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GRAMMATICAL ANALYSIS OF INTERLANGUAGE

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ABSTRACT

The process of second language acquisition involves the active construction of "interim grammars" or "interlanguages" (Selinker, 1972) by learners as they progress towards competence in the target language. An interlanguage evolves as a result of the various strategies which learners apply to the task of language learning. The primary aim of this study was to analyse and describe the interlanguage of two second-language English speakers in samples of interactional spoken language with the goal of identifying the learning strategies being applied and developing appropriate, empirically based intervention strategies designed to facilitate the acquisition process. A secondary aim of the study was to evaluate the appropriacy of the particular descriptive tool employed in this study, namely the Language Assessment, Remediation and Screening Procedure (LARSP) (Crystal, Fletcher and Garman, 1989), in the context of L2 acquisition research.

While the LARSP provided a useful initial description it lacked precision in identifying and accounting for the numerous error patterns produced. A detailed error analysis was therefore devised which permitted identification of idiosyncratic strategies as well as the more general error patterns that characterised the interlanguage of both subjects in strikingly similar ways. Of particular note was the finding that the acquisition of the verb phrase and its components was particularly problematic for both subjects. Numerous errors in the realisation of the argument structure of lexical verbs was noted. As it is generally agreed that the verb phrase plays a central role in the syntactic organisation of the sentence and contributes significantly to communicative efficiency (Fletcher, 1992), this finding has significant implications for second language pedagogy and warrants further investigation.

1. INTRODUCTION

Educators in South Africa currently face a crisis that is by no means unique world-wide but for which they are largely unprepared. The integration of South African schools has resulted in a submersion-type situation where many pupils are being educated through the medium of English when they have had minimal prior exposure to the language and therefore display extremely limited proficiency.

As language constitutes the primary medium of most aspects of formal education in Western culture (Van Kleeck and Richardson, 1988) limited proficiency in the language of instruction places a child at a disadvantage which may result in academic difficulties.

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In order to avoid such a disadvantage and promote the development of bilingualism, it is
postulated that a minimal or "threshold" level of linguistic competence is required in both
languages (Cummins, 1976). It has therefore been argued that teaching of the second language
(L2) should not be commenced until the first language (L1) is properly consolidated.
However, it is not clear at what point in the development of the L1 such a threshold or degree
of consolidation can be said to have been achieved (Makoni, 1993).

The first important factor in avoiding academic disadvantage therefore appears to be
maintenance and enhancement of L1 skills (Cummins, 1991) while the second is the facilitation
of L2 acquisition. Makoni (1993) suggests that the acquisition of English by African pupils
does not have any negative impact on the retention of their home languages as they are used in
"functionally different domains, English is highly valued for instrumental purposes in
educational contexts and African languages are perceived as languages of the home and
hearth" (p.91).

Thus, while ongoing development of the indigenous languages is essential, it is the second
factor that requires the urgent attention of educators. However, the identification of
difficulties that L2 learners are experiencing in acquiring English and the development and
implementation of appropriate intervention strategies to facilitate and enhance the acquisition
process, need to be based on empirical evidence. It is felt that such evidence can only be
obtained through careful and comprehensive investigation of the L2 acquisition process in
learners from the particular population of concern.

The motivation for providing comprehensive descriptions of the sequence of development of
linguistic structures in the L2 is based on an approach to the learnability of language espoused
by Pienemann (1989) and Schmidt-Schonbein (1988 cited in Dirven, 1994) amongst others,
who believe that psycholinguistic constraints determine the hierarchical emergence of language
structures. They believe that structured formal input which is in advance of the subject's
developmental acquisition level is at best, ineffective and at worst, detrimental to the
development of the L2 (Duncan, 1989, McLaughlin and Robbins, 1994). Information
regarding the expected sequence of development of the L2 is therefore necessary in order for
appropriate grading of structures in syllabi as well as for accurate selection of appropriate
teaching goals for particular groups of learners

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The process of acquisition has been characterised as involving the active construction of "interim grammars" or "interlanguages" (Selinker, 1972) by learners as they progress towards the target language. An interlanguage is thought to evolve as a result of the various strategies which learners apply to the task of language learning in order to "make sense of input and control their own output" (McLaughlin and Robbins, 1994, p.3478). McLaughlin and Robbins (1994) propose that we can learn a great deal regarding the nature and systematic properties of the learner's interlanguage by making a series of descriptions of learners' language usage (p.3749).

2. METHODOLOGY

2.1 Aims

The primary aim of this study was to analyse and describe the "interim grammars" or interlanguages used by two second-language English speakers in samples of interactional spoken language. The subjects are undergoing their first year of primary education with English being the medium of instruction. Both subjects are first language Zulu speakers who have had limited prior exposure to English. (For detailed subject description see Appendix 1). As this appears to be the first attempt which has been made to describe the interlanguage of this particular population of learners, the study was necessarily exploratory.

A sub-aim of the study was to evaluate the usefulness and appropriacy of the particular descriptive tools used in this study in the context of second language acquisition research.

2.2 Why LARSP ?

The tool selected for the initial analysis and description of the language samples was the Language Assessment, Remediation and Screening Procedure (LARSP) developed by Crystal, Fletcher and Garman (1976, 1989) which is based upon the approach to grammar described by Quirk, Greenbaum, Leech and Svartvik (1972, 1985). The procedure involves elicitation, transcription and linguistic analysis of a sample of interactional spoken language.

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Findings are summarised on a profile chart on which linguistic categories have been graded developmentally into seven discrete stages according to research in normal child language acquisition.

A LARSP profile does not constitute a statement of the subject's ability but simply summarises their performance in a particular situation. The analyst is required to *infer* further information by interpreting the chart in the context of the transcription on which it was based (Crystal, 1992).

The selection and use of this procedure is motivated on the following grounds:

o LARSP provides a framework for description in a context where culturally appropriate language assessment tools based on locally derived norms of development are virtually non-existent and linguistic research is fraught with difficulties as a result of the multilingual nature of the target population.

o LARSP profiles the emergence of syntactic and morphological structures in language development. It has been suggested that the assessment of morphosyntax may yield the clearest indication of the developmental level of an individual interlanguage (Clahsen, 1985).

o LARSP encourages systematic and detailed appraisal of language samples, organising data in such a way that emerging patterns can be identified (Crystal, 1992).

o It is claimed that the whole range of adult syntactic structures in English can be analysed within the descriptive framework of LARSP (Clahsen, 1985)

o McLaughlin (1984) and Duncan (1989) refer to numerous studies which have found that "emerging morphology and syntax seems to develop in a similar pattern in both first and second language English, in primary school aged children with mother tongue and gender not presenting as significant variables" (p 13) Although this finding is not without its exceptions, Duncan (1989) believes that it justifies the use of descriptive development profiles of the structure of L1 English to chart the morphosyntactic development of L2 English.

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3. PHASE 1: RESULTS OF LARSP ANALYSIS

(A glossary of the symbols used in the LARSP is provided in Appendix 2).

The LARSP profiles of both subjects reveal striking similarities between the nature and level of their acquisition of English syntax.

3.1 Clause Structure

Both subjects:

o   appear to have mastered syntactic structure up to Stage III as evidenced by the wide distribution of clause and phrase types produced at this level.

o   produced Stage II and Stage III clause element expansions indicating their ability to integrate clause and phrase structure.

o   have well-established English word order patterns

o   used very few constructions with double objects

o   produced few Stage IV clause structures

o   produced numerous co-ordinated and subordinated Stage V constructions. The existence of "islands" of proficiency at Stage V and higher stages makes accurate appraisal of subjects' abilities at these levels problematic. LARSP is acknowledged to be less reliable at the more advanced stages due to increasing variability between learners and a lack of research support (Crystal et al, 1989).

o   displayed overuse of connectives *and* and *other* in relation to the number of co-ordinated constructions used. (The connective coded as *other* on the profile was the adverbial connective *then*).

Very few Stage VI and VII structures were noted in #D's sample. #L produced a slightly wider range of Stage VI structures including two instances of more advanced noun phrase co-ordination patterns

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L used complex complementation in four utterances which would seem to indicate a relatively advanced level of language development. However, Ellis (1985) stresses the importance of distinguishing between formulaic utterances characteristic of early L2 acquisition and "creatively constructed utterances" (p.167) when assessing children acquiring an L2. There is a danger of accepting formulaic "chunks" as premature evidence of the child's level of proficiency (Jordaan, 1993). Several of #L's constructions were only prevented from being coded as stereotypes by her use of varying intonation patterns and accompanying gestures. It is likely that these represent structures over which she has not yet established complete control. The area of complex complementation is felt to be such an area. All instances of this structure were of the form *like .Y* and while they were contextually appropriate this structure was clearly limited in scope.

3.2   Phrase Structure

Both subjects:

o   produced a representative range of phrase structures at Stages II and III.

o   used a large number of personal pronouns but displayed numerous errors of pronominal reference.

o   used a significant number of *other* auxiliaries, despite #L's frequent omissions of this structure. The most frequent context of usage of auxiliaries by both subjects was in the present progressive construction. This also resulted in the disproportionately frequent occurrence of the morpheme *-ing*. The progressive aspect was frequently overused in inappropriate contexts by both subjects

o   produced few Stage IV phrase structures although each subject displayed an isolated strength at this level. #L produced numerous examples of *XcX* constructions, #D produced several examples of *Neg V* which was consistently realised as auxiliary + contracted negative + verb stem

#L produced a single post-modifying clause (Stage V phrase structure) in object position.

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3.3 Word Structure

Frequent occurrence of the morpheme -ing in both samples has been discussed

Subjects produced a wide range of the morphemes coded under word structure, although several significant gaps were evident. Both subjects used very few past tense forms and neither produced any past participles. This highlights a striking feature of both samples, namely the virtual absence of past tense forms and an abundance of uninflected verb forms. Neither subject displayed any means of referring to past time, using only uninflected bare verb stems or progressive aspect (apart from isolated occurrences of past tense forms).

#L produced more 3s agreement markers than #D who seemed aware that the marker /s/ was required but displayed inconsistency in selecting the appropriate position for its insertion into the utterance. In several examples a contracted auxiliary appeared to have been inappropriately inserted between the subject and an uninflected verb form but these may in fact have been attempts to achieve 3s agreement.

3.4 Stage VI Errors

Both subjects produced numerous structures which constituted syntactic "errors" according to the LARSP analysis and which were recorded in the Stage VI "Error box". Errors were noted in 54.94% of #L's utterances and in 58.38% of #D's utterances. Considering that 26.54% of #L's utterances and 22.54% of #D's utterances were "minor" utterances, only 18.52% of #L's and 19.08% of #D's utterances consisted of accurately produced major utterances. Thus errors constitute a central feature of the interlanguage produced by the subjects of this study.

The most frequently occurring errors coded for both subjects were:

- Element omission
- Determiner errors
- Personal pronoun errors
- Preposition errors

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In addition #L displayed a high incidence of:

o "Other" connective usage errors

o Determiner omission

o Auxiliary omission

o Copula errors

Both subjects produced numerous other syntactic errors that could not be satisfactorily accounted for by the categories of error classification included on the LARSP.

3.5   Summary: Findings of the LARSP analysis requiring further investigation

BOTH SUBJECTS:
o   Very few double-object constructions *(S)VOdO)*   o   Underrepresentation of Stage IV clause and phrase structure   o   Overuse of *and* and *then* connectives   o   Overuse of progressive aspect   o   Absence of past tense inflections, overuse of uninflected verb stems   o   Errors of element omission, determiner selection, personal pronoun usage, preposition selection   o   Numerous errors which could not be accurately encoded within the existing "error box" categories
SUBJECT L:
o   Auxiliary omission   o   *Other* connective usage errors   o   Determiner omission   o   Errors in usage of the copula   o   Overuse of "empty" terms and semi-stereotypic chunks
SUBJECT D:
o   Auxiliary insertion and/or difficulty establishing 3s agreement   o   Few subject expansions - use of pronouns or subject omission   o   Few descriptive terms used

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DISCUSSION: FINDINGS OF LARSP ANALYSIS

The LARSP procedure is felt to have provided a fairly detailed initial description of the interlanguage produced by the two subjects in the samples analysed and has highlighted several areas for further investigation. However, one aspect of the LARSP that was felt to offer an insufficiently detailed analysis of the available data was the Stage VI Error classification.

Both subjects produced an extremely high proportion of utterances containing at least a single error and, more commonly, multiple errors. It should be noted that although the term "error" will be adopted for the purposes of this paper to refer to the occurrence of any syntactic or morphological feature that is considered unacceptable in the target language, the term is not used without reservation. It is unfortunate that the term "error" has such negative connotations as errors in this study are viewed as positive evidence of the nature of the subjects' emerging linguistic systems.

Non-occurrence of a structure in a particular sample cannot be considered evidence that the subject is unable to produce the structure and even the production of an utterance that is correct by the standards of the target language, tells us very little about its grammatical status. However, errors, particularly systematic errors, may provide "a window on the developing system" (Fletcher, 1985, p.25). Careful analysis of errors can reveal the strategies that learners are employing in the active construction of their interlanguage and the hypotheses that they are making regarding the target language
(McLaughlin, 1984).

Therefore, a complete description of interlanguage requires that both accurately and inaccurately produced aspects of the interlanguage be accounted for (Hawkins and Spencer, 1985). It is felt that due to its limited scope, the error classification on the LARSP profile was unable to fulfil this requirement

Crystal et al (1989) indicate that it is only intended to constitute a first step in the identification of error patterns. However, in the current study it was felt that even as a first step it was limited as numerous widely-occurring and significant errors within both samples

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failed to be accurately accounted for within the existing categories. It is acknowledged that these errors may be particularly characteristic of L2 learners' interlanguage and were thus not relevant in a profile designed for the description of disordered language in monolingual English speakers.

For example, the lack of tensed verb forms, overuse of the progressive aspect and other errors in tense marking could not be coded at all in the current classification, while a category such as "Personal pronoun error" failed to reveal the particular difficulty that the subjects have with pronoun gender

Previous researchers have also identified limitations in the LARSP error classification, even with respect to disordered first language development (Connolly, 1984; Hawkins and Spencer, 1985). Connolly (1984) suggested that either the error analysis should be undertaken as a complementary but separate task to the profile itself or should be distributed more homogeneously along the vertical dimension of the chart

For the purposes of this study, a separate extended error analysis format was devised which more accurately reflected the nature and range of errors identified. The categories represented on the LARSP profile formed a basis for the analysis and were modified or supplemented as necessary (with reference to King and Fletcher, 1992). A list of categories included, descriptions of each category and examples of error types is presented in Appendix 3.

5.   PHASE 2: EXTENDED ERROR ANALYSIS

5.1   Connectivity

A striking feature of this section is the high incidence of inappropriate insertion of the adverbial connective *then* after *and* in co-ordinated sentences. In narrative discourse the use of both connectives is acceptable to indicate the temporal sequence of events described. However, #L overused this device in inappropriate contexts. It is hypothesised that she is using *and then* as a formulaic connective "chunk" without awareness of its semantic implications

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5.2   Clause Elements

Both subjects omit a significant number of obligatory clause elements. As these elements constitute the argument structure of the verb it was felt that a more detailed investigation of these omissions would provide insight into the subjects' acquisition and representation of verb structure which is considered by many to be a central task in learning a language (See Section 7 below).

5.3   Verb Phrase

- By differentiating between copula omission and erroneous usage of the copula, the analysis revealed that #L characteristically omits the copula as well as auxiliary verbs.
- #D's previously discussed difficulties in establishing 3s agreement are reflected in the categories AUX INSERT and NULL 3s.
- Three additional categories characterise the particular verb errors displayed by these subjects. Both subjects display a high incidence of UVF or uninflected verb forms. This, together with their limited auxiliary usage, results in an inability to refer to past time and severe limitations in referring to future time.
- Inappropriate overuse of the progressive aspect (PROGR ERR) also occurred frequently in both samples. This may be the result of transfer or "native language influence" (Odlin, 1989) as Zulu, which is the first language of both subjects, uses adverbials to differentiate between the present progressive and the simple present (Grant, 1987) rather than differing forms of the verb itself with the result that these tenses may be confused in English.
- The category TENSE ERR reveals that even #D's limited attempts to express verb tense produced numerous errors.

The verb phrase was thus revealed as being particularly problematic for these subjects.

5.4   Noun Phrase

- #L displayed frequent determiner omissions both in subject and object/adverbial position. This is congruent with a general pattern of "omission" that is also reflected in the high

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incidence of clause element, copula and auxiliary omissions displayed by #L. She appears to be employing a strategy of omission of items which are semantically or perceptually less salient.

o   The determiner errors produced by both subjects result largely from their failure to establish a contrast between definite and indefinite articles. Differentiation between contexts in which articles are obligatory, non-obligatory and obligatorily omitted also poses difficulties for the subjects who insert determiners in inappropriate contexts. These errors may be the result of transfer as definite and indefinite articles do not occur in African languages such as Zulu (Grant, 1987) and research shows that where the L2 learner's L1 does not make the same discriminations as the target language greater difficulty is experienced in learning those items than is the case for learners whose L1 does make the semantic discrimination (McLaughlin, 1984, Zobl, 1984 cited in Towell and Hawkins, 1994)

o   Detailed analysis of personal pronoun errors reveals that both subjects have failed to establish a contrast between the gender of pronouns. Once again this may be due to L1 transfer as masculine and feminine pronoun forms are not marked in African languages (Grant, 1987).

o   Both subjects display numerous instances of incorrect selection of prepositions. This may also be the result of transfer as English prepositions have no exact equivalent in African languages which use "locative forms attached to the noun; various class concords and a variety of multipurpose prepositional inflections and particles" (Grant, 1987, p.200).

6.   DISCUSSION: FINDINGS OF EXTENDED ERROR ANALYSIS

The extended analysis of the subjects' errors permitted the identification of both idiosyncratic strategies and more general error patterns that characterise the interlanguage of both subjects in strikingly similar ways. This allowed for tentative hypotheses to be made regarding the nature and origin of errors identified

However, there is a lack of consensus among researchers regarding the origin of errors that are produced by L2 learners and the role of the first language in second language acquisition remains the topic of much debate

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It was originally thought that a simple interference relationship existed whereby transfer from L1 to L2 syntactic structure resulted in error production. However, it is now widely acknowledged that the relationship is more complex than this and can, at best, be considered ambiguous (Duncan, 1989).

Both case studies and cross-sectional research indicate that the order of acquisition of syntactic and morphological structures involves an interplay of both developmental and transfer factors. Developmental factors include the universal cognitive mechanisms or strategies that are believed to guide both first and subsequent language acquisition (Dulay and Burt, 1974, Pienemann. 1989) accounting for relatively consistent sequences in the development of grammatical morphology and syntax that are evident in both monolinguals and second language learners for each language (McLaughlin, 1984; Duncan, 1989).

However, deviations from this order frequently occur and variability is a recurrent theme in L2 acquisition research (Towell and Hawkins. 1994). In accounting for this variability many other factors have been identified as playing potentially important roles in L2 acquisition. These include both positive and negative transfer factors (Odlin, 1989), the effects of the frequency of occurrence (Larsen-Freeman. 1976) and perceptual salience (Pienemann, 1989) of structures in the input to which learners are exposed, context of learning and usage of the L2, the limited capacity nature of working memory (McLaughlin, 1987 cited in Towell and Hawkins 1994) and the effects of explicit instruction and negative feedback (Schwartz, 1993 cited in Towell and Hawkins. 1994).

In addition, learners may simply adopt idiosyncratic "reduction" and "achievement" strategies (Faerch and Kasper, 1983) or differ in the features on which they focus attention in their attempts to actively construct their interlanguage.

Thus, with the current state of theory and research, it remains extremely difficult to be certain of the type of error a learner is making and why they are making it as the same error can often be attributed either to intralingual or interlingual factors or the interaction of these factors (McLaughlin. 1984). An example from the present study would be the copula omission displayed by HL. Maw (1994) states that in African languages "copular constructions of the equivalence or adjectival type frequently have no manifestation of the copula" (p.310). This

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seems to indicate that #L's difficulties producing copular constructions in English may result from transfer from her L1. However, copula omission is also a recognised feature of early first language acquisition indicating that developmental factors may also be involved. In addition, the hypothesis made previously that #L's language production is characterised by a general strategy of omission of perceptually and semantically less salient items, provides an alternative explanation.

The above example indicates that error classification as undertaken here, cannot be considered an end in itself. It simply highlights aspects of error production that warrant further investigation. Detailed "micro-profiles" of all highlighted areas would be necessary for the description of the interlanguage to be considered truly comprehensive.

7.   PHASE 3: ANALYSIS OF VERB ARGUMENT STRUCTURE

7.1   Motivation

Previous analyses indicated that the acquisition of the verb phrase and its various components is particularly problematic for the subjects of this study. In addition, both subjects displayed many errors in their realisations of the argument structures of lexical verbs. Fletcher (1992) believes that "knowledge of verbs and their argument structure is central to the syntactic organisation of the sentence and a deficit in this area will considerably restrict communicative efficiency" (p.152).

Current theories suggest that verbs are represented lexically at two separate levels. The participant or "thematic" roles involved in a verb's meaning are represented at a lexical-semantic level (s-selection) while argument structure
(c-selection) which constitutes "the lexical representation of grammatical information about a predicate" (Grimshaw, 1990, p 1) receives a separate lexical-syntactic representation (Chomsky, 1986). The grammatical information referred to by Grimshaw (1990) relates to the syntactic complementation patterns which are realised in the predicate.

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In order for a child to learn about verb complementation patterns it is necessary that they acquire the mapping rules that link the verb's semantic properties and their syntactic complementation (Ingham, 1992).

However, a verb's c-selection is not always predictable from its s-selection. While, in English, omission of subject arguments is always ungrammatical (except in cases of ellipsis) the admissibility of alternations in certain predicate argument structures means that the omission of direct objects is lexically restricted rather than constituting a regular grammatical process (Ingham, 1992). Thus, children acquiring English have to learn, either verb by verb or as classes of verbs, whether each lexical verb takes one or more internal arguments and whether these are optional or obligatory (King, Schelletter, Sinka, Fletcher and Ingham, in press).

Errors of verb argument structure have not previously been discussed as characteristic of L2 learners' interlanguage and it was therefore decided to undertake a more detailed "micro-profile" of verb-argument structure as advocated by Crystal et al (1989), based on the approaches adopted by Fletcher (1985) and King and Fletcher (1993).

7.2   Summary of findings: Analysis of Verb Argument Structure

In a study of the grammatical impairments displayed by children with Specific Language Impairment, Fletcher (1994) found that his subjects displayed errors in predicate argument structure on 2% of the lexical verbs used (range in group studied: 0-7%). This was considered to represent a significant problem for the children studied. In the present study #L produced errors in predicate argument structure on 28.57% of lexical verbs used and #D on 26.66% of verbs. Thus, although previous research on L2 acquisition does not mention verb argument structure as presenting difficulties for L2 learners, for the subjects of this study such errors are a widespread feature of their interlanguage.

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Features of realisation of verb argument structure noted include:

o Inconsistency in realisation of argument structure in different contexts

o Frequent omission of one predicate argument when verb required two or more, #L more frequently omitted the NP while #D displayed more frequent omissions of obligatory PPs.

o Confusion evident in #D's syntactic realisation of arguments in that he substituted NPs for PPs and vice versa

o Inappropriate overgeneralisation of the argument structure of verbs that are similar in meaning. These errors may therefore reflect limitations in vocabulary selection or retrieval as the argument structure seems to have been selected by analogy to verbs that are lexically more precise than those that were in fact used.

o Both subjects frequently used "pro-verbs" (Rice, 1991 cited in Fletcher, 1992) that is "verbs such as *do, get, have, make, move* to which semantically more precise verbs are relatable as quasi-hyponyms" (p.152) While this may simply reflect the limited vocabulary of the subjects. it has been hypothesised that overuse of these verbs by language-impaired children could indicate difficulties in building accurate lexical representations for the semantically more precise verbs or in deploying this knowledge within the "real-time demands of conversation" (Fletcher, 1992, p 152). More detailed investigation of both comprehension and production of verbs with different types of argument structures is necessary in order for this hypothesis to be evaluated for L2 learners.

8. DISCUSSION: FINDINGS OF VERB ARGUMENT STRUCTURE ANALYSIS

Considering the previously discussed complexity of verb argument structure acquisition, it is not surprising that this task poses significant difficulties for L2 learners of English, particularly when transitivity and argument structure are realised differently in their native language. In African languages patterns of transitivity can be extremely complex, and relate to the structure of the clause as a whole rather than being primarily a function of the verb governing clause structure, as is the case in English (Maw, 1994).

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Much research has recently begun to emerge focusing on the processes involved in the acquisition of lexical representations of verbs in first language acquisition (comprehensively reviewed by Ingham, 1993 and Fisher, 1994) Debate in this area centres around the question of whether children access the verb's syntactic structure via semantic data (eg. Pinker, 1989) or whether they deduce information about the verb's meanings by working back from the syntactic subcategorisation frames (eg Landau and Gleitman, 1985 cited in Ingham, 1993). As many of the errors in verb argument structure displayed in the present study seem to involve an interaction of syntactic and semantic features, it is proposed that research into the acquisition of verb argument structure by L2 learners as well as more detailed investigation of the semantic features of the errors they display, may provide new and valuable insights into this debate.

9. IMPLICATIONS OF THE FINDINGS OF THIS STUDY

9.1 Development of tools for analysis

The use of the LARSP procedure in this study is felt to have been justified by the fact that it yielded a sufficiently detailed initial analysis of the subjects' interlanguages to allow for identification of patterns of strength and weakness as well as areas that warranted further exploration.

However, several limitations of this tool were noted which proved significant in this study and indicate that the use of alternative or supplementary methods of analysis should be considered in further research. The major limitations identified include the following:

- LARSP fails to differentiate between complements and adjuncts in predicate argument structure. The LARSP analysis therefore failed to identify the predicate argument structure errors displayed in this study. Perhaps a grammatical approach which accounts for verb argument structure with greater depth and precision, would be more appropriate for future analyses

- The limitations of the LARSP's error classification procedure have been discussed (see Section 4) The error analysis developed in this study was specifically designed to account

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for the errors observed. Its usefulness for other L2 learners from the same population will therefore depend upon corroboration of the findings of this study. It is recommended that further evaluation and refinement of its categories be undertaken.

o While LARSP provides comprehensive analysis of simple clause and phrase structure, it becomes increasingly limited as the language it is required to account for becomes more complex. Thus while it may be useful for analysis of the early interlanguages of L2 learners its usefulness may be limited as their proficiency increases.

9.2 Linguistic investigation of interlanguage development

o Large-scale descriptive studies as well as experimental designs are required to evaluate the accuracy and representativeness of the linguistic findings of this study and the hypotheses it generated

o A desired outcome of future research would be a comprehensive description of the process of second language acquisition undergone by indigenous language speakers learning English at a primary school age in an educational setting Recognising that syntax constitutes only one dimension of language and that aspects such as phonology, semantics, pragmatics and discourse also require further investigation, it is felt that such comprehensive descriptions could be expected to yield information that would guide and enhance pedagogic interventions to facilitate language learning.

10. CONCLUSION

Although it is acknowledged that it is not possible to generalise the results obtained on two case studies to a wider population, the fact that in this study two children of different gender, with differing language backgrounds (although Zulu was considered to be L1 for both), attending different schools but having had similar limited prior exposure to English, displayed such striking similarities in the nature of their interlanguages, is felt to be significant. This exploratory study has highlighted numerous areas in which further research is required. Errors identified in verb argument structure, which have not been previously discussed by researchers in second language acquisition, are felt to be particular worthy of more extensive investigation.

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APPENDIX 1: SUBJECT DESCRIPTION

	SUBJECT L	SUBJECT D	SOURCE OF INFORMATION
AGE	7 yrs 1 mth	6 yrs 8 mths	Case History Form
GENDER	Female	Male	As above
EARLY HISTORY AND DEVELOPMENT	Normal	Normal	As above + interview with caretaker
CURRENT PHYSICAL, SOCIAL AND COGNITIVE ABILITIES	Satisfactory	Satisafactory	Teacher questionnaire and interview
LANGUAGE BACKGROUND	L1: Zulu Other languages spoken: Sotho, Tsonga (limited proficiency) Limited exposure: English	L1: Zulu Limited exposure: Afrikaans, English	Language Background Questionnaire and interview with caretaker
FIRST LANGUAGE PROFICIENCY	Developing normally	Developing normally	Bilingual Oral Language Development (B.O.L.D.) measure completed by caretaker and caretaker interview
EXPOSURE TO ENGLISH	English medium pre-school-1 yr, English medium primary school-3 mths	English medium pre-school-1 yr, English medium primary school-3 mths	Case History Form, Language Background Questionnaire and caretaker interview
ENGLISH PROFICIENCY	Limited	Limited	B.O.L.D. measure completed by class teacher

It was necessary to establish that subjects were functioning normally in their first language. to rule out the possibility that any difficulties displayed in acquisition of the L2 were the result of underlying linguistic disability. In the absence of language assessment tools in the home language of subjects it was necessary to rely on information provided by caretakers. The Bilingual Oral Language Development (B.O.L.D.) measure (Mattes and Omark, 1984) as modified by Jordaan (1993) was used which probes usage of a range of communicative functions and conversational management strategies. To enable the caretakers to complete the questionnaire, an example of each type of language behaviour was given. However, in case the B.O.L.D. was not sufficiently sensitive to identify more subtle language problems, additional questions suggested by Cole (1982) regarding the subjects' L1 grammar and vocabulary were included (Jordaan, 1993).Teachers were also asked to complete the B.O.L.D. questionnaire regarding the children's use of English as a comparison

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APPENDIX 2:

GLOSSARY OF SYMBOLS USED IN LARSP PROCEDURE
(Crystal, Fletcher and Garman, 1989)

A	adverbial
Adj	adjectival
Aux m	modal auxiliary
Aux o	other auxiliary
'aux	contracted auxiliary form
c	coordinator
C	complement
Comm	command sentence type
conn	connectivity marker
cop	copula
'cop	contracted copula form
D	determiner
Det	determiner system (errors)
-ed	past tense
-en	past participle
-er	comparative
-est	superlative
gen	genitive
I	initiator
-ing	present participle
Int	intensifier
let	first person command
-ly	adverb marker
Major	a major sentence whose elements are able to combine with other elements according to the language's grammatical rules, to produce an indefinitely large set of sentences (Crystal, 1992, p.17)
Minor	non-productive minor sentence patterns that do not readily allow an analysis into structural types (Crystal, 1992, p.17)
N	noun
"N"	noun-like element at Stage I
N Irreg	irregular noun inflections (errors)
Neg	negation

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n't	contracted negative form
O	object
Od	direct object
Oi	indirect object
part	particle
P	pupil or patient
pl	plural
postmod clause	postmodifying clause
postmod phrase	postmodifying phrase
Pr	preposition
Pron o	other pronoun
Pron p	personal pronoun
Q	question-word
"Q"	Stage I question-word
Quest	question sentence type
s	subordinator
S	subject
+S	expressed subject in a command
T	teacher or therapist
v	main verb (at phrase-structure level)
V	verb
"V"	verb-like element at Stage I
V irreg	irregular verb inflections (errors)
Voc	vocative
X, Y, Z	cover symbols for elements of structure
3s	third person singular
⇄	word order

APPENDIX 3

DESCRIPTION OF ERROR CATEGORIES:
EXTENDED ERROR ANALYSIS
(adapted from Crystal, 1992; King and Fletcher, 1993)

1. Connectivity

CONN ERR: and - inappropriate use of *and* e.g. he broke his arm *and* the ladder slipped
CONN ERR: c - inappropriate use of other connectives e.g. he broke his arm *but* the ladder slipped
CONN ERR: s - inappropriate use of subordinating markers e.g. the ladder slipped *because* he broke his arm
CONN ERR: other - inappropriate use of other items as connectives e.g. she is wearing a blue hat and *then* white gloves

2. Clause Elements

NULL S - Subject omitted in obligatory context (non-elliptical) e.g. is happy
NULL O - Object omitted in obligatory context e.g. he put on the table
NULL A - Adverbial omitted in obligatory context e.g. he gave the ball

ORDER ERR - incorrect word order e.g. chased the man the dog

CONCORD ERR - failure of the subject to agree in number with another element e.g. *they is* running, he hurt *themself*

3. Verb Phrase

NULL COP - copula omitted e.g. the boy sad
COP ERR - incorrect form of copula used e.g. he *be* sad

NULL AUX - auxiliary (modal or other) omitted e.g. the girl swimming
AUX M ERR - errors of substitution or order involving modal auxiliaries
e.g. he *must* (="can") jump, he jump *can*

AUX O ERR - errors of substitution or order involving other auxiliaries
e.g. he *be* going, he going *is*
AUX INSERT - auxiliary inserted inappropriately e.g. he *is* came

NULL ING - omission of the progressive morpheme in contexts where progressive aspect
clearly intended e.g. the girl was run when she fell

NULL 3s - Third person singular morpheme omitted (only instances where present tense
clearly indicated are counted as NULL 3s, if any doubt exists as to intended tense or aspect
counted as UVF error) e.g. the boy want ice-cream now

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UVF - uninflected verb form - base form of verb stem used without inflection
e.g. she *run* across the road

PROGR ERR - progressive aspect used inappropriately e.g. she *was shutting* the door

TENSE ERR - inappropriate marking of tense e.g. he *is* cutting the trees (referring to past event). Uninflected verb forms are not marked for tense and are therefore not counted as errors of tense

VREG ERR - incorrect form of regular verb used e.g. singinging, I walken
V IRREG ERR - incorrect form of irregular verb used e.g. tooken, wented

4. Noun Phrase

NULL DET - determiner omitted e.g. girl eats the apple, the girl eats apple
DET ERR: POSS PRON - incorrect possessive pronoun selection resulting in errors of gender or number e.g. he wants to eat *her* own ice-cream
DET ERR: ORDER - determiner in incorrect position in noun phrase e.g. man *the* came
DET ERR: OTHER - incorrect form of determiner used (excluding possessive pronoun errors) e.g. I want *a* milk
DET INSERT - inappropriate determiner inserted e.g. he's going to *the* school

PRON P ERR: GENDER - personal pronoun error, incorrect gender
e.g. *she* is coming (referring to a male person)

PRON P ERR: CASE - personal pronoun error, incorrect case used
e.g. *him* is coming
PRON P ERR: OTHER - any other error involving personal pronouns
e.g. *we* are coming (when in context "they" is appropriate)
PRON P INSERT - inappropriate insertion of a personal pronoun
e.g. the boy *he* runs
PRON O ERR - all other pronoun errors e.g. I want *anything*

PREP ERR - use of incorrect preposition e.g. put the milk *in* the table
NULL PREP - preposition omitted e.g. put the milk the table
PREP ORDER - preposition in incorrect position e.g. put the milk the table *on*

N REG ERR - Incorrect plural form of a regular noun e.g. boyses
N IRREG ERR - Incorrect plural form of an irregular noun e.g. mouses, sheeps