis and restructuring.

This process view of consciousness raising differs somewhat from that taken by Rutherford (1987:104), who states that "what is raised to consciousness is not the grammatical product but aspects of the grammatical process." However, process is taken

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in this study to refer to the *reanalysis and restructuring of the learner's hypotheses*, whereas Rutherford (1987:104) defines the grammatical process as the "on-line processing component of discourse." Processes of reanalysis and restructuring are underlying and may only be inferred or even guessed at from surface structures.

It is nonetheless difficult to understand how learners might review what happens on the surface of language without reference to their underlying hypotheses about language that are responsible for the surface structures.

5.2.1.3 The invariance of the ability gap between self-monitoring and other-monitoring

This contribution of the study relates to the observed **invariant ability gap** between the ability to monitor one's own production and the ability to make grammatical judgements of structures produced by others (see 4.3.8, p.251 and 4.3.8.2, p.256). In these sections an attempt is made to relate the phenomenon of the invariant ability gap to aspects of fossilisation and consciousness raising.

Aspects of the findings on consciousness raising have particular pedagogical implications. In the next section the pedagogical value of consciousness raising procedures, including the understanding of how the problem of fossilisation may be addressed in the context of teacher training (see p.1 of this study) is considered.

5.2.2 Pedagogical contributions

Pedagogical insights have been gained about semantico-grammatical consciousness raising as a

- remedial teaching strategy
- second language teaching strategy
- teacher training strategy.

Implications of the study

5.2.2.1 Semantico-grammatical consciousness raising as a remedial teaching strategy

This study suggests that semantico-grammatical consciousness raising procedures may be used effectively in a multilevelled intervention programme. These findings imply that the low grammatical accuracy levels of the teacher trainees may be remedied by means of semantico-grammatical consciousness raising procedures. The perpetuation of low levels of language proficiency described in Chapter 1 may thus be arrested by means of remedial intervention at teacher training college level.

5.2.2.2 Semantico-grammatical consciousness raising as an initial second language teaching strategy

The use of consciousness raising strategies in initial ESL teaching at primary school level may promote internalisation and stabilisation of correct linguistic structures from the beginning. One of the implications derived from the central hypothesis is that consciousness raising strategies promote the development of higher order cognitive skills. In a consciousness raising procedure, initial and intermediate ESL learners may be guided by helping them to notice features that trigger appropriate processes of reanalysis and restructuring. These processes are achieved by means of general cognitive strategies for learning: analysis, comparison, noting differences and similarities, identifying patterns and making generalisations by means of inductive processes. In this way, the ESL teacher may *facilitate* language learning rather than *teach* language. It is likely, then, that early fossilisation may be largely precluded along a learning route that helps the learner to notice those features that will promote the formulation of correct hypotheses. By means of consciousness raising procedures natural second language learning may be ideally approximated in classroom instruction.

Implications of the study

In a consciousness raising teaching approach learners have the advantage of being presented with contextualised language in an unanalysed integrated manner as opposed to a decontextualised rule teaching approach in which a particular rule is the item taught. The difference between an **integrated, contextualised teaching approach** and a **rule-focused approach** is that the first approach presents learners with all the relevant morphosyntactic aspects of language within a meaningful context. This enables the learner to make proper generalisations relating to obligatory grammatical contexts as well as non-obligatory and optional contexts, whereas the second approach tends to focus on one rule at a time as it is applied in obligatory grammatical contexts. It may be argued that direct rule teaching may also be done within a meaningful context. However, the appropriate generalisations cannot be made when only the marked instances explicating the rule are taught.

What is wrong with rule instruction then is that only half the story is told. I shall illustrate this point with two examples of grammatical areas that are often the focus of teaching in ESL classrooms (in the case of concord, frequently remedially):

- subject-verb agreement (concord)
- temporality (time)
- aspect.

Agreement of verb and subject (concord)

What is most typically taught in a lesson on concord is the rule relating to the grammaticised form:

- VERB [PRES] + **s** in the context of SUBJECT [3rd PERS] [SING].

Grammaticised forms in other contexts are added:

- COP [PRES]-> **am** in the context of SUBJECT [1st PERS] [SING];
- COP [PAST]-> **was** in the context of SUBJECT [1st PERS] [SING].

Implications of the study

ESL teachers tend to teach what is expected to go wrong. This may lead learners to have a distorted view of the structure concerned (Sharwood Smith 1991:130). What is not marked is rarely taught. Learners are therefore confronted with a learnability problem where they have to understand a number of *implicit rules* to arrive at the full set of generalisations relating to concord, without being able to relate to an integrated and meaningful language context. The position that non-observance of the obligatory rule does not render a concord structure incomprehensible, furthermore, may explain why learners are not pushed to adjust their fossilised hypothesis relating to concord structures.

It is possible that focused rule teaching does not engage the learner's general cognitive skills, such as analysis and synthesis, which are required to learn language. A more natural exposure to concord structures involving the learner in a meaningful context, as is made possible by consciousness raising procedures, therefore seems to be preferable.

Temporality

I briefly refer to the teaching of tenses to support the previous statement. The teaching of formal temporal structures by means of direct, analytical rule-based approaches may result in surface forms that are morphologically mostly correct but do not fit the intended meaning. It was particularly notable that temporal structures encountered in the data were morphologically correct, but inappropriate in terms of the meaning that the form should have signified. The appropriate semantico-grammatical links had therefore not been made. In such cases consciousness raising remedial strategies were required to establish appropriate semantico-grammatical relationships.

Implications of the study

Aspect

The relevance of a meaningful context for learning may be illustrated with reference to the teaching of aspect. In terms of the findings of this study the semantic significance of grammatical structures pushes learners to grammaticise. As aspectual structures are semantically highly significant, the teaching of these structures by means of consciousness raising strategies within a meaningful context promotes the formulation of the appropriate generalisations required to lead to target levels of mastery.

Consciousness raising approaches also have implications for language testing. Although this study does not directly investigate testing procedures, I shall briefly refer to testing to the extent that it relates to the findings of this study.

Testing

Teaching approaches may determine how learners learn. The findings of this study suggest that learners taught by means of consciousness raising procedures did not cope as well with the analytical discrete item test as those learners who had been exposed to analytical teaching of rules. This suggests that the testing format should match the teaching style.

The most natural style of language test would replicate situations that occur in natural language. Such language tests should pose questions that activate the same trigger that is responsible for natural language production. Test tasks that require analytical analysis and deductive application of rules learnt are academic and have nothing to do with language in natural situations. Not only do consciousness raising procedures constitute a more natural teaching approach, but testing that matches this approach would reflect language problems as they are experienced in natural language use.

5.2.2.3 Semantico-grammatical consciousness raising in teacher training

Linguistic perspectives that have pedagogical relevance must also have relevance for teacher training. The implications of this study for a theory of fossilisation and for the understanding of consciousness raising in initial ESL teaching and remedial teaching impact on the training of teachers.

The findings of this study show that semantico-grammatical consciousness raising is a plausible strategy to address the problem identified at the beginning of Chapter 1. The main advantage of such a multilevelled, multifaceted consciousness raising intervention programme is that students are able to improve their own accuracy levels *while learning how to teach*. The teach-back application sessions that require learners to verbalise in a mock teaching situation what they have learnt, justify and contextualise the consciousness raising activities in a meaningful way. Along this route, semantico-grammatical consciousness raising procedures used at teacher training college level may also serve as an ESL training strategy for primary school teacher trainees.

This study has already generated further investigation. A language programme, indirectly related to this study and drawing on insights gained through the exploration of the relationship between fossilisation and consciousness raising, is currently being implemented experimentally with first-year students at the institution where this study was undertaken. This programme aims to develop cognitive academic language proficiency, which incorporates accuracy concerns. The semantico-grammatical consciousness strategies are presented with a double agenda in mind: students engage in semantico-grammatical consciousness raising activities aimed at improving their own accuracy while learning how to teach in a follow-up application activity. This

Implications of the study

project is still in its infancy and will be fully reported on at a later stage.

A related consciousness raising strategy is the use of self-monitoring in the development of accuracy. Self-monitoring is a prerequisite of reanalysis and restructuring leading to defossilisation. Self-monitoring activities constituting consciousness raising strategies are an aspect of the teach-back phase (see *Appendix ii*, p.358: Teach-back). In this way, students benefit from learning how to teach by having their own consciousness raised, that is teacher trainees **learn to teach by teaching to learn.**

5.2.3 Contributions to learning theory

It is inevitable that, in a study that has as its central focus issues relating to the learning of language, some insights must also be gained about learning in general. Although general learning theory is not the focus of this study, it is nonetheless appropriate that some reference be made to these insights, especially as the position taken in this study supports the cognitive theory of language learning. The relevance of general cognitive abilities to language learning is indicated in each point discussed below:

- metacognition and learning
- proceeding from the known to the unknown
- obliterative subsumption
- significance, salience and learnability
- disparate learning styles
- teaching, learning and testing
- reflective learning
- fundamental similarity of learning.

Metacognition and learning

According to Schmidt (1990:132) (see p.132 of this study), metacognition goes on within consciousness. This means that the

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learner thinks about the learning material by engaging analytical skills. In the consciousness raising intervention programme used in this study, procedures which induced learners to think about thinking, (see p.159 of this study) were designed to raise awareness of linguistic structures to a level of consciousness. The results of this study suggest that these procedures improved learning of particular linguistic structures, an outcome that supports Flavell's (1979:906) position that metacognition plays an important role in language reception and learning. If language development could benefit from metacognitive processes, it follows that learning in general should also be improved by metacognition. Learners who have metacognitive awareness therefore have **analytical knowledge of what they know**, an awareness which is necessary if learning is to proceed to the understanding of new information encountered consciously.

Proceeding from the known to the unknown

This basic tenet of general learning theory has been borne out by this study. Related to the principle of proceeding from the known to the new is the concomitant learner strategy of **the learner using what he/she knows**. The point at which a learner will either continue to use only what is known, or proceed to add the new is definitive; this is the dividing line between non-learning and learning. In SLA terms, it is the difference between interlanguage fossilisation and interlanguage change. The next point sheds some light on the question as to why learning may not happen.

The principle of obliterative subsumption

Ausubel (1971:320) offers some explanation of the watershed point between learning and non-learning (see 5.1, p.273). In terms of this principle, learners tend to ignore information that does not fit into their existing schemata, which are forms or rules through which the understanding is able to apply its categories in the process of realising knowledge (Onions 1973:1901). The

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misfit, however, may only be the learner's perception of the new information and is not necessarily an inherent quality of the new information. In this study another aspect of the learner's perception that affected learning of the new material was pointed out. As was illustrated by the non-improvement of concord structures, **what learners did not learn well was information that lacked salience for the learner or was deemed redundant.** The next point differentiates between learners' perceptions of new information and inherent qualities of the learning material.

Significance, salience and learnability

I have been at pains in this study to differentiate between the **semantic salience** and **semantic significance** of learning material. Where salience is related to the way in which the learner perceives the learning material, significance, in the sense of **meaning**, is an inherent quality of the learning material. Learning material could become salient for the learner because it has significance, but cannot be salient of itself.

This point may be illustrated by referring to the semantic value of grammatical structures. The semantic value of grammatical structures may be represented on a continuum between semantic significance and semantic vacuity. New grammatical information seems to be learnable to the extent that it possesses semantic significance (see p.245 of this study). Fossilised aspectual structures, which are semantically significant, improved considerably in this study, apparently because semantic significance rendered the material salient for the learner, and therefore more learnable (see p.246 of this study).

By the same token, grammatical structures that are semantically vacuous, such as fossilised concord structures, showed no improvement (p.231 of 4.3.2). The semantic vacuity of the new information rendered it less salient for the learner and therefore less learnable.

Implications of the study

These insights about the factors that affect the readiness with which new linguistic information is incorporated into existing linguistic schemata seem equally relevant to general learning theory. Most important is the understanding of **learners' contributions to their own learning**. Related to learners' contributions to their own learning is the matter of learners' individual learning styles.

Disparate learning styles

The results of this study showed that learners did not all respond to the consciousness raising intervention programme in the same way. When individual scores were examined, it was found that, in some instances, the score of an individual in the group actually deteriorated (see p.242 of this study) despite the statistically significant improvement of the experimental group, according to the comparison of the experimental and control group posttests. This discrepancy could only be explained by assuming that it is the result of disparate learning styles of learners. As any explanation about the way in which the learning styles differed would be speculative, I merely refer to the matter of possible disparate learning styles to stress the position that **learners contribute to the learning situation**. This brings us to the next point: the relationship between teaching, learning and testing.

Teaching, learning and testing

The notion of disparate learning styles, by implication, means that learners respond to particular **teaching approaches** in different ways. It was noted in the discussion of the results of this study that, despite the fact that the experimental group improved significantly on total verb errors (Variable 1), and considerably on time (Variable 3) and aspect (Variable 4) in their posttests, the discrete item verb test (Variable 5) result showed little improvement, although the same verb structures were tested. This discrepancy in the results could only be related to

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the different **testing approaches** used. Where verb structures in the discrete item verb test elicited verb structures in an analytical decontextualised test, Variables 1, 3 and 4 were tested in a test that required contextualised natural language production (see *Appendix iii*, p.361).

These observations, however, could not explain the discrepancy in the results unless the teaching style used in the intervention programme was more appropriately tested by means of natural language production than by a discrete item analytical test. The possibility that an **interrelationship apparently exists between teaching style, testing approach and learning style** invites further investigation. The next point touches on self-monitoring as a particular learning style.

Reflective learning

According to Flavell (1979:909) "[c]ognitive strategies are invoked to *make* cognitive progress [i.e. learn], metacognitive strategies to monitor it." Self-monitoring, as it was applied in the intervention programme, was designed to encourage learners to consider their own language production and to reflect on the linguistic structures used. This constituted a metacognitive activity, which required learners to have conscious awareness of what they know.

In this study, the ability to monitor their own language production was regarded as a prerequisite for interlanguage change. In this sense, the learning of new information depended on whether learners had analytical awareness of what they knew.

There seems to be little difference between monitoring self-produced linguistic structures and thinking critically about other kinds of knowledge: both processes rely on the learner's ability to **reflect on new information**.

Implications of the study

This point raises the question: is the process of language learning and the process of general learning then essentially the same? I turn to the last point.

Fundamental similarity of learning

It seems feasible to conclude that language learning engages the same cognitive processes as those required to learn any other new information. It also seems feasible to conclude that non-learning of language (fossilisation) is related to the same processes that result in the non-learning of other new information. If this were so, it would then be unlikely that language learners availed themselves of any specialised language learning device. However, although one is tempted to conclude that **all learning is fundamentally the same**, such a hypothesis would have to be subjected to rigorous research.

5.3 LIMITATIONS OF THE STUDY

Limitations of the research are discussed in this section. Predictable problems related to the research design were identified in Chapter 3 (see 3.2.2, p.143). Limitations of the research done are mainly related to

- small groups;
- control group improvement;
- control of variables;
- inability to directly observe a "raised consciousness";
- limited exposures to semantico-grammatical consciousness raising strategies;
- limited rejection of the null hypothesis;
- lack of generalisability of results.

5.3.1 Small groups

The small naturally occurring groups, which manifested a high standard deviation in most of the tests, made rejection of the

Implications of the study

null hypothesis on all the variables less likely. It was not possible to demonstrate to what extent the results may have been influenced by a larger test population. It is likely that a larger number of observations would have produced statistically significant results on more variables. Despite the limitation of small test groups, however, the significant improvement demonstrated in respect of total verb errors illustrates the effect of semantico-grammatical consciousness raising procedures on structures that are semantically significant as opposed to those structures that are semantically vacuous (see p.282).

5.3.2 Control group improvement

A further limitation of the research design is the improvement of the control group, which was exposed to a teaching approach that included relating tenses to a timeline. The timeline also happened to be the pivotal consciousness raising strategy used to teach temporal and aspectual structures in the intervention programme. I merely refer to this limitation here as the problem is discussed earlier (see 4.2.4, p.210).

5.3.3 Control of variables

The design of this study involving naturally occurring groups made control of the variables exceedingly difficult because the researcher could not be selective in respect of subjects, time and place where the experiment was to be conducted. Furthermore, groups doing two different courses were used as the experimental and control groups. Much research, time and effort would have been saved by a simpler research design which made elicitation of fewer, isolated structures, for example only concord and aspect, possible. Such data would have been easier and simpler to quantify than an extended piece of written language that had to be analysed to find the desired structures. However, it is the very scope of the study which has been responsible for insights that might otherwise have been missed in a more rigidly structured design with narrower easily controllable

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delimitations. Although the design may have had less internal validity, external validity was enhanced by the natural classroom situation.

5.3.4 Inability to directly observe a "raised consciousness"

Observing change of surface structures is not the same as saying that structures have been produced as a result of a conscious process. Van Patten (1990:289) points out that it is difficult to determine whether a learning outcome has been processed consciously or not. Concluding that it is difficult for early stage and intermediate stage learners to attend consciously to form and meaning simultaneously, he entertains the possibility that "conscious attention to grammatico-morphological forms in the input occurs as comprehension improves over time" (Van Patten 1990:295). In this case, adult learners such as first-year teacher trainees would then be likely candidates to benefit from consciousness raising procedures. However, a "raised consciousness" cannot be observed directly. Whether learners' consciousness has indeed been raised can only be inferred from test results and by processes of deduction. Structures previously automatised and internalised as fossilised structures are no longer under conscious attentional control. If, after consciousness raising intervention, these structures are then manifested in a changed form which is a closer approximation of the target form, it may be concluded that these changed structures are the result of a reinstated conscious control, and that the learner's consciousness has been raised.

5.3.5 Limited exposures to semantico-grammatical consciousness raising strategies

The results could not reveal whether more exposures to consciousness raising strategies over a longer period would have produced significant results on more variables. This issue is speculative at this stage and clear answers can only be obtained

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by subjecting the conclusions of this study to further rigorous research.

5.3.6 Limited rejection of the null hypothesis

The main limitation is the fact that the null hypothesis could not be rejected outright. The value of the study therefore lies more in the rich avenues that it explored, its speculations, and its indications for future research rather than the statistical significance of its findings. However, although results were shown to be significant on only three of the variables, it was nonetheless possible to observe change on all variables except concord.

5.3.7 Limited generalisability of results

Although the research design has external validity in that prevailing classroom conditions were closely preserved, and although a concomitant implication is that results may have wider relevance for similar teacher training institutions, it is not possible to make significant generalisations about the wider primary school teacher trainee population in South Africa.

The limitation referred to above is endemic to linguistic research in pedagogical contexts. The dilemma of the applied linguist is the decision to sacrifice external validity and highly relevant natural data elicited in a quasi-experimental research design for internal validity and artificial language data elicited in a neat, controllable laboratory-type experiment (Larsen-Freeman 1991:22).

5.4 FUTURE RESEARCH

What is eventually revealed in any study by the insistent probing of the researcher can never be totally divined or anticipated. The element of the unexpected is always there. It is precisely

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this serendipitous quality of research that generates further research. This study is no exception.

Departing now from the limiting confines of this study, I attempt to build on insights gained and learn from mistakes made. The consciousness raising route ahead is plotted in this section. This section suggests further research relating to the following issues raised by the findings of the study:

- long-term effects of consciousness raising as a teaching strategy
- the relationship between the semantic value of structures and fossilisation: semantic significance as opposed to semantic vacuity
- exploration of the Multiple Effects Principle and the Defossilisation Hypothesis
- applications of self-monitoring promoting reflective learning
- the ability gap between self-monitoring and other-monitoring
- the relationship between learning styles and fossilisation
- the systematicity of fossilisation
- measurement of levels of grammaticisation.

5.4.1 Long-term effects of consciousness raising

As this study was concluded with the set of posttests at the end of the ten-week period, it was impossible to say whether the benefits noted in post-tests after ten weeks would still be available to the learner at a later stage. For consciousness raising procedures to have any pedagogical value as a defossilisation tool, the permanence of such benefits would have to be tested. It is therefore necessary to establish how initial consciousness raising procedures may be adapted to ensure lasting effects, how these benefits could be maintained over time, and how expected attrition may be countered.

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The effects of the interaction of **repeated exposures** to consciousness raising procedures and **length of time** over which the consciousness raising procedures are presented need to be investigated. These two variables were identified in this chapter as factors that apparently affected the results. It was also pointed out that, in the case of unlearning and relearning of knowledge that had been previously automatised, as in the case of fossilised structures, many more repetitions are required before reanalysed, restructured knowledge can be stored in long term memory as automatised knowledge. The effects of such repeated exposures over a period of time longer than ten weeks would have to be measured and compared to the findings of this study.

Furthermore, the **attrition rate** over time of benefits when learners are not exposed to any reinforcing consciousness raising procedures would have to be compared to the maintenance levels of learners who are exposed to reinforcement procedures. Such information would be a valuable contribution to second language pedagogy, for the initial teaching of second language as well as remedial procedures. A second area of further research concerns the semantic value of structures.

5.4.2 The relationship between the semantic value of structures and fossilisation

The apparent relationship between the semantic value and the fossilisation tendency of structures as well as the relationship between consciousness raising success and semantic value of structures was pointed out in this chapter. It was shown that fossilised semantically vacuous concord structures were not improved, whereas aspectual structures, which were semantically significant, benefited considerably from semantico-grammatical consciousness raising. However, this study did not reveal whether reanalysis and restructuring of fossilised concord structures were less likely to be precipitated by a focus on meaning in

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semantico-grammatical consciousness raising procedures than by exposure to concord structures being merely highlighted in a text. Research investigating the relationship between semantic significance of structures and consciousness raising on the one hand and fossilisation tendency on the other would therefore explore the questions:

- What is the impact of the semantic significance of grammatical structures on learnability?
- What predictions can be made for the success of semantico-grammatical consciousness raising procedures in terms of the semantic value of fossilised structures?

Related to the above would be the need to demonstrate the differential result on semantically significant and semantically vacuous variables in terms of a semantico-grammatical consciousness raising intervention programme.

5.4.3 Exploration of the Multiple Effects Principle and the Defossilisation Hypothesis

The reinterpretation of Selinker and Lakshmanan's (1992:198,199) Multiple Effects Principle in this study states that a reversal of fossilisation may be precipitated by multiple processes in tandem designed to destabilise fossilised language structures. In terms of the Consciousness Raising Multiple Effects Principle, reanalysis and restructuring are to be accomplished not by length of time, but rather by the effects of multilevelled and varied intervention procedures. It was pointed out earlier in this study that fossilised structures were difficult to change. It was also assumed that the longer a structure had been fossilised, the more resistant it would be to change, an assumption that is partly supported by Shiffrin and Schneider's (1977:160) position on the unlearning and relearning of structures that have already become automatised (see p.96 of this study). In terms of this assumption, a **Defossilisation Hypothesis** was posited (see p.280).

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Further exploration of this hypothesis may add to the understanding of the systematic relationship between the semantic value of structures, the tendency of particular structures to fossilise and the length of time that these structures have been fossilised. Such insights may in turn inform **second language pedagogy**:

- Structures that have a propensity towards fossilisation may be identified timeously and addressed appropriately.
- Factors precipitating fossilisation may require particular teaching approaches that accommodate the polygenous nature of these effects.
- The length of time that a structure has been fossilised may predict defossilisation potential, which would in turn determine the design of an intervention programme.
- Defossilisation potential might serve as an indicator of future language success of first-year teacher trainees.

Experimental testing of the Defossilisation Hypothesis may further illustrate how the effects of language transfer interact with other factors related to fossilisation. Selinker and Lakshmanan (1992:211) have already pointed out that "language transfer is either a NECESSARY, or at the very least, a PRIVILEGED CO-FACTOR in cases of fossilisation." The findings of this study suggest that, in addition to effects such as the semantic vacuity of structures and length of the period that a structure has been fossilised, several language transfer factors seem to be operative in processes of fossilisation (see p.263 of this study). An understanding of those language structures that are likely to be transferred would serve second language pedagogy well. Learners might then be steered through this potential minefield by means of semantico-grammatical consciousness raising

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procedures, thus avoiding pitfalls and diminishing the likelihood of early fossilisation of grammatical structures.

The fourth area that could be explored very profitably is self-monitoring and its relationship to the conscious learning of a second language in a formal language classroom.

5.4.4 Applications of self-monitoring

This study suggests that self-monitoring is a prerequisite for interlanguage change (see p.273 of this study). What is not realised by the learner as being erroneous cannot be changed. The findings further show that semantico-grammatical consciousness raising procedures improve self-monitoring ability whereas conventional teaching of rules seems to have the opposite effect (see p.257). The findings also show that self-monitoring of own structures is improved less than grammatical judgement of structures produced by others (see *Fig. xvi*, p.254). Although other-monitoring of structures is improved somewhat by conventional rule teaching, self-monitoring does not seem to benefit from this kind of teaching. These findings have particular implications for the teaching of second language, including remedial teaching such as defossilisation procedures. The findings furthermore suggest that accuracy development and improvement which are dependent on self-monitoring may be promoted by means of consciousness raising self-monitoring procedures.

I have indicated in this study that learners typically do not monitor fossilised structures because they are not conscious of any error in the first place. When self-monitoring of a particular structure ceases, that structure becomes fossilised. The focus of this study has been on strategies to raise consciousness of fossilised structures. Although processes of fossilisation and their relationship with semantico-grammatical consciousness raising procedures have been discussed at length

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in this study, the exact point of fossilisation of a structure and the related cessation of self-monitoring should be explored further. An investigation of the cognitive processes that precipitate the cessation of self-monitoring would contribute to a theory of second language acquisition. Related to this is the notion of the ability gap between self-monitoring and other-monitoring and further research of this ability gap is required.

5.4.5 The ability gap between self-monitoring and other-monitoring

The findings of this study suggest that semantico-grammatical consciousness raising procedures improved other-monitoring significantly, and self-monitoring considerably but not significantly (see Table 4.2, p.270). It is further indicated that the ability gap was basically preserved after the intervention programme. Because the improvement in other-monitoring was greater than the improvement in self-monitoring, the gap was also larger after the intervention programme. This observation leads to the question whether second language learners gradually become less inclined to monitor own production as they approximate target language levels and automatise correct target language structures. At this point, however, it is a matter of conjecture whether this ability gap would remain stable during the course of second language development, or whether the discrepancy would gradually diminish as the learner approximates target language levels.

Related to this question is the question whether a related position exists in first language acquisition: is there any discrepancy between self-monitoring and other-monitoring in first language? Investigation of these issues would contribute to an understanding of amongst other things the cognitive processes involved in first and second language acquisition.

5.4.6 The relationship between learning styles and fossilisation

This study showed that not all subjects reacted to semantico-grammatical consciousness raising procedures in exactly the same way. I have suggested that learners do not all respond in exactly the same way because of disparate learning styles (see p.242, 290 of this study). The relationship between semantico-grammatical consciousness raising and learners' learning styles could be explored to the advantage of language pedagogy and may well generate deeper understanding of the cognitive processes involved in language acquisition and learning.

Another aspect of learning style that should be addressed in such a study concerns the semantic value of the grammatical structure to be learnt. Not only do individual learning styles affect the way that learners learn; the findings of this study suggest that different cognitive processes may be involved in the learning of grammatical structures that are semantically vacuous and grammatical structures that are semantically significant. Furthermore, the relationships that hold between teaching styles and learning, and teaching styles and testing could be explored to the advantage of language pedagogy.

5.4.7 The systematicity of fossilisation

The notion of the systematicity of fossilisation (see p.282) has implications for language proficiency assessment. Language proficiency assessment criteria based on levels of fossilisation, types of fossilised structures and length of time that structures have been fossilised may be established.

Such criteria would also facilitate the identification of the *improvement potential* of learners. Appropriate second language proficiency measurement of first-year college students for admission purposes has proved to be unsatisfactory in the past as a result of the lack of adequate and appropriate measurement

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criteria. The possibility of such assessment criteria generated by a theory of fossilisation invites further research. Such a measurement instrument would facilitate a more tenable selection procedure of first-year trainees for admission to training colleges.

Related to the above is the possible measurement of levels of grammaticisation.

5.4.8 Measurement of levels of grammaticisation

Given that levels of grammaticisation constitute the opposite of fossilisation, systematicity of fossilisation would then also imply systematicity of grammaticisation processes. Systematicity embraces implicativeness which suggests that it might be possible to devise systematic measuring instruments of levels of grammaticisation in language. Such measurements could provide valuable information in respect of the grammatical proficiency of prospective first-year teacher trainees. Research into the possibility of such measurement would be valuable in contexts such as ESL teaching where grammatical proficiency is a necessary requirement.

5.5 RECOMMENDATIONS FOR PEDAGOGICAL APPLICATIONS

Based on the findings of this study, recommendations for future pedagogical applications of consciousness raising procedures are made. It is recommended that semantico-grammatical consciousness raising

- be used in remedial second language teaching
- form an integral part of second language initial teaching approaches
- be used in teacher training, for teaching as well as learning
- serve to develop self-monitoring skills.

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5.5.1 Semantico-grammatical consciousness raising as a defossilisation strategy

In view of the findings of this study it is recommended that semantico-grammatical consciousness raising be used as a remedial teaching strategy. As semantico-grammatical consciousness raising techniques that are tailored to the specific needs of South African classrooms do not yet exist, it is furthermore recommended that such remedial materials be developed. A related recommendation concerns the teaching of English second language.

5.5.2 Semantico-grammatical consciousness raising in initial teaching

It is recommended that semantico-grammatical consciousness raising be used as an initial teaching strategy. As indicated in this chapter (see p.260), semantico-grammatical consciousness raising strategies may be used to illuminate the second language learner's route by providing beacons that guide his/her hypothesising toward correct internalisations, thus avoiding the usual pitfalls along the way. The second language learning strategy of first language transfer in particular may be avoided timeously by raising the appropriate consciousness to lead to correct hypothesising and structuring. Such an initial teaching approach may go a long way toward prevention of fossilisation, avoiding first language transfer of inappropriate structures.

As in the case of remedial procedures, it is suggested that appropriate materials for initial ESL teaching be developed. The third recommendation relates to teacher training.

5.5.3 Semantico-grammatical consciousness raising in teacher training

Semantico-grammatical consciousness raising may be applied as a teach-back strategy in primary school teacher training: trainees may **learn to teach while teaching to learn**. It is suggested that semantico-grammatical consciousness raising be used as a teacher

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training strategy to address fossilised structures in the language production of teacher trainees in order to promote students' language development and to improve their linguistic accuracy.

Semantico-grammatical consciousness raising procedures in teacher training may be presented in such a way that trainees also take cognisance of the value of such procedures as a future teaching strategy available to them. The benefits would therefore be bilateral and so feed into the education system.

Furthermore, as there are apparently no suitable materials of this kind available for use at teacher training colleges, it is suggested that appropriate materials for teacher training be developed. The next point relates to the selection of aspiring teacher trainees.

It is essential to establish an adequate level of language development requirement for aspiring teacher trainees. To date no such criterion exists. As indicated in 5.4.7 and 5.4.8 (see p.306), assessment criteria, based on developmental phenomena determining the minimum language requirements for first-year teacher trainee candidates, should be developed. Such criteria would also facilitate a more accurate assessment of what teacher trainees should be able to do or not do at any given point during their training.

A further consideration related to the above is the crucial role of self-monitoring in second language acquisition.

5.5.4 Self-monitoring as semantico-grammatical consciousness raising in teaching

Self-monitoring was used as consciousness raising in the intervention programme of this study (see p.164). If self-monitoring is a prerequisite for interlanguage change, that is reanalysis and restructuring, then self-monitoring should be

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deliberately promoted in the second language classroom and in teacher training. This may be achieved by means of semantico-grammatical consciousness raising procedures.

The main conclusions of this study concern semantico-grammatical consciousness raising and fossilisation as these issues relate to second language learning, teaching and teacher training.

5.6 CONCLUSIONS

The two most important conclusions reached in this study in respect of consciousness raising and fossilisation relate to the central hypothesis posited in Chapter 1.

5.6.1 Conclusions relating to semantico-grammatical consciousness raising

The main conclusion reached in this respect is that **semantico-grammatical consciousness raising procedures may precipitate defossilisation**. The susceptibility to defossilisation of structures is dependent on the length of time that grammatical structures have been fossilised, the semantic value of these grammatical structures, and the multiple effects related to fossilisation. This study has demonstrated that the application of semantico-grammatical consciousness raising procedures has made some significant differences to learners' production and consciousness of fossilised structures. Despite the fact that the null hypothesis was not rejected in respect of all the feature variables, the findings suggest that semantico-grammatical consciousness raising procedures may be employed to good effect in respect of fossilised structures and that improvement may be expected, especially in cases where the grammatical structure is semantically significant. Less or no improvement may be expected to the extent that structures are semantically vacuous.

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This study has demonstrated the importance of meaningful relevance in semantico-grammatical consciousness raising procedures. A justifiably relevant, meaningful context in terms of real needs promoted the forming of semantico-grammatical links in respect of structures that were semantically significant. Not only was the teaching content semantically significant, it was also meaningful. This position is in line with SLA theory. I conclude that the improvements achieved in this study may in part be attributed to the necessary semantic relevance of the semantico-grammatical consciousness raising procedures employed in this study.

5.6.2 Conclusions relating to fossilisation

The main conclusion reached in this respect is that **fossilisation is not necessarily a final state**; fossilised structures are not necessarily petrified for all time. This study has demonstrated that interlanguage change is possible, and that reanalysis and restructuring of structures can be triggered.

The traditional view of fossilisation as being immutable and final is challenged in this study. The study has demonstrated that destabilisation of certain fossilised structures may be possible by means of multilevelled and varied semantico-grammatical consciousness raising procedures engaging the Consciousness Raising Multiple Effects Principle.

Precipitation of reanalysis and restructuring of fossilised structures has implications for SLA theory as the concept of fossilisation is deeply entrenched in the theory of interlanguage. A closer understanding of processes of fossilisation and defossilisation not only informs SLA theory, but illuminates the way toward improved second language pedagogy.

5.7 SUMMARY

The contributions of this study, which has implications for psycholinguistics as well as for language pedagogy, have been indicated in this chapter.

The stated perspectives on defossilisation within a cognitive view of SLA suggest that, although fossilised structures are difficult to defossilise, this may yet be possible if learners could be guided by means of semantico-grammatical consciousness raising to notice features that may trigger reanalysis and restructuring of fossilised structures. Defossilisation of interlanguage structures is regarded as dependent on particular preconditions relating to levels of conscious attentional control. These levels of conscious control are seen to be promoted by consciousness raising strategies. Research on semantico-grammatical consciousness raising as applied in this study suggests that consciousness raising is an inductive rather than a deductive process.

Contributions to an understanding of the psychodynamics of fossilisation include the notions that fossilisation is systematic, that fossilisation sets in during initial instruction and furthermore suggest that fossilised structures are not necessarily immutable. A Defossilisation Hypothesis is posited to delineate conditions for potential defossilisation. Views on fossilisation based on the findings of this study not only contribute to a theory of second language acquisition, but also provide insights into how second language may be taught by means of consciousness raising strategies to avoid unnecessary fossilisation of interlanguage structures.

The pedagogical value of consciousness raising for initial teaching, remedial teaching and teacher training indicated in section 5.2.2 brings this study, which has investigated

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semantico-grammatical consciousness raising in an ESL programme for primary school trainees, the full circle.

The limitations of the research design and of the results are indicated and acknowledged. The very limitations of the study, however, point the way to further research.

Future perspectives are subsequently indicated with suggestions for future research and recommendations for the pedagogical application of semantico-grammatical consciousness raising. Several areas that require further investigation are identified:

- the permanence of effects in a longitudinal study of semantico-grammatical consciousness raising;
- the relationship between the semantic value of grammatical structures and fossilisation as well as defossilisation;
- the relationship between the Consciousness Raising Multiple Effects Principle and defossilisation, and the Defossilisation Hypothesis;
- applications of self-monitoring;
- the cognitive implications of the ability gap between self-monitoring and other-monitoring;
- the relationship between learning styles and fossilisation, and learning styles and defossilisation.

Based on the findings of this study, several pedagogical applications are recommended. Low grammatical accuracy levels may be addressed by means of semantico-grammatical consciousness raising intervention procedures to defossilise interlanguage structures produced by teacher trainees. Semantico-grammatical

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consciousness raising procedures are also recommended for initial teaching to inhibit the formation and internalisation of incorrect hypotheses leading to early fossilisation. A further recommendation is the deliberate development of self-monitoring of structures, a necessary requirement for improvement.

Finally, this study concludes that fossilisation is not necessarily immutable and that semantico-grammatical consciousness raising procedures, as applied in an ESL programme for primary school teacher trainees, may precipitate defossilisation.

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APPENDIX i: EXAMPLES

EXAMPLES OF FOSSILISED INTERLANGUAGE STRUCTURES

Plausible interpretations are given in brackets.

(1) **Deletion: copula, have**

Standard 2 (second year of tuition):

[1] * *A toenieng 10* (I am turning 10)

Standard 4 (fourth year of tuition):

[2] * *I clad to yer yor wes a cen* (I am glad to hear your voice again)

Standard 6 (sixth year of tuition):

[3] * *I got more English friends* (I have [got] more English friends)

Standard 8 (eighth year of tuition):

[4] * *I got a lot of friends* (I have [got] a lot of friends)

Standard 9, 10 (ninth and tenth years of tuition):

[5] * *I don't know why that, but maybe it's the world we living in* (I don't know why that is, maybe it's the world we are living in)

First-year students (Examples of data elicited at seven teacher training colleges):

[6] * *It going to be difficult* (It is going to be difficult)

Other verb errors made by first-year students double marking

[7] * *Schools did not had all the facilities* (Schools did not have all the facilities)

subject-verb agreement

[8] * *I were very happy* (I was very happy)

tense

Appendix i

- [9] * *I find that it was quit big inside (I found that it was quite big inside)*
- [10] * *So meany people will ask you why do you stood still before you went into the building (Many will ask you why you stood still before entering the building)*

aspect

- [11] * *I wanted to become a teacher since I was a little girl (I have wanted to become a teacher...)*
- [12] * *While I wait for my parents...memories of my matric year wondered through my mind (While I was waiting for my parents...memories of my matric year went through my mind)*

deviant form

- [13] * *...with lots of hard work wived in (...with lots of hard work woven in).*

(2) Idiosyncratic marking

- Standard 2: * *Her man was cats her, she whas cry (Her husband caught her, she cried)*
- Standard 4: * *We did oso moefd to a nawer bilding (We also moved to another building)*
- Standard 6: * *I just cant remember no more (I just can't remember any more)*
- Standard 8: * *if you reply back (if you reply)*
- Standard 9,10: * *I did not thought (I did not think)*

(3) Substitution: what for that/who

- Standard 2: * *they resquo ather poeple wat is slafs (they rescue other people who are slaves)*
- Standard 4: * *My like your leters wat you sent for me (I like the letters that you sent me)*
- Standard 6: * *Thanks for you boutefful foto what you have send as X us (Thank you for the beautiful photograph that you sent us)*

Appendix i

Standard 8: * *the first thing is what I do is I greet my parents* (The first thing that I do is to greet my parents)

Standard 9, 10: ---

First-year students: * *even the skills, your objectives what you want* (even the skills, the objectives that you want)

(4) Word order: adverbial misplacement/embedded sentences

Standard 2: * *At the home is english kids* (There are English children at the orphanage)

Standard 4: * *I can not speak very wel engels* (I cannot speak English very well)

Standard 6: * *I have lived for ten years in Cape Town* (I have lived in Cape Town for ten years)

Standard 8: * *I went for the first time alone on holiday* (I went on holiday for the first time)

Standard 9,10: * *I swot now for the exams lately* (I have lately been swotting for the exams)

First-year students: * *Education is everyday getting better* (Education is getting better every [by the] day).

APPENDIX ii: INTERVENTION PROGRAMME MATERIALS

EXAMPLE: UNIT 2

IP 2.1 NAME _____

DATE: 92-02-

THEME: Playing a game

SITUATION: Mrs Lee hands a game to each pupil. She then explains the game and they play individually. While they are playing she engages in conversation with them.

Read the following dialogue. Respond to the teacher's questions as you read. Then answer the questions that follow.

DIALOGUE:

- 1 Mrs L: (Holding up the game sheets (see p.360) What do
2 think these are, class? What are these, Marius?
3 Marius: They are pieces of paper, I think.
4 Mrs L: Try again. What does this one look like, Peter?
5 Peter: It looks like a test.
6 Mrs L: No, not this time. These are much more pleasant
7 to work with.
8 Anne: I know what they are! They are games!
9 Mrs L: You are quite correct, Anne. Give each pupil a
10 game sheet while I'm **explaining** the game. Make
11 sure that side 1 is face up. (Pointing) What do
12 we call this shape?
13 Mark: It's a block.
14 Anne: No, silly, it's a square.
15 Mrs L: Actually it is called a rectangle. Why is it
16 called a rectangle?
17 Marius: It's called a rectangle because it has two
18 short sides facing each other and two long
19 sides.
20 Mrs L: That's right, Marius. And what can you tell me
21 about the opposite pairs, Anne?
22 Anne: Each pair is the same length.
23 Mrs L: Does a rectangle always look like this, Anne?
24 Anne: Yes, it does. If it doesn't then it isn't a
25 rectangle.
26 Mrs L: Now look very carefully at the shapes in the
27 rectangle. Match the numbered shapes outside
28 the rectangle to the shapes in the rectangle.
29 Cross out the numbers in the rectangle if they
30 are wrong and number the shapes correctly. Now

Appendix ii

31 start the game. You have only four minutes.
32 (Pupils proceed to play).

(Write appropriate expanded sentence responses in the spaces provided. Work on your own.)

33 Mrs L: What **are** you **doing**, Anne?

Anne: _____

34 Mrs L: What **is** he **doing** at the moment, Peter?

Peter: _____

35 Mrs L: (Pointing at two pupils) Why **are** those two **frowning**
36 so much, Marius?

Marius: _____

37 Mrs L: What **are** you two **talking** about now, Peter?

Peter: _____

38 Mrs L: Anne, why **are** you **staring** at the ceiling? **Is** it
39 **threatening** to fall down?

Anne: (Laughing) _____

40 Mrs L: Well, your four minutes are up. Let's play another
41 game. Turn the page over. Look at the shapes in the
42 columns. They are all incomplete. You have to match
43 a shape from the first column with a shape from the
44 second column to get the shape in the middle at the
45 top. Let's do one together. Which shape from the
46 second column must I add to shape 1 in the first
47 column to get the one in the middle? That's correct.
48 It is b. Now do the others. You have four minutes.

49 Marius: This is difficult!

50 Mrs L: Not really. Just try it. Where **are** you **going** now,
Anne?

(Respond to the questions in expanded sentences)

Anne: _____

51 Mrs L: You **are looking** very unhappy, Peter. What seems to
52 be the problem?

Peter: _____

53 Mrs L: **Are** you **managing** all right now, Marius?

Marius: _____

54 Mrs L: You **are doing** well, Peter! **Are** you **finding** it

Appendix ii

55 easy?

Peter: _____

56 Mrs L: Time **is running** out. What **are** you **doing** at the
57 moment, Anne? **Are** you **finishing** off?

Anne: _____

58 Mrs L: Stop! Your time is up.

1. **Look at the pictures on the screen (see copy of transparency above). Write ONE sentence reflecting the event depicted by each picture.**

1.1 _____

1.2 _____

1.3 _____

1.4 _____

1.5 _____

1.6 _____

2. In the short passage below, mark the VERBS printed in bold face letters with a dot (•) **above the word** if the VERB indicates a state or single event at a known moment, and with a squiggle (~~~~) if the event is ongoing/progressive/ continuous at a given time.

Mrs Lee's pupils always **listen** very carefully. They **know** that something interesting usually **happens** in her class. They **are watching** her with bated breath. Why **is** she **holding** up pieces of paper for them to see? She **wants** them to guess what they are. She always **encourages** her pupils when they **are trying** to solve a problem.

Appendix ii

NOW REFER TO THE DIALOGUE ON pp. 1 AND 2 (see p.354)

3. What aspects of English are being taught by means of the game and the conversation between the teacher and the pupils?
The 8 teaching points are: _____

4. Do the VERBS in **bold face** letters refer to now, long ago or has the event not yet happened?

5. Do the underlined VERBS refer to present, past or future time?

6. Look at all the underlined VERBS. Then look at all the VERBS in **bold face** letters. Compare the two sets of VERBS and explain how they differ in **form**. The underlined VERBS are

7. Look at all the underlined VERBS in lines 4, 24, 25, 26, 28, 37 and 44. The situation demanding this tense is the same for all these VERBS. What is the situation?

8. Carefully study the underlined VERBS in lines 3, 5, 6, 8, 9, 6, 20 and 22. What similar situation is present in all these sentences?

IP 2-2 **TEACH-BACK**
(see Procedures, p.156, 160, 359)

PAIR _____

NAME _____

TEACHING POINTS

Vocabulary; agreement SUBJECT and VERB; agreement ANTECEDENT and REFERENT; questions; statements; IMPERATIVE (orders); presents simple tense; present continuous tense

INSTRUCTIONS

1. Work in pairs.
2. Write a teacher-pupil conversation.
3. The **teacher** explains game 1 and pupil asks questions.
4. Pupil "plays" the game and teacher asks pupil what he/she is doing/ thinking/ writing/etc. (Also why, how)
5. **Pupil** writes responses.

1. Teacher:

3. _____
5. _____
7. _____
9. _____
11. _____
13. _____
15. _____
17. _____

2. Pupil:

4. _____
6. _____
8. _____
10. _____
12. _____

Appendix ii

14.

16.

18.

TEACH-BACK PROCEDURE

WARM-UP: Cognitive tune-in: game / thinking strategies
visual task

MODEL: Unanalysed INPUT constituting illustration of teaching
points and demonstration of teaching method
Means: researcher/written/tape/ video

STUDENTS: Analyse input by means of consciousness raising
techniques; Lecturer acts as facilitator

STUDENTS: TEACH-BACK: Output
Application of teaching points and method

STUDENTS: READ-BACK & MONITORING:
Checking and editing

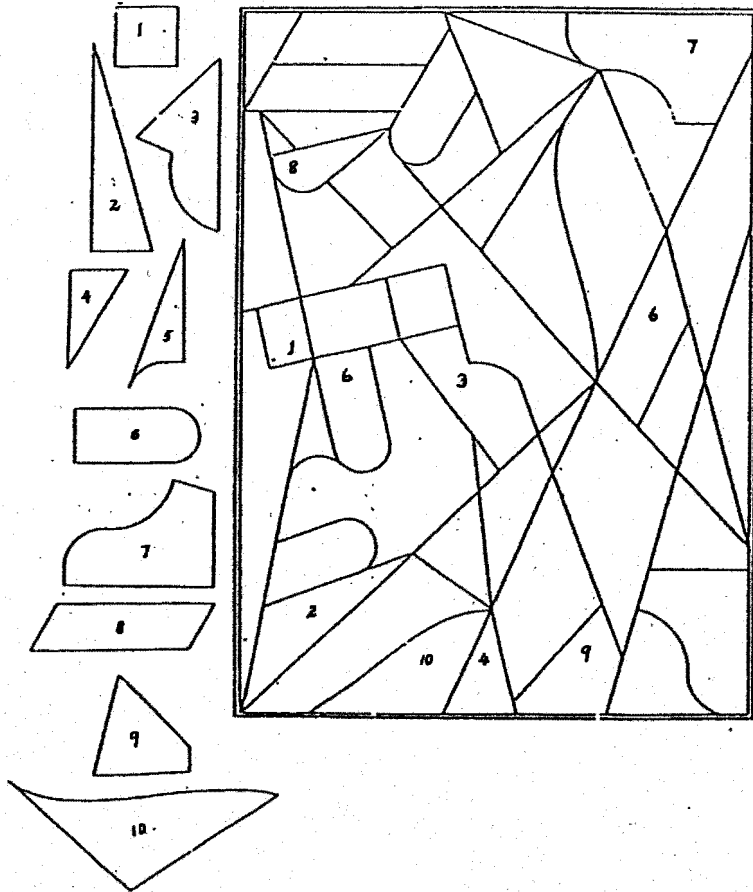
STUDENTS: REVIEW:
Reinforcement; feedback

UNIT 2

SIDE 1

NAME _____

Find the corresponding shapes in the rectangle.
Cross out the wrong numbers and number them correctly.



SIDE 2

Add shapes in column I to shapes in column II to get the shape in the middle. Write the combinations on the lines.

I			II	
1			a	
2		_____	b	
3		_____	c	
4		_____	d	
5		_____	e	
6		_____	f	

(Feuerstein 1980)

APPENDIX iii: TESTS

INSTRUCTIONS OF TESTS

T1a Spontaneous language production

Write the following exactly as indicated. You may structure your writing in as many paragraphs as you wish. Length: 1 - 2 pages

You have finally arrived at the entrance of the College of Education on the first day of the new academic year - your first year of study. Before entering the building, you pause to reflect on this important moment of your life.

Describe your thoughts and feelings. Relate the events of the past year that led up to this moment. Conclude by expressing your hopes and expectations of the future.

T1b Spontaneous language production

Write the following exactly as indicated. You may structure your writing in as many paragraphs as you wish. Length: 1 - 2 pages

It is the beginning of the December holidays at the end of your first year at college. Imagine yourself to be relaxing in your favourite spot, indulging in the unusual luxury of daydreaming.

Describe your immediate surroundings as well as your feelings. Reflect on the important events of the past year and express your future expectations.

T2 a & b (Self-monitoring) and T3 a & b (Other-monitoring)

FIND THE ERRORS Follow every instruction precisely.

1. [T2 a & b only. Subjects are required to monitor a photostatted copy of their writing produced in T1]. Correct your own writing.
1. [T3 a & b only]. The following passage contains a number of errors. Identify the errors and number them in the passage.

Appendix iii

2. Write each error down next to its corresponding number and give the line reference in brackets.
3. Write the correct form of the structure in the line below the error that you have written down.
4. Explain why the structure that you have identified is wrong. It is not enough to say "The word is wrong" or "It is the wrong tense." Be as accurate and precise as you can be in your explanation, e.g. "The word is wrong because"; "The tense is wrong because" Make your explanation as detailed as you can.
5. Write an **a** next to all the numbers of the errors that you have written down, a **b** next to the numbers of all the corrected sentences and a **c** next to the numbers of all the explanations.

EXAMPLES OF TESTS

TEST 4 a

- Study the following passage and read each question very carefully before writing your answer.
- Write your answers in the spaces provided.

1 They were walking past this hill, they were streaming
2 to battle. Going to battle! He realised he had not felt
3 precisely this tense feeling of pleasure in close to
4 twenty-four years, not since the first time he had gone
5 into combat, and found to his surprise that the walk
6 towards the fire fight was one of the more agreeable - if
7 painful - moments of his life. Later, in the battle
8 itself
9 it was less agreeable - he had perspired so profusely he
10 had hardly been able to see through his sweat- much
11 later,
12 months later, combat was disagreeable; it managed to
13 consist of large doses of tiredness, the upset stomach
14 of the tropics, endless walks through mud and a general
15 lack of caring towards whether one lived or not. But that
first excitement was in the wind now - it stirred his
memory.

Appendix iii

Question 1

Change stir in the following sentence so that it fits the meanings suggested in the sentences below:

The excitement (stir) his memory.

- 1.1 The excitement _____ his memory at this moment.
- 1.2 The excitement _____ his memory last night.
- 1.3 The excitement _____ his memory before.
- 1.4 The excitement often _____ his memory these days.
- 1.5 I could see that the excitement _____ his memory while he was listening to the song.
- 1.6 The excitement _____ his memory as soon as I show him the old photograph album.
- 1.7 After the excitement _____ his memory we finally discovered the truth.
- 1.8 I fully expected the excitement _____ his memory.
- 1.9 I could see signs of the excitement _____ his memory.
- 1.10 She was sure that by the time he arrived on the farm the excitement _____ his memory.

(10)

Question 2 *

The passage refers to two incidents: one happening at the moment indicated in the story, and one remembered. Arrange the following events in the order in which they happened. Also indicate when you think events happened at the same time. Write only the **bracketed letters** of the sentences next to the ordered numbers indicated below.

- (a) They were streaming to battle (line 1).
- (b) He had gone into combat (lines 4,5).
- (c) The walk towards the fire fight was more agreeable (lines 5,6).
- (d) The battle was less agreeable (line 7,8).
- (e) He had perspired a lot (line 8).
- (f) He was tired and sick (lines 10,11).
- (g) They were walking past this hill (line 1).
- (h) Excitement was in the wind (line 14).
- (i) He had hardly been able to see through his sweat (9).
- (j) Combat was disagreeable (line 10).

1 4 7 10
2 5 8 (You need not use up all ten
3 6 9 positions.)

(5)

Question 3

Select the **most appropriate** response. Indicate your choice by circling the relevant letter.

3.1 **They were streaming to battle** (lines 1,2) means:

- A They are still walking.
- B They walked at a given moment in the past and then stopped.
- C The walking went on for a while some time in the past and then stopped.
- D They were in the process of walking while something else was happening in the past.

3.2 In the passage, **caring** (line 13) is

- A the name of a thing or idea.
- B a word showing what he was doing.
- C the second part of a VERB (doing word) beginning with was.
- D a word describing man.

3.3 **Walk** (line 5)

- A should be walking.
- B is the name of a thing or idea.
- C is a VERB (doing word).
- D is the present tense form of walked.

3.4 **Had gone** (line 4) shows that

- A he went into combat at some time in the past.
- B he went into combat a very long time ago.
- C he went into combat before they were walking past the hill.
- D he went into combat after the realisation.

3.5 Indicate the sentence that is grammatically correct.

- A He has passed the exam last year.
- B He has been passing the exam a year ago.
- C He was passing the exam at the end of the year.
- D He has passed the exam.

(10)

Appendix iii

Question 4

Refer to the passage and change lines 1-7 so that they read as if the events are happening at this moment. Fill in the missing words in the spaces below. Only change what needs to be changed.

They _____ past this hill, they _____ to battle. _____ to battle! He _____ he _____ precisely this tense feeling of pleasure in close to twenty-four years, not since the first time he _____ into combat, and _____ to his surprise that the _____ towards the fire fight _____ one of the more agreeable - if painful - moments of his life. Later, in the battle itself it _____ less agreeable.

(10//)
/35/

TEST 4 b

- Study the following passage and read each question very carefully before writing your answer.
- Write your answers in the spaces provided.

(The following story from the Marico of long ago has to do with the building of a farmhouse and the sadism vented by a farmer on his step-daughter.)

1 After you have laid the foundations of a house you start
2 with the bricklaying. To make bricks you dig a hole in a
3 place where the soil is clayey, and then shovel in river
4 sand and pour in water, and you get the cattle to mill
5 around in this sticky mud until it is all properly mixed.
6 This farmer, who had subjected his step-daughter to all
7 sorts of brutalities for a number of years, hit on the idea
8 of making her mill around, along with the cattle, helping to
9 tread the clay until it was the right consistency for making
10 bricks. Anyway, the point of the story is that this sixteen-
11 year-old girl one day studied her reflection in a mirror and
12 came to the conclusion that she was very pretty, with the
13 result that she shortly afterwards clambered out of the

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14 clay-hole where she had been tramping about in the thick mud
15 that came up to her thighs, and she ran away from her step-
16 father's farm to Johannesburg that same day.
17 In the city, men found her desirable - as her reflection in
18 the mirror had told her that they would - and so she went
19 wrong. But they say that in Johannesburg she dressed very
20 fashionably, and that she looked ever so distinguished. And
21 through the years that followed, pondering on that story, I
22 have often pictured to myself that girl from the Marico
23 clay-hole walking the streets of Johannesburg.

From: **Reminiscences**, by Herman Charles Bosman

QUESTION 1

Sentences 1.1 to 1.10 do not fit into one time zone and should not be read as belonging to one paragraph.

Change picture in the following sentence so that it fits the meanings suggested in the sentences below.

He (picture) the scene ...

- 1.1 He _____ the scene whenever he feels lonely.
- 1.2 Whenever he _____ the scene of the unfortunate girl in the clay-hole it upset him very much.
- 1.3 The writer sometimes spent sleepless nights thinking about the girl. After he _____ the scene of her tramping the streets of Johannesburg, he could not fall asleep again.
- 1.4 I believe he (often) _____ the scene since he first heard the story many years ago.
- 1.5 By the end of the year he probably _____ the scene many times more.
- 1.6 Since the girl's death the writer has been free of the upsetting spectre; he no longer _____ the distressful scene.

Change tramp in the following sentence so that it fits the meanings suggested in the sentences below.

She (tramp) about in the muddy clay-hole.

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- 1.7 The vengeful father watches while his daughter _____
the mud in the clay-hole.
- 1.8 By the time the clay is ready for brick-making she _____
_____ about in the clay-hole for five days.
- 1.9 She _____ about in the clay-
hole for five awful days.
- 1.10 While she _____ about in the
clay-hole, she thought of a possible solution.

(10)

Question 2 *

Place the sentences 2.1 - 2.4 below in the order in which they happened. You may do this with the aid of a time line if you wish. Write only the numbers next to 1 - 4 below. Next to 5, indicate which of the events referred to in 2.5 and 2.6 happened first.

- 2.1 The farmer **hit** on the idea of making her mill around, along with the cattle.
- 2.2 They **say** that in Johannesburg she dressed very fashionably.
- 2.3 I **have** often **pictured** to myself that girl from the Marico clay-hole walking the streets of Johannesburg.
- 2.4 The farmer **had subjected** his daughter to all sorts of brutalities.
- 2.5 Men **found** her desirable.
- 2.6 Her reflection in the mirror **had told** her that they would.

1. 2. 3. 4. 5.
(5)

Question 3

Select the **most appropriate** response to indicate the **meaning** of the following sentences. Indicate your choice by circling the relevant letter. Read all the options before you make your choice.

3.1 You have laid the foundations of a house.

- A You laid the foundations at some known time in the past.
- B You laid the foundations at some unknown time in the past.
- C You are still laying the foundations.
- D You laid the foundations at some unknown time during a past period of time which has not yet ended.

3.2 To make bricks you dig a hole.

- A You always make bricks like this.
- B You make bricks like this now.
- C You are making bricks like this at the moment.
- D That bricks are made like this is an unchangeable truth.

3.3 The girl from the Marico was walking the streets of Johannesburg when she was found.

- A She is walking the streets at this moment.
- B She walked at some known time in the past.
- C The walking was in progress at a known time in the past.
- D She was continuously walking.

3.4 She ran away from her step-father's farm.

- A She regularly ran away.
- B She is still running away.
- C She ran away at a known time.
- D She ran away at some unknown time.

3.5 She clambered out of the clay-hole where she had been tramping about in the thick mud.

- A She clambered out before she had been tramping in the mud.
- B She had been tramping in the mud before she clambered out.

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- C She had been tramping continuously for a period of time in the past but is no longer doing so.
- D She had been tramping continuously for a period of time in the past but stopped when something else happened. (10)

Question 4

Refer to the first paragraph of the passage (lines 1-5) and change it in the following way (Only change what needs to be changed):

You are a history teacher. Tell your standard three class how some farmers used to make bricks seventy-five years ago.

Many years ago you could not buy bricks in the Marico district therefore you had to make them yourself. After you _____ the foundations of a house you _____ with the _____. To make bricks you _____ hole in a place where the soil clayey, and then _____ in river sand and _____ in water, and you _____ the cattle _____ around in this sticky mud until it _____ all properly mixed.

(10)
/35/

* The results of Question 2 in the pretest as well as in the posttest were ignored as they were deemed invalid. (see 3.7.2.4, p.187).