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'It's Just a Word': CALL, French verbs and mixed-ability pupils

Thesis submitted for the Degree of Doctor of Philosophy
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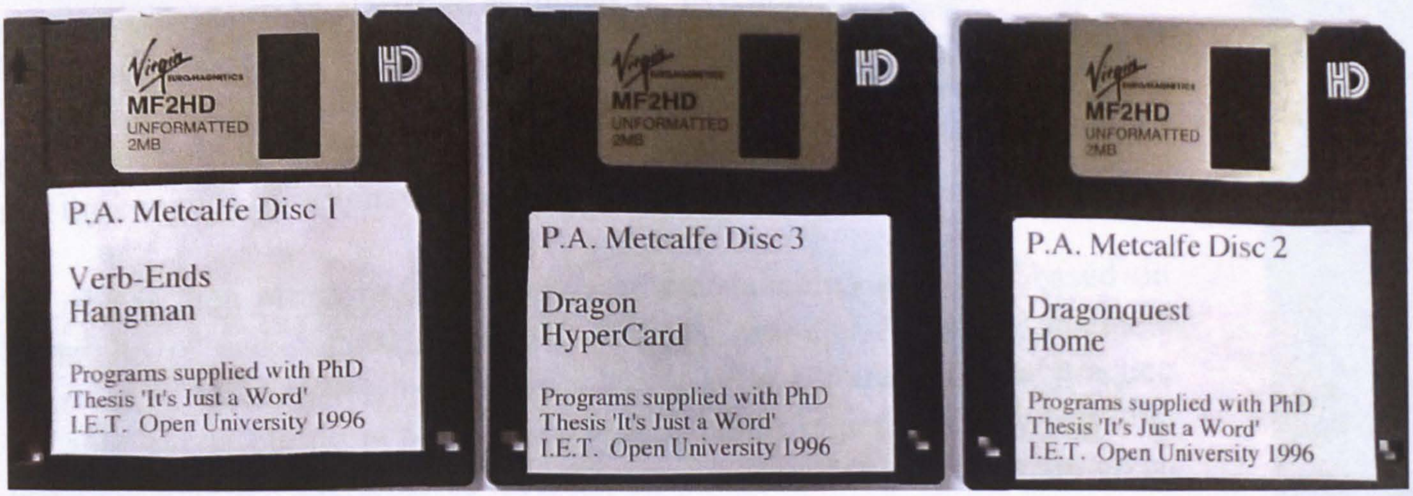
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'It's Just a Word': CALL, French verbs and mixed-ability pupils

Abstract

This thesis follows the trail of a perennial problem in the written work of pupils studying GCSE French, and suggests a CALL solution. The motivation for the research lies in the decline of grammatical accuracy, particularly in verb use, in the French produced by mixed-ability pupils and university students alike. Theories of language acquisition are assessed and a limited amount of guidance emerges. French GCSE Examiners' Reports then provide a firm foundation for research with their suggestion that the rise in oral work has affected written standards. A review of the literature reveals a wide range of barriers to verb learning. These can be classified as linguistic, psycholinguistic and pedagogic. One of the most impenetrable barriers is the redundancy of many verb endings. Empirical evidence from written and interview data is presented to show the startling kinds of misconceptions held by many pupils about verbs, and the complex of systems learners devise to solve problems.

The thesis then proposes an explicit grammar-teaching approach based on principles of pedagogical grammar. Current Computer Assisted Language Learning (CALL) approaches to verb teaching offer admirable formal practice for able pupils but do not cater for the difficulties experienced by less able learners, who may therefore be disenfranchised. Detailed proposals are given for the creation of 'mixed-ability CALL' for verb learning, followed by a description of the design and production processes of three new programs aimed at less able pupils. Further empirical work is undertaken with GCSE pupils in order to assess the effects of tutorial, game and 'cognitive' CALL approaches. The quantitative data show that written performance can improve after using these programs. However, the most striking result of CALL intervention is the transformation of weak pupils' spoken metalanguage from restricted grammatical expression to accurate verb articulation within a short space of time.

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Software

Copies of the three programs described in Chapters 8 and 9 are provided with this thesis. These were created by the candidate using HyperCard 2, and require HyperCard 2 (or later) and a 'Home' stack to run on an Apple Macintosh computer.

DRAGONQUEST consists of two stacks, 'Dragonquest' and 'Dragon'. These should be copied into one folder before use. HANGMAN consists of one stack. VERB-ENDS consists of one stack.

Three discs are supplied with contents as follows:
(1) Verb-Ends & Hangman
(2) Dragonquest & Home
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Publications

Versions of parts of this thesis have been published, or are to be published, as follows:

An edited version of Chapter 3 appeared as
METCALFE, P., LAURILLARD, D. and MASON, R. (1995) 'The decline of written accuracy in pupils' use of French verbs', *Language Learning Journal*, **12**, pp. 48-51.

An edited version of parts of Chapters 3, 4, 5 and 7 appeared as
METCALFE, P., LAURILLARD, D. and MASON, R. (1996) 'French is not a language - it's a subject: verb learning and CALL in a mixed-ability environment', *Computer Assisted Language Learning*, **9**(2/3), pp. 143-161.

An edited version of Chapter 5 will appear as
METCALFE, P., LAURILLARD, D. and MASON, R. (forthcoming) ' "It's just a word": pupil perceptions of verb form and function', *Language Learning Journal* (accepted 24 October 1995).

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I salute the following colleagues with whom I have tried to meet the challenge of teaching French across the ability range in comprehensive schools: Catherine Bradley, Penny Donworth, Tony Foster, Sheila Hall, Neil Hitchen, Trudi Marcroft, Jan Northend, Susan Simpson and Paul Whitaker. Their good humour in adversity over the years is fondly remembered.

Affectionate thanks are given to my wife Kath for her encouragement, patience and support, as well as for much discussion on language-learning issues and for helping to produce the transcriptions. Thanks also to my sons James and William for their seemingly endless supply of primary linguistic data. It is sobering to remember that they were toddlers when this research began.

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Terminology

The conventional distinction between a Second Language (L2) and a Foreign Language (FL) is that the former is a language in its natural environment learnt by a non-native speaker, while the latter is a language being learnt outside its place of origin. A distinction is also frequently made between acquisition and learning. 'Acquisition' is the process of gaining language proficiency by natural interaction with native speakers, whereas 'learning' takes place with formal, explicit instruction. In common with much of the academic literature, this thesis uses the terms L2 / FL and acquisition / learning in free variation, respectively, except where distinctions have to be made.

The subjects of investigation are referred to as 'pupils' rather than 'students' in order to distinguish them from university students or adults, and as a reminder that schoolchildren constitute a distinct and underresearched population. The term 'mixed-ability' is used to refer to groups of pupils who, though possibly placed in a 'set' or 'stream', nevertheless produce a wide range of GCSE grades and include a substantial number of weak learners.

Chapter 1

Weird and unnatural notions: introduction to the research

'... as for French irregular verbs, there was simply no keeping him away from them. He was full of weird and unnatural notions about being a credit to his parents and an honour to the school; and he yearned to win prizes, and grow up and be a clever man, and had all those sorts of weak-minded ideas.'
(Jerome K. Jerome, *Three Men in a Boat*, 1889)

The attitude that no-one in their right mind would actually want to learn French verbs may not have changed significantly since Jerome's refreshing cynicism of over a century ago. On the face of it, they do not constitute the most exciting body of human knowledge. However, as this thesis will try to show, French verbs have become a focal point for serious misgivings about the way Modern Languages are now taught. They are at the heart of a debate about the value and nature of grammar teaching, a subject which is desperately important to many people for many reasons, not all of them linguistic. Grammar teaching, whether First Language (L1) or Second Language (L2), has acquired a political and social agenda which rarely fails to attract equivocal media attention. This research was started at a time of controversy over language teaching (see Metcalfe, 1992) and, five years on, one can still read headlines like 'Teachers "failing on grammar"' (*The Guardian*, 17 June 1996).

Second Language Acquisition (SLA) has only recently established itself as a distinct discipline, and Computer-Assisted Language Learning (CALL) is itself still an emerging domain. Research in both these areas is badly needed in order to provide a solid base for instruction. Against this general need for data, a specific problem has emerged which is having far-reaching consequences in Modern Languages faculties in Higher Education. According to recent Examiners' Reports on GCSE French, there has been a marked and continuing decline in the grammatical quality of written French. Even more specifically, the most striking problem is that of general incompetence, at all levels of ability, with the production of written verbs (including their pronouns, auxiliaries and morphological inflection). This is confirmed by personal experience as a teacher and GCSE examiner. Apart from the serious concern expressed in Examiners' Reports, we have the now well-established phenomenon in universities of Modern Languages undergraduates being unable to cope with the basics of sentence construction, and the need for remedial programmes in the first year of degree work. McBride and Seago report that their students, who are the product of an educational system which emphasises communicative skills, 'lack an awareness of language structure and grammatical concepts necessary for study at degree level. This translates into an inability to differentiate ... even a verb from a noun' (1996, p. 45). Bushell describes this situation as 'little short of a crisis' (1995, p. 38).

This decline in written standards has gone hand-in-hand with (a) a decrease in the amount of grammar taught in school English lessons and (b) an improvement in the quality of oral work in Modern Languages, with much more emphasis on success in this area. While (a) is outside the scope of this research, one hypothesis to be considered is that an increase in oral work has contributed to a decline in written performance with verbs, both because of the time allocated to each skill, and as a result of the written verb being specifically influenced by the spoken verb. Previous research with 'immersion' pupils (e.g. Harley and Swain, 1978) suggests that there is evidence for an 'oral effect' on writing. The present research will take a fresh look at mainstream GCSE pupils to determine whether such an effect can be identified.

SLA theories have proliferated in recent years, providing explanations which include Universal Grammar, Monitor Theory, cognitive theory and connectionism. A leading researcher (Klein, 1986) once characterised the multiplicity of theories as a 'jungle', and it can be shown that the undergrowth is even denser a decade later. It cannot therefore be assumed that a classroom language teacher will find clear practical help in this area, especially as most of the theories relate to adult, naturalistic, oral acquisition, while our interest is in adolescent, instructed, written learning. Much of the research in this field has also had a similar orientation, with the further disadvantage, for us, that it relates largely to Teaching English as a Foreign Language. The most relevant strand to emerge from SLA theory and research is the question of explicit grammar teaching. This is considered by many in the field to be the most important issue facing language teachers today. The area has been complicated by political debate and polarisation, but it can broadly be summed up as dependent upon how 'grammar' is defined. There are few exponents of 'traditional' grammar left, but several exponents of 'no-grammar'. The most recent trend is back towards grammar, but reborn as 'pedagogical grammar' which includes such concepts as 'consciousness raising' and 'input enhancement'. Another hypothesis to be considered is therefore that some form of explicit grammar treatment will be beneficial to pupils learning to use written French verbs.

Bushell (1995) suggests that CALL might have to be used almost by default, despite its limited success and scientific uncertainty, if students do not have the terminology or analytical skills to cope with other teaching methods. His scepticism about CALL is widely shared at secondary level. The problems of National Curriculum constraints, resourcing, training and program suitability make it an unlikely option in many language departments. However, it is hoped that the latter chapters of this thesis will show that some aspects of verb learning could be facilitated under certain circumstances by CALL. This belief has been influenced by personal training in the new technology, but is not a passionately-held conviction. The thesis will not attempt to prove the unprovable, but rather describe how a genuine teaching and learning problem might be addressed. The courseware has been authored personally, with its construction based on learner need. A further hypothesis to be tested is therefore that principled CALL can be a beneficial means of teaching problematic grammatical structures to secondary-school pupils.

This statement needs some qualification. Only a small minority of pupils go on to study a Modern Language at university level. We also have to consider those less able pupils who have an equal right to grammatical knowledge, but often appear to be denied this by some teaching methods. This thesis will explore ways back to grammar teaching which will not alienate or disenfranchise the vast majority of mixed-ability pupils.

There seems little doubt about the need for such work. According to Johnstone, 'there must be a much greater volume of FL / SL teaching in secondary schools than in any other sector ... yet the amount of research published ... is small' (1993, p. 141). He feels that secondary schools constitute a very special context, and goes on to suggest that other countries seem 'more advanced than the British in conducting research that is closely focused on one specific issue deriving from published theory and applied to a limited group of students' (1993, p. 141). Mitchell notes that 'relevant published empirical studies, both of teacher thinking about grammar and of classroom practice in this area, are still few in number' (1994a, p. 91). She adds elsewhere that 'we badly need some richly descriptive ethnographic studies, which will document instances of classroom talk about grammar, both teacher- and student-initiated ..., we need explorations of learners' explicit knowledge of target language systems' (1994b, p. 221). This thesis is written partly as a response to these appeals.

A great difficulty with this type of research is that we are operating at several overlapping areas of uncertainty. For example, teachers are not sure:

- how a first language is learnt

- how second languages are learnt
- whether they should teach grammar
- how to teach grammar
- what parts of grammar can be taught
- why verbs cause so much difficulty
- whether CALL is effective
- what sort of CALL to use
- which pupils will most benefit from CALL.

It is clear that there are no straightforward answers to the sorts of straightforward questions that teachers feel entitled to ask. Because of the lack of metaphorical 'handles' or 'hard edges' in these domains, the thesis takes a step-by-step approach in trying to establish areas of reasonably solid ground in limited areas before moving on to further investigation. The thesis first of all considers what help SLA theories might be for the teacher who has discovered a persistent grammatical problem in pupils' work. It then moves into the more sharply-focused world of GCSE Examiners, whose very informative Reports highlight general grammatical difficulties and specific problems with French verbs. A survey of a wide range of literature is then undertaken in order to establish what barriers might exist between the student and successful verb learning. The next logical move is to the specific target population. A large empirical investigation of GCSE pupils is carried out, using written exercises and interviews, in order to establish the exact nature of the verb-learning problem, and to determine whether any aspects of the problem merit pedagogical attention. We then consider what form grammar teaching should take, and whether CALL in its present form is likely to help the mixed-ability pupils who are our concern. Noting a lack of suitable programs for this population and for the specified problem, we describe the process of design of courseware which might be helpful. Another empirical investigation is carried out on pupil use of specially-designed CALL programs. Data are gathered from written tests, observation and interviews, in order to discover the effects of a principled CALL approach. After an analysis of the results, the thesis concludes with a critique of the overall findings and makes suggestions for further research.

In sum, it is hoped that this thesis will clarify where particular grammar problems lie, what their causes may be and how informed and principled solutions might be found. This can be expressed in the form of two main research objectives:

(a) to discover what GCSE pupils do when writing French verbs, and why they do it (including an exploration of the effects of increased oral work on written work); and

(b) to apply this knowledge, and knowledge about language teaching and learning, to the design of computer-assisted instructional materials, and discover the effects of this form of instruction.

There is an ancient (possibly apocryphal) Oriental curse which states, 'May you live in interesting times'. As far as SLA and CALL use are concerned, we are at present condemned to a life in very interesting times, with little hard evidence on which to base our teaching assumptions. We take the approach suggested by Larsen-Freeman, who feels that 'researchers should not limit their goals to specifying what is minimally necessary for untutored SLA to occur, but rather, work with teachers ... to help define what is maximally effective in tutored acquisition' (1991, p. 335). Above all, this work is intended to be useful for hard-pressed school-teachers, and each chapter of the thesis is written with them firmly in mind.

Chapter 2

What nobody is sure about: Second Language Acquisition theories

'But Scientists, who ought to know,
Assure us that they must be so...
Oh! let us never, never doubt
What nobody is sure about!'
(Hilaire Belloc, *More Beasts for Worse Children*, 1897)

2.1 The relevance of SLA theories

'A theory of language acquisition is not so easy' (Klein, 1990, p. 219).

'A theory of SLA is someone's current best shot at explanation' (Long, 1993, p. 242).

There are conflicting views on the relevance of theories to the practical cause of investigating and promoting second language acquisition, but McLaughlin (1987) argues that theories exist to further understanding, unify generalisations and to guide prediction. Those who see theories as a waste of time and insist on the accumulation of 'facts' misunderstand the role of theories, according to Larsen-Freeman and Long (1991). As well as protecting teachers from seductive and inadequate prescriptions, theories can speed up research and provide an organisational framework. Without theory, it is maintained, there is a failure to build on previous work, and a tendency to let simple correlations of variables lead to misleading conclusions. For example, the assertion that 'motivation leads to proficiency' might emerge from 'facts' in empirical data, whereas a theoretical perspective might admit that motivation can be a result of proficiency.

Though assured in general terms of the value of theories, teachers immediately face the difficulty of deciding which theory will be most useful in solving problems encountered during instruction in formal aspects of L2 to children in a classroom setting. Larsen-Freeman and Long (1991) estimated that there were at least 40 theories in the SLA literature, a figure updated by Long, who noted 60 'theories, hypotheses, models, metaphors, frameworks [and] perspectives' (1993, p. 225). We have noted that Klein characterises the range of SLA theories as a 'jungle' (1986, p. 32), while more recently Candlin warns of 'snake oil salespersons with a theory to grind' (1994a, xiii).

Long (1993) has particular difficulty with the oppositional nature of SLA theories, and demonstrates that they can differ in type (e.g. nativist or environmentalist), source (linguistics, sociolinguistics, psycholinguistics, neurolinguistics, cognitive science) and scope (naturalistic, instructed, children, adults, structures, processes, systems). Theories can be oppositional both in domain (e.g. competence or performance) and within a domain (e.g. availability of Universal Grammar to adults). He pleads for a more selective approach and advocates the 'culling' (p. 227) of many theories. 'The field has an obligation to act as quickly as possible to respond to practitioners' questions ... in some other way than by informing them of the existence of numerous different points of view' (p. 229).

This chapter is the work of such a practitioner who has had to undertake the culling himself. The process may be bloody and inhumane, but the cudgel is wielded on behalf of colleagues who mainly wish to consider theories in terms of their explanation of certain phenomena in the written performance of adolescents in language classrooms. In this spirit, it is neither pertinent nor is there room here to deal with many early theories, and the more recently influential ones are handled robustly. It is perhaps appropriate to look first at Monitor Theory, which has received more robust treatment than most.

2.2 The Monitor Theory

One of the most influential and controversial SLA theories of recent years has been the Monitor Model developed by Krashen (e.g. in Krashen, 1988), who in partnership with Terrell evolved the 'Natural Approach' to classroom L2 teaching (Krashen and Terrell, 1983) as a direct pedagogical application. The Theory emerged from an attempt to reconcile two phenomena; the apparent 'natural order' of L2 morpheme acquisition, and evidence for disturbances in that order. The key components of the Theory are briefly described and evaluated.

2.2.1 The Acquisition-Learning Hypothesis

This claims the existence of two separate language systems internal to the learner. The acquired system is subconscious and contains material absorbed during natural language interactions, similar in manner to first language (L1) acquisition. By contrast, the learned system is a result of conscious thought and is mainly the result of explicit, formal instruction. There is claimed to be no interface between these two systems, with the result that learning cannot be transformed into acquisition, and that only acquired language is available for spontaneous communication. Problems with these ideas include the impossibility of determining whether learners operate using 'rule' or 'feel', and the lack of objective ways of distinguishing learning from acquisition. Many people have personal evidence that consciously learnt skills can become unconscious and spontaneous, but 'to what extent this conscious analysis is "necessary" or helpful for foreign language learning ... remains a major question'. (Schulz, 1991, p. 21).

2.2.2 The Monitor Hypothesis

Krashen claims that learning (as opposed to acquisition) only has the function of monitoring language produced by the acquired system. It is a consciously-controlled editor and needs the three conditions of sufficient time, focus on language form, and knowledge of the rule in question in order to operate. It is claimed that acquisition is not helped by conscious knowledge of rules, so language teaching should focus on communication rather than rule-learning. Individual learner differences are explained by people making more or less use of the Monitor, with children being superior L2 learners as they are not inhibited by Monitor use. Some of McLaughlin's earlier research (1985) challenges this, however, and claims that older learners have a faster learning rate and higher ultimate attainment, with rule knowledge a help rather than a hindrance. Further criticisms of the Monitor are that it is impossible to prove the knowledge source in any utterance, therefore evidence for Monitor use is hard to find. In any case, the rule knowledge that people actually operate with is often informal and limited in scope and validity, and very different from actual grammatical rules.

2.2.3 The Natural Order Hypothesis

A natural sequence for the learning of L2 language rules is predicted, independently of any classroom instruction. Although McLaughlin (1987) warns that the sequence might be instrument- or task-specific, he accepts that a weak version of the hypothesis might be acceptable (some things get learned before others, but not always) but adds that as it does not explain *why* this is the case, it is not telling us very much. He points out that the research on which the hypothesis is partly based (Dulay and Burt, 1974) did not measure acquisition sequences but accuracy of use. Furthermore, the study was cross-sectional and focused on the final form rather than processes, whereas longitudinal studies show L1 influence on the order of L2 learning, with much individual variation and different developmental streams.

2.2.4 The Input Hypothesis

Central to Krashen's overall claims, this hypothesis states that language is only acquired through comprehensible input ('i'), with progress being made if the learner is exposed to input slightly beyond his or her current proficiency ('i+1'). Speech is a result of acquisition, not its cause, with grammar being automatically provided by the comprehensible input alone. Krashen's evidence to support this centres round the use of simple codes, the effects of instruction, and methods-comparison research.

Simple codes, such as the 'caregiver speech' used by parents to help L1 acquisition in their children, are held to be valuable as they communicate meaning rather than explicitly teach language. Also, they relate to the immediate environment and provide comprehensible input. McLaughlin (1987) argues caution here as, 'there is now considerable evidence that many children in the world learn language in a way that is different from the way that American middle-class White children learn to speak' (p. 44). There are cultures which make no accommodation for or concessions to children's language 'needs', with simplification being regarded as inappropriate.

The role of the L2 classroom is to provide good comprehensible input, with grammar teaching only being valuable when it is in itself another source of comprehensible input. For Krashen, the best way to learn an L2 is therefore to use the approach employed by children learning the L1, i.e. focusing on meaning rather than form. According to McLaughlin (1987), this view seems to ignore adult cognitive development which can enable rapid L2 learning progress compared to the long time it takes for children to learn their L1.

Some adult L2 learners use information from extra-linguistic sources and can greatly reduce the time taken to reach proficiency by learning formal rules.

Methods-comparison research is seen by Krashen to demonstrate the superiority of 'Natural Approach' models over grammar-based approaches. However, if the latter methods can be shown to be effective, Krashen's theory could claim that they indirectly provided comprehensible input, thus making it impossible to argue against his premise. McLaughlin (1987) would rather see grammar teaching as a short-cut or stimulus for learning, and points out that researchers now give grammar a wider, newly-defined role in L2 learning. Grammar is not the essence of language learning, but to dismiss it entirely is wrong.

2.2.5 The Affective Filter Hypothesis

This is an elaborate metaphor used to describe the effects of psychological factors such as motivation and anxiety on language learning. The Filter is seen as a barrier to learning and the principal source of individual differences in L2 acquisition, limiting what will be attended to, what will be learnt, and the speed of learning. McLaughlin (1987) readily admits that affective factors have a vital role to play in language learning, but states that the Hypothesis is imprecise about the Filter's operation, is unrelated to linguistic theory, and cannot make specific predictions.

2.2.6 The value of Monitor Theory

In sum, it is held by McLaughlin that Krashen's Monitor Theory is seriously flawed. The distinction between acquisition and learning cannot be empirically resolved, while the Natural Order Hypothesis has at its heart morpheme acquisition studies of alleged questionable validity and limited focus. There is no definition of comprehensible input to support the Input Hypothesis (a point also made by Pienemann, 1988) and the Affective Filter Hypothesis makes no precise predictions. McLaughlin (1987) acknowledges that Krashen has rendered a service by highlighting the importance of communicative and affective factors in language learning, and accepts that the Theory attracts more than its fair share of criticism because of its promotion and accessibility, as also attested by Larsen-Freeman and Long (1991), but McLaughlin is severe in his critique nonetheless. The Theory is essentially untestable as it contains many unfalsifiable propositions. Krashen's rearguard defence of his Theory attracts the accusation that he conveniently shifts assumptions, makes sweeping generalisations and 'hides' conflicting evidence in footnotes. Larsen-Freeman and Long (1991) add further criticisms, such as the lack of explanation for the absence of a Filter in pre-pubertal children and the inadequacy of a simple binary on / off Monitor mode.

Where does this leave teachers? Pedagogically, the Theory, embodied in the 'Natural Approach', is intended to promote communication, with acquisition skills seen as central to this. Comprehension must precede production, with the latter emerging when the learner is ready. Error correction is limited to material which is 'learnt' rather than 'acquired', while grammar instruction is considered of questionable value. It should be used only as an aid to monitoring (which is not done by everyone), and is not the goal of language teaching. From the point of view of this thesis, although Monitor Theory considers how 'learnt' language might monitor language produced by acquisition, it does not consider the effect that natural oral language might have on formal written production. In essence, writing is irrelevant in communicative settings, but where writing is done, the learning of grammar can have a role (a notion developed in section 2.7.5). However, we have no guide as to the sort of grammar teaching which might improve written verb usage.

Ellis (1990) feels that Krashen has helped the teaching profession, albeit indirectly, by stimulating empirical research and discussion, but Dirven remarks that, 'it is almost unbelievable that a whole theory of language acquisition vs. learning and a theory rejecting formal grammar teaching has been built on such a small range of data from the complex structural networks of a language' (1990, p. 10). Though its influence persists among teachers still involved in the 'no-grammar or pro-grammar' debate, it may be that the Theory has had its day, despite Zobl's (1995) sympathetic reappraisal of Krashen's work. Sharwood Smith (1994) has consigned it to the 'early refinements' section of his recent review, and Mitchell and Brumfit (1991) observe that the balance of attention has indeed shifted from a focus on the Monitor Model to continued debate on the relevance of Universal Grammar to L2 acquisition. Our attention now shifts that way too.

2.3 Universal Grammar Theory

2.3.1 Linguistic universals

This theory of linguistic universals has been used to explain acquisition of both L1 and L2 by suggesting the existence of an innate Universal Grammar (UG). The theory started life in Chomsky's (1959) critique of a Behaviourist theory of verbal behaviour, and has since been through very many metamorphoses. Chomsky thought that there was a 'logical problem' with the poverty of stimulus in language learning, in that children produce correct grammar very quickly from inadequate data ('underdetermined' learning), and concluded that a language-learning-specific ability is at work. UG does not consist of traditional grammar rules, but is a set of 'initial state' features common to all natural languages, though specific aspects of any language, such as vocabulary and syntax, still need to be learnt. The point should be made that Chomsky was interested in L1 acquisition and did not elaborate on SLA implications of his theory. SLA theories relating to UG are essentially extrapolation by other theorists and researchers, who see value in the explanatory power and structure of the original Theory. As Sharwood Smith observes, 'even if UG is only supposed to play a role in ... certain areas of the language, it deserves special treatment by virtue of the debate that it ... continues to provoke in the 1990s' (1994, p. 143).

A leading protagonist in this debate is Cook, whose recent (1994) analysis is developed with the teacher in mind. Cook's UG model is based on Chomsky's (1981) 'principles and parameters' theory. Language is knowledge stored in the mind, this knowledge consisting of universal principles, and parameters which are 'set' according to the particular language being acquired. These are highly abstract constructs, and are held to interact in very complex ways. An example of a universal principle, part of all languages, is that of structure-dependency. In simple terms, this means that transforming a sentence into interrogative or passive forms relies on the internal structure of the sentence rather than on its superficial word order. The principle must be 'built-in' because of the automatic rejection of ungrammatical sentences by speakers who may never have heard them before.

In order to demonstrate how parameter setting is held to operate, Cook cites the so-called 'opacity parameter'. Its setting in English means that adverbs precede the verb (e.g. 'I always drink beer'), while in French they follow it ('je bois toujours de la bière'). The initial setting for this or any other parameter is a matter for debate. It may be at a neutral or a default setting. The values are changed, if a change is required, once examples of the structure in question have been heard. This means that, though native speakers of either language do not consciously learn their respective 'rule' for the position of adverbs, they are able to reject infractions of it because the parameter has been 'set' accordingly.

The question still remains whether the foregoing has any bearing on second language acquisition. There has been much discussion about the availability of UG principles to adult L2 learners (e.g. Bley-Vroman, 1989). Cook (1994) identifies three possibilities; no-access, direct access or indirect access via the L1. The no-access view is sometimes supported because L2 learning can be inconsistent, incomplete and dependent on the L1, but there is no evidence that L2 learners do not conform to a 'principles and parameters' system. Cook suggests that as L2 learners have less effective cognitive processing in the L2 than in the L1, the result will be less complete. Left with the choice between direct or indirect access, he prefers the latter position, claiming that L2 learning is strongly influenced by L1 parameter settings.

2.3.2 The value of Universal Grammar Theory

McLaughlin (1987) and Larsen-Freeman and Long (1991) both acknowledge that Universal Grammar Theory contains 'fuzzy' data and is hard to falsify, therefore less viable as a theory. It is a theory of internal competence rather than external performance, and contains many abstractions which remove it from actual language use. It remains a valid source of SLA hypotheses, but 'Chomsky is not concerned in his writings with second language learning. The burden rests on those who would apply his ideas to second language to show how the connection is made' (McLaughlin, 1987, p.108). Klein is more blunt. 'If it is true that UG plays no significant role in L2 acquisition, then it should play no significant role in L2 acquisition research. I share this view. A theory of L2 acquisition must be sought elsewhere' (1990, p. 223).

Cook (1994) accepts that UG is a theory of competence, and should not in itself be a basis for teaching methodology, but puts forward the interesting notion of multicompetence; that is, the ability to 'know' two parameter settings simultaneously and to switch between languages, an ability which may well be the norm. For this reason, 'teaching should not produce ersatz native speakers so much as people who can stand between two languages and interpret one to the other' (p. 44). This appears a more realistic goal for a teacher than striving for perfection, and it endorses the sort of 'language awareness' encouraged by the National Curriculum. This section concludes with Mitchell and Brumfit's (1991) declaration that 'even the proponents of UG-based explanations recognise that they can account in principle only for the grammatical "module" of a given language, and accept that other learning principles must be at work alongside it' (1991, p. 139). We now consider what some of those principles might be.

2.4 Cognitive Theory and Second Language Acquisition

2.4.1 The need for a cognitive approach

O'Malley and Chamot (1990) complain that that few ideas from cognitive psychology appear to have been adopted in SLA research. As they put it, 'instructional approaches in second language acquisition are rarely based on sound theory and research on how individuals learn' (1990, p. x). They are concerned that some prevailing views, which seem to ignore deliberate cognitive processing, claim instead that acquisition occurs without awareness, and that the teacher's primary role is to provide comprehensible input (cf. Monitor Theory). The authors claim that, on the contrary, teachers can help in more pro-active ways by encouraging learning strategies and using 'academic' language because 'language learning involves many conscious decisions at both the cognitive and metacognitive levels, which parallel cognitive processes in learning other cognitive skills' (1990, p. x). The principles of a cognitive information-processing view of human thought and action are that behaviour can be explained by reference to individual perception and interpretation of experiences, and that the thinking process has parallels with computer processing of information (Shuell, 1986). Information is thus 'processed' and thoughts are 'mental processes'. The essence of Cognitive SLA Theory is that language is a complex skill like many others.

2.4.2 Early work in Cognitive SLA Theory

McLaughlin (1987) is credited by O'Malley and Chamot (1990) with making a significant contribution to Cognitive SLA Theory in his relating of skilled language production to information-processing theory. Given that mastery of a complex skill is acquired by performing the aspects that need little processing capacity, freeing attention for other aspects that need conscious effort, he suggested that L2 acquisition involves the gradual integration of subskills in a move from controlled to automatic processing. For Ellis (1990), the work of Bialystok (e.g. 1988) in this field was revelatory. It affirmed that language is processed in the mind like other information and added that language proficiency contains both analysed and automatic 'dimensions'. The analysed dimension corresponds to the degree of awareness language learners have of the structure of their linguistic knowledge. This awareness is described as a 'mental representation' which is not in itself articulated knowledge of rules. Analysed knowledge makes articulated knowledge possible, however, as it can be operated on by the learner to produce formal language. On the other hand, learners with only unanalysed knowledge will be more restricted in this area. The automatic dimension refers to the ease of access to knowledge, achievable by practice. Bialystok predicted that learners will tend to favour either progress along the automatic continuum (towards fluency) or along the analysed continuum (towards metalingual awareness). As far as the present research is concerned, we might speculate that pupils who have spent a lot of time acquiring oral fluency may find it difficult to proceed far enough along the analysed continuum to ensure consistent written performance.

Despite these contributions, a comprehensive analysis of the influence of cognition in SLA has been lacking. According to O'Malley and Chamot, 'second language acquisition cannot be understood without addressing the interaction between language and cognition, and ... at present this interaction is only poorly understood' (1990, p. 16).

2.4.3 Cognitive Learning Theory

Whereas other theories posit a linguistics paradigm for SLA, in which language has its own unique properties and is learnt separately from (though interacting with) cognitive skills, the cognitive psychology paradigm uses an information-processing framework. In its basic form, this assumes a short-term memory (STM) store as 'working' memory, and a long-term memory (LTM) store composed of elements or networks. New information is acquired by an encoding process, in which information is selected from the environment and transferred to STM, followed by 'acquisition', i.e. active transfer of information from STM to LTM for permanent storage. Other phenomena include 'construction', which makes active connections between ideas in the STM, while LTM provides schemata (organised structures) of related information into which the new ideas can be organised, and 'integration', which involves active searching of the LTM for prior knowledge and transfers it to STM. The emphasis here is on the active engagement of mental processes to bring about learning. O'Malley and Chamot (1990) point out that the above framework was not in itself intended to fill the need for a Cognitive SLA Theory, but it has been extended by the emergence of ways of representing the competence underlying complex cognitive skill performance (such as in language).

2.4.4 Language as a cognitive skill

O'Malley and Chamot (1990) hold that the advantages of treating L2 acquisition as a complex cognitive skill lie in the comprehensive and detailed theoretical framework available (with positive implications for pedagogy) and in the 'process' orientation whose absence from most other SLA approaches is regretted by Larsen-Freeman and Long (1991).

Knowledge is held to be represented in memory as declarative or procedural. Declarative or factual knowledge ('knowing that') resides partly in 'propositional representations' which hold the meaning of information. These are composed of simpler propositions, identifiable as simple verbal statements, which can be represented as propositional networks consisting of nodes (ideas) and links (associations). Networks are an important idea as they allow for the hierarchical organisation of propositions, and for the activation of one concept by another ('spreading activation'). There are also more complex schemata which contain interrelated features amounting to a 'concept'. Schemata are adjustable and richly interconnected, and are seen as organisers of new information and aids to comprehension.

Procedural knowledge ('knowing how') is the cognitive skill needed to perform mental 'procedures' such as understanding and generating language. It is learnt gradually and with extensive practice. Knowledge is used over and again in a procedure in such a way that access to the original rules for the procedure may be lost, with a resultant inability to declare them verbally. Anderson's (1985) 'production systems' are one way of representing procedural knowledge in memory. These derive from computer applications and consist of IF statements (conditions) followed by THEN statements (actions). Each condition-action pair ('production') can exist in a declarative form before being compiled, through practice, into an automatic 'production set'. This system is applicable within all domains, and comes with the assumption that language is no different from any other higher level skill. The distinction between procedural and declarative knowledge is important in SLA, as declarative knowledge of rules is not sufficient for language use.

In considering the process of 'skill acquisition', we must first clarify that we are not here dealing with 'acquisition' in Krashen's sense of the word. The actual stages of skill acquisition (the movement from declarative to procedural knowledge, or 'proceduralisation') can be viewed in several different ways, which cannot all be examined here. One view (based on Anderson, 1985) is that we begin with a 'cognitive' stage, involving conscious instruction and study, in order to acquire declarative knowledge such as vocabulary, chunks of unanalysed knowledge and grammar rules. This stage is inadequate for complete skill as performance is slow and faulty.

We then enter the 'associative' stage, in which connections are strengthened and errors begin to be eliminated. Declarative knowledge 'is turned into' (O'Malley and Chamot, 1990, p. 26) procedural knowledge (the authors do not say how), though declarative knowledge is not always lost; it is possible to be fluent and still remember grammar rules. This stage resembles expert performance, but is still slower and prone to some errors. The later 'autonomous' stage arrives gradually after practice. Performance can become effortless, thus drastically reducing the demands on conscious attention in STM.

There are parallels between the three acquisition stages and L2 constructs. The cognitive, attentive stage corresponds to the (often) silent early SLA period where the learner is trying to make sense out of input, while the associative stage corresponds to the 'interlanguage' period of shifting rules. ('Interlanguage' was a term used by Selinker (1972) to describe the 'interim grammar' of an L2 learner on the way to acquiring the target language). The autonomous stage produces near-native performance without reference to rules, and allows new information to be processed while the language is used.

There are difficulties with the role of rules in SLA from Anderson's viewpoint if the implication is that declarative knowledge of formal rules (which later becomes proceduralised) is the route to L2 acquisition. The problem is that not all rules are known, or taught, or occur, or are focused on, and are often informal ones used by particular learners. Pedagogically, it is clear to any teacher that the requirement to learn declarative rules before performance of a skill could be counter-productive, as rules are time-consuming, complex and at times inexpressible in words. O'Malley and Chamot (1990) see a role for cognitive theory in an alternative method of instruction whereby 'procedural knowledge may be learned more effectively through cued practice with the complete skill or with portions of it that can be compiled' (p. 55).

McLaughlin (1990) has continued to support the idea of L2 acquisition being a complex cognitive skill. He observes that with practice amazing things can be achieved, though it does not always make perfect. The concept of 'restructuring' is examined to explain some imperfections which are often noticed by language teachers. Because cognitive development is the result of structural changes in the mind, in other words a process rather than a product, discontinuities can occur. This may result in 'backsliding' where learnt material is 'lost' while the whole system is being restructured to accommodate new material. McLaughlin (1990) notes that learners might initially use correct irregular verb forms (e.g. 'went') but go through a period of regularisation ('goed') before returning to the correct version, a process described as 'U-shaped' learning. This frequently-observed non-linear phenomenon can be attributed to restructuring. Learning is not therefore simply a quantitative 'add-on' change, but a qualitative, structural change. Teachers should be aware that practice can have two distinct effects; improvement as subskills become automatic, followed by a reduction in performance as the knowledge base is reorganised. The restructuring later brings more rapid improvement as a result of the more efficient generative rule, hence the U-shaped performance curve.

2.4.5 The value of Cognitive SLA Theory

In contrast with Krashen's (1988) prediction of unconscious learning, cognitive science predicts learner awareness and conscious processes in SLA. This appears to be borne out by everyday experience with learners being able to describe how they learn, even if formal rules are unknown. Cognitive Theory predicts that declarative knowledge will be lost first, with procedural knowledge retained. It also predicts that the depth of processing of words in LTM (the extent to which they have been applied to semantic or syntactic contexts) affects retrieval. The theory answers the need for a process- rather than product-oriented approach, and as far as pedagogy is concerned, 'one of the major implications of cognitive theory is that the way in which individuals process information must be considered along with the way in which teachers teach if we are to understand the instructional process' (O'Malley and Chamot, 1990, p. 84).

It is readily acknowledged that the cognitive approach in SLA is open to question if used in isolation. Its 'ambiguity with regard to the content of learning is the fundamental reason why the theory needs to be augmented with information from the field of linguistics before it has meaning in second language acquisition' (O'Malley and Chamot, 1990, p. 216). This is very much the position of McLaughlin, who notes that there are 'specifically linguistic considerations ... not addressed by an approach that sees learning a second language merely in terms of the acquisition of a complex cognitive skill' (1987, p. 150), and in later work that the cognitive model is 'a partial account, and needs to be linked to linguistic theories of second language acquisition' (1990, p. 126). Despite these limitations, a classroom teacher should find some value in Cognitive SLA Theory. It does offer an insight into learning processes, and gives support, in appropriate circumstances, for explicit grammar teaching. This relates to the 'real-world' experience of many teachers. However, the ambiguity and partiality identified by the above authors will persuade those teachers to look elsewhere for more enlightenment.

2.5 A Theory of Instructed Second Language Learning

Ellis (1990) echoes the quotations from the latter part of the preceding section with his recognition that 'neither a purely linguistic nor a purely cognitive framework will provide a complete explanation' (1990, p. 184). He therefore sets out to provide an 'integrated' theory which has the advantage for the languages teacher of being specifically formulated with reference to instruction. Some of the Theory's suggestions are outlined here.

2.5.1 Learning style

The Theory holds that the learner's 'affective and cognitive orientation' moderates the effect of instructed language learning. Affectively, not everyone is tolerant of or receptive to instruction, and even for those that are, the wrong sort of instruction may be counterproductive. Cognitive orientation refers to preferences for informal (communicative) or formal (form-focused) approaches, with incompatibility producing inhibition and anxiety.

2.5.2 Differentiation

Another claim is that knowledge is differentiated. The view proposed by Ellis that L2 knowledge is composed of dichotomous explicit (conscious, declarative) and implicit (subconscious, procedural) types runs counter to the idea of a knowledge continuum, but agrees with the 'acquired' and 'learnt' distinctions made in Krashen's Monitor Theory (see above). Ellis admits that this distinction is problematical as, although some studies seem to show that there is no relationship between conscious rule knowledge and performance, it is hard for learners to know what kind of knowledge they use in performance. Explicit knowledge can itself be differentiated according to how it is articulated and by whom, and implicit knowledge can consist of productive 'rules' for utterance and chunks of formulaic expressions described as 'lexicalised sentence stems'. The learner can save processing effort by retrieving these stems 'ready-made' and thus gain fluency. In Ellis' words, 'the recognition that knowledge is differentiated is central for understanding the role played by instructional input in L2 learning, as ... different kinds of input are needed to achieve acquisition of different kinds of knowledge' (1990, p. 187). Differentiated input means that the teacher will emphasise communication and meaning or grammatical correctness, affecting either the learner's syntactic or semantic processing. In practice, instruction is likely to be mixed, with the teacher shifting the focus according to the needs of the lesson. It is always the case that learners will make of instruction what they will, but the predisposition in classrooms (including many so-called 'communicative' ones) is likely to be towards attention to form.

2.5.3 Explicit and implicit knowledge

Form-focused instruction would seem to favour explicit knowledge, although there is no simple correlation between the two. Ellis feels that those who decry instruction on form are too pessimistic, as diary studies reveal that 'learners are able to acquire conscious representations of quite complex rules and that they actively seek to do so' (1990, p. 189).

Implicit knowledge is mainly the result of a focus on meaning (though, once again, the correlation is not simple). For one type of implicit knowledge ('lexicalised sentence stems' or chunks) acquisition may be determined by frequency of exposure and communicative need. On the other hand, for acquisition of productive implicit 'rules', frequency of input is much less critical.

It depends instead on the cognitive factor of subconscious attention to a specific feature, and the linguistic factor of whether the feature is learnable at a particular developmental stage.

Conversely, implicit knowledge can also result from a focus on form. Direct teaching of implicit knowledge can theoretically occur if the learner is developmentally ready or if the the taught forms are not subject to developmental constraints. In practical terms, only the direct teaching of 'lexicalised sentence stems' is seen as profitable. More usefully, explicit knowledge helps acquisition of implicit knowledge. While Ellis agrees with Krashen that explicit and implicit knowledge are discrete, he parts company with him by allocating a major role to explicit knowledge. Conscious knowledge is seen as an 'acquisition facilitator', enabling features in meaning-based instruction to be noticed instead of ignored by the learner. Instructed learners are considered to do better than naturalistic learners because of their greater knowledge of useful facts about the language. In a word, instruction heightens awareness.

The role of practice is called into question by Ellis (1990), despite widespread assumptions that it is valuable. For Ellis, control of L2 knowledge results from meaning-based activities in real operating conditions. He cites research which seems to show that practice does not help fluency or long-term retention. Control of L2 results instead from meaning-focused instruction which activates procedures for automatising knowledge, and from 'real operating conditions' (undefined) which help develop the learner's strategic abilities.

A further claim is that learner output is useful input. The nature of the output depends on learner orientation and the task in hand, but it is seen as a contribution to acquisition. It is apparently fed back into the system and becomes part of the total input processed by the learner. Ellis (1990) warns that while corrected output raises consciousness and helps acquisition of the correct form, uncorrected faulty output may feed back and result in persistent errors which are hard for the learner to recognise.

2.5.4 The value of Instructed SLA Theory

Ellis' integrated theory has the advantage of combining a substantive cognitive base with linguistic and psycholinguistic factors related to language learning. Because evidence is available that the learner often cannot transform explicit knowledge into implicit knowledge, the case is argued that the two forms of knowledge are discrete. Significantly, there is nevertheless a major role for explicit knowledge in its highlighting of linguistic features in input for the benefit of the learner. Ellis claims that the Theory resolves the central paradox of instructed language learning, that 'instruction frequently fails to result in the direct acquisition of new linguistic structures, yet instruction results in faster learning and higher levels of achievement' (1990, p. 196). He acknowledges his debt to Pienemann's (e.g. 1989) teachability hypothesis, which is described as 'the most powerful account we have of how formal instruction relates to learning' (Ellis, 1990, p. 158). Briefly, the hypothesis states that teaching any given structure will only promote its acquisition if the student is ready to learn it. However, the research base for this hypothesis is seen as very limited, and we have little information about the *kind* of instruction used in the empirical work.

Although the learner is assigned the key role in the learning process, the teacher has the dual purpose of providing meaning-based communicative activities to promote implicit knowledge, and activities designed to develop explicit knowledge. It is this very mix of grammar awareness and communication which many teachers have intuitively felt to be right for their pupils that appears to be encapsulated in Instructed Second Language

Learning Theory. However, just when teachers might feel that at last they have a 'comfortable' theory to identify with, they run into Long's (1993) criticism. He finds the Theory to be symptomatic of the eclecticism that has 'afflicted' (p. 228) language teaching pedagogy for so long. He takes Ellis (1990) to task for listing various inadequate, competing and flawed theories, then constructing his own Theory to be consistent with these apparently faulty products. A personal view is that Long's criticism is rather strong. Ellis may well be eclectic, but this in itself should not be seen as an affliction. Instead of using faulty products, Ellis appears rather to have assembled his own theory from the very parts of other theories which do seem to work. The main difficulty with Ellis' Theory is that, although formal and communicative approaches are distinguished, oral and written work receive no clear distinction. For example, when Ellis discusses the effect of formal instruction on L2 acquisition (e.g. 1990, p. 131), written and spoken data from various studies are presented in undifferentiated form. Is there anywhere else a teacher can look? What are the latest products?

2.6 Recent developments in SLA Theory

We were warned by Klein in 1990 that another theory is starting to develop which may involve a paradigm shift in our understanding of language (and presumably of every approach to teaching and learning). This is the Connectionist Model of cognition, which holds that all knowledge is formed by a network of 'simple processing units' whose connections respond to input. Rule-like behaviour is exhibited, but without explicit rules. This Parallel Distributed Processing (PDP) theory earns the soubriquet 'ECE' (Everything Connected to Everything) from Klein (1990), who is somewhat sceptical about the direction in which this 'seductive' theory might lead us. He considers that formulators of theory should indeed be aware of work in related fields, but that jumping on bandwagons will not bring a theory of SLA closer.

Has Klein's bandwagon arrived? Sokolik (1990) explains that 'connectionist or parallel models are systems that behave intelligently without the explicit manipulation of symbol systems, that is, the learning of rules' (p. 687). He discusses the 'weighting' of brain network connectivity, with knowledge seen as a pattern of activity. The network can apparently produce an appropriate output pattern when presented with a particular input pattern. In PDP 'learning is simply the setting and adjustment of weights within the network structure' (p. 684). Jensen and Ulbæk (1994) see the parallel systems and neural networks of PDP as a serious challenge to the serial processing of rules which forms the basis of most L1 / L2 theories. They produced a software program which simulated the acquisition of verb inflection through interaction with the environment without a central processor, though they concluded that the PDP model should be complementary to the serial one rather than replace it. PDP could be a 'subatomic' process, still allowing for a macrostructure as well.

On a less conciliatory note, however, the SLA literature recently included a sharp exchange between supporters of a neurobiological approach and those of Universal Grammar. Eubank and Gregg (1995) oppose the suggestion that there is no neurobiological evidence for UG, and that it is a cognitive misfit. They are critical of reductionism, and claim that there is evidence for dedicated brain mechanisms (including specifically grammatical ones), and that not all learning domains are the same. Schumann (1995) responds that reductionism should not be seen as an insult, and that UG is inadequate as there is more to language than competence. Jacobs (1995) weighs in with references to new-born ferrets and 'metabotropic effects and neuromodulators' (p. 66), and asserts that studies purportedly showing an innate language module are highly suspect. The last word here should go to Klein (1990), who likes the idea of connectionist models being testable (unlike many other SLA theories); as he puts it, 'they either work, or they don't work' (p. 226). They are also able to handle 'messy input', the reality of language learning (p. 226), and have some links to neurological research. However, he remains to be convinced that connectionism is leading anywhere.

2.7 Conclusion

2.7.1 How helpful are SLA theories to the teacher?

These influential or recent SLA developments, however stimulating or firmly linked to research they may be, do not at first sight appear to offer clear guidance to the classroom teacher with specific problems to solve. There are areas of commonality in many approaches, but more often there are apparently incompatible differences which have their origin in diverse philosophical approaches and equivocal research findings. Apart from external contradictions between theories, there are internal problems with certain theories as they undergo continual metamorphosis. There is even no agreement on assessment criteria for these theories (Long, 1993), with the picture described as 'very murky indeed' by Larsen-Freeman and Long (1991, p. 289).

Language teachers are disposed to expect ideas to develop and be challenged, but within these shifting sands they also expect to find some areas of solidity on which to build their teaching platform. The latter expectation is often unfulfilled. Klein once observed that 'anyone who claims that second language instruction must be arranged in a particular way on the evidence from linguistics ... or any other science, displays a fair measure of naivety if not presumption' (1986, p. 55). Takahashi has a precise description of the difficulty. 'Attempts at a coherent theory remain necessarily reductive; because of the interdisciplinary character of the field, comprehensive accounts of [L2] learning cannot attain, at this point, the level of integration which a coherent theory would require' (1991, p. 445), and Klein adds that 'we should be modest enough to admit that at present we are still very far from such a theory' (1990, p. 230). At the risk of over-emphasising negative comments, a group of leading language educators concluded that 'there is little agreement among specialists over the fundamental nature of second language acquisition or of language teaching methodology' (Fox *et al.*, 1992, p. 55). An outsider could add that the theorists themselves seem uneasy with the concepts they debate. This is illustrated by rather flippant reference to, say, grass growing from steer manure (Gregg, 1993), or to the brainless scarecrow from the land of Oz (Jacobs, 1995). A sense of humour is highly appreciated, but the use of such metaphors in specialist articles may alienate teachers who need help, and need it quickly.

Discussion of SLA theories is a recurring feature in the academic literature. The debate continues in special 'theme' issues of journals (e.g. *Studies in Second Language Acquisition,* 1990, **12**(2) & 1995, **17**(1); *Applied Linguistics,* 1993, **14**(3)) and seems to provoke strong feelings amongst those closely involved. Even if a widely-accepted SLA theory were to emerge, there would still be considerable difficulties for the teacher regarding applicability. Recall that we are concerned with mixed-ability, adolescent classroom learners, aiming to pass an examination, who are having problems with their written grammar. To what extent are SLA theories likely to apply to these circumstances?

2.7.2 Ability

The English comprehensive school classroom is generally categorised as 'mixed-ability', though this factor is closely linked to social and political issues largely out of the teacher's control. The long-standing Modern Languages GCE / CSE dichotomy was transformed into a 16+ / GCSE continuum in the early 1980s, which allowed, encouraged and sometimes compelled all ability ranges to be taught together, much in the spirit of a communicatively-based approach to language learning. More recently, there has been a move back to some form of 'streaming' for L2 learning, even within the GCSE framework, and the National Curriculum requirement for all pupils to study one modern foreign language will undoubtedly raise this issue once more, though the whole area is full of uncertainty.

Although the 'mixed-ability' classification should not be interpreted too rigidly, there is nevertheless the likelihood that one classroom will contain pupils with a wide range of cognitive abilities and orientation, i.e. a preference for formal or communicative activities. Larsen-Freeman and Long (1991) describe research which shows that intelligence (aptitude) correlates closely to academic 'grammar' ability and not at all to oral communicative proficiency. However, the classroom teacher will notice that it is very often the case that the pupil who has formal ability and metalinguistic awareness is more able to communicate fluently. Learner differences are so vast, varied and the result of so many factors that SLA theories will struggle to provide a comprehensive explanation. The teacher can nonetheless benefit from an insight into which language learning factors are likely to be linguistic and universal, and those which may well be cognitive and personal, but must be aware that the distinction is far from resolved.

2.7.3 Age

There is often an ambiguity about theories and research studies which refer to child and adult L2 learning. Although empirical findings normally specify the age of treatment subjects, a teacher might look at overall theoretical explanations and fail to find a clear definition of where 'L2 childhood' ends and 'L2 adulthood' begins. McLaughlin (1987) refers to the Monitor Theory as applicable to adults, while Schulz (1991) notes it is for adults and adolescents. A major problem is that secondary-age pupils are somewhere between childhood and adulthood (with the sex / age factor significant in the development of certain capabilities) and are likely to exhibit a range of behaviours. Larsen-Freeman and Long (1991) cite a study which treats adolescence (age 12 to 15) as a separate subject grouping from childhood and adulthood, but other studies do not follow this pattern. The same authors refer to the effect of Piaget's formal operations stage at age 14 / 15 (no reference given), but acknowledge that there are alternative theories that suggest that this stage can be reached at about age 11 (but some people never reach it), or that the stages do not exist. Research has mainly been into rate of acquisition and ultimate achievement, the results of which appear chaotic, but generally conclude, 'older is faster, but younger is better'. In our present study, the subjects are GCSE students, aged from 14 to 16, on the threshold of adulthood. As a general principle, the teacher should be aware that most SLA theories assume an adult L2 learner, and adapt the implications accordingly.

2.7.4 Setting

SLA theories generally refer to naturalistic L2 learning, often based on research into the acquisition of second languages by immigrants into the target-language community. This is far removed from the secondary-school classroom, where social and motivational factors are categorically different. Larsen-Freeman (1991) points out that 'most of the research to date has dealt with natural or untutored acquisition, as researchers have operated under the tacit assumption that instruction was a variable ... which could be factored in after we arrived at some understanding of the natural process' (p. 335). The emphasis on naturalistic L2 learning is highlighted by the contrast with Ellis' (1990) formulation of a theory of language learning specifically with classroom instruction in mind. Teachers will assume that they are on safer ground with such a framework. More practically, there is a body of research available on the effects of classroom instruction, but even here claims are made that are unjustifiable and must be treated with caution. 'For economic, social, and sometimes academic reasons (e.g. poor application of research methods), research on L2 classrooms has often been flawed, incomplete in analysis, and contradictory in outcome' (Chaudron, 1988, p. 10).

2.7.5 Skill instruction

'Skill' in this context refers to the 'four skills' (speaking, listening, reading and writing) distinguished by examination boards. The first assumption of most SLA theories is that the input and output referred to will be speech acts in the L2, usually within a naturalistic setting. Even within studies of classroom learning (e.g., Chaudron, 1988; van Lier, 1988) the 'language performance' used as a reference point will very often be an oral activity of some kind. In Ellis (1990), too, although the focus is on classroom instruction, no specific guidance is given about written problems, nor is the skill actually indicated. Indeed, Ellis' main reference points are words like 'interaction', 'discourse' and 'output'. This is the stuff of oral acquisition, not of pupils writing in exercise books. Teachers must therefore be cautious in interpreting and extrapolating from theories based on naturalistic oral data to produce useful guidelines for written work.

For example, devotees of the 'Natural Approach' might assume that any formal instruction in writing is taboo. However, Krashen himself admits that, 'both formal and informal linguistic environments contribute to second language proficiency but do so in different ways' (1988, p. 50). More precisely, 'the world often demands accurate language ... in just those domains where Monitor use is most possible - in the written language - and a clear idea of linguistic rules can be a real asset for the performer' (1988, p. 14). This world is the one inhabited by teachers, pupils and examiners. As Tarone and Yule (1989) point out, the conflicting views of Krashen and McLaughlin are alternate representations of reality. In the end, decisions on whether or how to teach will depend on the aims of the learners: 'a very common aim, we suspect, is simply limited to passing the examination at the end of the course' (Tarone and Yule, 1989, p. 9). They add that, although eclectic approaches are common, they should be based on principled choices, not a hotchpotch.

Larsen-Freeman (1991) conveniently provides a digestible synthesis of SLA theories and research findings which she formulates as principles for teachers. These are summarised as follows:

- the learning / acquisition process is complex; avoid simplistic solutions
- the process is gradual; allow time for awareness to emerge
- the process is non-linear; expect backsliding to occur because of restructuring
- the process is dynamic; what works for learners at one level may not work for other levels
- learners learn when ready; they cannot master aspects too far beyond their level of development
- learners rely on previous knowledge; they actively use what they know of L1 and L2 to formulate hypotheses
- complete mastery of L2 may be impossible; be realistic in expectations
- there is tremendous individual variation; learn to work with this
- learning a language is a social phenomenon; consider the needs of students.

However anodyne some of these principles may be, it is important to leave this chapter with some positive pedagogical statements based on what little is known about SLA.

2.7.6 Leaving the jungle

Any visit to the 'jungle' of theories must be brief in an essentially empirical study. It has at least given us the background to several concepts related to language learning, and attempted to highlight the view taken in this research that instruction is important. As we have seen, Monitor Theory does allow for instruction, and Cook's treatment of Universal Grammar makes pedagogical suggestions, such as the selection of sentences to show the effects of particular parameters (1994, p. 43). Cognitive SLA Theory, as outlined by O'Malley and Chamot (1990) treats language as a skill that can be taught, partly by instruction in learning strategies. Ellis (1990), of course, bases his entire theory on instruction. In other words, if there are problems with pupils' written output, as there seem to be with French verb use, they have probably not arisen simply *because* teaching has taken place. It is the *nature* of the 'grammar' instruction that is the important question, and one we can deal with only after the problems are described in detail.

The general 'verb-learning problems' referred to in the introductory chapter have still to be specified. This will be done by appealing to three sources. Firstly, GCE and GCSE Examiners' Reports will be analysed. These give an invaluable first-hand account of the nature and scale of language learning problems throughout the country, from a teacher's point of view. Secondly, academic literature will be reviewed in the search for possible barriers to verb learning. Finally, and most importantly, the pupils themselves will be consulted. After all, the secondary school is where most language teaching takes place, and is a real shared experience for virtually all adolescents in this country.

Chapter 3

A significant decline: written accuracy in GCSE French examinations

'In Writing ... the decline is significant. Unfortunately, the desire not to set unreasonable targets in this skill area appears to have led to a tendency to neglect any real learning, whether one defines "real learning" in traditional or "communicative" terms' (SEG, 1992, p.1)

'The inability to form verb tenses or to choose the correct tense was the principal cause of failure to communicate the required information' (SEG, 1990, p.19)

3.1 Background to the Analysis of Examiners' Reports

In the introductory chapter it was suggested that a decline in written French grammar was evident in schools and universities, and that verbs constituted a distinct problem. One of our hypotheses was that an increase in oral work may have reduced written verb skills. As the theoretical positions outlined in Chapter 2 did not offer clear direction on these issues, we are obliged to seek guidance elsewhere. One excellent and perhaps underused source of direction and data can be found in the Examiners' Reports published annually by the various GCSE boards. Although anecdotal rather than scientific in their analysis, these reports contain first-hand, up-to-date and wide-ranging accounts of pupil performance.

The following survey and analysis of Examiners' Reports on public examination results for 16-year-old students of French is essentially qualitative and designed to identify the major areas of concern which are of relevance to this study. Teachers will be aware that the problems associated with written French verbs are related to both form (including inflectional morphology and auxiliaries) and function (appropriate use of tense). Giacalone Ramat (1992) feels that problems associated with verb learning may differ in kind from other language-learning difficulties. Something more profound than the formal learning of lists is required.

A number of constraints in this analysis should be mentioned. All seven UK GCSE examining bodies provided documents, but information from the Scottish Board was not used because of its different educational system and reporting methods. Amongst the six remaining boards, reporting procedures vary considerably in detail, and reports for some years were not available. Similarly, the examinations themselves vary in structure, content and levels. The data have been slightly distorted by school entry policies which in the past entered very many pupils for examination at an inappropriate level, especially in the written papers, though the publication of 'league tables' seems to have reduced this effect recently.

The data have been used selectively, the main emphasis being on written grammatical performance with reference to verb use and the influence of oral work. It should also be borne in mind that Examiners' Reports by their nature tend to highlight negative rather than positive performance. Despite these limitations, it is possible to obtain a clear picture of the current position and overall trends (some of which are echoed by Rock (1993) in his survey of GCE and GCSE German examinations). In all, twenty-four French GCSE reports from 1988 to 1992 were used, together with five GCE reports from 1969 to 1973 which provided some historical perspective. Finally, a quantitative and qualitative comparison is made between typical GCSE and GCE French written papers in order to examine any shift in emphasis in the use of verbs.

3.2 Communicative competence and accuracy

The tone of Examiners' Reports is increasingly one of frustration that the change in examination objectives has removed emphasis on grammatical accuracy. 'The importance of matters such as correct genders and agreements is not always stressed, because it is possible to obtain a reasonable GCSE grade without observing these rules. The principle of rewarding anything which would be understood by a sympathetic native speaker has apparently led to a decline in what is expected of candidates in Writing' (SEG, 1991, p. 1).

The Examiners have no doubt that over the past five years at least the main problem with written French has been with the use of verbs. 'The main weakness of candidates was their failure to use verb tenses and forms correctly ... this ability is essential to effective communication ... this is a fact of communicative life, not a quirk of any marking system' (SEG, 1988, French / 4GEW).

In the continuing debate over the relative merits of communicative competence and grammatical accuracy (often seen to represent implicit and explicit modes of learning) the Examiners repeat many times and in clear terms where their loyalties lie. Far from communication being unrelated to accuracy, it is seen as being completely dependent on it. Examiners, though accepting that syllabus objectives have changed, feel that the move from accuracy has become too pronounced, and that teachers must accept some responsibility; 'students and teachers should bear in mind that assessment of communicative effectiveness demands greater, not less, accuracy: it is not intended to be a euphemism for an "anything goes" approach' (SEG, 1991, p. 5), and; 'the emphasis placed on successful communication seems to have encouraged a neglect of accurate writing ... This year's candidates, like those in previous years, had great difficulty in forming and using the verb tenses required ... it is to be hoped that teachers will remind candidates that inaccuracy leads to a failure to communicate' (SEG, 1992, pp. 3-5).

The point is frequently made that, despite an improvement in other aspects of language work at Basic Level, to which all the above quotations refer, there is a distinct and continuing downward trend in both grammatical awareness and accuracy. At the extreme, there are candidates who ignore verbs altogether (NEAB, 1990), or who have no conception of tense (NISEAC, 1992).

The story at Higher Level is similar. Few candidates have a fundamental grasp of how language works or even a 'feel' for it (SEG, 1988), with sheer lack of linguistic competence and marked deterioration reported more recently (NEAB, 1990 & 1991; SEG, 1992). Incompetence with verbs was seen as 'the most disturbing feature of the whole examination' in 1991 (NEAB, p.11). It was particularly mentioned that 'the emphasis on communicative competence seems to have resulted in candidates acquiring a wide range of nouns ... but this is accompanied by very limited grammatical awareness, particularly of verb formation and tense usage. Syntax is often completely anglicised and there is, in general, a distinct lack of refinement' (NEAB, 1990, p. 10). The problem is not therefore confined to pupils of lower writing ability, but has permeated the ranks of those who may have ambitions to study French at Advanced or even degree level.

There is evidence elsewhere that English-language teaching methods (however justifiable in themselves) have contributed to foreign-language teachers' difficulties. Bloor (1986) found serious gaps in the linguistic knowledge of English of his Modern Languages university students (58% of whom could not identify an infinitive), and noted comments like, 'verbs don't have to agree [i.e. endings] in English with nouns' (p.159). 43% of his linguists had learnt their grammar in school Modern Languages lessons, as opposed to 16% in English classes. As these students are the élite (adult, specialist, academic), one should be prepared not to judge too harshly non-academic, non-specialist 16-year-old pupils.

My earlier review of the concerns of teachers in Higher Education Modern Languages faculties (Metcalfe, 1992) found that there is a perceived lack of competence in grammar use and understanding among language undergraduates, and that the causes are related to the way English and languages are taught in schools. The review cited McKee *et al.* (1990); 'students are having increasing difficulty with even simple grammatical concepts and therefore a correspondingly increasing difficulty in writing the target language with any real degree of precision' (p. 46). Problems with written foreign-language work and grammatical awareness seem to be endemic, touching learners at all levels.

3.3 Specific problems with verbs

At Basic Level, the main difficulties are found in the use and formation of verbs. It is not always easy to distinguish a formal error from one of use, without knowledge of the candidates' intentions (e.g. was a wrong perfect tense put intentionally because the context was misunderstood, or unintentionally as a version of another tense?). However, it seems clear that the perfect tense is overused (perhaps because of school emphasis) where a present or future tense is required, but there are examples of the present being used instead of the perfect tense. There is evidence that the idea of future time often goes unnoticed, and that tu and vous are used indiscriminately. Note is taken of the narrow range of verbs known, resulting in overuse of general verbs such as aller, avoir, être and faire.

Frequent formal errors (indicated henceforth by *) include the word-for-word present continuous (e.g. *elle est travaille), use of infinitives with pronouns, inability to form the present and past tenses, complete omission of verbs, and construction of the future tense with a mixture of present and past tense forms. Also reported are overuse of the past participle, regardless of tense requirement, and a general increase over the years in the use of accents on verb forms ending in -e. The anglicised 3rd-person pronoun + verb-with-s (e.g. *il aimes) is common. Comments are also made on the inability of many candidates to function other than in the 1st person, which is the most frequent form used in class, and their tendency to use structures wholesale without attempting to transform them. The interrogative and negative forms are badly constructed, which is inevitable if the verbs themselves are malformed. J'ai and je suis are confused, as are the (possibly oral-affected) groups est / et and il est / il a / c'est / il y a.

At Higher Level too, the outstanding problems centre around the use and formation of tenses. Among the many references to verb misuse, the present is used instead of the perfect, the perfect instead of the future, and the past tense generally used in the wrong place. Weaker candidates swing from present to perfect to future tense randomly. There are many difficulties with the formation of tenses. Common faults include word-for-word translation of continuous present (e.g. *je suis passer), and indeterminate versions such as *je voyager and *je mangé. The observation was made that free composition was being treated as a translation exercise by some candidates. The future tense is not generally well formed. Other problems include inability to construct negatives or interrogatives, lack of agreement of verbs, confusion of tu / vous, omission of or wrong auxiliary, and 'oral-induced' errors such as the confusion of était / étaient and je / j'ai.

The problems at Higher Level were recently summed up thus: 'Perhaps the most worrying trend in so many scripts seen this year has been the marked deterioration in ability to separate one tense from another, to form agreements correctly and generally to produce a flow of accurate French at this level which can extend beyond three or four words' (NISEAC, 1992, p. 130).

We have seen that general grammatical awareness in both English and French is in decline, with a possible link between the two languages, and that the use and formation of French verbs are considered especially problematical. How strong is the hypothesis that there is a particular link between the rise in oral work and the fall in accuracy in written French verbs?

3.4 The influence of oral work on written verbs

There is no doubt that the GCSE syllabus has led to a much higher standard of performance in spoken French in recent years (see e.g. NEAB, 1992; ULEAC, 1992). However, there is a feeling that concentration on speaking skills has had a direct influence on the way French is written, especially, and interestingly, with reference to written verb forms. At Basic Level, NEAB (1990) points out that the difference between oral and written tests is that, in the former, the verb may well have been supplied in the question without the candidate needing to repeat it, but in written messages use of the verb cannot be avoided. WJEC (1992) noted that many candidates failed to communicate in writing what they had undoubtedly learned for their oral examination, and SEG (1990) suggested that with verb work teachers should try to relate more closely what is said with what is written. At Higher Level, two different boards present a similar analysis; 'many candidates had great difficulty in writing accurate French, the main problem being with the formation and use of verbs [and] some candidates would appear to have some oral competence which they are unable to transfer to paper, for their spellings were almost phonetic' (SEG, 1990, p.24). Also, 'a good proportion of candidates write as they speak; since orally they often communicate well but pay little attention to ... the exact nature of verb forms, they are often poor performers when it comes to writing French' (ULEAC, 1992, p.18).

As far back as 1983, Eskey claimed that the rise in communicative methodology was having a severe effect on standards of written accuracy. Whereas it used to be thought that mastering forms would lead to communication, the new orthodoxy was that communication could achieve mastery of form. Eskey felt that, 'we cannot go on accepting inaccurate language simply because it communicates something that a clever native speaker can somehow understand' (1983, p. 322). Fossilisation will occur where rewarding fluency actually reinforces inaccuracy. The writer wanted to find ways of teaching form and use together, which he described as, 'perhaps the major problem in learning a new language' (p. 321). In short, we have to give students what they need.

Those involved in teacher training have now taken up this issue. Swarbrick (1994) notes the unfairness of teachers who create a problematic area by neglecting writing, and then judge written performance too harshly. She issues the blunt and timely warning that, 'unless the balance is redressed soon, the criticism directed at us by future generations will reflect not an inability to speak a foreign language, as was the case pre-GCSE, but an inability to read or write it' (p. 141). According to Mitchell (1994c), 'the "communicative approach" has been interpreted to date, at least in British schools, as very largely an oral approach. The skills of reading and writing have so far been marginalised, rather than rethought' (p. 41).

This reappraisal will be welcomed by Clark (1993), who feels strongly that the problem is within the GCSE syllabus, and that teachers should not be 'enslaved' to it. Citing the problems of A-level pupils who actually regress and appear to know no more French after five years than after three, she warns that 'we cannot afford to have students wishing to continue the study of a foreign language who have been so badly neglected by the style of teaching that they are irretrievably lost and cannot write even simple coherent French' (1993, p. 66). Writing is seen as the most difficult skill area in the move from

GCSE to A-level, as there are even grade B pupils who have written very little French in their careers and are expected to make a huge transition. Rock (1993) points out that, 'the danger of a procedure which requires examiners only to tick features worthy of credit consists in encouraging classroom practices which do not allow candidates to see clearly where they are making mistakes' (1993, p. 29). This author claims the decline in written performance at A-level has been quickened by 'positive marking'.

3.5 The problem in perspective

NISEAC (1992) admits that, despite the decline in written skills, there are reasonably high standards in reading, listening and speaking, with more chance of finding something to assess than in the days of GCE. SEG (1992) also adds in mitigation that many of these criticisms were aimed at O-level candidates 20 years ago. A survey of O-Level Examiners' Reports from that period (JMB, 1969-1973) does indeed reveal criticisms of verb formation and usage, but we have to point out that completely different parameters and expectations then prevailed. SEG (1992) is not comparing like with like. The imperative, the conditional, past historic and past anterior tenses, depuis constructions and past participle agreement are mentioned, with the pluperfect being 'strangely unpopular' (JMB, 1973, p.10). These comments would be inconceivable today as most of these constructions are simply not encountered in lessons.

These laments should be seen in the context of comments such as 'candidates normally achieved consistent use of tenses' (JMB, 1969, pp. 6-7); 'continuing improvement in the use of structured sentences with naturally contrasting tenses' (JMB, 1970, p. 7); and similar comments in 1971. JMB (1973) even adds that tenses were competently handled against a background of otherwise deteriorating prose standards. In oral work, however, we find that large numbers of candidates had apparently not had the requisite preparation (JMB,

1969) with widespread failure to distinguish tenses, many vague verb-forms sounding like infinitives and an increase in pronunciation of silent endings like -ent (JMB 1972). We therefore have evidence that, whereas nowadays it seems that oral work adversely affects written performance, twenty years ago the exact opposite was the case.

At that same period, a series of concurrent 'Alternative' syllabuses were offered by JMB in an attempt to incorporate contemporary notions of communicative competence, and the thrust of criticism of written work was already directed at poor use of tenses (JMB, 1969, 1971, 1973). Each candidate sat two distinct Conversation examinations with very different criteria; one emphasising communication and the other stressing grammatical accuracy. These naturally produced different analyses in the Examiners' Reports. On the one hand, misuse of tenses was berated in Conversation I (JMB, 1970-73), while on the other hand candidates in Conversation II were found to express themselves, '...some with great inaccuracy, but it is worth stressing that these latter are better rewarded than those whose fear of grammatical error inhibits their ... willingness to communicate' (JMB, 1972, p.10), with the comment elsewhere that, 'grammar, in terms of agreement and verb forms, is often shaky, but that does not hinder facility of expression which is considered the more important aspect of the examination' (JMB, 1971, p.11). With hindsight, pupils (and teachers) must have been very confused by the attempt to satisfy advocates of both 'traditional' and 'communicative' methodology by applying two different oral marking schemes within the same examination.

3.6 Verb use in GCE and GCSE examination papers

Another way of looking at the change in emphasis in French verb requirements is to analyse the verbs used in actual examination papers. Figures 3.1 and 3.2 attempt to make comparisons in the quantity and tense of verb forms used in GCE and GCSE examinations about 20 years apart. They are not entirely comparable because of mark allocation and overall structure, but they give some indication of the changes that have taken place. Figure 3.1 compares the verb tenses used in questions appearing in JMB's 1971 GCE O-Level French Paper 2 (Translation into English, and Comprehension) with those in NEA's 1988 GCSE French Higher and Basic Reading Comprehension Tests. Figure 3.2 makes a similar comparison between JMB's Paper 1 (Translation into French, and Composition) with NEA's Higher and Basic Writing Tests.

French to English Translation & Comprehension	1971	1988
Past Historic	29	0
Imperfect	22	4
Infinitive	19	17
Present	8	59
Perfect	8	19
Pluperfect	8	0
Conditional	3	2
Present participle	2	3
Conditional Perfect	1	1
Perfect infinitive	1	1
Subjunctive (marked)	1	1
Subjunctive (unmarked)	0	1
Imperative	0	2
Future	0	3
Future with aller	0	1
TOTAL	102	114

Figure 3.1. Verb Tenses appearing in 1971 GCE O-Level French Paper 2 (Translation into English, and Comprehension) and in 1988 GCSE French Reading Tests (Comprehension).

English to French Translation & Composition	1971	1988
Past Historic	9	0
Present	5	10
Infinitive	4	5
Conditional	3	1
Imperfect	3	1
Pluperfect	1	0
Perfect	1	5
Future	1	1
Pres. participle	1	0
Imperative	0	2
Past participle	0	1
Future with aller	0	1
TOTAL	28	27

Figure 3.2. Verb Tenses appearing in 1971 GCE O-Level French Paper 1 (Translation into French, and Composition) and in 1988 GCSE French Writing Tests (Composition).

It is noticeable that there has been a move towards the present and perfect tenses at the expense of the past historic, pluperfect and imperfect, though it is interesting to note that the raw totals for overall occurrences of verbs are very similar for the two examinations in each table. Apart from quantitative comparisons, one can note that the GCE paper includes sentences for translation like il faut pourtant que je sorte de là, toute seule, sans appeler au secours, while the GCSE Higher Reading Test at one point contains 400 words of French without a single verb.

In that same GCSE Test, candidates must have received mixed messages about the importance of verbs, as 29 marks were allocated for passages with only two verbs as compared to 21 marks for passages containing over one hundred. Much classroom and examination work nowadays involves exposure to items of so-called 'realia' containing virtual 'verb-free zones' of French, or with the verb only relevant as a lexical item. As the tabular figures show, however, the overall 'quantitative exposure' to verbs may not be the main change. The difference now seems to be that there is less 'qualitative exposure', which requires emphasis on an understanding of verb tenses, structures and related concepts. GCE work provided a regular flow of French in which verb inflections had to be understood, while GCSE work gives a less coherent, more distorted impression of the value of these structures.

As has already been noted, teachers in Higher Education have an increasing interest in what is happening in schools. After the findings in this chapter were published (Metcalfe, Laurillard and Mason, 1995), they were immediately cited by Engel and Myles (1996) to inform the growing debate on what sort of grammar should be taught at university level. The findings were also used by Turner (1996) in her discussion of syllabus design in the National Curriculum. As the following section promises, we shall return to the issue of grammar teaching in a later chapter.

3.7 Towards a solution

In the search for a solution to these worrying problems, it should not be assumed that a wholesale move to learning of verb tables will be effective. WJEC (1992) found very worrying the inability of Higher Level candidates to transfer their obvious basic grammatical skills into something intelligent and creative. They noted that some candidates had filled their first page with three tense conjugations of regular paradigms (plus avoir and être) and had listed all the past participles, but were incapable of writing one single verb correctly in the context of a sentence. Hooper, Mitchell and Brumfit (1994) also refer to a pupil who pointed out the paradigm of avoir which she had copied out hoping it would be useful, but who was unable to discuss or understand its meaning in a real sentence.

The language teacher is in a very difficult position. The main aim is to obtain as many good grades for the pupils as possible by whatever means. If the marking system allows this without recourse to much knowledge about verbs then it is inevitable that a 'real-world' approach will be taken, given the many constraints on time and resources. It seems to be a question of degree. The Examiners would argue that there should be some move back towards accuracy, especially as explicit work with verbs may actually help communication, while the teacher will take a hard look at the teaching time available and ask whether extra work on verbs will produce better results than, say, more listening practice. Harley and Swain (1984) and Harley (1993) suggest that explicit reference to written French verbs at an early (normally exclusively oral) stage of learning could be beneficial, an idea endorsed by at least one examination board: 'Since the verb is the cornerstone of any written sentence it is unfortunate that more attention is not given to it in preparing candidates. Perhaps teachers should try to link more closely what is said with what is written' (SEG, 1990, p. 20).

In considering the hypothesis about the effects of oral work (outlined in Chapter 1), we can state at this point that there is a strong feeling among several examination boards and educators that an over-emphasis on oral work has reduced written standards, especially of verb forms. Although the evidence for this effect may be circumstantial (the nearest thing to 'proof' being pupils' phonetic spelling), it seems very powerful nonetheless. It is hard to ascribe such a manifest decline in written performance to coincidence in the light of greatly increased oral work.

If we accept that more organised knowledge of verbs could have a significant impact on (at least) examination results, then the search is on for a less time-consuming method of learning than exposure to examples, and a more digestible one than rote-learning of paradigms. A role for computer-assisted language learning (CALL) is one of the options available to save time and make the exercise more palatable, while a principled approach could remove the charge that no 'real learning' is taking place. Furthermore, if the impact of the written word has indeed been reduced, then CALL may have a specific role to play in re-establishing its importance. The written and spoken verb elements should be complementary rather than competing for the pupils' attention, and CALL may be ideally placed to provide the link between these elements if a program could be created which highlights the disparity between spelling and pronunciation. Before discussing grammar-teaching principles in relation to CALL, more information is needed about what the actual barriers to verb learning might be.

Chapter 4

They shall not pass: barriers to verb learning

Ils ne passeront pas!
(Inflected expression of resistance, France, 1916)

The last chapter showed that teaching activities may be erecting barriers to the effective learning of French verbs for written production. The Open University's recent manual (*Teaching Modern Languages,* 1994) has recognised the dangers of these trends, with Swarbrick noting, 'concentration on oral skills at the expense of others is both misguided and artificial' (1994, p. 141). Krashen (1988) himself, seen as an instigator of communicative practice, is clear that writing and speaking skills have different requirements. Even where a reasonable amount of work is done with French texts, there is a tension between the requirements for reading and writing activities.

Consideration is now given to other barriers to verb learning, whether inherent or as a result of teaching methodology. As there is no *Journal of Verb-Learning Studies*, a wide range of sources has been consulted. After a review of the universal difficulties encountered by learners, barriers are categorised as linguistic (mainly concerned with properties of language), psycholinguistic (mainly related to the language learner) and pedagogical (primarily concerned with teaching). Not all the barriers fit neatly into these categories, but it is at least a systematic attempt to paint a coherent picture of the problems involved. The chapter concludes with a discussion of the effects of redundancy and context on effective verb learning.

4.1 A universal problem

4.1.1 Philosophy

If it is debatable whether language influences conceptions of time, there is at least agreement that different languages represent time variously. Hinkel (1992) maintains that different cultures and languages have very different ways of looking at time attributes, and somewhat misleadingly cites Comrie (1985) in support of her observations. However, a closer reading of Comrie makes it clear that he disputes the strong claim that Western and non-Western philosophies have radically different ideas of time. It cannot be taken literally that some societies have 'no concept of time', given a commonsense view of night following day. The long-established Whorfian claim that languages such as Hopi have no general notion of time or grammatical devices for locating events in time is also completely dismissed by Pinker (1994).

Comrie adds that although some cultures have a cyclical concept of time, it is on such a macroscopic scale that it is irrelevant in practice. Nevertheless, Hinkel (1992) claims that a great deal of ESL research supports her view. Apparently, Hebrew speakers find some English past tenses redundant, while Chinese speakers may need to re-hypothesise completely their ideas of time and its reference. Pinker (1994), however, warns against the strong claim that thought is shaped by language, citing allegedly flawed experiments which purported to show that Chinese learners of English could not entertain hypothetical events because their language lacks a subjunctive mood. Moving from time attributes to the firmer ground of tense representation, Hinkel (1992) and Comrie (1985) agree that languages differ in the accuracy with which temporal location is achieved and the way in which situations are located in time. Tense reference can be made by a continuum of methods, ranging from grammatical means (such as bound morphemes on inflected verbs) at one extreme, to lexical means (such as the use of nouns and adverbs) at the other.

These concerns may seem a far cry from the needs of GCSE French pupils, but the point is well made that 'tense-related instruction does not always strike a familiar chord or provide for a point of reference in non-native speakers' (NNSs') conceptualisations of time and its grammatical encoding' (Hinkel, 1992, p. 568). Pupils with little language sensitivity may find verb-related concepts hard to learn. In Chapter 1, reference was made to the deleterious effect on foreign-language undergraduates of 'non-grammar' English teaching in schools as reported earlier (Metcalfe, 1992). There is a perceived lack of overarching grammatical awareness extending across all school-taught languages. Reflection on language form is certainly far from universal, with an understanding of explicit grammatical concepts and metalinguistic awareness uncommon outside an L2 lesson. Under the influence of the National Curriculum there is a revival in grammar teaching in school English classes which may be helpful, but it could be some time before the effects are felt. Language teachers may still have to provide remedial teaching in basic grammar. Bearing in mind the problems encountered by the university élite, teachers should not be too critical of their pupils' efforts.

Pupils could benefit from 'verb awareness' material, such as illustrations from a Bantu language described by Pinker, which has sixteen possible gender classes for verb subject and object, and tenses such as 'today, earlier today, yesterday, no earlier than yesterday, yesterday or earlier, in the remote past, habitually, ongoing, consecutively, hypothetically, in the future, at an indeterminate time, not yet, and sometimes' (1994, p. 128), all of which produces half a million forms per verb. Opening pupils' minds to such concepts, however extreme, might raise their consciousness of verb function in L1 and L2, and make less likely comments like, 'I knew they had verbs in French. I didn't know they had verbs in German as well' (Clark, 1994, p. 84).

McLagan shows how such an approach might work while teaching L2 tenses to weaker pupils. He notes that, 'learners may frequently use the present tense in their own language when recounting events in the past ... The introduction of the past tense in a foreign language may represent a huge step' (1994, p. 71), and suggests that the concept of 'past' may need establishing first by using a calendar, and then by exercises making learners think about the past, present and future in English and the L2. The problems may be as much with teaching methods as with learners. Pupils of moderate ability can acquire good levels of grammatical understanding if the material is taught sympathetically.

4.1.2 Grammaticality

While one may expect differences in grammaticality judgements of tense from speakers of languages at the extremes of the grammatical-lexical continuum referred to above, it is less obvious that there will be differences between speakers who share the inflectional mode. However, Coppieters (1987) has shown that even very advanced near-native speakers of a language have different grammaticality judgements from those of real native speakers (NSs).

His experiments involved the discussion of French grammatical points, including tense usage, with NS and near-NS adults and found that superficial similarities hid underlying grammatical differences. Native language had a significant effect on the results, with Romance speakers having clearer grammaticality intuitions than non-Romance speakers. Coppieters adds that NSs, who themselves showed slight variations, were surprised at the qualitatively different underlying grammars developed by fully integrated near-NS colleagues. As the language examples used in the experiment were decontextualised, they reflected a 'conventional' meaning for each form. Coppieters suggests that a fundamental difference between NSs and near-NSs is the ability to derive interpretation from a sentence without explicit context. It is context which typically over-determines the meaning of a tense. He concludes that NS / near-NS differences reflect the fact that there may be several learning routes and that a language does not impose a specific grammar on its speakers.

If advanced L2 learners do not share NS grammaticality judgements, then lower-level GCSE learners cannot hope to approximate NS understanding, however superficially correct their output may be. Although this barrier may be insuperable, it will help pupils if they are made aware of these conditions and do not have unrealistic demands made of them. Krashen (1988) refers to learner attempts to achieve 'the *illusion* of the native speaker's syntactic level of performance' (p. 14, my italics) by accurate self-monitoring, and, in the final analysis, teachers would be grateful for this superficial correctness which brings success in GCSE examinations.

4.1.3 Universality

Learning any foreign-language verb system is difficult, especially for non-advanced pupils. While accepting that NS-like understanding of tense is unattainable, it is nonetheless the case that many learners struggle to achieve even moderate success with L2 verb use. Coppieters (1987) sees this as a traditional difficulty, as confirmed by many classroom teachers. Klein notes that 'there is a general tendency for beginning learners to avoid inflection, even though the idea of having inflection may be familiar to the learner from his native language' (1986, p. 160) and Zalewski (1993) reminds us that even advanced students make morphological errors.

Part of the inherent difficulty of teaching temporal reference is, as Rutherford maintains, that it is not an entity constructed from subcomponents, but rather a system which must be perceived, 'a code network that realises through language one important area of cognition - namely, the perception of time' (1988a, p. 234). Coppieters states that it is very difficult to provide clear explanations for some points, and 'developing predictive principles for the use of tenses in any language is a far from straightforward matter' (1987, p. 567). We do, therefore, seem to be dealing with a universal problem.

4.2 Linguistic barriers

'Linguistic barriers' are defined as those impediments to verb learning which are mainly inherent in the language being taught, or in all languages. Though the teacher cannot remove such barriers, an awareness of their existence and a willingness to adapt instructional strategies can reduce their effect on the pupils.

4.2.1 Intrinsicality

According to some researchers, there appear to be intrinsic features of the French verb system which cause problems for all learners, including native speakers. In an experiment designed to test students' L2 knowledge of French verbs, Buteau (1970) found that his control group of L1 French speakers also made errors. Harley's more recent work with primary- and secondary-age L2 immersion and L1 pupils led her to conclude that 'acquiring the auxiliaries and inflections of the French verb system is a challenging task, not just for second language learners but for first language learners too' (1992, p. 171). She cites problems of verb homophony and irregularity as underlying causes of this phenomenon, which should give some indication of the nature of difficulties faced by GCSE pupils.

4.2.2 Specificality

As a complement to the above section, there is evidence that French verbs pose more problems to learners than do those of other Romance languages such as Spanish or Italian. Giacalone Ramat's (1992) research on Italian acquisition showed that all categories of learner developed an early 'morphological sensitivity' (defined as the ability to analyse input morphologically and distinguish variant forms of a grammatical category such as tense). This is in striking contrast with acquisition of French where learners are particularly slow to acquire verb morphology for tense relations. Italian has a more perceptually salient morphology in verb endings than French, which has, for example, homophony in -é, -er and -ez. Garrett (1987) noted that personal endings on French verbs are redundant, as the subject must be explicit and the information is clearer there. The subject is often omitted in Spanish, making verb endings communicatively more important. It should be added that Spanish morphology is also far more salient orally than that of French.

Teachers often instinctively try cognate-language teaching, using knowledge of one language to support the learning of another, although the process may be carried out *ad hoc*, where a second L2 like Spanish is taught to pupils who have several years' experience of French. This approach was formalised in a computer program by Galletly, Butcher and Daryanani (1992), who tried to avoid the repetition and redundant effort in learning a new language. Their program used 'identical' prose passage in French and Spanish, and included comparison work on verb regularities. Students found the program 'useful', but there was no analysis of its effect. Further research on cognate teaching of verb elements would be most useful.

4.2.3 Transferability

French and English have different inflectional forms and verb structures, and their inflections may be acquired in different ways. Although both languages share an inflectional approach to tense representation, the structures are so dissimilar that transfer of an L1 form to L2 is a barrier to production. The literature on L1 / L2 transfer is large and often contradictory, with transfer seeming to depend on such variables as grammatical markedness and learner ability. Although Larsen-Freeman and Long (1991) note that we are a long way from predicting accurately when and how L1 transfer will occur, researchers have shown that it can occur in verb use. Harley and Swain's (1978) English pupils on a French immersion course had a single verb form for the present tense with no marking for number or person, similar to English, in which subject number and person reference is carried out by the subject (except in 3rd-person singular). Pupils also showed a preference for English-style analytic forms instead of synthetic endings (e. g. using je vais + infinitive for the future, rather than an -ai ending).

Later research (Harley and Swain, 1984) demonstrated the continuing role of L1 present progressive, with French construction interpreted in terms of an English verb frame. The transfer of the English two-place construction for the simple past (I spoke) to French (j'ai parlé) is one reason for the common perception of j'ai as an unsegmented unit, but homophony may play a greater role. *Il est parler may be used for he is speaking, and the appearance of je suis allé may be a learner version of I am going, rather than I went. Bardovi-Harlig warns that learners' verbal morphology, 'frequently does not reflect the [temporal] distinctions that the target language itself maintains' (1992, p. 255), recalling Kaplan's (1987) finding that students learning French as a foreign language use target-like forms with non-target-like meanings. One should be therefore be suspicious of such forms if intended meaning is not clear.

In any case, recent work by Zobl and Liceras (1994) suggests that inflection acquisition proceeds along fundamentally different lines in English and French. In Universal Grammar terms (see Chapter 2) English is apparently parametrised for affixes to 'hop' onto the main verb, while in Romance languages the lexical head moves to 'pick up' inflections. If correct, this means that the relevant parameter settings for French and English are of a wholly different nature, not just a dichotomous 'on / off' configuration. This is a reminder that, though we have classified transferability as a linguistic barrier, a strong psycholinguistic element is present.

4.2.4 Saliency

The position of a verb in an utterance can affect how much it is noticed. It is a claim of cognitive science (Shuell, 1990) that human selective perception means that not all information is noticed or attended to in the same way. There is simply so much information available that learners will direct their attention to features which are more salient. After examining research on the position of words in utterances, Klein (1986) has noted that positions of salience are at the start and finish, and before or after a pause. If verbs themselves are not the opening or closing words of a French utterance, which is often the case, they may be less noticeable than competing information. The saliency of a feature may actually be a disadvantage in the case of one particular pronoun and auxiliary. Harley and Swain (1984) believe that j'ai is often treated as an acquisition unit (instead of two units, j(e) + ai) because of its phonological salience as an initial stressed syllable. Furthermore, according to Klein (1986), taking particular notice of one word could make nearby ones 'weak spots' for the listener. Although conditions of pause and emphasis will not apply to written texts, the position of a word may still affect noticing.

4.2.5 Opacity

The lexical meanings of verbs seem far more important and transparent than their opaque, abstract endings. Early L1 learners are influenced by the inherent semantic aspect of a verb when acquiring tense or aspect markers, each inflection being associated with a semantic class of verbs. Typically, verbs that are 'states' are seldom inflected, 'activities' are continuous, and 'events' are put into the past. According to Andersen and Shirai (1994), there is a similar tendency in adult L2 acquisition. It appears that learners initially use past markers on event verbs simply to complete them, not because of their tense, as 'a grammatical morpheme is first used by learners according to how relevant it is to the meaning of the verb' (p. 145). Learners will pair an appropriate verb and inflection, but very often the inflection will be congruent with the meaning of the verb and therefore add little information.

Klein's SLA work on the acquisition of finite parts of a verb (the marking of tense, person and number) shows how hard it is to isolate the finite element in a flow of speech. 'For the learner the lexical verb itself is more conspicuous, being relatively invariant across all sentence forms ... This contrasts with the rather abstract meaning of the finite element' (1986, p. 91). Radford (1990) supports this with findings from English L1 acquisition which show that functional inflections (e.g. for tense) are acquired later than lexical inflections (e.g. plural -s). He shows that 'the linguistic properties of items belonging to functional categories make such items more difficult to learn than than those belonging to lexical categories' (p. 263). Formally, functional items are less acoustically salient, less uniform and more opaque in their structure than lexical ones, while semantically, 'functors' are more abstract in meaning than lexical 'contentives'.

4.2.6 Homophony

Many inflections and auxiliary verbs sound more or less the same to the untrained ear of GCSE pupils. The main problems centre round the verb endings -*é* -*er* -*ez* (all pronounced [e]), -*ais* -*ait* -*aient* (all pronounced [ɛ]); the auxiliaries *est* [ɛ] and *ai* [e]; and the 1st-person pronoun, with and without *avoir*, namely, *je* [ʒə] and *j'ai* [ʒe].

In their 1978 immersion study, Harley and Swain noted that in written tests at age nine or ten, the -*er* inflection was a common misspelling for -*é*, and that their L2 group relied on a substantially smaller range of phonologically distinct forms than did L1 children. Harley (1992) also found that *je* and *j'ai* are often confused, and suggested, 'the use of first person [ʒe] is not clearly interpretable as pronoun plus auxiliary with unambiguous past time reference. Rather, it appears to function at least some of the time as an unsegmented chunk corresponding to the English pronoun "I" ' (p. 173). This is not the only difficulty, however, as the *j'ai* sound also appears to function as part of *j'* [e], *tu* [e], *il* [e], almost comprising an all-purpose auxiliary or full verb translating parts of *to be* or *to have*. Pupils wrongly producing **j'ai parti* with *il est parti* are actually being consistent with the sound of the auxiliary verb, and have their instincts seemingly confirmed by the fact that French uses both *avoir* and *être* as auxiliaries.

Remedial work by teachers should focus on these specific areas. Harley and Swain (1984) feel that oral work should be accompanied by written input drawing attention to the bi-morphemic status of *j'ai* as opposed to *je*, and suggest card-sorting games to construct sentences, possibly on a computer. Other forms of clarification could be found to reduce the endemic production of -*er* as a version of -*é* in written texts. As it must be stressed that the effects of homophony or near-homophony are intensified by the marginalisation of written work, a sensible move would be to integrate exercises in listening and reading, or speaking and writing, which would raise pupils' consciousness of how spelling diversity contrasts with oral homogeneity.

4.2.7 Quantity

Apart from qualitative differences in French and English morphology, we should acknowledge that the overwhelming quantity of French inflections is a further barrier to learning. Klein remarks that, 'English verbs have a very limited inflection ... which contrasts strongly with other European languages, where verb ... inflection is a source of endless problems for the learner' (1986, p. 47). The bilingual dictionary *Collins Robert* (Atkins, Duval and Milne, 1983) illustrates the point by allocating fourteen pages to the French verb and fewer than four to the English.

This overloading of learners' cognitive capacity may relate to a lack of organisation of verb information into suitable categories. In an effort to solve this problem, Herschenson (1993) suggests a revolutionary reclassification of French verbs, which abandons concepts of regularity and conjugation class, and reduces all verbs to 'variable' or 'invariable'. However, her ideas might have limited impact as they require a paradigm shift in thinking, and will only be effective with oral work, but there is force in the message that teachers are responsible for enabling pupils to find ways of categorising verb forms in order to ensure mental storage and retrieval.

4.3 Psycholinguistic barriers

In this section we consider those barriers to verb learning which reside mainly in learner psychology; that is, the natural tendencies manifested by the pupils themselves while learning a language. While the linguistic barriers just noted relate mainly (but not entirely) to the 'product' being taught, the concept of 'psycholinguistic barriers' is an important reminder to the teacher that language learning is a *process*. If the teacher is aware that there are certain errors that pupils are almost bound to make, then a constructive rather than critical approach to instruction can be expected.

4.3.1 Naivety

It is common for non-advanced learners to assume L1 / L2 word-for-word equivalence. The effects of this barrier to verb learning are difficult to distinguish from those of L1 transfer, but the distinction resides more in the level of learner ability and language awareness than in the nature of the L1. Bland *et al.* (1990) have formulated the Naive Lexical Hypothesis, which reflects a lexical rather than grammatical focus of thinking and assumes word-for-word translation from L1 to L2. Although teachers may see this as an impressive-sounding name for a phenomenon which has been acknowledged for decades, it is an important reminder of how differently experts and naive learners think.

As far as verbs are concerned, the most naive learner will attempt 'token matching', which could involve searching for an inflected verb like says in the dictionary. At a higher level, 'type matching' will occur, in which the base form say will be sought. Faulty token matching of inflected verbs results from mapping an unanalysed L1 chunk onto a hypothesised L2 chunk. Bland *et al.* believe this 'reflects a lack of awareness of the possible need to construct meaning according to different meaning-form relationships in L2' (1990, p. 442). The Hypothesis also claims that performance may be unstable, with the learner at times so involved in the English way of expressing thought that English inflections are left intact, while at other times being able to move away from English and search for base forms. One of the authors' students, who had already used reflexive verbs, looked up each other in a dictionary instead of seeing it as a grammar problem.

Harley & King (1989) also show that learners perceive communication problems as primarily lexical in nature, with help being requested for vocabulary gaps rather than grammatical structure, while more recent work by Harley confirms an initial assumption that word-for-word equivalence exists, 'a tendency which may be particularly strong in a classroom L2 context where most of the learners share a common L1 and are constantly using [it] outside the classroom' (1992, p. 161). The L1 lexical system may not be the best frame of reference for L2 meaning.

The concept of a 'basic learner variety' of a verb has been elaborated by Klein (1986) and Giacalone Ramat (1992). Early learners have a limited repertoire of standard word entities (referred to by Klein as 'morphs') which show no grammatical variation or clear word class. Klein cites examples of successful communication using underlying complex rules but involving no inflection, auxiliaries or finite verbs, with time instead being constructed by devices such as the chaining of events and the resetting of perspectives. An uninflected basic variety is seen as a natural occurrence, being the first part of the grammaticalisation process in the acquisition of verbal morphology. It can be regarded as a default form in which the learner extracts an invariant part of the verb from a wide range of forms, before possibly moving on to the stage of adding inflections. These observations refer primarily to naturalistic acquisition, but they are relevant to classroom settings. The basic form used by naturalistic learners may fossilise once communicative needs are met, but the class teacher can provide an environment in which learners place a value on inflection.

4.3.2 Regularity

There is a natural human inclination to try to impose order on chaos, hence the tendency for many learners to assume that all verb forms are regular. As 90% of French verbs are regular -er, it is common for pupils to overgeneralise the 1st-conjugation oral pattern to other verbs, producing problems with irregular 3rd-person plurals (Harley, 1992), e.g. *ils vient instead of ils viennent, by analogy with homophonous il parle / ils parlent. Harley and Swain's (1978) immersion pupils also frequently reduced irregular verbs to a single form by analogy with the -er paradigm, (e. g. *je va for je vais), as well as using the infinitive itself for irregular past tenses. This latter phenomenon may be an overgeneralisation of the principle that in -er verbs the same sound pattern is used for the infinitive as for some past tenses (e.g. donner, donné, and donnais).

Harley and Swain concluded that most past tense errors involved an elimination of formal redundancy in the L2 system; 'the learner might well ask; if in -er verbs it is not possible to distinguish between past participle, imperfect and infinitive, then why do it with other verbs? Why have other conjugations at all ?' (1978, p. 58). Although this is essentially an oral effect, the influence of spoken French upon written is now so strong at GCSE that similar principles may obtain.

The urge for learners to regularise verbs may in part explain why traditional grammar teaching emphasises exceptions and irregularities. As the current approach to grammar pedagogy may encourage regularisation by attaching less importance to exceptions (Herschenson, 1990), the class teacher will have to make a careful appraisal of the needs and abilities of pupils before deciding on a teaching strategy.

4.3.3 Teachability

A particular verb structure may not be teachable if the learner is not ready to learn it. Pienemann's Teachability Hypothesis questions assumptions teachers make about their students. Recognising that every learner builds up their own grammar, Pienemann claims that 'you can't teach everything you want' (1989, p. 57) as acquisition processes cannot be steered just by formal instruction. Teaching is subject to some natural constraints and only promotes acquisition if the interlanguage is close to where a structure would be acquired naturally. Formal learners learn 'stepwise', with each structure requiring a processing device developed at the preceding stage, and may not follow the order laid down in a teaching programme. In fact, premature learning of a structure is counterproductive as it can cause avoidance or withdrawal of its use by a learner.

There are serious implications for pedagogy, but Pienemann does not propose a methodology, rather 'psycholinguistic background information' on which to base teaching methods. He does not suggest abandoning formal teaching, as this would lead to fossilisation, nor always following the 'natural order', as not enough is known about this area. Teachers need an awareness that some stages of learning cannot be bypassed, and that problems in verb learning may be a result of structures being taught too early.

4.3.4 Maturity

Errors in verb production are a normal phenomenon, and may indicate systematic learning. Pupils can pass through developmental stages where incorrect verb production reflects that the language learning process is in good order. In L1, children are known to use unanalysed past tenses early (I ate), followed by a phase where a *correct* analysis of regular verbs is overgeneralised to *I eated, with a final return to the (this time analysed) form of I ate. A similar example with a French verb is recorded by Harley and Swain (1984) in j'ai oublié > *j'ai a oublié > j'ai oublié. The first item is an unanalysed expression, while the second shows the desired movement from English two-place past tense to the French three-place (but with j'ai still being seen as unsegmented). The final version correctly sees j'ai as two items.

This kind of 'U-shaped behaviour' (see Chapter 2) is part of the process of interlangage development (Larsen-Freeman and Long, 1991) in which pupils devise their own grammar to explain what they see, then continue through a series of revised grammars which increasingly approximate the real one. Errors can be seen as windows into interlanguage development rather than mistakes in the target language. We have already noted the advice of Larsen-Freeman (1991) and McLaughlin (1990) that learning is non-linear, with backsliding occurring as 'restructuring' takes place. This is reassuring from the student's viewpoint, but requires a substantial change in outlook from the teacher. Just as incorrect use may be a sign of development from a superficial stage, the counterpart is that correct use of surface forms does not always imply understanding. The existence of 'U-shaped behaviour' means that teachers should not assume that a form has been learnt properly simply because it has appeared correctly.

4.3.5 Accessibility

Even if verb endings are explicitly 'known' (e.g. in verb tables), this is no guarantee that they are accessible for use. In Chapter 3, reference was made to Examiners' Reports which mentioned that a candidate knew explicit verb paradigms without being able to use verbs correctly, and Harley and Swain (1978) cite plural forms being used in a paradigm by a pupil who could not use them functionally. Harley's (1993) assertion that, 'being able to conjugate verbs in different tenses tells us nothing about their contrastive uses in communication' (p. 249) sums up these findings.

Krashen's (1988) distinction between learned and acquired language is of particular interest here. The above illustrations do not invalidate his strong claim (the 'non-interface' hypothesis) that explicit rules cannot become implicit knowledge. In his terms, these pupils are inefficient users of the Monitor (see Chapter 2), which should be applied when a focus on form is required. Citing examples of errors in subject-verb agreement, past participle and infinitive confusion, and irregular verbs, Krashen maintains that many written errors do not reflect a lack of knowledge, as pupils may know the rules and can correct if attention is drawn to errors, but rather a failure to apply the Monitor effectively. He reminds us that even good learners may only be able to recall part of the rules we give them.

Explicit decontextualised knowledge of verbs may produce the phenomenon of language fragmentation. Klein (1986) gives examples of how a learner uses apparently familiar parts of L2 knowledge to decipher utterances, but is misguided because those parts are fragments of other words. Herschenson warns against using fragmentary methods in teaching verbs, where paradigms are completely broken up and forms of a given conjugation are not taught at the same time (perhaps by some forms being used in context before others are presented). 'The breakup of verb conjugations may be a hindrance to students trying to formulate generalisations regarding the morphological functioning of the target language. Its questionable justification is far outweighed by the advantage of giving students insight into the overall morphological system of the language' (1990, p. 455). It is not uncommon for schools to teach in exactly this way, and possibly deprive pupils of an overview of language patterns. While mindless rote-learning of verb tables has little value, as noted above, it seems that knowledge of paradigms, perhaps in a limited or adapted form, may be a useful tool if acquired and used in the right way.

4.3.6 Durability

Verbs may well be 'known' communicatively, but in times of stress pupils may regress to basic uninflected forms as a default, even though they are known to be inappropriate. This phenomenon is part of Sharwood Smith's (1991) 'control variability', or the 'on-line processing of competence'. He maintains that, 'apparently random behaviour may be caused when the language user experiences some kind of stress or overload due to fatigue or distraction' (pp. 98-99). Klein (1986) also notes that a learner may suddenly regress to an earlier stage, for example by ignoring the inflections of verbs for a few sentences in conversation. This could be caused by fatigue, showing 'the repressed presence of earlier language varieties [which] do not disappear without trace, but rather are overridden by the new varieties' (p. 52).

These insights may help explain the apparently inexplicable to many teachers. How can it be that a pupil who has mastered verb morphology in formal and communicative contexts can produce elementary errors in an examination? The answer may be that the old forms never completely go away. These observations are of particular relevance to GCSE examinations in Modern Languages. Despite disagreements about the proportion of coursework to examination for pupil assessment, it is commonly held that coursework is an indication of ability to produce long-term, considered, revised and edited work in contrast with performance under stress in examinations. The GCSE Modern Languages syllabuses have long been the only subjects to contain no element of coursework (the oral test somehow technically fulfilling this role). Modern Language pupils have therefore never had a chance to show what they are capable of producing in stress-free conditions. Argument continues for and against coursework in the National Curriculum, and further data are awaited.

4.3.7 Familiarity

We have seen that communicative pressure may make people use forms they are uncertain of or know to be wrong, or avoid forms which add complications. However, even when learners are not under particular pressure they may return to uninflected forms. According to Klein (1986), a learner may have a selection of competing rules of varying uncertainty, leaving it an open question which will be used. A doubtful rule may well be used instead of a more promising one simply because it is familiar and has already worked for communication; 'thus, a learner who already "knows" inflected forms - at least to some extent and with some degree of certainty - may nevertheless go on using uninflected forms for some time, or occasionally return to them' (p 148). The frequent and consistent appearance of a rule does not mean it is highly confirmed, just as non-appearance does not exclude possession and confirmation.

4.3.8 Variability

Teachers may intuitively expect pupils to produce higher grammatical accuracy in formal tests than in communicative tasks, but Tarone and Yule (1989) cast doubt on this assumption. Learner ability to produce accurate L2 grammar forms is seen as variable and related to the task in hand. It is not necessarily the case that oral communication will be less accurate than written, as written items may be an incoherent collection of sentences, while oral production may be cohesive and communicative. The pressure to improve accuracy rises in some situations and decreases in others. Tarone's earlier (1985) work had already shown marked variation between L2 learners' judgement of grammar and their use of grammar.

According to Bialystok (1991), language proficiency is not a single achievement, but represents the ability to apply specific processing skills to problems. Her contention is that 'language learners with a particular configuration of skill component development will ... exhibit a range of proficiency with the language that is determined by the impact of the task demands on the processing abilities of the learner' (p. 75). These insights are a reminder to teachers that grammatical accuracy, in verbs and other structures, will be significantly and perhaps unexpectedly affected by the task in hand. The interaction of pupil processing abilities with task requirements makes predictions of performance very difficult. The implications for teaching are that pupils may not readily transfer particular grammar skills from one area of language performance to another, and that language assessment should be differentiated rather than global.

4.3.9 Non-conformity

Before English / French verb comparisons can be made, the problem of non-Standard English may be encountered. Dialect forms of English verbs, widely used by school-children, differ from Standard English forms. Trudgill and Chambers (1991) find it significant that most of their English dialect research relates to verb use, while summaries of regional dialect in McArthur (1992, *passim*) mention the irregularity of verb forms throughout the country. Furthermore, it has been demonstrated (Petyt, 1982) that (because of peer pressure) children are more likely to use dialect than are adults, adding a 'generation-gap' barrier to that of general non-conformity.

In practical terms there may be real difficulties in trying to establish pronoun-agreement rules when, in Yorkshire dialect for example, the use of I were and you was is common. In more advanced school work, I were may reappear as a Standard form when using the subjunctive, further adding to confusion unless teacher and pupil awareness is heightened. According to Baugh and Cable

(1993), you was was Standard until early last century; many 'incorrect' dialect forms are simply old-fashioned versions. Anecdotal evidence for current pupil perceptions (1996) was gathered by a colleague working with a group of 20 Year 9 pupils (age 14 / 15) in an English lesson in Yorkshire. The pupils, potentially grade C to G in English, were asked to translate items of Hampshire dialect into Standard English. About a third of the pupils considered I were to be Standard, 'because that's how we say it'. Pupils' 'bilingualism' in Standard English and dialect need not remain a barrier to L2 learning if pedagogic strategies make use of a contrastive approach which illustrates the formal differences between these two varieties of English.

4.4 Pedagogical barriers

In some cases, barriers to verb learning are inadvertently erected by teachers themselves. 'Pedagogical barriers' may be far more tractable than linguistic or psycholinguistic ones, with more opportunity for direct action which could remove the barriers altogether.

4.4.1 Methodology

The infinitive of a French verb very often becomes the default learner form. Its presence is indeed strengthened by the influence of several factors (see the sections on Homophony and Regularity above), but how does it appear in the first place? One assessment is that the infinitive is given undue importance by course materials, examination boards and, consequently, by teachers. The Base Form of an English verb, defined by Greenbaum and Quirk (1990) as the dictionary entry form, coincides with the infinitive, apart from the absence of to. In French (Mansion, 1975) the Base Form is the stem to which endings are added (parl-), and not the dictionary infinitive (parler). By analogy with English, teachers tend to refer to the French dictionary infinitive a great deal, and it has become the standard way of categorising verbs. The French infinitive is thus reinforced for the pupils, who find it easier to drop to from an English infinitive than the bound morpheme -er from a French one.

Even in the most modern and widely-accepted text-books, the route into verbs is still through the infinitive. In Buckby (1994), for example, we find; 'to use the correct ending take off -er, -re and -ir, then add the correct endings' (p. 147); 'c'est le verbe *aller* (to go) avec un verbe à l'imparfait' (p. 153); and, 'to form the perfect tense you use *avoir* and a past participle' (p. 158). The overuse of the infinitive may therefore be partly teacher-induced, or a 'pedagogenic' error in Laurillard's (1993) terminology. It may be that a pedagogical reclassification of verbs will help the pupils, or at the very least that verbs are not treated in the same way as other lexis. Herschenson (1993) actually suggests reorganising verb-learning without using the infinitive as the basis for conjugation patterns. GCSE syllabuses specify the required vocabulary, with verb infinitives simply listed alphabetically with all the other words. It is convenient to ask pupils to learn such lists wholesale for vocabulary tests, but this will only reinforce the appearance of the infinitive when it is not required. For pupils it is not the most needed form of the verb and should therefore not be the most seen.

4.4.2 Terminology

Although thoughtful L1 teaching could sensitise pupils to verb concepts (see the Philosophy section above), the lack of standardised tense definitions can cause confusion. At a fundamental level, it is not at all straightforward to allocate precise meaning to tense or aspect categories (Comrie, 1985), but even where categories have been established for practical reference purposes, a glance through any grammar book will show a confusing range of terms used to describe tenses. For example, the English tense (or aspect) was -ing is variously past progressive, past continuous, imperfect, imperfective, past descriptive, and 'simple past extended'. Its French counterpart can be 'passé continu' or 'imparfait'. Furthermore, there is rarely an exact translation equivalence between tenses. The French imparfait can represent English used to do, or with depuis, had been doing, or English simple past did if the meaning is descriptive, or 'future in the past' after si. It can even, as Mansion (1975) notes, be used as a stylistic device for single non-descriptive events in the past, despite the standard teaching that it is for continuous events only.

This is only a brief sample of possibilities from one tense. As many teachers have difficulties with these categorical and definitional problems, one can imagine how pupils will feel if overloaded with unnecessary and unstandardised terminology. Jeffries suggests that 'the use of unfamiliar terminology in a rule may actually pose an obstacle to complete understanding of the grammar principle. The unfamiliar grammar term is more than a new vocabulary word for most students; it is a new concept' (1985, p. 390). Although Bloor observes that, 'familiarity with linguistic terminology is no guarantee of accurate observations about language' (1986, p. 160), Giacalone Ramat's view is that, 'the lack of categories like agreement, auxiliary, or gender in the first language is certainly one ... reason why learners do not mark such categories in their interlanguages' (1992, p. 299). Ideally, a common approach to categorisation is needed, both within languages (including coursebooks, courseware and examinations) and between English and Modern Languages departments.

4.5 Redundancy and context

4.5.1 Context over-determines meaning

Verb endings, or even verbs themselves, are not always needed to convey the meaning of time or person. One of the key findings of the literature dealing with L2 verb learning is that in certain contexts inflections are are simply redundant. In other words, they add no extra meaning to an utterance or text if notions of time or person are established by other means. This inevitably means that the learner will pay less attention to verb endings and see them as rather pointless. It seems that redundancy involves both linguistic and psycholinguistic factors.

In some situations, even verbs themselves may be seen as redundant. Schumann (1987) found naturalistic adult learners whose language had fossilised at 'basilang' (the earliest type of second language development), and who expressed temporality without inflectional morphology or verbs by means of adverbials, serialisation and context. Speakers used 'discourse pragmatics' rather than a linguistic system. Moving from this extreme to an educational environment, we find that Harley and Swain's (1978) immersion children lacked verb forms which were not needed to convey meaning. This sometimes meant reduction to a single inflection, or the infinitive. The explanation given is that, 'since subject number and person are generally already indicated in the subject itself (or in the context), ... children tend to eliminate ... redundant parts of the verb system' (p. 55). Klein (1986) concurs that, 'any linguistic form ... is dispensable to a greater or lesser extent, depending on all of the other possible ways of conveying the information which this form is supposed to express ... Verb morphology, for example, may be largely superfluous in a given context' (p. 42). For Harley and Swain, the criterion is the point at which meaning is lost, and these authors consider that, 'it is an interesting question just how much redundancy in the French verb system ... pupils can in effect prune away and still be understood' (1978, p. 71). The teacher's job is presumably to discourage pupils from taking up this tempting challenge.

It is the lack of communicative value in a verb form which Coppieters identifies as the stumbling-block to learning. Working out the exact contribution made by a tense to the meaning of a sentence is very complex. 'Typically, the context will OVER-determine the meaning of the tense; it will be unclear exactly what the tense expresses by itself' (1987, p. 567). Indeed, Andersen & Shirai (1994) remark that it is only when a particular verb inflection is *un*expected that it will carry much information. In her perspective, Garrett (1986) portrays a continuum of how grammatical form conveys meaning, ranging from a structure which is uniquely and obligatorily meaningful, to meaningless forms which do not interfere with communication. In the middle she places forms which carry a meaning but are redundant in processing terms, such as verb endings when the subject or an adverb of time is represented. In a later paper (Garrett, 1987), she feels that, although some redundancy is inevitable, teachers could help by being more explicit about the different coding systems languages use to mark meaning. 'Traditional grammar explanations give such scanty attention to [coding systems] that students often have no idea of the differences in kinds of meaning conveyed by verb endings' (1987, p. 179). Hinkel also notes 'learners' lack of understanding of the impact of tense on text' (1992, p. 559), which explains why tenses are sometimes chosen arbitrarily despite their important role.

4.5.2 A Scale of Redundancy

At this point it may be helpful to posit a 'Scale of Redundancy' in French verb use, clarifying how verb elements might be perceived by the pupils themselves. The continuum could be expressed as follows:

- personal endings are *completely* redundant as the subject must be explicit and the information is clearer there
- tense endings are *often* redundant if the context is cohesive and contains adverbs of time
- verbs themselves may be at least *partly* redundant if the context is predictable.

We will suggest in section 4.5.6 how the Scale of Redundancy might be applied by instructional designers, after first considering a paradox in the way that verbs are taught at GCSE.

4.5.3 The Contextuality Paradox

Even when written work on verbs is done, the lack of context may make it meaningless. Although the use of decontextualised sentences may have its own justification as a research tool to elicit learners' 'conventional' understanding of tenses (Coppieters, 1987), their use in a communicative syllabus is open to question. Even in traditional syllabuses, there has always been disquiet at the use of such sentences, as demonstrated by the frequent humorous 'la plume de ma tante' parodies of juxtaposed unrelated statements into some kind of surreal chain of events. Many older textbooks contain examples which are virtual self-parodies, e.g., 'Il a changé d'avis, de souliers. *He has changed his mind, his shoes*' (Mansion, 1975, p. 118).

Not surprisingly, recent literature is critical of this approach. The influential 'Natural Approach' of Krashen and Terrell (1983) accepts that learning exercises such as drills can be valuable tools, but the authors warn that random, incoherent topics in sentences will cause confusion. 'Meaningless' grammar teaching is condemned by Widdowson (1988), who states that communication is only possible if language is related to context. In discussing the role of grammar in a communicative syllabus, Glisan and Drescher (1993) also emphasise real context and discourse to make grammar meaningful. With particular reference to verbs, Hood stresses the importance of a framework or context for grammar points. 'Pupils find it hard to appreciate an overtly presented grammar pattern if they have no existing reference point for it. Hence, many pupils never really accept verb ending changes' (1994, p. 28).

There appears to be a tension between the requirement to avoid verb redundancy in a text and the need for intelligibility and coherence in that text. This could be characterised as the 'Contextuality Paradox' and formalised in a statement like: 'If verbs are placed in contextualised statements to ensure that they are learnt meaningfully, the very context may determine action, time and person, hence reducing the relevance of those verbs and their inflections, and diminishing their chances of being noticed and learnt'.

This is an example of a contextualised and (reasonably) meaningful text, with the verbs underlined:

'Hier soir, Sophie a demandé à son père, "Papa, peux-tu me donner mon argent de poche maintenant? Dans trois jours Paul et moi irons à Paris. J'acheterai les billets demain." Son père n'avait pas d'argent, donc il a vîte couru à la banque'.

(Yesterday evening, Sophie asked her father, "Dad, can you give me my pocket-money now? In three days Paul and I are going to Paris. I'll buy the tickets tomorrow." Her father hadn't any money, so he quickly ran to the bank.)

Because of this story's coherence, the action, person and time are almost completely determined by means other than verbs, which could all be removed without understanding of the chain of events being seriously impaired. A learner might reason as follows (not necessarily using the same metalanguage):

1. a demandé is past tense (hier), 3rd-person singular (Sophie) and must be asking something (the next sentence is a question)
2. peux is present (maintenant), 2nd-person singular (tu) and asking something (in a question)
3. donner must mean something like 'give' if a daughter is asking for pocket

money.

4. irons is future (dans trois jours), 1st-person plural (Paul et moi) and to do with movement (à Paris).

5. acheterai is future (demain), 1st-person singular (j') and the meaning of buying can be inferred (billets)

6. avait should be past (returning to the action) and continuous (a state of 'no money' is inferred). It is 3rd-person singular (son père) and should mean possession of some kind (in a negative construction, contrasting with the part of the sentence after 'donc')

7. a couru should be past (no counter-indication) and a completed event (vîte). It must be 3rd-person singular (il) and mean a rapid action (vîte), probably 'running' as there is no mention of transport.

What is striking about these examples is that the context not only over-determines time and person, but actually over-determines the lexical meaning of the verbs. It is not just that the inflections are redundant, but the verbs themselves add very little to the understanding of the text, yet this is exactly the sort of written French a GCSE student might be expected to read or produce.

Some progress towards overcoming the Contextuality Paradox can be achieved by considering what is really meant by 'redundancy' and 'context'. The clues lie in conflicting views on the importance of accuracy for communication. Klein warns that, 'it is dangerous to indulge in the illusion that ... errors in the application of certain forms and constructions invariably jeopardise communication. The fact is that they are frequently not even noticed' (1986, p. 171), and Page believes it is a 'totally spurious' argument that grammar is needed for communication. 'It is clearly possible to make communications which are totally efficient in language which is grammatically highly defective' (1994, pp. 14-15). A retort to Page would be that it is also possible, and perhaps more likely, *not* to make efficient communication in such circumstances, Indeed, Hinkel (1992) sees the omission of tense markers or tense-related errors as damaging and a barrier to communication.

4.5.4 Local and global redundancy

Errors in inflectional morphology have been called 'local' or 'surface' (Rutherford, 1988b), as they are redundant communicatively, but Zalewski (1993) considers they may not in fact be redundant as they affect 'cognitive continuity' and interfere with comprehension. How errors look depends on where you are standing, or, as Zalewski puts it, 'errors considered local at the sentence level may become global at the discourse level' (1993, p. 698) as they hinder 'referential tracking'. Conflicting morphological information can make it impossible to have a coherent picture of a composition. Rutherford argues that rules of low level syntax, including subject / verb agreement and tense, do not merit pedagogical attention because their form is easily seen on the surface and they are continually broken, even by advanced learners. He feels that such rules can be left to take care of themselves, while teachers should emphasise the L2 conception of reality and its grammatical realisation. Time is apparently better spent 'engendering an inclination' or 'inculcating a thought pattern' (1988b, p. 174). Zalewski questions such an approach as, 'such problems evidently do not take care of themselves, at least not for a long time and, in some cases, never' (1993, p. 692).

Confirming findings that inflectional morphology is a recurrent difficulty, Zalewski suggests that learners need more, not less, help with local features. He believes that all language elements have potential importance or they would not survive. 'Some are important more often than others, but there are no features which are never important' (1993, p. 699). Rather than dichotomise global and local features, we should accept a continuum where some 'local' elements may be 'global' in the right context, i.e. communicatively important some of the time. In his search for a pedagogical solution, Zalewski takes the cognitive approach that what is learned must be part of a task which forces the noticing of relevant (cognitively salient) information. It is the demands of this task more than the intentions of the teacher which determine noticeability. A feature which is global (communicatively salient) most of the time will be learned faster than a local (less communicatively salient) one. Indeed, Schmidt (1990) attributes incomplete adult L2 learning to a high control of cognitive processing, which focuses on relevant, communicatively salient features of overall meaning, and limits intake of less informative linguistic features, which would include inflections.

From this, Zalewski derives a role for his 'global grammar', which, 'presents features in precisely those contexts which render those features communicatively salient and so more noticeable ... , thus making them easier to learn' (1993, p. 700). A task must be specified which draws attention to these features. For example, a text containing morphological ambiguities could be used, and, with inflections occurring in semantically non-redundant contexts, the students would be forced to rely on them exclusively for essential information.

4.5.5 A self-defeating strategy

Zalewski has been quoted extensively as he has arrived at similar conclusions to our Contextuality Paradox. His summary is worth citing at length, as it should form the starting point for the effective learning of verbs. 'The problem with form-focused instruction seems to be that when we teach specific language features, we tend to present them in highly redundant contexts. It seems that what such an approach facilitates is conscious understanding rather than learning. With respect to learning, such a strategy is self-defeating' (1993,

p. 702). This insight from an American academic seems to describe exactly the techniques used in GCSE work, such as skimming, scanning, looking for key words and finding the gist in so-called 'realia' and meaningful texts. In these conditions verb endings lose their impact as they are the last thing a pupil would look for.

The difficulties of focusing on form and content were highlighted in an interesting experiment by Vanpatten (1990), which required students to listen for meaning and note occurrences of a Spanish verb inflection. He found that paying conscious attention to non-communicative morphological forms had a negative effect on comprehension of content, while listening for lexical items did not. As inflections lack communicative value, cannot stand alone and do not exist in a dictionary, students showed extreme difficulty in processing meaning and this kind of form. As one remarked, 'how are we supposed to listen for verb endings and for the information too?' (1990, p. 295). Vanpatten concluded that 'simultaneous conscious attention to informational content and "meaningless" form in the input is difficult for the early stage and intermediate stage learner' (1990, p. 296).

4.5.6 'Virtual realia'

Zalewski's own conclusion was that 'because in real language processing so many linguistic features compete for the learner's limited attention, the cognitively redundant and perceptually nonsalient inflection will likely be passed over unnoticed' (1993, p. 702). To overcome the Contextuality Paradox, we can propose a middle way between the extremes of 'real' texts and 'surreal' verb sentences, with inflections seen as meaningful for coherence, and salient as a focus for information. Suggestions for 'virtually real' activities could include adaptations of cloze exercises, story reconstructions and 'detective' work, all of which have verb inflections as the focus of attention.

The Scale of Redundancy, which we proposed in section 4.5.2, could be applied to ensure that attention is given to personal or temporal inflections, depending on pupil need and task requirements. Another possibility is contrastive tense work, as suggested by Sharwood Smith, in which the learner is forced 'to look for the function of verbs within the text rather than rely on a vague feeling for the independent meaning of particular tenses' (1988a, p. 229). These ideas do not indicate a complete retreat from 'real' texts, but accept that some adaptation of reality is essential if pupils are to overcome their natural and understandable tendency to ignore inflections. It also indicates that an integrated reading / writing policy might be more beneficial than a separation of the skills, and questions the wisdom of examinations with rigidly separate Reading and Writing sections.

4.6 Conclusion

This chapter seems to be the first time that the diverse findings on verb learning (from some sixty sources) have been presented in a structured framework. For this reason, the classification of the barriers into linguistic, psycholinguistic and pedagogic domains should be seen as tentative. Some barriers are stronger than others, and many of them may interact unpredictably. It is at least a starting point for further research, and a reminder to teachers that we should be grateful if any verb structures are learnt at all. We have seen evidence in the last two chapters of a tension between teacher, learner, syllabus and examiner, and between the requirements of secondary and higher education. How important verbs are depends on how important we want them to be.

The advantage of the tripartite classification proposed in this chapter is that, if teachers are able to identify the type of verb barrier encountered by pupils, they will be better equipped to find solutions. Although linguistic barriers can never be completely removed, as we cannot change the language itself, teachers can at least modify their instructional strategies. For example, the barrier represented by the sheer quantity of verb inflections can be partially dismantled by careful categorisation and elimination of inessential information.

Similarly, although teachers may not be able to alter learner psychology, they can take account of learning processes during instruction. The psycholinguistic barrier of 'regularity' (a tendency for learners to regularise verb forms) can be reduced by a careful balance between establishing language patterns and identifying exceptions. However, pedagogical barriers are by their nature more directly removable. For example, terminological obstructions to learning are erected by teachers in the first place, and could be cleared away by the promotion of a common approach to verb and tense nomenclature. Even where is is difficult to assign a barrier to a single class, as is often the case, it may still be useful to teachers to point out that, for example, the redundancy of verb endings may be a result of both linguistic and psycholinguistic factors.

Most of the studies of expressions of temporality described above refer to naturalistic oral learning by adults, especially in ESL. The literature also contains a few examples of studies involving school-pupils' understanding and use of French verbs. Birgit Harley and her various collaborators (see References) have been particularly active in this area. However, her studies mainly concern pupils in a special context (i.e. immersion) and again refer almost entirely to oral production. A study by Devitt (1993) of five 8- to 12-year-olds acquiring French verbs while in France is similarly unconcerned with written production. Though Devitt (1993) maintains that his findings have direct relevance to classroom teaching, the age-group, environment and motivation of his subjects seem rather distant from those in our research focus. It is therefore now time to undertake a study of the learner population of greatest interest to most Modern Languages teachers in the land. What ideas about verbs are held by the thousands of adolescents studying GCSE French, now, in classrooms throughout this country? Do their problems relate to the verb-learning barriers just described? The following chapter exposes startling pupil misconceptions and suggests that new teaching approaches are called for.

Chapter 5

It's just a word: pupil perceptions of verb form and function

5.1 Background and subjects

5.1.1 Aims

Given the concerns expressed in our analysis of Examiners' Reports in Chapter 3, a net was cast widely over the relevant literature in order to find likely areas of difficulty in French verb learning. The findings presented in Chapter 4 seem to represent the first structured analysis of these difficulties. However, we have seen that there is very little information, if any, on the perceptions held by the vast GCSE learner population about its written performance in this domain. This chapter describes empirical work undertaken to fill the gap in our knowledge. The aim was to provide a synchronic, cross-sectional perspective on the state of knowledge of and about written verbs held by pupils in their final year of the French GCSE course. Rutherford (1988b) has pointed out that we cannot rely on error analysis alone for our research because the complexity of pupil perceptions is simply not visible from surface errors. As he says, 'it is not rash to assume that much more may be going on in the production of learner errors than we can presently understand' (p. 175). Support for this approach comes from Frodesen (1991), who contends that, 'although ... students may lack metalanguage to describe reasons for structural problems, they can often provide insight into sources of error that a teacher might not have considered' (pp. 274-5). Accordingly, the research aims at this point were to find what pupils do when dealing with written verbs, and then to ask them why they do it. A written exercise and interviews were the means used to obtain this information.

5.1.2 Subjects

Out of a total year-group of 71 GCSE French candidates, 63 pupils from Year 11 (age 15 / 16) of a comprehensive school took part in the written exercise, and 24 of these participated in interviews. Nearly all the subjects were in their sixth year of French instruction (three at Middle School, three at High School) and had been taught in mixed-ability groups for much of the time. At the time of the data collection, they were in one of four groups, either in teacher A's upper or lower group, or teacher B's upper or lower group. Both teachers were very experienced and committed language instructors. All of the year group were to be entered for the GCSE Basic Writing Examination, with 56% to be entered for GCSE Higher Writing.

5.1.3 Validity

To ensure the validity of any results, care had been taken to select a school which (a) used an examination board (in this case, NEAB) which was widely used and respected nationally, (b) was fully comprehensive in its school entry policy, (c) allowed the full ability range to take the GCSE French course *and* enter the examination, and (d) was mixed-sex. Furthermore, it was necessary to establish that actual school examination results were representative of national ones. To some extent this had to be done retrospectively. Once it was established that the school results had been close to the national average in previous years, the relevant pupils could be tested and interviewed with some confidence. After their actual examination results became known, these were compared with the NEAB national average as shown in Figure 5.1.

	Totals	C+	C
National	156727	46.9	16.1
School Entry	71	47.8	29.6
Test Group	63	46.0	25.4
Interview Group	24	70.8	41.7

C+ = % Grade C and over 1993 C = % Grade C 1993

Figure 5.1. Comparison of national and sample pupils' examination results

The results show that both the school's overall entry and test sample performed very close to the national average for column C+, thus establishing the school as highly representative according to the 'C and over' baseline generally adopted for inter-school comparisons, though the interview group were considerably above average in this respect. The actual achievement of Grade C (in column C) shows a bulge which results from fewer school Grades A and B than the national average. While the school is not typical at Grade C, it is argued that the high numbers of Grade C pupils provided ideal subjects, as it is precisely along this 'fault line' that the arguments about O-Level equivalence and 'standards' persist.

The GCSE examination at the time consisted of four equal-value Basic papers testing Reading, Writing, Listening and Speaking, and four equal-value papers testing the same skills at Higher Level. It should be borne in mind that any grade is an 'overall' award reflecting performance in all four skills. Furthermore, among other criteria, Grade C could only be awarded if Basic Writing was tested, and Grades A and B only if Higher Writing was tested (NEA, 1990). The notion of the criticality of written performance for higher grades is part of the rationale for this study.

5.1.4 Sex ratio

Finally, the sex of the pupils was considered, both in respect of school and sample validity, and, although outside the scope of this study, because of its increasing importance in language learning research (e.g. Bacon and Finnemann, 1992; Oxford, Nyikos and Ehrman, 1988; SEAC, 1991). Figure 5.2 compares the 1988 / 89 national mean entry for GCSE French (SEAC, 1991) with that of the present school groups.

	Female	Male
National Mean 1988/89	59.4	40.6
School Entry 1993	60.6	39.4
Test Group	60.3	39.7
Interview Group	54.2	45.8

% entries for GCSE French

Figure 5.2. Sex ratios for GCSE French examinations

It is clear that the school entry and the test group were very representative of the national sex balance for GCSE French Examination entry. Although females outnumbered males in the interviews, there were proportionally fewer females given the overall sex balance. This may be explained by a possible disinclination by some female pupils to be alone in a room with a male interviewer.

5.2 Methodology

5.2.1 Test structure

A test paper (see Appendix A) was prepared which aimed to elicit information about pupils' abilities with French verbs across a range of language tasks. Tarone (1985) emphasises the importance of task context and its differential effect on language performance, while Ellis (1988) stresses the need to consider the effect of linguistic context. It was therefore considered that a single task-type would not give the wide perspective needed for this kind of study. The tasks were:

1. Verb Identification (English and French)

2. Tense Identification (English and French)
3. Grammaticality Judgement and Correction of Verbs (French)
4. Gap-Filling with Verbs (French)
5. Free Composition using Verbs (French)
6. Verb Translation (English to French).

5.2.2 Test content

The vocabulary content of the test was based on personal experience with similar pupils, on the syllabus (NEA, 1990), and on previous examination papers. It was important that the vocabulary used should be widely known in order to allow the focus to be on verb structures rather than lexical items. Only regular 1st-conjugation (-er) verbs were used, these being by far the most numerous and best-known: this also allowed a focus on a single research area without distractions from other conjugations. The tenses were restricted to present, perfect (passé composé) and future, including the 'periphrastic' or 'immediate' future with aller. The infinitive was also included. These forms are most representative of those used at this level and conveniently encapsulate the temporal concepts of present, past and future. Any consideration of the contrast between the imperfect (passé continu) and the perfect would have clouded the issue, and is in any case worthy of a study in itself. The total test time was 50 minutes, with recommendations for time limits for sub-components included in the rubric for each section.

5.2.3 Pilot study

The test was piloted in order to ensure the suitability of its content and time allocations. Two representative pupils from the selected school were asked to sit the test in their homes under examination conditions. Pilot Pupil 1 (PP1) was a boy from the Year 11 GCSE French group under consideration. His ability placed him at the lower end of one of the upper groups with a predicted grade of C (which he eventually obtained in the actual examination). Pilot Pupil 2 (PP2) was a girl from Year 12 (age 16/17) who had already achieved a Grade C in the previous year's examination, but who had not studied French for seven months. Both pupils were interviewed at length about the test, their approaches to learning and problems with verbs. They found the vocabulary and structure of the test to be fair, though by no means easy, and the time allocations were seen as appropriate. PP2 had made extensive use (not always to her advantage) of 'free' information in Section 6 (see Appendix B) to help answer other sections of the test. This material was therefore removed in order to prevent too much 'contamination' between sections, with the final version appearing as in Appendix A. Comments by PP1 and PP2 were included in the overall interview data, as they provided useful insights, but their written pilot results were not included in the overall test data, nor were these pupils re-used in the school test itself.

5.2.4 Procedure

The test and interviews were administered in March 1993, at the half-way stage between Trial Examinations in January and the actual GCSE in June. At this period it was felt that pre-learnt Trial material would have decayed somewhat, and that final revision would not yet be under way. The test was unannounced, unprepared and compulsory. The picture obtained would therefore be representative of the pupils' 'normal' state of knowledge, uninfluenced by any recent intensive learning. The test was given under examination conditions to 63 out of 71 possible pupils (absence from school accounting for the discrepancy), with their normal class teachers in attendance. The whole 50-minute lesson was available, and pupils were asked not to leave any blanks. This last factor was bound to affect the data, but was included to ensure comparability with actual examination conditions when teachers give similar instructions to their candidates.

The test papers were scanned for anomalies and points of interest, and 24 pupils agreed to discuss their papers. Within five days of the test, individual interviews were carried out in a non-teaching room in school, providing a relaxed and informal setting with no third party present (except where one girl brought a silent companion), and with the promise of confidentiality. No time limit was given for the interviews, but most lasted between 20 and 30 minutes. There was no rigid questionnaire, but an adaptable structure was used in which each pupil was invited to go through the test discussing both anomalies and correct answers, their reasons for choices, their problems with verbs and their learning methods.

5.3 Results and Analysis Part A: metalinguistic judgement exercises

5.3.1 Identifying and defining English verbs

Most pupils had a reasonable idea of what was required in Test Section 1 (a) (underlining English verbs in a text - see Appendix A), and had some kind of working definition of a verb, however inaccurate, incomplete or inconsistently applied.

beat	40
watch	40
going	39
lost	38
knocked	37
go	33
liked	31
wait	31
helped	29
thought	27
open	19
is	2
MEAN	30.5

Figure 5.3. Number of pupils (N=63) correctly identifying English verbs

Figure 5.3 shows how many of the 63 pupils correctly identified each verb in the test, while Figure 5.4 shows how the 26 interviewees (24 selected, plus 2 from the pilot study) went about identifying a verb.

doing/action word	16
use of explicit French	3
wrongly, as a pronoun	2
'to' can precede word	2
linguistic context	1
'describes an action'	1
no definition	1

Figure 5.4. How English verbs are identified by pupils (N=26)

None of the definitions deals with the actual function of the verb within the context of its overall sentence, but only with its surface meaning and appearance. The most popular method of identifying an English verb was to see if the word in question met the criterion of 'doing' something (Figure 5.4). The strength of this belief is reflected in Figure 5.3 in the high scores for beat, going and knocked, which are clear actions, testified by,

> 'I went for the obvious ones' (P1 = Pupil 1)

while thought and helped are less easy to visualise. Is was virtually excluded as a verb by this definition because 'you can't do it' or 'it isn't happening'. Conversely, the selection of the adjective open and noun go (Figure 5.5 below) shows the over-inclusiveness of the 'doing' definition if unaccompanied by other grammatical knowledge. In the case of P58, wide was seen as a verb because it 'could be put in a lot of tenses' (e.g. has widened), with no distinction made between the function of an adjective and that of a derivative verb.

go (noun)	15
open (adjective)	13
(various pronouns)	13
verb auxiliaries	11
wide	8
another	7
after	6
pity (noun)	4

Figure 5.5. Number of pupils (N=63) identifying non-verbs as English verbs

Interestingly, although the obvious explanation is that open *looks* like a verb, P38 appeared to give it the *function* of a verb as well, with 'the competition being wide open' meaning that 'anyone can win'. Examples of this 'function transfer' also occurred in the French section. There is clearly some grammatical knowledge available, but it is wrongly applied in these cases. PP2 used her grammatical knowledge that [another] go was not a verb to affect her decision not to identify [to] go as a verb. Correct knowledge was again used to negative effect as it was wrongly applied. The nicely ambiguous definition of 'describing an action' (Figure 5.4) seems to confound fragmented grammatical descriptions of verb and adjective (or adverb) which must have been learnt at some stage.

The following exchange between pupil P33 and interviewer (I) is transcribed as it hints of misunderstandings on several levels. The pupil expressed doubts about lost being a verb, despite choosing 'doing' as the main criterion. Other criteria seem to be that the action should be in the present, or consciously carried out.

> P33: [It's not 'doing']....because it's already happened
>
> I: What would you think *is* a doing word?
>
> P33: If you're doing it at that very moment
>
> I: What about thought?
>
> P33: A 'doing' word
>
> I: But that's already happened
>
> P33: Yeah, but you've been consciously doing it, you didn't consciously lose... you never consciously lost so you never actually did it...

It would be wrong to read too much into the precise definitions (if indeed any can be found) offered by this subject, but it is an example of the sort of confusion which can arise even after five years of study. Using a 'doing' word definition works as a rule of thumb for some of the time, but will fail unless extended by other definitions.

One of the problems at the outset was that pupils may only have implicit knowledge of verbs in English, which makes it difficult to carry out the identification task in the English text. One surprising strategy for dealing with this was to use their explicit French knowledge to help identify English verbs:

> 'I'd forgotten what a verb was in English. .. now I know it's the same as it is in French.... to do something'...After, I'd remembered that they'd be the same in English as they were in French' (P48)
>
> 'I've never done verbs in English ... I used the French to do the English' (P45)
>
> 'I thought of the verb aller which means to go [while doing the English]' (P28).

For this kind of task, some reference to explicit learning is necessary, but pupils' implicit English knowledge does not embody the metalinguistic descriptions used in the task definition. Evidently some explicit information is available in the French knowledge system of some of the pupils. As one pupil said,

> 'In French you learn your verbs, in English you don't.. in French they jump out at you' (P56).

These remarks do not confirm the comment made by Bloor that '...it is unlikely that an English-speaking student who cannot identify an adverb [etc.] ... in an English sentence can do so in a French or German sentence' (1986, p. 160), though the same author remarked that that 43% of his students had learnt their grammar in Modern Languages lessons, as opposed to 16% in English classes.

The criterion of being able to place to before the word was applied. This can function successfully if the nature and structure of the infinitive are understood. As most pupils are unable to deduce that to be is the infinitive derived from is, the latter was virtually excluded from consideration as a verb. An underlying awareness of the canonical Subject-Verb-Object (SVO) structure of English sentences was apparent in one case where the pupil was unable to define a verb until some were pointed out:

> 'like words in between... in "Bolton helped open it up", helped occurred to me to be the verb, but I can't explain' (P47).

Another pupil, who completed section 1(a) with some success, was absolutely unable to explain her ability (except as guesswork) even after repeated prompting. Despite her English knowledge being unavailable for description, she nevertheless showed an ability to understand and articulate a definition of a verb in French (which has a similar SVO structure) in her own metalanguage. Her implicit English knowledge may have been in some way influenced by her explicit French knowledge (however vague):

> 'We've done verbs in the past, I've remembered from that. You have like three parts, usually the middle one's a verb' (P54).

Knowledge about word order alone will not always provide a solution. The couplets going to go and helped open were thought to contain only one verb each by sixteen and eighteen pupils respectively:

> 'helped being a verb, I wasn't expecting one right next to it' (P5).

This phenomenon also occurred with French verbs and is discussed in the next section.

5.3.2 Identifying and defining French verbs

Figure 5.6 (below) shows the number of times verbs were identified as such in the French text in Test Section 1(b) (see Appendix A).

aimes	40
pouvons	38
viendrai	36
voir	35
amuser	34
porte	32
veux	32
rencontrait	31
aller	31
va	18
est	4
MEAN	30.1

Figure 5.6. Number of pupils (N=63) correctly identifying French verbs

Aimes may have scored highly as it is very well known, while va is highly irregular and very short. Est seems to have suffered the same fate as is in the English verb exercise. Figures 5.3 and 5.6 show the mean English and French scores to be almost identical, whereas a better score for the native English section might have been predicted if explicit knowledge had been equally available in both languages. To find out why the pupils in fact made their choices, we refer to interview data. A range of methods of identifying a French verb is revealed in Figure 5.7, based on frequency of mention in interviews. The 'primary' methods are the first ones cited by the pupil concerned, and the 'secondary' methods are the one or more 'backup' procedures used by some pupils.

	(i)	(ii)
English meaning	8	2
no method	5	-
endings	4	3
formally recognised	4	0
no comment	3	-
linguistic context	2	6
semantic context	0	1
elimination	0	2
a 'longer' word	0	1

Figure 5.7. Primary (i) and secondary (ii) methods of identifying French verbs by pupils (N=26)

The most frequently-used primary method was to translate the word into English first and then apply an 'English verb definition' (which we have seen is usually limited to that of a 'doing' word). However, not all the verbs were easy to translate (e.g rencontrait, viendrai), so other strategies had to be used. There were those who seemed to bypass the translation process altogether with their formal knowledge of which words were verbs. Reference was made to the form of the word rather than to meaning:

> 'It's just what we've learnt' (P38).

Other pupils preferred to look for inflectional endings which would distinguish verbs from other parts of speech. This approach had limited success because of misapplication and overgeneralisation. The non-verbs nouvelle, [la] porte and devant (all exhibiting verb-like endings) were mistakenly identified as verbs by several subjects (Figure 5.8 below).

nouvelle	8
(plus) tard	7
(la) porte	6
devant	5
(various pronouns)	5

Figure 5.8. Number of pupils (N=63) identifying non-verbs as French verbs

The French linguistic context was used by some to determine which word would be a verb, either (i) simply by finding the subject or subject pronoun and assuming the following word was a verb, or (ii) by an awareness of the canonical SVO structure of many sentences. These methods can be successful some of the time, but in cases like the couplet pouvons aller, twenty-two pupils selected one verb without the other:

> 'I just looked at pouvons and didn't think there'd be another next to it' (P37).

This effect, also noted in the English verb section, may relate to Ellis' observation that linguistic context can affect the way grammatical rules are learnt. They may be learnt in a semi-formulaic, unanalysed way (e.g. by noticing the pattern SVO), but deeper processing with 'rules' may be needed for more complex sentences, such as one containing a dependent infinitive. If this is correct, 'the kind of learning associated with the same feature can be qualitatively different in different linguistic contexts' (1988, p. 271). Ellis concludes that though language learning can be in unanalysed chunks or analysed rules, we only advance by analysing previously unanalysed chunks, thus freeing the learner to apply knowledge to new contexts and perhaps to understand a new organising principle of the language. The implication is that explicit instruction can be beneficial, not just for metalinguistic exercises, but for overall L2 production. Among the present subjects there was an isolated example of the use of semantic context, where a pupil was able to translate most of the rest of the words and infer that some sort of action must be taking place at a certain point in the sentence. Non-linguistic problem-solving skills seem to have been used in conjunction with linguistic skills.

In test and interview, some pupils mistakenly used definitions and choices applicable to pronouns instead of verbs in both the French and English sections (Figures 5.4, 5.5, 5.8). In these cases there is evidence of an explicit grammar system, but with its categories wrongly 'labelled' internally. It is striking that, even though the test revolved round examples of verbs, these pupils could not induce that their definitions in this section had the wrong 'label'.

5.3.3 English and French tense identification

The most noticeable feature of English tense identification in Test Section 2 was the assignment of futurity to the present continuous as represented in Q.4 she's not playing netball, even though no adverbial reference to a future event was made in the sentence (Figure 5.9 below).

	Past	Pres.	Fut.
1. We live quite near school	0	**63**	0
6. They left very early	**62**	1	0
5. Do you like this sort of soup?	1	**61**	1
2. I'll come back	3	4	**56**
3. You've eaten all of it	**55**	7	1
4. She's not playing netball	2	**52**	9

9. Je finirai à cinq heures	10	2	**51**
15. Vous êtes content?	5	**50**	8
7. Nous n'aimons pas ces disques	13	**41**	9
12. Elle a fini ses devoirs	**39**	11	13
11. Henri arrive en auto	26	**29**	8
14. Les Anglais n'aiment pas voyager	20	**26**	16
10. J'ai travaillé dans son garage	**24**	34	5
13. Vous êtes allés à l'école	**21**	26	15
8. Il est allé en Amérique	**21**	18	24

Figure 5.9. French and English verb tense identification by pupils (N=63). Correct choices shown in bold. N.B. Q.13 and Q.14 each produced one blank answer

Greenbaum and Quirk (1990) find this understanding of the tense acceptable, and some pupils had thought carefully about the ambiguity of the sentence:

> 'I thought it meant she was a reserve as the game was going on, but then I realised it was going to happen' (P33).

This interpretation is by no means an error and would be of marginal interest in itself were it not closely bound up with a significant translation error in French. In Figure 5.9 only one-third of the pupils correctly identified Q.8 and Q.13 as past tense. We note in production exercises below that the perfect-tense auxiliaries il est and vous êtes are often translated word for word to produce the English present continuous he is / you are [going]. This process appears to have been carried out by two-thirds of the pupils, some of whom then activated a further process in assigning a future tense to this spurious present (i.e. used the translation he is going as an indication of future action).

Comrie (1985) points out that different languages have distinct grammatical means of expressing temporal distance, and that tenses do not simply map from language to language in a clear-cut way (cf. Hinkel, 1992). For example, the French perfect tense (elle a fini) can refer either to recent or more distant past actions, and is not an exact translation of the English perfect (she has finished) which, as Reichenbach (1947) noted, is often used as an extended present tense. It is true that many examples used in the test were decontextualised, which makes tense judgements more problematical, but there is evidence here and in the Examiners' Reports of a lack of deep understanding of tense concepts.

For the French perfect tense in elle a fini (Q.12), the criterion of recentness of action was put forward as an argument for the present tense:

> 'I didn't know whether it meant she has finished it now, or whether she has already finished it... just finished it, or whether she's finished it a bit ago.' (P37).

This perception is understandable. Meziani (1988), in his analysis of the English verb system, sees perfect tense sentences (like she has finished) as having an 'essentially present nature' (p. 288). The contrast between the results for past-tense perception of the English perfect tense you've eaten (Q. 3) and the simple past they left (Q. 6) illustrates this point, and is in line with Hinkel's (1992) finding in a similar exercise. The crux here is whether elle a fini is translated by the reader as she has finished or she finished, both versions being acceptable in different contexts. Figure 5.10 uses 'timelines' to help distinguish between these two versions. S = point of speech, E = point of event, and R = point of reference (determined by the context of events and the speaker's viewpoint).

(i) she has finished
--->
E R,S

(ii) she finished
--->
E,R S

Figure 5.10. Timelines, adapted from Meziani (1988, p. 288) and Reichenbach (1947, p. 290)

The speaker of (i) views the action as anterior to the present moment, while that of (ii) views it as simultaneous to a past moment.

An interview on the English perfect tense in Q.3 revealed an unusual amount of introspection:

> 'I just thought you've eaten all of it, so it's like, it's talking... it's like present time... you're talking in the present saying that you... I thought it was saying there and then...'(P1).

In this case the present tense appears to have been assigned to an imaginary speaker in the present relating what has happened in the past. It may also be that where it is possible to imagine clearly 'before' and 'after' states, such as a full plate and an empty one, the transitive verb which carried out the action in the past is less strong an image than that of the final result as seen 'now'. Though less prevalent in the test, the same effect also occurred when the present tense was assigned to a presumed speaker of the future sentence I'll come back in Q.2,

> 'because they're saying that then' (P36).

In these cases the times of event and reference are ignored, the only criterion being time of speech, which is assumed to be present.

5.3.4 A 'Personal Distance' effect

Why the incorrect word-for-word translation he is going (Q.8) is more often seen as a future event than you are going (Q.13) is not clear. It is possible that the personal distance of il compared to vous, together with the geographical distance of Amérique compared with l'école may have conjured up the image of a more distant event. It is also not clear why many more pupils saw the word-for-word 'false' present continuous (e.g. he is going from the French) as a future event than did those with the real present continuous (she's not playing in English). The word-for-word translation seems to have magnified the effect. The explanation could be linked to the real present continuous existing first in writing while the 'false' one only existed in the mind.

The idea of personal distance may also account for the large anomaly between the 'future' and 'past' scores for Q.7 and Q.14 (Figure 5.9) where they and travelling are possibly seen as more distant than we and records. Some factor must influence the many guesses for Q.14 admitted to in interview, several of which were successfully corrected verbally. The 'Personal Distance Effect', essentially one of semantic context, may operate unconsciously where other tense-identification measures (e.g. inflection, linguistic context) have failed.

5.3.5 Grammaticality judgement

The grammaticality judgement and correction exercise (Test Section 3, Appendix A) was widely described in interviews as the most difficult in the test, a view clearly reflected in the results (Figure 5.11).

	(i)	(ii)
1. Nous avons visité le musée samedi dernier	57	n/a
7. Je commence mes devoirs à 8 heures	57	n/a
4. Un jour Paul a bu un litre de vin!	44	n/a
5. *Je jouer au cricket chaque été	18	14
3. *Il resté dans sa chambre hier soir	17	5
2. *Il est travaille maintenant	15	4
8. *Sophie reçu une lettre ce matin	11	4
6. *Elle aimes aller aux discos	6	3

Figure 5.11. Correct grammaticality judgement (i), and accurate correction (ii) of French verbs by pupils (N=63). (indicates ungrammatical verb)*

Although a certain amount of explicit French knowledge is available to pupils, this was counteracted partly by the unfamiliar nature of the exercise. However, the main factor was the requirement for a paradigm shift in the pupils' perception of printed French. Examination boards do not expect candidates to analyse the form of written language but to demonstrate understanding, extract information and identify themes (see e.g. NEA, 1990, p. 71). The following observations reflect the depth of conditioning for confidence in the printed word which pupils would have to overcome before attempting the task with much hope of success:

> 'you trust it.. you trust it for looks and stuff, so you think... you don't normally look for mistakes, it's never easy to find them' (P9)

> 'I couldn't find any mistakes, so they're all pure guesses. You just presume it's going to be right. If you look at an exam paper you don't expect to see mistakes' (P37).

These findings are not unexpected. Bialystok found that, 'grammaticality decisions are made initially on an intuitive basis that may or may not be supportable by the subjects' knowledge of the relevant structures. Detailed information about errors, however, relies on information in explicit knowledge and hence requires time to produce. As the information is stored in a structured, articulated manner, some of it (for example, adjective rules) is easier to access than the rest (for example, verb rules)' (1979, p. 98). The time factor should also therefore be considered. Had the pupils been given longer than 8 minutes for this exercise the performance might have been different. In any case, it is clear that verbs (whose rules are seen as more abstract) cause more problems than other word classes such as pronouns and adjectives.

The age and experience of the pupils should also be taken into account. Frodesen (1991) points out that unguided editing tasks can overwhelm students unless they are quite advanced, while Celce-Murcia (1991) found that, whereas beginners are typically weak at grammaticality judgements, students at intermediate level can begin to spot and correct their own errors, but only advanced learners can correct other people's errors. Schachter (1988) adds that as learners become more proficient they are increasingly able to identify grammatical sentences as grammatical, but with less corresponding growth in ability to identify ungrammatical sentences as ungrammatical. They often appear to react randomly to these sentences. Bley-Vroman (1989) and Schachter, Tyson and Diffley (1976) refer to 'indeterminate intuitions' of grammaticality held by NNSs. Decisions on grammaticality are not just dichotomous (as they would be for an ideal NS) but are often unclear, implying a formal difference between NS and NNS language knowledge systems.

As we have seen, the placing of the infinitive after a pronoun is a frequent examination error. It was noticeable that there was far more accurate correction of *je jouer than of any other in this test section (Figure 5.11, Q.5), the number of corrections made here representing nearly half of all those made on the five ungrammatical sentences. This was unexpected, considering that pronoun + infinitive was a common production error in later parts of the test. Conversely, though sixty subjects failed to correct *elle aimes (Q.6), not one pupil wrote *il / elle travailles in later production exercises. This seems to highlight a distinction between judgement and production exercises, and may relate to Tarone's (1985) findings that learners performing different tasks at a single time will produce predictable variation in some grammatical structures. Her study also found that tasks requiring more careful attention to form did not necessarily produce the most grammatically accurate results. A lot may depend on the utility of a particular structure in varying contexts, and we have seen that French inflectional endings are largely redundant.

It can be hypothesised that by improving pupils' grammaticality judgement ability and their correcting or editing skills we can improve written examination performance and productive language use. For Bialystok (1979), the pedagogical implications of her results in this type of exercise were that pupils should develop intuitions and learn strategies for consulting explicit knowledge. Celce-Murcia (1991) suggested raising awareness by discussion, and specific contrastive work in pairing of correct and incorrect sentences.

5.4. Results and Analysis Part B: production exercises

As the production exercises in the test (Sections 4, 5 & 6) were open-ended, there was an extremely wide range of answers from the 63 pupils involved. All the results from all these exercises fill a large number of extensive tables and have therefore been placed in Appendices C (gap-filling), D (composition) and E (translation). Though the results are arranged by question type in the Appendices, they are discussed thematically here in the context of interview revelations in order to provide an integrated picture of the problems that pupils encounter.

5.4.1 Problems with explicit learning

(a) Verb paradigms

Of the nineteen interviewees who discussed general verb difficulties, twelve highlighted the problem of verb endings. More specifically, over half mentioned confusing the endings and structures for different tenses, especially the past. The future tense was seen as less problematical by PP2 as it 'hits you' much more, whereas endings in the past do not seem so obviously changed (cf. observations on saliency and lack of transparency in Chapter 4). Even for those who know endings reasonably well, there is the problem of cognitive overload (cf. the reference in Chapter 4 to Klein, 1986, p. 47):

> 'You do one tense then you do the next one, you get it like mixed up... you start putting endings on the wrong ones' (P1)
>
> There's so many of them, they just go on and on and on. They're just not interesting to learn' (P8)
>
> 'I know most of the endings and the start parts, I get mixed up between the avoir, être and all the different verbs, we learn them all at the same time' (P46)
>
> 'I don't know how to finish the words off... there's just so many' (P52).

Other concerns are the quantity of irregular verbs which need to be learnt on top of the regular paradigms, as well as uncertainty about which verbs are in fact irregular.

A methodical learning of verb tables is not necessarily the solution if their actual function is not learnt. We recall the findings of Harley and Swain (1978), Harley (1993), Hooper *et al.* (1994) and the Examiners' Reports about the candidates who had memorised and transcribed several verb paradigms, but had failed to use one verb correctly. An interviewee notes,

> 'I can remember verbs from tables, [the difficulty is] probably putting them into sections for past, future, present...' (P48).

Learners may have different reactions to the same stimulus. One pupil was only happy with 1st-person singular endings but could not manage the rest, while another could trigger off the remaining endings once he had successfully remembered the 1st-person singular.

A most striking finding about the nature of explicit paradigm learning was revealed at interview where three subjects justified their inconsistency in producing *j'ai regarde or j'ai regardé followed by *j'ai acheter in the gap-filling exercise:

> 'I know that's to buy but I don't think I'm really sure that you could put an accent on it...It doesn't occur to me I should do. I know regarder you do that in the past, but I didn't think acheter does ... like when you were learning the past participle it was always regardé you learnt and mangé but not acheté' (P47)

> 'I thought that was how they were spelt' (P33)

> '[they end like that] because of the word itself' (P15).

These statements are highly significant for teachers, revealing that while verb paradigms may be reasonably well known, the application of the model to many other verbs was not understood. This lack of appreciation of the generality of paradigms takes away the whole point of learning them, and adds a huge cognitive burden if all verbs are to be learnt separately, in the manner of, say, vocabulary learning.

One subject wrote *je regarder in free composition but in interview demonstrated a clear knowledge of verb endings:

> 'regarder means to watch, regarde is I watch, and regardé is I watched, I have watched.'.
>
> (Interviewer: 'Why did you put the infinitive in the test?')
>
> 'It's just you know that's to watch ... I didn't really think about which tense it was' (P47).

Another added,

> 'I thought regarder meant to watch... I always put the -r on with regarder' (P15).

Similar effects were found in the translation exercise where *il travailler and its homophone *il travaillé were common (Appendix E):

> 'It's to work, I don't think I knew what works is, I knew travailler was to work ' (P47).

In all these cases the pronoun was recalled first, followed independently by the verb in the infinitive. For some, this was enough of an achievement because of cognitive demands, and for others the link between an infinitive and its derivatives was not present even if mental processing space had been available:

> 'I've seen [je jouer] before, I know you *can* put an -é on, but I didn't know

> whether that was right or not...present tense, you've got to end it with -é ... I'm not really good on tenses' (P1).

In translation of the future tense the correct stem was sometimes used, but with the first-person singular ending, resulting in *ils jouerai. (Appendix E). Several pupils said they tended to use only the first-person form, for example,

> 'I just thought that was future tense... it's what I remembered from the future... it's the only one I could remember' (P14)

> 'I thought of je ... it just came straight in... you're used to writing stuff about yourself' (P38).

The version *ils ont jouer was produced by two pupils for similar reasons:

> 'I knew ils ont was a group of people. I'd learnt it but didn't know which verb table it was on, past, present or future. We do j'ai straight down to ils ont,, we change the endings...' (P46)

> 'I looked at they and remembered from the verb tables ... that it could be ils ont or ils sont...that's all I could remember ... I didn't know anything for the future' (P48).

As well as being misapplied in this way, explicit verb information can also become fractured, as revealed in the following section.

(b) Fragmentation

We saw that in the verb-identification exercise, nouvelle was mistakenly chosen as a verb by eight subjects (Figure 5.8 above), ostensibly because of its similarity to the present tense 3rd-person -er verb ending (confirmed in interview by P38). As already mentioned, this seems to be a case of overgeneralisation of a rule specifically because language knowledge has become fragmented, with more reference to *form* than to the *meaning* of verbs and adjectives. However, in at least one case the actual meaning was known but the word was endowed with the *function* of a verb. P33 correctly translated tu aimes ma nouvelle chemise as you like my new shirt, but maintained that nouvelle was a verb because it meant someone had 'just bought it'. A similar transfer of verb-like functions was made by P53 to dans [le café] on the grounds that one can 'go into it'. In these cases a different kind of fragmentation has occurred, with explicit grammatical definitions becoming detached and applied to wrong word classes. The distinction between nouvelle being chosen for formal or functional reasons could not have been made without the interview data.

Interviewees were overwhelmingly aware of the -ai first person singular form being associated with the future, as were a clear majority of test candidates. Figure 5.9 showed that this tense structure was better known than any other French example, though evidence from the translation exercise (Appendix E, Q.6) shows that other future endings are virtually unknown. Language knowledge became spectacularly fragmented for P1 who sighted -ai within the word aiment (present tense, Figure 5.9) and identified it as future despite being able to translate it correctly. This demonstrates an uncertain knowledge of the structure of the word.

Fragmentation of grammatical language knowledge also occurred in the case of P47 who announced that there was no -s on *elle aimes in the grammaticality-judgement exercise because it was 'not plural', by analogy with the plural of nouns and adjectives. PP1 was also asked explicitly when he would expect to see -s on an -er verb, and suggested it would be in the plural.

In free composition, P9 produced *mon ami ' allé, an apostrophe replacing the intended (incorrect) auxiliary a because of a supposed 'vowel clash'. Similarly, P20 wanted to write j'ai joué, but put *j'ai jouer because it was followed by a vowel in au cricket. Another pupil, who had translated *j'ai achete as I buy, even when compared with j'aime meaning I like (perceiving no difference between je and j'ai), explained,

> 'you can't really put anything there [in front of aime] as there'd be a vowel clash...you can't leave that [out in front of acheter] because it means it's important' (P1).

There are echoes here of the frequently used rule of thumb for elision of vowels, which requires an apostrophe to replace the -e in je when followed by aime, but not the a in il a acheté, because of the relative importance of the vowels' functions. The rule is known, but only in a fragmentary way.

In many of these examples there is evidence of more attention being given to the surface appearance of language rather than to internal structure and meaning. Giacalone Ramat asked, 'what must those learners develop who do not have ... that morphological machinery that provides ... information on tense [and] person on the verb...? The task seems harder than a formal one (i.e. to learn only sets of endings). What they need to develop seems to be more of a cognitive nature' (1992, p. 299). Much of the time, pupils seem to be desperately constructing their own rules when none come to mind. There are other apparent examples of language fragmentation where pupils use verb information from one test section to provide answers for another with no reference to meaning. As this seems to be more a calculated strategy (although similarly born of desperation) rather than a linguistic problem, these cases are discussed in a later section.

The sorts of revelation outlined above present a real challenge to teachers who routinely ask pupils to 'learn their verb tables'. The worry is not that such explicit learning is useless - in the right circumstances it can be invaluable - but that so many learners misunderstand, misapply and fragment it.

5.4.2 Problems with implicit learning

Allowing that explicit instruction is not in itself the answer to difficulties with verbs, the interviews gave a timely reminder that exposure to data alone will not guarantee useful learning:

> 'You have an accent on with je in front, I couldn't remember whether you took it off or added on -s with il in front... when you have je in front of an -er verb, you put -é' (P28).

This may be an example of the kind of mistake that can be made if grammatical rules are induced by exposure to data alone with no explicit instruction (see e.g. Krashen, 1988 and McLaughlin, 1987). It is possible that this pupil has seen many more examples of je followed by -é than by anything else, perhaps a reflection of 1st-person, past-tense orientation in GCSE work. A 'rule' has certainly been learnt and can be retrieved and applied, but it has the drawback of being incorrect in most real-life cases even though it might function with limited (but perhaps sufficient?) success in a school or examination context.

A further example of implicit 'communicative' learning causing difficulties was revealed when a pupil was asked why he had put je vais nager for I went swimming, when other evidence showed that he clearly knew past tenses very well:

> 'I just thought of a sentence including swimming and then remembered a sentence from past things that we've done at school. It made sense, je vais nager'. (P48).

In this case, unanalysed contextually-learnt material was allowed to override the requirements of grammar and meaning. Hooper *et al.* (1994) describe 13- and 14-year-old pupils who used intuitive ways of checking their work, such as by whether it looked or sounded right, and by the use of unanalysed chunks, rather than by reference to grammar resources. Widdowson (1989) observes that if we can generalise that the communicative approach tends towards access while the structural tends towards analysis, we have the paradox that if analysis allows adaptability of language, then the structural approach is in fact more communicative than a holistic fixed range of contexts. His remarks seem justified here.

Similarly, some of those who correctly produced je dois (faire) mes devoirs in the gap-filling exercise (Appendix C) revealed at interview that they had taken no account of dois as a modal verb requiring an infinitive, but had simply put faire because faire mes devoirs was a pre-learnt expression. The sentence, though correct, was often seen as I do / have done my homework. Implicit learning in this case produced the right answer, but with no understanding of the meaning or structure of the sentence.

5.4.3 Pupils and learning methods

Whatever the outcome of this continuing debate over implicit and explicit grammar teaching, pupils are quite ready to accept that some conscious learning of verbs is necessary or desirable in order to perform satisfactorily in an examination. The problem is that learning (or teaching) methods may not be appropriate for the particular task in hand, and may produce the kind of confusion revealed above.

It was striking that nearly all interviewees had some kind of learning method and were taking the problem seriously. It was also clear that learning strategies were similar, mostly involving different combinations of writing out verbs, reading, repetition, covering up, testing (orally and written) by self or a parent. Vocabulary and verbs are often learnt in the same way, which could explain the failure of paradigm learning shown above. This process is carried out *ad hoc* in preparation for a class test or examination, but pupils admitted that information learnt in this way is not always retained for very long (from a few days to a week or two) unless regular revision is done independently of test requirements. It would seem that in order to retain and retrieve information on verbs, a deeper and more structured kind of processing is required.

Some pupils were keen to recommend learning methods which were successful for them, including frequency of use, pattern observation and contrastive linguistic work where comparisons are made in order to aid retention. The most interesting conversation was with a fairly able pupil who provided a unique (amongst his peers) contrastive analysis of explicit and implicit modes. He came late to Middle School and missed his first year of French at age 10/11. He had a native tutor for three months to help him catch up at the time, but had had no extra help since then. His tutor taught the verbs and how they were used, which was not what was taught in school as his colleagues did not need to learn about structures. He notices that verb learning is getting harder now, but has no real difficulties in French, and has always been ahead (despite once being behind) since that 3-month session at age 11:

> 'You didn't learn about verbs [in Middle School], ...just phrases you might use ... [The tutor concentrated on] the actual patterns of the language. [It made] masses of difference, a lot of difference...it's been very easy since I was

> about 11... I wouldn't have been like anywhere near... I mean I'm not very good at languages... I find German extremely hard... a totally different arrangement of words' (P5).

As P5 had individual tuition, verbs were given for homework with correction a week later, but were dealt with completely in the actual lesson. Instant personal correction appeared to be the key, a facility most readily available with individual tuition or computer-assisted learning.

5.4.4 Oral influence on written verbs

(a) The increase in oral work

One of the main complaints about GCE O-Level French was its lack of emphasis on spoken language. As little as 10% of the marks were allocated for the oral test, and it was not difficult to obtain a passing grade without much effort in this skill. In the present GCSE system, much more credit is given for oral work and speech is the natural medium for most classroom activity. The analysis of Examiners' Reports in Chapter 3 suggested that whereas pronunciation of French used to be affected by over-emphasis on written work, there is now evidence that written French is influenced by a rich oral environment. An unscientific scan through the interview transcriptions reveals as many references to 'sounds like' as to 'looks like' when deciding on a choice of verb ending, for example in the grammaticality judgement test,

> It looks right, you can't actually tell. You have to speak it, you think that sounds wrong' (P54),

and many pupils admit to explicit learning of verbs via oral repetition and testing at home. Against this background of general oral influence, specific effects can be isolated from the test and interview data.

(b) Near-homophones

In the tense-identification exercise the 3rd-person singular of avoir (elle a) was more noticeable than the 1st-person singular (j'ai) when used as an auxiliary, as revealed in Figure 5.9. Many subjects understood j'ai travaillé to mean I work or I am working, with j'ai being seen as I or I am respectively. Confusion between je and j'ai was admitted, while the -e ending was seen as being part of an -er verb, but not otherwise significant. In the interviews as a whole there were many who were unable to distinguish je and j'ai, which are often treated as homophones (cf. Harley, 1992). For example, P20 used both *je regarder and *j'ai regarder to mean the same thing and was unclear about the differences. The variations in Appendix E (Q.2) help to confirm this. Other near-homophones frequently confused were avons / allons. The periphrastic (immediate) future required to translate we are going to play produced an enormous variety of errors with combinations of *nous sommes / avons / allons / aller + jouer / joué (Q.4). However, the pre-eminent error here was *nous avons jouer, which was written by nearly twice as many as those who put the correct nous allons jouer. A very striking example of good oral knowledge producing meaningless writing is found in the same question, where *nous sans allez replaced nous sommes allés.

(c) Homophones

Given the above examples of near-homophone confusion, it should be no surprise that true homophones are even more confounded in writing. This was particularly noticeable in the replacement of past participle ending -é by infinitive -er (cf. Harley and Swain, 1978). In the gap-filling exercise, twelve subjects produced the homophone *je suis aller for je suis allé (Appendix C, Q.5), which is some indication that the sound of the sentence may be as influential as the meaning. A strong identical effect was shown with j'ai regardé (Q.1) and j'ai acheté (Q.6). Careful examination of the test scripts showed that several pupils had changed -er to -é, suggesting that an instinctive homophonic rendering can be corrected given time and thought afterwards.

For il (a) aidé (Q.9), many pupils put some kind of modal or factitive verb (i.e. a verb which is followed by a dependent infinitive) into the gap, including parts of faire, aimer, préférer, pouvoir, falloir and devoir. This appears to demonstrate that a past participle (aidé) is often seen as an infinitive (aider). Although the oral effect apparently confuses -er and -é, other effects must be at work allowing -é or -er to stand for silent -e (Appendix D, Q.1 & Appendix E, Q.1). Part of the problem for remedial work is the unpicking of different effects which may override or interact with each other in ways that are difficult to predict. The results illustrated above do seem to match the findings on homophony and verb learning discussed in Chapters 3 and 4.

5.4.5 Word-for-word or literal translation of verbs

The Examiners' Reports also made reference to anglicised and literal renderings of French, and we have discussed the Naive Lexical Hypothesis of Bland *et al.* (1990). At this point it is useful to distinguish three translation effects which are often confused. According to Crystal (1987), a literal translation involves normalisation of the source text according to target language norms (*il pleut des chats et des chiens for it's raining cats and dogs), as distinct from a word-for-word translation (*il est pleuvant chats et chiens). The term 'transliteration' is strictly only used for letter-by-letter transcriptions.

Although literalisms such as *il est ça va (he is all right) persist, the main effect on verbs is one of word-for-word translation; for example, the auxiliary être is widely misunderstood. In the tense-identification exercise, only a third of subjects saw il est allé and vous êtes allé as past tenses (Figure 5.9). The interviews clearly revealed that instinctive translation under examination conditions, without any adverbial clues, produced the versions he is going and you are going. Once so translated, they are then seen to refer to present or future actions, as in the English sentence she's not playing (see the discussion above). The instinct for seeing est as is is so strong that pupils who correctly rendered he has gone as il est allé elsewhere in the test could still translate il est allé as he is going in this section.

In the grammaticality-judgement test, the incorrect *il est travaille was widely understood to mean he is working or he works. Faulty corrections included *il est travaillé, about which one subject observed after reflection,

> '[I've changed it to] he has worked now... it should be he is working now... I'd get rid of the accent" (P38).

After comparison with a correct elle travaille in section 6, the pupil then agreed that est was out of place, but had been happy with it for a while. A further faulty correction was *il est travailler, which produced the following observation;

> [it means] to work... he is ... to work now, which means he is going to work... I don't think I should've changed it' (P47).

Once again, the urge to retain est is overwhelming.

Only a small proportion of pupils provided a correct auxiliary verb when filling gaps (Appendix C). Several weaker students did manage to produce Paul *est* resté correctly, apparently showing a knowledge of verbs which use être in compound tenses; however, stronger candidates were more likely to put incorrect *Paul *a* resté. At first glance, this suggests a 'U-shaped learning' effect of rule over-generalisation (see Chapters 2 and 4), but interviews were more revealing. Four pupils thought they were writing Paul is staying / resting, which means that several answers were 'right' for the wrong reason. A high proportion put *il est aidé, for il a aidé, which is more likely to indicate an attempted translation of he is helping than an erroneous auxiliary verb. Similarly, although many pupils correctly wrote je suis allé in Q.5, this is no guarantee that the sentence was understood. In the gap which preceded a dependent infinitive in Q.3, many subjects thought *je suis écouter (translated in interview as I am listening or I listened) was permissible, though some interviewees admitted to putting suis simply as a reaction to je, with no reference to the following infinitive.

Asked to compare her version of she went (*elle allé) with il est allé that she had correctly labelled as past tense elsewhere, this pupil spoke in confused terms to reveal her fixation with the meaning of individual words rather than overall structural meaning:

> '...he is, to me that's gone...he is gone, doesn't make sense so... she's gone.... she went... here it's il est which to me means he is but if in English you say .. he is gone it doesn't make sense, so when I was writing it I was thinking what it was in English and put it down in French' (P47).

As a test for this effect in Section 6, the simple present tense he works caused fewer problems than the present continuous she is working, which produced *elle est travaille in over a quarter of the sample (Appendix E). The appearance of is in Q.3 was the undoubted cause, as testified in interviews. Though well aware that both Q.1 and Q.3 were present tense, one pupil said, The English sounded different' (P48).

The wide difference in scores between translation sentences (Appendix D) Q.2 I ate and Q.5 I have drunk, which both required the perfect tense, seems attributable to the failure by many to use an auxiliary verb in Q.2, producing common versions such as *je mangé, *je manger and *je mange (the latter also possibly due to a misreading of I ate as I eat, as admitted by P29). The need for an auxiliary verb is signalled far more clearly in I have drunk than in I ate, and P45 and P47 said in interview that they would have put j'ai mangé if the stimulus had been I have eaten. Word-for-word translation is a natural action for many pupils.

A fairly common error in examination is the intrusive -s on the third-person singular ending in the present tense of an -er verb, understandable as a false analogy with the English equivalent. Surprisingly, there was not one instance of this in the test (Appendix E), though mention has already been made that in the grammaticality-judgement test, this example of transliteration went uncorrected by nearly all subjects (Figure 5.11, Q.6). This appears to confirm the value of collecting data from a wide variety of tasks as outlined in the Methodology section above.

5.5 Non-linguistic strategies and effects

Examination-induced deliberate strategies and reactive effects manifest themselves in all subject areas and are not in themselves a linguistic problem. The problem nevertheless needs to be understood, as the interviews revealed that such phenomena were widespread in all sections of the test and had a distorting effect on results. For this reason, the results are displayed as raw scores in tabular form without statistical analysis. Their value is in the structure they give to the interview data, and in their illumination of general states of learning. They are not a precise tool. When one considers the scale of strategy use from this sample (which is claimed to be representative), it is fair to ask whether other data acquired in this way should not be treated as descriptive rather than purely statistical.

In Section 1 there were attempts to work out which words were *not* verbs, and choose those which remained, given that the task requirements guaranteed that there must be some verbs present. Although some formal language knowledge is required in order to do this, the process of elimination was induced by the test itself and carried out without any regard to the overall meaning or structure of the sentences, and can be classified as an an examination-passing strategy. This is distinct from the use of linguistic or semantic context, which is described elsewhere.

Interviews on Section 2 revealed such tense-selection methods as:

- use of material from other sections of the test
- use of 'pattern' choices based on surrounding answers
- guesswork, justified by the request to fill blanks,

> 'It was a test, right, ...I didn't really translate it... I just guessed' (P45)

- use of context (a future tense was somehow 'correctly' chosen by referring to a tense-neutral clock time)
- elimination, reflecting the order of confidence in knowledge of the three tenses. One search order was: -ai for the future, followed by past participles, with the remainder (unanalysed) assumed to be present. The use of context and elimination requires some linguistic knowledge, but it interacts with a strong strategic element. These strategies are not always successful, and very frequently pupils could see their test errors while being interviewed.

Without further information, the high scores for the only correct sentences in the grammaticality-judgement exercise (Figure 5.11, Qs.1, 4 & 7) could be interpreted as reflecting a good knowledge of the perfect and present tenses. This interpretation is most probably erroneous, given that it is easier simply to tick a sentence without reflection, and given the very low scores on the sentences which actually contained deliberate errors. An examination-induced strategy of ticking most answers without reflection could be hypothesised, and the interview confirmed that many guesses were made. However, it seems that another strategy was widely adopted; that of underlining any section of French and hoping it contained an error. This was certainly task-induced, as testified by,

> 'I couldn't see any [but] the question said to underline mistakes so I thought there must be a mistake here' (P47)
>
> 'I had to find a mistake' (PP1)
>
> 'I would have just accepted it [if mistakes hadn't been mentioned]' (P56),

and by the disparity between numbers of supposedly identified errors and numbers of corrections in Figure 5.11. These findings appear to confirm Chaudron's conclusion that this sort of exercise causes difficulties because the learner feels obliged to correct something and produces a hypercorrection response bias (1983, p. 371), though it must be open to debate how much correction is due to grammatical sensitivity as opposed to strategic factors. There is strong evidence elsewhere that this exercise was extremely difficult for most pupils, so non-linguistic guessing and pattern choices are a reasonable expectation.

The gap-filling exercise also revealed strategic influences at work. In interview one subject translated his *j'ai regarde as I have watched, and j'ai acheté as I have bought. He explained,

> 'I wasn't sure... it was a test, so if I put one without and one with [an accent], I'd get one mark' (P45).

This exercise produced a wide range of errors and unusual answers partly as a result of the request not to leave any blanks.

A pupil was asked why he put j'ai regardé for a present tense in free composition when he already knew what the same sentence meant in the gap-filling section:

> ' I thought of the sentence I was going to put and at what the sentence actually was, and then I was looking up there [in the other section] and I thought, yeah, that makes sense' (P49).

It is notable that those pupils who adopted this strategy of plundering other sections of the test usually did it unsuccessfully, while there were many who failed to make any comparison at all between what they had written in different sections (or even neighbouring items) of the test. A similar phenomenon was noticed by Hooper *et al.* (1994), who found that pupils are routinely unable to make use of information on verb forms, even if presented directly, in different sections of a written test. For our pupils, this was an unsuccessful strategy: compartmentalisation is as unproductive as superficial comparison. What should be encouraged is comparison of language elements from a deeper, structural point of view. P45 gave an example of the failure of both strategies when he produced *il est travaillé in the grammaticality-judgement section, having seen the inflected verb in j'ai travaillé in the previous section. Here he was more concerned with the superficial appearance of the sentence than its meaning. He then compartmentalised this answer by failing to compare it with his il travaille and *elle est travaille in the translation exercise.

A mention must be made of examination-induced effects other than deliberate strategies. The interviews revealed numerous instances of examination stress and panic causing errors in performance, many of which were successfully corrected in conversation. A pupil who wrote *j'ai regardez (for I watch) and *j'ai acheter (for I buy) didn't think about the different endings at the time, but in interview realised they should at least be the same:

> 'I tried to get the test out of the way' (P46).

We are not dealing here with linguists, but with school-pupils whose agenda may not remotely resemble the one set by teachers and researchers.

5.6 Conclusion

5.6.1 Summary of findings

These new empirical findings about GCSE pupils seem to fit firmly into the background established by previous research and categorised in Chapter 4. There are obvious conceptual problems for several pupils, whose lack of formal linguistic knowledge of English made metalinguistic tasks, such as verb identification, rather difficult. Even with some explicit French knowledge, there is a general reliance on the surface appearance and lexical meaning of words rather than on the structure of sentences.

If it is not crystal-clear how a verb is functioning in a sentence, then ideas about tenses may also become distorted. The present continuous is often seen primarily as referring to the future and the perfect tense can be seen as present.

There are deeper problems for those who cannot understand how to assign tense in the first place. Because of these inadequacies, metalinguistic definitions must be found which are helpful to pupils and useful for teaching. Asking pupils to make judgements about grammaticality was perhaps expecting too much, but the results revealed an interesting difference in the treatment of identical structures in judgement and production tasks. Pupils are trained to look at French for meaning rather than form, hence the redundancy of most verb endings. One approach might be to make pupils look critically at French form in a given text as a separate exercise from looking for meaning. They could then be persuaded to look actively for errors in their own work. Another method could involve the use of texts which have been adapted to remove inflectional redundancy.

The dangers of extreme explicit or implicit approaches to grammar teaching are demonstrated in the production data (section 5.4). Learning verbs from tables can become a (pointless) end in itself if it is not closely related to communicative tasks. Language elements and grammar rules themselves can become fragmented unless a superficial approach to learning is avoided. On the other hand, exposure to language data alone may result in incorrect hypotheses, and the learning of unanalysed communicative 'chunks' can prevent grammatical knowledge from being used.

Chapters 3 and 4 suggested that oral skills may be adversely influencing written output, with incorrect homophonous verb endings being cited as strong indirect evidence. Perhaps for the first time, we have some fairly direct evidence (from the interviews) that pupils are thinking as much about how a verb sounds as how it looks when writing it down. Writing and speaking could be usefully treated contrastively at early stages of language learning. A suggestion for remedial work might be to show the confusion that can arise if spelling is ignored in favour of 'phonetic' verb endings.

Word-for-word translation is very common, as all teachers know, but it was instructive to relate this knowledge both to the Naive Lexical Hypothesis (Bland *et al.*, 1990) and to pupils' own descriptions of how they translate verbs (cf. P47's 'he is gone, it doesn't make sense'). Although not part of the GCSE syllabus, pupils should perhaps be taught some translation skills, not because they *have to* translate in the examination, but because they *are* translating (badly) in their minds as they write French. Contrastive work could be carried out with French and English verbs to illustrate the dangers of a word-for-word approach.

There was much mind-changing in the interviews. A lot of pupils could see certain errors (especially production errors) when asked to look for them, and showed some genuine understanding not reflected in the test. The results of limited-time tests may distort our perceptions of what someone can produce without pressure. Another insight into test results was given by three pupils who did the test twice (though only the first versions were used in the data). All three pupils produced two different versions, which leads one to think that there may be a variable element in every examination, with less able pupils presumably producing more variability. For the researcher this may be valuable information, but for the examiner and teacher one has to ask which version represents the 'real' GCSE candidate. Results may be further distorted, as we have seen, by the use of 'exam-passing' strategies which are not the same as language-production strategies.

5.6.2 Classification of pupil problems

Chapter 4 attempted to classify the many barriers to verb learning discovered in the literature. It proposed linguistic, psycholinguistic and pedagogical barriers, but admitted that these classifications were not mutually exclusive. It may be helpful to see whether features of pupil performance outlined in this chapter can be similarly classified.

- Tense definition: concepts of time and tense may be a cognitive issue (cf. Giacalone Ramat, 1992; Rutherford 1988a), but pedagogical approaches which fail to clarify tense terminology are a hindrance to pupils.

- Redundancy: the linguistic fact that French verb morphology is opaque in form promotes the pupils' natural psycholinguistic tendencies to look for time and person meaning in more transparent pronouns and adverbs.

- Fragmentation: the fragmentation of pupils' linguistic knowledge, including partial application of rules and misunderstanding of language elements, is a psycholinguistic phenomenon related to the limitations of explicit rule and paradigm learning.

- Implicit learning: pupils who learn verbs by 'exposure' and in an unanalysed way may find that incorrect grammatical forms undergo the psycholinguistic process of fossilisation, or that grammatically correct forms are used inappropriately.

- Homophony: pupils' writing appeared to be affected by the similarity in sound of many French verb elements, which is seen as a linguistic factor, but the pedagogical influence of increased oral work is also important.

- Word-for-word translation: there was a psycholinguistic tendency for pupils to translate verb elements in a naive word-for-word manner, demonstrating only a lexical understanding of language.

- Time constraints: when given more time to consider their test answers, some pupils were able to identify their errors. The stress of test conditions may have had the psycholinguistic effect of causing reversion to incorrect verb forms.

- Variable performance: pupils showed clear variations in performance when using the same language structures in different tasks, a phenomenon seen as psycholinguistic in nature.

- Quantity of inflections: pupils often struggle with the linguistic reality that the French language contains many more verb inflections than English.

A consideration of the suggested, often diverse, origins of these facets of pupil performance can encourage teachers to take a new perspective on particular verb errors. An example of how this could be done appears in the following section.

5.6.3 A case study: multiple systematicity in a common verb error

Though all the test results are presented in tabular form in this chapter and in the Appendices, the statistical details of this empirical research are perhaps less important than the insights revealed in interviews. Though it may be shattering for a teacher to find thirty different versions of nous allons jouer among some sixty pupils (Appendix E), this is less interesting than knowing *why* so many versions of a single structure exist. Above all, we must beware of expecting simple explanations for errors. At first sight the common error of pronoun (+ auxiliary) + infinitive (e.g. *je suis aller for je suis allé) seems a straightforward blunder, but the fact that it is so common and persistent suggests something more complex. Interviews revealed that there is undoubtedly some systematicity in operation, but the problem is that there may be several systems at work. A few of the possible reasons (or combinations of reasons) are now proposed for this widespread error.

- A 'default' form (*je suis aller) may have been used because of cognitive overload. The pupil could have known the correct answer (je suis allé) but had other things to think about under test conditions, and in fact did well to use a correct auxiliary. The infinitive may have been learnt declaratively and retrieved easily, though with more processing time available the correct ending could have been retrieved from the more complex knowledge systems needed for morphological information (cf. Giacalone Ramat, 1992). A pupil using this process is often likely to notice and correct errors in interview.

- The form aller may have been learnt only as declarative vocabulary and used to mean go / went in all forms, with no other version available.

- The correct form allé may have been brought to mind, but the prolonged effect of extensive oral work may have caused the homophone aller to be written. In GCE days, words were often pronounced as spelt; now they are more likely to be spelt as pronounced.

- Because of limitations in the way explicit verb paradigms were learnt, the -é ending may not have been seen as an option for aller, though it may have been for other verbs.

- Je suis allé could be replaced by *je suis aller to avoid a perceived 'clash' with a following vowel, as a result of fragmentary knowledge.

- The pupil may not in fact have been trying to write I went, but attempting a word-for-word translation of I am going, which in turn may be seen as a present or future event.

- Even if the correct version had been written, it could have been induced implicitly by exposure to examples of je followed by -é, and therefore correct without necessarily being understood.

- Non-linguistic strategic factors may have influenced linguistic knowledge. Je suis allé may have been correctly but uncertainly written elsewhere, with *je suis aller being chosen on the second appearance of the structure to ensure that at least one correct version was present in the examination.

It must be emphasised that all these systems could be used by the same pupil in the space of a few lines of French, and that some systems override or interact with others in different ways and in different circumstances.

The overall picture obtained here would have been impossible with error analysis alone. Discussion with pupils was vital, not just about errors, but also about correct versions, as right answers can often be given for the wrong reason. Even with the benefit of interviews, the task of unravelling misconceptions is very complicated. However, it is hoped that this new analysis of a typical long-standing and widespread error will point the way to a critical look at other problems with written French, and to innovative teaching and remedial methods.

5.7 Postscript

No criticism of teachers of French is intended in this analysis. They have the impossible job of reconciling ideal performance with the reality of Grade C pass-rates and success by any means in difficult teaching conditions. The teacher must at times wonder what examiners really want. If grade C can be obtained by avoiding a deep knowledge of verbs, and if some parts of the examination implicitly devalue their importance, then it is no surprise that work on this topic is not given priority in class. It is not generally appreciated that examinations in French (and other Modern Languages) have differed from others at GCSE in their lack of coursework. There has been relatively little requirement in other subjects for methodical learning of the type needed for success at languages, and the pupils find work patterns in language subjects difficult to adapt to against the background of other school work. Whereas other subjects have allowed GCSE credit to accrue steadily in coursework, French has until now relied on 'sudden death' learning for timed, fixed-date examinations.

One particular, almost casual, comment by a pupil neatly summed up the main research and teaching problem, and provides a title for this chapter and indeed the whole thesis. When asked why she had put *j'ai jouer for the past tense instead of j'ai joué, P52 replied,

> 'I don't know... it's just a word...'

The implication is that there is no logic to verb endings, nor could there be. However much theorising and analysis the researcher carries out, the heart of the problem lies in the inability of a large number of pupils to see beyond the superficial appearance of what they read and write, in whatever language.

Let us never forget the reality of learning French for the 'average' pupil. Who says verbs are more important than vocabulary? Who says verb endings matter? The appearance of 'verb-free zones' and redundant inflections in much language teaching realia seems to justify these questions. School pupils in a mixed-ability environment look at the world through very different eyes from those of linguists, teachers or university students. For many, French is not a language but a *subject*, a verb is just a *word*, and verb endings are almost completely *redundant*. Indeed, many pupils seem to have been inoculated against all forms of inflection. A pedagogical programme must take account of these challenging facts. At the half-way point in this thesis, we have finished describing the problems and are now looking for solutions. The following chapter will look at ways in which grammar instruction can be carried out beneficially.

Chapter 6

I wish I knew: approaches to grammar instruction

'I wish I knew how to teach grammar'
(John Higgins, *The Computer and Grammar Teaching*, 1986)

6.1 Introduction

6.1.1 Still with us

'This dilemma is the most serious problem in language teaching today' (Garrett,, 1986, p. 134).

'The questions involving what kind of explicit grammar instruction teachers need to do... have yet to be answered' (Scott and Randall, 1992, p. 357).

'The most obvious "problem issue" is the question of grammar' (Mitchell, 1994c, p. 40).

A decade ago, McLaughlin observed that Krashen's Monitor Theory 'has captured the Zeitgeist - the movement away from grammar-based to communicatively oriented language instruction' (1987, p. 162). There is evidence to suggest that the Zeitgeist has changed. Dirven notes, 'it now looks as if we are in for a new swing of the pendulum .... Perhaps it would not be exaggerating to speak of a new "grammar boom", as may be attested by the abundant recent publication of numerous grammars, and papers on grammar theorising and the teaching of grammar' (1990, p. 4). Johnstone's (1992) wide-ranging review concluded that the 'instructed acquisition' view appears to be gaining ground. Significantly, Terrell (co-author of *The Natural Approach*) seems to have moved on from earlier feelings on grammar instruction when he explains there are ways in which 'an explicit knowledge of grammatical relationships in the target language can be helpful to some learners in the acquisition process itself' (1991, p. 54). Candlin is rather more robust when he asserts that the removal of grammar work was a 'manifest absurdity' (1994b,

p. vii); grammar should never vanish or, on the other hand, be used to 'enslave' learners again. Grammar is seen as a liberating force by Widdowson, as 'it frees us from a dependency on context and the limitations of a purely lexical categorisation of reality' (1988, p. 151). Far from being meaningless, it helps achieve meaning by 'mediating' between words and context, increasing precision and thus making communication possible.

6.1.2 The Communicative Approach does not always communicate

Teachers have had years of inconsistent advice, according to Celce-Murcia (1991), who maintains that many learners need a focus on form in order to achieve accuracy. This applies particularly to adolescents (or older) at intermediate level (or above), the particular population of interest to our research. While there is no empirical evidence that communicative classrooms produce better learners, there is some convincing evidence that a grammarless approach 'can lead to the development of a broken, ungrammatical, pidginised form of the target language beyond which students rarely progress' (1991, p. 462). If the focus is on productive skills, particularly writing, formal accuracy is important, as rules of pedagogical grammar are essentially rules of production. Celce-Murcia's perspective is that grammar has moved 'from a position of central importance in language teaching, to pariah status, and back to a position of renewed importance, but with some diminution (1991, p. 476). This means that it must not be taught alone, but in relation to form, meaning and function. In this way, it will become part of communicative competence; adolescent learners' grammar should no more be seen as a system capable of emerging solely from input and practice.

A similar stance is taken by Little, Devitt and Singleton (1994), who find that one of the dangers in the communicative approach is the assumption that it is only oral, whereas written communication is also important, with grammar work needed as part of an eclectic methodology. They warn that 'there is a point beyond which disregard of grammatical form virtually guarantees a breakdown in communication' (1994, p. 44). For Mitchell (1994c), too, the biggest problem with the communicative approach is that it produces learners who can only use unanalysed phrases and have no internalised grammar for original language production, to the detriment of Advanced-level work. Her view is that, 'at present we lack any developed understanding of the most effective and principled way to tackle grammar instruction as a component of an approach which remains communicative overall, and research and discussion will certainly focus on this question in coming years' (1994c, pp. 40-41).

In a further article, Mitchell (1994a) directs her criticism at GCSE Modern Languages syllabuses for their lack of emphasis on grammar, inadequate definitions of grammar and the use of 'phrasebook learning' for communication. The National Curriculum documents are also seen as unhelpful on grammar teaching. As this is coupled with confusing advice from theorists, Mitchell's view is that teachers' practical and research experience are at least as valid as 'expert' methodological and theoretical advice. In this regard, 'we need to know not only what is being said to teachers, but also what teachers are making of this advice ... if we are to understand better the role of grammar in classroom language teaching and learning' (1994a, p. 91). The work described in this thesis will perhaps add something to a very incomplete picture.

6.1.3 Towards a rationale for grammar instruction

If teachers are in considerable confusion about the position of grammar in L2 acquisition or learning, this is partly because the definition of 'grammar' has changed at the same time as its supposed role. The grammar-teaching debate is still with us, but, according to Hawkins and Towell (1996), we still have no clear-cut guidance on the best way to teach grammar, partly because it has not been academically respectable (they say) to compare methods in a non-grammar-teaching climate. A lot of ink has already been spilt on the subject, but this chapter presents a necessarily selective and limited review of recent and current studies. It will try to demonstrate that converging evidence and opinion put a strong case for some kind of explicit language teaching methodology, incorporating such ideas as 'pedagogical grammar', 'consciousness raising', 'input enhancement', 'language processing' and 'attention to form'. Our aim will be to inform the design of a teaching procedure which addresses the verb-learning problems of GCSE pupils.

6.2 Pedagogical Grammar

This is not the place for an historical survey of grammar-teaching methods. It is sufficient to know that the teaching profession has used grammar-translation, 'structuralist-behaviourist' audio-lingual, or 'natural' communicative approaches (among others) in recent years, and that all have been found wanting in some way. A strict adherence to any one methodology has resulted in more or less learner motivation, accuracy, fluency or understanding, but never apparently in an acceptable configuration. For our purposes, it is more relevant to clarify definitions of grammar and relate them to the explicit / implicit dichotomy.

One of the great difficulties in this area is that 'grammar' is defined in so many ways. Dirven (1990) distinguishes descriptive grammars ('reference' for students, or 'linguistic' for theorists) from pedagogical grammars (used for teaching or learning). He warns that many other views prevail, including those who see descriptive or even prescriptive grammars as pedagogic in use, if not in original intent. As a working definition of pedagogical grammar (PG), Dirven offers, 'any learner- or teacher-oriented description or presentation of foreign language rule complexes with the aim of promoting and guiding learning processes in the acquisition of that language' (1990, p 1). Such a grammar should firstly contain rich, authentic, graded texts (although grading may be problematic); secondly, there should be some element of formal grammar teaching and learning. Because learners are often misled into wrong generalisations both by inaccurate rule formulations and by inappropriate sequencing of material, 'a major assignment for foreign language pedagogy is experimental research into adequate forms of rule formulation and presentation' (1990, p. 8). Above all, any formal rule presentation should promote 'cognitive insight' and internalisation of the rule.

A rather looser description of PG is provided by Corder (1988), who allows it to be anything in a continuum from inductive exposure to a text (the 'sunburn' method) to deductive learning of rules. He identifies four elements of PG teaching: language data and examples; inductive exercises; explanations and descriptions; and hypothesis-testing exercises. The sequence and combination of these elements will depend on particular requirements. Corder is more helpful when he reminds us that there are different 'consumers' of grammar, all with different requirements, and that any grammatical descriptions given by teachers are *aids* to learning, not the object of learning. Indeed, the essence of pedagogical grammar is that it is tailored to the needs of learners, according to Odlin (1994). It is motivated by the limited time available to pupils and by the dangers of fossilisation of incorrect forms. This key notion of the adaptability of PG is enthusiastically taken up by Swan (1994) and McLagan (1994), whose ideas on help for weaker pupils are developed in later chapters.

Another contribution towards a definition of PG is given by Rutherford and Sharwood Smith (1988) whose imposingly-titled 'Pedagogical Grammar Hypothesis' runs as follows: 'instructional strategies which draw the attention of the learner to specifically structural regularities of the language, as distinct from message content, will under certain conditions significantly increase the rate of acquisition over and above the rate expected from learners acquiring that language under natural circumstances where attention to form may be minimal and sporadic' (p. 109). In other words, grammar helps. It must be said that none of the above descriptions of pedagogical grammar seem particularly startling to many classroom teachers, who routinely use 'learner-oriented descriptions', 'language data and examples' and draw attention to 'structural regularities'. This, after all, is the French teacher's job (though, as already described, how the job is done has been strongly affected by GCSE examination tolerances). In fairness to the authors, the above PG definitions are probably so tentatively expressed as they come from an environment where grammar instruction has not been viewed kindly. Rutherford and Sharwood Smith (1988) can be forgiven their somewhat wordy elaborations and limited concrete proposals because they have developed the useful notions of 'consciousness raising' and 'input enhancement' as elements of pedagogical grammar. These ideas have been taken up with some enthusiasm by researchers, and have helped teachers concentrate on the learning process. Before looking through the findings and opinions of other researchers on explicit grammar teaching, therefore, some clarification of these concepts must be given.

6.3 Consciousness Raising and Input Enhancement

The notions of consciousness raising and input enhancement have become part of the repertoire of an influential 'double act' between two researchers, whose joint and individual approaches are outlined below.

6.3.1 Consciousness Raising

Rutherford and Sharwood Smith (1988) define consciousness raising (CR) as 'the deliberate attempt to draw the learner's attention specifically to the formal properties of the target language' (1988, p.107). CR is a continuum of strategies, which might involve simply highlighting a feature, or 'the deliberate exposure of the learner to an artificially large number of instances of some target structure [in order to] attract the learner's attention to the relevant formal regularities' (1988, p. 108). The teacher has to make decisions on how implicit or explicit the CR should be. This will depend on the nature of both the structure and the learner. As one way of making a choice of CR, the authors use an idea derived from Universal Grammar parameter-setting theories (see Chapter 2). The so-called 'pro-drop' parameter settings in English and Spanish are compared (Spanish speakers can drop the pronoun before a verb, while English speakers cannot). As an English learner of Spanish would only have to notice one example of pronoun-dropping to see it is possible, then CR could simply provide implicit exposure. However, a Spanish learner of English would have to notice an enormous number of 'non-occurrences' in order to realise that pronoun-dropping is never possible. In this case the CR would be explicit in order to save time and frustration.

6.3.2 Sharwood Smith

Sharwood Smith (1988b) adds that as a simple binary distinction between implicit and explicit knowledge is questionable, we should allow for degrees of explicitness. He is critical of 'hard-line' direct methods when explanations might be appropriate, because 'natural' methods just take too long. This awareness that most pupils and students only have limited time available prompts the view that 'by providing some pattern or system in the target language, the teacher holds out a promise of ... a shorter and more effective way of mastering a structure' (1988b, p. 52). CR is not one method, but a continuum of elaboration and explicitness from brief indirect clues and symbolic devices to metalinguistic explanations.

The same author looks elsewhere at how a pedagogic grammar might use a contrastive approach to introduce ideas of tense to L2 learners. He stresses the psychological importance of presenting new information in the context of old, invoking Bruner's Apostel principle that 'to learn something about a domain requires that you already know something about the domain ... there is no such thing as *ab initio* learning pure and simple' (Bruner, 1978, p. 243), but warns that this may only be effective if the learner 'is familiar with his or her native language in a conscious way; otherwise remarks about native language structure may be just as novel as remarks about the structure of the target language' (Sharwood Smith, 1988c, p. 161). This is certainly a difficulty as far as many GCSE pupils are concerned. A suggested method is to start with everyday experience (what is time?), then to find how time is subdivided in L1 and L2 (past, present, future), followed by examples from each language. The similarities and differences could then be discussed and elaborated as appropriate.

6.3.3 Rutherford

Rutherford (1987) states that grammar instruction as the teaching of discrete entities, with rules directly 'imparted' to the learner, is inconsistent with what is known about language learning. Grammatical descriptions are the means to an end, and should not be the object of learning. Even if Krashen's (1988) view that comprehensible input is sufficient for language acquisition were true, Rutherford feels that language learners get a lot less data than they need for making appropriate generalisations. Consciousness raising can make the necessary data available in principled fashion, but this must be seen as fundamentally different from 'traditional' grammar teaching. Ideally, as much attention should be paid to the learning process as to the language product (though Rutherford admits this is not an easy matter), and CR is regarded as helpful in this: 'to teach a language is not to teach a body of knowledge but to teach how to learn, or to teach learners how to become better managers of their own learning' (1987, p. 104).

The teacher has to decide which parts of the grammar system are the best source of language data and the right moment for their use, as CR must be handled carefully in order for language input to become 'intake'. As Rutherford's metaphor has it, CR reduces the amount of stumbling in the dark. The teacher needs to know how language looks to a learner, when to turn the spotlight on or off, and how to aim without blinding. Rutherford's consciousness-raising approach sits somewhere between authentic text use and explicit traditional grammar, very much the sort of language teaching envisaged for effective verb learning in our discussion of realia and 'surreal' grammar in Chapter 4.

Between the extremes of traditional and communicative teaching, Rutherford admits that it is not at all clear how practically to interweave form and function, but his ideas for CR exercises include: judgement (error correction); discrimination (choosing from a word list to complete gaps); discernment (the relationships of words, and word order); and problem solving (recreating text, connecting sentences). Whatever exercises are done, the choice must be principled as, in this way, 'target-language grammar enters the learner's experience not as an objectified body of alien knowledge to be mastered or as obstacles to be overcome but rather as a network of systems' (1987, p. 153).

6.3.4 Input Enhancement

The concept of consciousness raising has recently been reconstructed as 'input enhancement' (IE) by Sharwood Smith (1993). Logically, this 'born-again' version better describes the action of the teacher, as consciousness raising cannot actually be guaranteed. This may be seen as rhetoric (indeed some authors use the two terms in free variation), but it is useful to clarify the notion that CR is input which has become intake (involving an alteration in the learner's mental state), while IE is input with no assumptions about what has happened to the learner. Input is simply 'what I give them in the lesson'. Hooper, Mitchell and Brumfit (1994) indeed see CR and IE as very different, and confirm that teacher input is not necessarily pupil intake, with CR helping the language development of *some* pupils. Which pupils are affected is a matter for empirical research. Sharwood Smith admits that we have a long way to go to be able to compete with the 'awe-inspiring' abilities of whatever 'language acquisition device' in the brain is postulated, but feels that input enhancement has a role. He is wary of ideology, echoing the warnings about language learning theories recounted in Chapter 2, that '[such] theories, if indeed they can be said to exist at all, are in a very early stage of development' (1993, p. 166), and suggests his approach is scientific rather than ideological. The role of positive input enhancement is to make certain correct forms salient, while negative enhancement serves to signal incorrect forms. The elaboration used is a matter of degree, and might entail colour-coding, highlighting or explanation. He suggests a useful starting place for IE work to be where learners have fossilised, but warns that any research and results must be treated as modular and not seen as generalisable.

6.4 The value of explicit teaching

6.4.1 Arrogance and debasement of the intellect?

An early defence of the use of 'meta talk' or metalanguage (talking about the form of language rather than its meaning) was put up by Færch (1985), who pointed out that we do not live in an ideal acquisitional world. Although language education may not represent normality on a global scale, it is 'normal' for thousands of children to take part in classroom discourse. Færch believed that metalanguage allows students to get more information to help them form hypotheses about the L2, and that explicit learning can become automatised. He felt that generalisations by supporters of Krashen which criticise the value of grammar explanations, 'are considered extremely arrogant by practising teachers' (Færch, 1985, p. 197) and break down links between researchers and teachers.

In similar vein, Leech (1989) outlines the familiar reasons for the decline of L2 grammar teaching; the communicative movement, the rejection of traditional methodology and Krashen's 'natural' approach. He argues that 'communication' has been misunderstood and that language knowledge is in fact a resource for communication. Further, Krashen's theory is more appropriate for naturalistic learning than for the the restrictions of a classroom. The fact that grammar has been seen as 'difficult' and abstract is a reflection of it being taught in a sterile way. Leech deplores the anti-educational removal of the intellectual content of language learning, adding that, 'for no other subject in the school curriculum would this debasement of the value of the human intellect be so readily accepted' (1989, p. 10). Ideally, implicit learning may be preferable, but 'in acquisition-poor environments, there must necessarily be a major dependence on explicit learning, and ... the great challenge here is to achieve accessibility of grammatical understanding for learners who have not reached higher levels of intellectual maturity' (1989, p. 19). Leech welcomes the consciousness raising and language awareness movements which carry the suggestion that simplification is necessary. Teachers might have to enter the fiction of there being a neat relationship between form and function, and accordingly use simple metalinguistic rules.

6.4.2 Recent experiments

Though Chaudron (1988) maintained that some form of explicit instruction can be beneficial, he was concerned that it may not always be done in the right way. His claim that, 'there is little doubt that most ... instructional practices present structures that are inappropriate for learners' stage of acquisition or natural-universal sequences' (1988, p. 164), seems quite pessimistic. He also found existing research difficult to synthesise because of the lack of consistent measures of classroom procedures and products, and incomplete descriptions of design, analysis and specification. Since that time, several new relevant research projects have been undertaken, as described below.

An experimental attempt to demonstrate the value of formal grammar teaching is presented by Doughty (1991), who outlines the difficulties involved in evaluating the effects of instruction. Firstly, the work of researchers like Dulay and Burt (1973) was unfortunately used to support the view that instruction was of minimal or detrimental value, as there was a natural order for L2 acquisition. We have to remind ourselves that their research applied to the natural speech of 5- to 8-year-olds, so that any extrapolation to adolescents engaged in L2 writing must be suspect. Secondly, studies comparing instructional and natural settings have produced conflicting results because of lack of rigour in isolating the settings. Thirdly, it is very difficult to compare actual instructional methods as we lack detailed descriptions of classroom implementation. Despite these difficulties in evaluation, an earlier analysis by Long (1983) found that there is considerable evidence that instruction does make a difference to children and adults alike, at all levels of learning, whether on integrative or discrete-point tests, and in acquisition-rich or -poor environments: 'put rather crudely, instruction is good for you, regardless of your proficiency level, of the wider linguistic environment in which you receive it, and of the type of test you are going to perform on' (Long, 1983, p. 379).

Doughty's way of testing this assertion was to compare the performance of 20 students using a computer program to learn English relative clauses. She found that the rule-oriented and meaning-oriented groups (each focusing on form) both performed better in written production than a control group which only had exposure to text. Further, the meaning-form students had better comprehension results than the rule-form students. Although these findings only apply to a particular group of subjects learning one structure, they are encouraging for teachers who see a role for formal instruction. Doughty adds that 'there are a variety of ways of encouraging learners to notice forms other than traditional methods of metalinguistic discussion' (1991, p. 461), which reminds us that although learners' attention must be drawn to language features in order for them to be learnt, this can be achieved by consciousness-raising techniques as well as by rule elaboration.

Scott (1989 & 1990) tried to compare explicit and implicit teaching strategies used on university students working on French relative pronouns and the subjunctive. Her results showed no significant difference in oral performance whichever method was used, but there was significant improvement in written grammatical performance for the explicitly-taught subjects, regardless of ability level. She was not completely happy with the validity of her first experiment, but did offer the conclusion that, 'when students are concentrating on the content and not on the form of a message, they are less likely to learn specific grammar structures' (1989, p. 19). Her more rigorous (1990) work produced almost identical results, and again suggested that the use of explicit grammar teaching strategies produced a better student outcome.

Lightbown (1991) reiterates the conflict between those who argue that formal instruction cannot affect deep underlying grammatical competence and those who think proficiency is significantly aided by instruction. She describes how strict drill-and-practice instruction could not prevent French learners of English confusing there's and have as a sentence introducer, with similar errors being made by a 'communicatively-taught' cohort (although the latter's vocabulary and production strategies were richer). However, one particular class within this cohort, though of similar ability to the others, was virtually free from these errors. Enquiries revealed that, although these pupils had been taught communicatively in principle, 30% of their time was spent on form focus. The reason for success appears to be that, as the forms were not taught in isolation (i.e. they had a communicative context) and, as the pupils wanted to use them for a purpose, they actually had a different interlanguage status from the same forms taught by other means. Lightbown adds that this success did not apply to other language structures, and accepts that a potentially successful strategy will only work if the learner is ready to learn that particular structure (see Chapter 4 on 'teachability'). The conclusion is still that there is a significant role for a focus on form.

Having found that comprehensible input was not producing high levels of accuracy in their pupils, White *et al.* (1991) describe how input enhancement (in the shape of form focus and correction) increased 11-year-olds' ESL syntactic accuracy. One of the benefits of input enhancement is that the learner may not have noticed relevant structures in language input and that no intake could take place otherwise. IE also helps students to 'unlearn' an incorrect analysis, and provides crucial negative evidence in the form of correction. Their results showed long-term improvements in accuracy in both oral and written tasks.

6.5 An input-processing perspective on explicit grammar

6.5.1 'Irremediably inaccurate fluency'

This evocative term is used by Garrett (1986, p. 133) as she takes up the concerns of those who are uneasy at the language problems which can develop within the context of 'communicative competence'. She describes the sorts of learner (cf. Chapter 3) who are 'unable to use a given grammar point correctly ... even after repeated explanation, illustration, drill, and apparent mastery as demonstrated on tests' (p. 133). For Garrett, the key question is what *kind* of grammar should be taught. Traditional grammar statements about form rather than meaning do not promote communicative competence, and abstract linguistic descriptions should not be used pedagogically as the linguist and the teacher have different goals. She supports the prevailing view that the whole concept needs revision for pedagogic reasons.

The aim, for Garrett, is to know how native speakers express meaning in their language form. Speakers share 'processing rules' for encoding and decoding language (these are psycholinguistic rules, i.e., they deal with the nature of the language and how it is acquired and used). All the rules we normally use only describe a system, not the *process* by which native speakers express meaning. Textbook grammar rules are not useful as processing rules because their terminology is often misleading, and categories do not apply similarly across languages (see Chapter 4). English speakers have particular difficulties in learning other languages, because of the nature of their L1. English is so dependent on word order and uses so little inflection that many NSs believe that it has hardly any grammar, and that meaning resides entirely in words. The choice of present or past tense (e.g. go / went) is often seen as simple word selection (recall 'it's just a word' in Chapter 5). The lexicalisation of many English grammatical notions makes it difficult to understand how other languages are processed. Mastering the form is not the same as mastering the grammatical point. In any case, analytic grammatical terminology cannot invoke the processing that is used by a native speaker. As the way rules are presented often devalues their function (cf. 'vowel clash' in Chapter 5), Garrett suggests that learners should be given examples to show how unthinking use of rules of thumb can produce wrong forms, and to show the difference between real processing and surface forms.

Garrett thinks that some students already adopt a processing approach, but that it is unfortunately faulty. Such learners create 'an idiosyncratic processing connection between the form and some irrelevant or inadequate or incidental bit of meaning [and invent] their own rules for "what this form is used for" ' (1986, p. 143), incidentally contradicting the 'Natural Approach' claim that successful learning takes place with appropriate input alone. Correction of errors may be useless if it deals with the surface form and not the faulty processing; students may have problems of recognition and understanding, not just forgetfulness (see the multiple reasons for verb errors in Chapter 5). Garrett holds the view that 'some explicit explanation and drilling of grammar is both necessary and desirable in secondary and post-secondary classrooms' (1986, p. 143), but that the teaching of 'processing grammar' is also needed. This might involve presenting basic principles of language in relation to thought, and transforming learner attitudes to grammar by making it meaningful. The way the language is organised can also be discussed (e.g. word order, prefixes, formal expressions of time). A continuum of how grammatical form conveys meaning might be a useful way of highlighting language redundancy. For example, some language forms have a unique and obligatory meaning, while others may well convey a meaning but are redundant in processing terms, such as verb endings when a subject or temporal adverb is present. Grammar teaching of this nature, which mediates between meaning and form, could serve to modify the superficial approach used by many learners.

6.5.2 A processing experiment

In a reprise of Garret's (1986) theme, Vanpatten and Cadierno (1993) state that, 'it may very well be that previous research is limited because both the grammar that has been taught and the manner in which it has been taught do little to affect the *processes* that underlie acquisition' (1993, p. 45, italics added).

The authors describe a comparative study of the effects of traditional output manipulation with those of input processing, which, as we have seen, involves making form-meaning connections. In the learning of Spanish non-SVO order by 2nd-year university students, traditional grammar work included the use of paradigms, explanation, examples, drills and meaningful practice with the focus on production. By contrast, the processing work involved interpretation of material, responding to information content, presentation by contrast, and assignment of heard or read material to a picture, with no production work. The processing group outscored the 'traditionalists' on text interpretation (matching sentences to pictures), but both groups scored equally well on production tasks (sentence completion). Different teaching approaches therefore seem to produce different knowledge systems. The traditional 'practice' method of grammar teaching may help production but may not feed into the learners' developing system, while the processing method gives the double bonus of interpretation skills, and knowledge that can be used for production. These findings are particularly interesting as they relate to written classroom production, not to the spontaneous naturalistic work of many other research exercises in this area.

6.5.3 The role of practice

Ellis (1992) takes it as a given that grammar should be taught, but warns that the usefulness of practice may not be as teachers expect. His contention is that we must be careful to separate CR from practice, which he sees as having limited potential. The main purpose of CR is to develop explicit knowledge and to form concepts, while practice is mainly behavioural, productive and 'success-oriented'. The practice of a particular structure does not necessarily result in autonomous ability to use it, as 'once learners move into a meaning-focused activity they seem to fall back on their own resources and ignore the linguistic material they have practised previously in form-focused activity' (1992, p. 236), a phenomenon we have noted in previous chapters. The use of practice assumes that grammar acquisition is a gradual automatisation of production, but, according to Ellis, it ignores the teacher's inability to influence what happens inside the learner's head. In a later work, Ellis' (1993) 'new rationale' for learning grammatical structures rests on the claim that 'grammar teaching should be directed at consciousness-raising rather than practice' (1993, p. 108). Consciousness raising makes the learner aware of L2 features and their properties, while practice has a role in control of knowledge, but not in its acquisition. The research cited by Ellis in support of this position suggests that explicit grammar instruction produces faster learning and higher accuracy, and succeeds if the learner is ready to acquire the feature being taught. Explicit instruction is deemed useful not only for its (debatable) ability to become implicit, but also because it can be used as an 'advance organiser' to help learners notice features and their meanings in language input, and to help them notice deficiencies in their own output. Ellis freely admits that his claims have limited empirical support, but they are a useful reminder to course designers that repeated manipulation of output may be less useful than the principled processing of input.

6.6 Consciousness and attention to form

6.6.1 Definitions of consciousness

An influential contribution to the explicit / implicit teaching debate is made by Schmidt (1990). He can find no theory which sees conscious grammar study as necessary or sufficient for learning, but some which see it as facilitative. Other theories, like that put forward by Krashen (1988), have no place for conscious grammar work in natural acquisition. Consciousness is seen as a tricky concept in SLA, but Schmidt believes that, although the unconscious has a role, 'conscious processing is a necessary condition for one step in the language learning process, and is facilitative for other aspects of learning' (1990, p. 131). The 'one step', explained below, will be seen as particularly relevant to our own study.

An initial difficulty is that consciousness is so variously defined, both in everyday and scientific domains. Schmidt shows that consciousness has been seen by some as 'awareness' which exists on three levels: perception (which may be subliminal), noticing (a focus on one thing in competition with others), and understanding (analysis, comparison, reflection and problem solving). Others define consciousness as 'intention' or as 'knowledge'. This last definition is especially confusing as consciousness can be distinguished from knowledge, and 'knowledge' means different things to different authors. Furthermore, Schmidt argues that explicit and implicit knowledge should represent a continuum rather than a dichotomy, but there is no consensus on where to draw the line which separates conscious and unconscious language knowledge. However, Schmidt does draw together theoretical approaches to consciousness which say 'roughly' (his term) the same thing; that unconscious processes are parallel, not limited by short-term memory, involuntary, fast and accurate; and that conscious processes are serial, limited, effortful, slow and inefficient, but can be deliberately controlled and are important for learning.

6.6.2 Saliency and redundancy revisited

Schmidt's (1990) most interesting comments relate to conscious attention to language form. Instruction can 'prime' expectation and increase the likelihood of features being noticed. The frequency of an item also makes it more likely to be noticed in input. Schmidt makes the critical point that perceptual salience is a prime determiner of acquisition. Grammatical morphemes that are phonologically reduced or homophonous with other morphemes (see Chapters 4 and 5) pose particular difficulties as they are not salient. We also learn that the demands of a given task strongly affect what is noticed and learned; 'the information committed to memory is essentially the information that must be heeded in order to carry out a task ... it really does not matter whether someone intends to learn or not; what matters is how the task forces the material to be processed' (1990, p. 143).

Some apposite observations are made about the difference between child and adult learners of a language, and relate strongly to Zalewski's (1993) analysis of why verb endings are not noticed (Chapter 4). We know that children learn grammar naturally as a by-product of communication, while adults do not succeed in this way. It may be that children notice information that does not actually require noticing (which could include redundant verb endings). Experiments are cited which suggest that a child has a passive mode of consciousness, open to the environment, while adults (here defined as adolescent or older) use a controlled mode which allocates attention strategically. Schmidt therefore predicts 'incomplete acquisition of form by adults to the extent that they do not deliberately attend to form, especially for redundant and communicatively less important grammatical features' (1990, p. 145). As children have less control over their attention, they may not avoid noticing features which are less communicatively important. The conclusion put forward by Schmidt is therefore that things must be noticed in order to be learnt, and that 'paying attention to language form is hypothesised to be facilitative in all cases, and may be necessary for adult acquisition of redundant grammatical features' (1990, p. 149). This is the 'one step' in language learning referred to above. The role of unconscious learning has been exaggerated because, even if implicit learning is possible, it does not mean that awareness is no help, or that understanding is irrelevant.

6.6.3 Selective attention

There is strong support from Gass (1991) for Schmidt's (1990) position that there is nothing available for intake into the L2 learner's existing system unless it is consciously noticed, and that attending to language form may be necessary for adult L2 learning, After admitting that grammar teaching is a controversial topic, Gass holds that explicit instruction helps the learner by causing 'selective attention' to be paid to language form. This concept is incorporated in several models of learning. Osborne and Wittrock (1983), for example, claim that experience itself does not trigger the construction of meaning, rather selective attention to that experience. The results of recent empirical work on saliency and focus on form have convinced Gass that selective attention is an important factor in second language development, as it triggers the noticing of a mismatch between L1 and L2, seen as a first step in grammar restructuring.

The role of explicit instruction is therefore as a 'selective attention device'. It helps learners become aware of target-language features and the discrepancies in their own L2 systems. As Gass puts it, 'before a change in one's grammar can come about there has to be an awareness that there are changes which need to be made. Grammar instruction in many cases may be what makes the learner initially aware of an aspect of her learner-language grammar which needs modification' (1991, p. 137). The change is not necessarily instant, but the initial stages of grammatical restructuring are triggered. In this regard, Gass argues a useful role for error correction ('negative evidence', as distinct from the 'positive evidence' of well-formed language) as, like grammar instruction, it focuses attention on structures which need modification.

Gass views Rutherford and Sharwood Smith's (1988) concept of consciousness raising as broadly supporting her position, and compensates for their lack of substantiating data by briefly summarising studies of relative clause acquisition which show that natural language development can be 'short-circuited' by the learner's ability to generalise after undergoing instruction. Gass does not take the extreme view that explicit instruction is essential, as it may be possible for learners to work out information themselves, but does see focused instruction as a short-cut. Whereas traditional grammar instruction rested on the hope that learners would internalise rules, and communicative teaching went on to de-emphasise instruction, Gass' proposal is that a focus on form has the important role of alerting the learner to a mismatch. As she states, 'the goal of explicit grammar instruction should ... be to highlight specific parts of a learner's grammar which do not coincide with target language norms and ... thus act as a trigger for future change' (1991, p. 140). This does not mean that learners must be able to state rules explicitly, but that the teaching medium tries to focus attention on particular L2 structural properties.

6.7 Language immersion and attention to form

Despite some claims that children do not benefit from form-focused L2 instruction, even though adults might, Harley (1993) has evidence that instructional support can help even in 'immersion' environments of massive target-language exposure and high motivation. Results from immersion studies show that although children may exhibit almost native-like L2 comprehension, there are non-native-like features in production. As outlined above, exposure to genuine task demands is considered by Schmidt (1990) to be influential in determining language learning with children, but Harley thinks that exposure alone may not be optimal. For example, from a verb-teaching point of view, unplanned teacher talk is found to contain mainly present tense and imperative verbs, thus providing little exposure to other tenses. Even frequent features may not be perceptually salient, and any actual answers may be short (and, we should add, might not even contain a verb). Experiential work may therefore be necessary, but not sufficient.

The advantages of a formal approach are manifold. As a feature cannot be learnt unless it is noticed (Schmidt 1990), this teaching style could make a feature salient by the use of input enhancement. Formal analysis may also clarify form-function relationships, and provide the negative input needed to counteract overgeneralisation of rules. The drawbacks are that over-accuracy can be inhibiting and that analytical work can be out of context, abstract and beyond the metalinguistic capabilities of the pupils. We have already observed that the ability to conjugate verbs does not relate to their effective use. However, these drawbacks must be set against the failure of implicit approaches to draw attention to features. Harley (1993) suggests that the teaching mode can be written, oral or iconic, and proposes various principles that could apply to persistent non-native language patterns. The first is the 'compensatory salience principle', which entails analytic teaching for L2 features which differ in unexpected ways from L1, and are irregular, infrequent or non-salient in L2, and which do not carry a heavy communicative load. The 'barrier-breaking principle' uses the analytic approach to clarify problematic L2 features which are causing confusion. Harley identifies être and avoir as suitable cases for treatment. If frequency were the sole criterion for learning, there would be no problem with these verbs, but (as we saw in Chapter 5) there is persistent non-segmentation of j'ai by analogy with the two-part English past tense (j'ai mangé = I ate). There is also frequent confusion between parts of avoir and être (which also occurs among French L1 speakers), reinforced by the lack of propositional meaning in these elements, and the fact that expressions like *j'ai* froid translate as *I am* cold

Having identified a problem, Harley invokes two more principles to ensure that analytic teaching is done at the right time and in the right way. The 'integration principle' allows for instruction at any time in a school course, provided that pupils' metalinguistic capacities are not overestimated and that the work is relevant. The 'learning task principle' simply means that the nature of the learning task determines the strategy. Even at beginning level, then, it makes sense to focus on L2 distinctions where misanalysis can cause long-lasting confusion, so long as this is within the pupils' capabilities. In the case of j'ai there is a strong case for input enhancement by visual support. In sum, if an important role can be found for grammar instruction within a theoretically 'natural' immersion course aimed at children, then there are serious arguments for using instruction in many other learning contexts.

6.8 A change of heart?

It was noted at the beginning if this chapter that Terrell, who, with Krashen, was one of the *bêtes noires* of explicit grammar teaching, had apparently 'come out' to find a place for instruction. Though Terrell (1991) feels that the controversy has been exaggerated, he admits that grammar instruction for adults may have more value than Krashen suggests, and instead of arguing against grammar, it may now be best to redefine it and make it useful. As for fluency and accuracy, there is not enough evidence to say that Explicit Grammar Instruction (EGI) helps in conversation, but it can help in written grammar tests. There is an assumption that EGI can help the rate of learning, but much evidence exists to support the view that acquisition orders are immutable. We do not really know if EGI helps, what form it should take, what aspects it helps, or which students it helps, and little research has been done on its long-term effects. Although there are no simple answers, Terrell does venture that it is 'probable that instruction about forms or structures of the target language is beneficial to learners at a particular point in their acquisition of the target language' (1991, p. 55). EGI may not have a direct effect on acquisition, but may indirectly help.

Significantly, from the point of view of our research, Terrell finds a role for EGI in overcoming the problem of redundancy and saliency in French verb inflections. A distinction is made between a linguist's rule, which might say that a verb agrees with its subject, and the cognitive processes which produce this effect. He states that, 'the ability to generalise patterns to new forms and contexts is not due to the learner's having formulated ... a rule, but rather is based on a network of meaning-form associations' (p, 57). Native speakers use verb endings correctly by analogy with hundreds of other endings rather than by the use of a morphological rule (this is demonstrated by the ability to generate endings on non-existent verbs). Each meaning-form association is part of a network, with acquisition seen as a continuous pattern of processing and storage. The process may be imperfect at first, thus causing the well-known phenomenon of overgeneralisation of regular verb endings onto irregular verbs. For acquisition of verb inflections to take place, the form must first be isolated, then the meaning ascertained, and finally a link must be made between the two. What role can EGI play in this 'binding'?

Terrell proposes that that EGI can help acquisition in three ways. Firstly, it provides an 'advance organiser' to help the learner process input. It could highlight key grammatical elements, for example by making general statements about how verb endings are organised. Secondly, EGI could act as a monitor of learner output (Krashen, 1988), but there is very little information available on this phenomenon. Finally, explicit instruction can be used to make a meaning-form focus for complex morphology. Some meaning-form relationships are salient and essential (for example, interrogatives) but others are redundant. For example, if a learner knows that hier means yesterday, the auxiliary and past participle are redundant in a following French verb (see Chapter 4). EGI could make these non-salient forms salient in input by providing lots of examples of the same grammatical form-meaning relationship, such as in a passage with only one verb ending to focus on. As there are doubts about the ease with which learners can focus on form and meaning at the same time, Terrell suggests reducing the lexical burden on students by using well-known vocabulary, thus releasing time to process the form and meaning of the targeted inflections. As he most pertinently concedes, 'we do not know whether students who are restricted to a classroom environment could acquire a verb system as complex as the Romance language systems without EGI given their necessarily limited amount of exposure. My impression is that grammar-focused activities are necessary and that classroom students will not come close to the number of hours of input necessary for natural acquisition' (1991, p. 60). Despite the views of Krashen, and evidence of an 'internal schedule' for language development, many teachers and pupils believe that EGI is useful in acquisition. For GCSE pupils needing help with French verbs, and where time is of the essence, such a specific endorsement of explicit grammar instruction coming from such a source as Terrell must be seen as highly encouraging.

6.9 Conclusion

6.9.1 A convergence of opinion

Mitchell (1994b) is clear that a focus on form helps learners restructure their knowledge and helps decontextualised work, even though the details of how this process works, and what explicit knowledge does, are not clear. She cites Ellis' (1990) Instructed Second Language Acquisition Theory and Sharwood Smith's consciousness raising as evidence that explicit language knowledge is now considered an acceptable part of classwork; 'whatever the details of the disputes between cognitive theorists, the broad pedagogic conclusion remains the same: that helping the learner to build an explicit reference model of the target language, without any immediate expectation that this will lead directly and mechanically to improved performance, will be useful (if in ways not yet understood in detail)' (Mitchell, 1994b, p. 222). Indeed, in a recent collection of essays on pedagogical grammar, Odlin (1994) feels bold enough to say categorically that grammar teaching is actually *necessary* for adult L2 learning, though not sufficient.

6.9.2 Written and oral work: a postscript to Krashen

It is important for teachers to remember that speech and writing are distinct modes of language production. Several years ago, Leech noted that, 'where a goal is informal conversational communication, ... grammar consciousness can fade into the background. But where the focus is on ... written communication, there is much greater need for learners to monitor their own performance' (1989, p. 22). This reminder about learner goals is particularly relevant to our study. More recently, Masters (1994) makes the crucial distinction that, since a writer is separated from the reader in space and time, the writer is unable to use extralinguistic cues. Heafford (1993) refers to Stubbs' statement that 'writing is not simply a way of recording speech ... it has its own distinctive forms and functions' (Stubbs, 1980, p. 23). This is echoed by Little, who made successful use of a pedagogical grammar text-reconstruction experiment (focusing on inflectional forms as carriers of temporal meanings) to solve a problem with the verb morphology of 13-year-old English learners of French. Little's perception is that, 'traditionally, language teaching has not distinguished between spoken and written language; yet discourse analysis has made abundantly clear that there are major differences between the two varieties' (1994, p. 114). Celce-Murcia (1992) also stresses the importance of instruction for L2 writing, as accuracy is unlikely without it. To support her opinion, she draws from the work of Day and Shapson (1991), who found a significant improvement in written performance, particularly in known problem areas like the French verb system, after grammatical instruction within an immersion programme.

If we now go back to one of the perceived roots of the current problem, it is illuminating to note that Krashen (1982) himself admitted to enjoying learning conscious rules, and did *not* object to the teaching of conscious rules, as it can be justified for writing and for essential structures with the right learners. He talked of 'putting grammar in its place' (1982, p. 83) and clearly stated that, 'when given time, and when focussed on form, some people can use conscious grammar to great advantage' (p. 90). We also need to be reminded that Krashen and Terrell's (partly) notorious *Natural Approach* (1983) is mainly concerned with oral work. The authors clearly accepted the use of conscious grammar 'in situations where it will not interfere with communication, as in writing or prepared speech' (1983, p. 143) and went on to suggest that students 'might well profit from learning morphology, thereby giving ... their written output a more correct form' (p. 144). Writing, after all, is where the three conditions for Monitor use (time, form focus and rule knowledge) are likely to be met, and particular mention is made of monitoring for subject-verb agreement and tense. Interestingly for our study, Krashen and Terrell added that adolescents pose a real problem for teachers, as it can be very hard to create the right atmosphere for acquisition with young teenagers because of peer pressure and a high affective filter. A truly 'natural' approach may not be ideal for these learners after all. If the implications of the above paragraph had been fully understood a decade or so ago, and if the requirements of written and spoken L2 had not become so confounded in classroom practice, for whatever reason, then there might have been no need for much of the work described in this thesis.

6.9.3 Where are we now?

To ensure that we finish on comparatively solid ground in a notoriously uncertain area, we canvas opinions on explicit grammar teaching that are up-to-date (1996), authoritative (published by the Centre for Information on Language Teaching and Research, with the Association for French Language

Studies) and relevant. In *Teaching Grammar: Perspectives in Higher Education*, two particular articles echo some of the theoretical issues and learner problems we outlined in earlier chapters of this thesis, and draw together the strands of this chapter to endorse an explicit grammar-teaching rationale. In the first article, Hawkins and Towell (1996) point out that in some quarters, grammar teaching has been taboo for two decades. Because instruction was seen to have little effect on L2 grammatical development, and because there are common L2 developmental errors, it was thought that L2 and L1 acquisition operated on similar lines, As we have seen, followers of Krashen proposed abandoning grammar teaching in favour of exposing L2 learners to comprehensible utterances. This was, after all, how they learnt their L1, using internal Universal Grammar principles rather than being taught. The rise of the highly-motivating 'communicative competence' movement reinforced this non-grammar approach.

However, as is now established, 'natural' L2 learners do not acquire the same grammatical knowledge as native speakers and their accuracy declines because L2 and L1 learning processes are not exactly alike. The paradox of the course of L2 development being impervious to instruction, yet its quality never equalling that of the L1, is explained by the idea of a 'critical' or 'sensitive' period at some point in childhood, after which there is a gradual decline in the ability to learn like a native speaker. There is indeed a stable order of development, but also what Hawkins and Towell call a 'plateau of competence' (1996, p. 201). Not all Universal Grammar areas are subject to decay, but, simply put, L2 learners are *physiologically* incapable of full competence after a certain age.

It is nevertheless possible to get close to NS ability, but not via exposure to language alone. As learners must use different strategies from those of NSs, the rationale for grammar instruction becomes clearer. Using Fodor's (1983) model of the mind, the authors propose that there are specific mental modules for particular domains (e.g. for grammar) which are 'hard-wired' and fast in operation. These modules cannot be deliberately turned off but may be subject to a critical period. The mind also has central processes: these integrate the modules, and are not domain-specific, automatic or fast. Hawkins and Towell (1996) believe that these central processes can possibly fill the gap which is left after the grammar module becomes impaired. Grammar instruction enables the central processes to draw inferences and try to emulate the modules. Krashen (1988) may or may not be right about the lack of effect of instruction on the grammar module, but, as the module cannot do all the learning, grammar instruction is needed for certain tasks. The central processes are not automatic but can be speeded up into routines to produce language which appears spontaneous. In other words, instructed learners can do well, not with naturally-acquired grammar representations, but with 'automatised', learned grammatical knowledge. Superficially, L2 language may be identical to that of the NS, but there are individual underlying differences.

The authors regret that there has been no serious comparison of grammar-teaching methods, but suggest that instruction should not be divorced from 'situations', and should deal with relatively simple and explainable properties. They conclude with a salutary appeal for realistic expectations. In the past, L2 learners were often expected to aspire to native speaker norms. This is unfair, as their language knowledge is not constructed in the same way. As Hawkins and Towell say, 'our expectations about what L2 learners can achieve must be tempered by the knowledge that most of them will never be like native speakers of the target language' (1996, p. 208). These sentiments are particularly relevant when dealing with GCSE pupils.

In the second recent article, Roberts (1996) reinforces our earlier findings that inflections cause difficulties for L2 learners. She sees morphological errors as evidence of deeper structural misconceptions, and, in an echo of revelations about GCSE French, describes how paradigms of German adjectival endings were written out in examinations by Advanced-level candidates, but not applied in productive writing. Once again we see that narrow explicit grammar learning is not the answer, nor is a limited interpretation of communicative competence which uses unanalysed phrases for survival. Roberts questions whether language teaching can ever be really 'authentic' in the classroom, as even communicative exercises bear little relation to real life. Grammar must be integrated into the communicative syllabus in order to avoid returning to 'traditional' grammar notions. The author concludes that, 'it seems sensible to abandon the illusion that the language-teaching classroom can be an entirely authentic reproduction of language use outside this context. This does not mean that authentic materials should be jettisoned, simply that language teaching needs to be recognised as a special use of language which may at times be different from the "real thing"' (Roberts, 1996, p. 38). This summary sits well with conclusions reached in Chapter 4 that a 'middle way' must be found between the use of unadapted realia and 'surreal' grammar exercises.

6.9.4 The 'middle way' as the way ahead

That middle way, as this chapter has argued, should involve the use of a specially-designed pedagogical grammar for our mixed-ability learners. We have evidence of a very strong convergence of current opinion amongst educators from different backgrounds towards an important role for explicit grammar teaching. In an appropriate form, this type of instruction is particularly suited to adolescents, whose natural language acquisition capabilities are in decline, and whose affective filter may be high. We cannot expect pupils undergoing compulsory Modern Languages instruction to be as motivated as adults learning a second language abroad. Explicit teaching is also useful as a short-cut to learning, a critical consideration given the limited time available to complete a GCSE course in competition with other school subjects. Furthermore, it is outstandingly suitable for writing, the medium of L2 communication being investigated in this thesis. In its incarnation as pedagogical grammar, as opposed to reference grammar, explicit language teaching is also adaptable, a particularly important bonus for the less able pupils we are dealing with. The content of pedagogical grammar can be restricted, and examples of structures artificially exaggerated to suit the learners' exact needs. From the views expressed in the chapter, teaching methodologies incorporating consciousness raising, input enhancement, a consideration of how language is processed, and a possibly limited role for practice, could usefully form the basis for a pedagogical grammar.

Although the preceding chapters have attempted to categorise verb errors, it is rather hard to find precise proposals for grammar-teaching methodology in relation to different kinds of error. As this chapter has suggested, the lack seems to stem partly from the recent unfashionableness of methods-comparison research (cf. Hawkins and Towell, 1996) and from the loose definitions of what pedagogical grammar is in concrete terms. In the end, as Rutherford and Sharwood Smith (1988) make clear, it is the individual teacher faced with particular structures and particular learners who has to make the decisions. We have some guidance in that teachers should not rely on unadapted authentic texts, that productive practice of a structure may not always be appropriate, and that learners should be taught how to manage their own learning.

This general advice is only rarely supplemented with specific suggestions for teaching. Rutherford (1987) advances exercises in error correction, word discrimination and text recreation, while Vanpatten and Cadierno (1993) propose language-processing work, such as text interpretation. Harley (1993) invokes the idea of giving 'compensatory salience' to features which carry little communicative weight, while Terrell (1991) specifically addresses the redundancy of verb endings with a similar appeal for non-salient forms to be made salient. This could be achieved by providing lots of examples of one particular inflection in a text which has a deliberately reduced lexical burden on the pupils. To compensate for a general lack of differentiation in relating particular grammar-teaching methods to pupil verb error types, the remaining chapters examine how a principled pedagogical grammar approach using computer-assisted language learning might meet the specific needs of mixed-ability pupils.

Chapter 7

The lost audience: CALL, grammar, and less able pupils

The justification for the use of CALL for teaching aspects of French verbs to less able GCSE pupils cannot be taken for granted. Many articles on CALL express concerns about its effectiveness and remind us that its acceptance by the language-teaching profession is far from universal (see e.g. Glencross, 1993a; McBride and Seago, 1996). An investigation of research trends by Chapelle and Jamieson (1989) accepted that the effects of CALL are not well understood and that there is no unequivocal evidence for its superiority over conventional teaching. A recent contribution by Liddell bluntly states that, 'hard educational evidence, in terms of improved learning outcomes, is nowhere to be found in the literature on CALL' (1994, p. 164). There has been an uneasy relationship between SLA theories and the development of CALL, with a feeling that progress in the field has been disappointing. We now examine relevant issues raised by grammar CALL users and authors, consider recent reviews of CALL for grammar teaching, and conclude with a critique of CALL for verb learning. As the various authors make very little explicit reference to less able or mixed-ability learners, this chapter carries out that task.

7.1 Issues in CALL for grammar teaching

7.1.1 Early warnings

Several years ago, Higgins warned that, 'we may be unwise to "computerise" conventional grammar teaching, since an essential prelude to computerising ... is to analyse that function, ... and grammar teaching is not well understood at all' (1986, p. 32). However, since Higgins explicitly refers to 'conventional' teaching, we should not be too discouraged, for as Chapter 6 showed, there are several 'unconventional' pedagogical grammar approaches now open to us.

In similar vein, Farrington (1989) reveals how the inadequacies of the model of language learning lying behind many CALL materials are shown up in painful relief by the medium. Though he concedes that accuracy is important in examinations, some programs have too much emphasis on explicit rules and formal accuracy. For him, the important question is how systems handle meaning rather than surface form, which is why he finds the manipulation of an unintelligent sentence like les voisins bavards donnent les bonbons aux petits enfants, found in an 'intelligent' CALL program, to be a sterile and unprofitable activity. We are reminded that meaning is not an appendage to language, rather language *is* meaning. Farrington invokes three-quarters of a century of linguistic science, but somewhat despairingly adds, 'looking at some CALL materials, both intelligent and unintelligent, ... one sees little evidence that those 75 years ever happened' (1989, p. 73). He feels we are better served by exercises of 'humdrum usefulness' than by elegantly constructed grammar grinders. Our feeling is that ideas of grammar have moved on, with a new target audience to consider, and that it may be possible to create programs which are neither grinders nor humdrum.

7.1.2 Psycholinguistic principles in CALL

Garrett's (1986) views on the value of the psycholinguistic processing of grammar (how meaning is encoded and related to form) are elaborated in Chapter 6. Her (1987) belief is that 'the development of CALL materials focusing on grammatical processing may be one of the most important concerns for foreign language education' (p. 171). Traditional grammar teaching often concentrates on a form rather than the process leading to it, while rules 'explain' structures with only passing reference to the meaning conveyed. Meanings (if any) are frequently given grammatical labels which assume a knowledge of English grammar, and which are sometimes misleading or even wrong. Garrett suggests that CALL grammar lessons can use consciousness-raising techniques to show how language works (e.g. the role of inflections) and explain grammatical concepts. CALL can also isolate and highlight particular language forms and relate them to meaning, comparing the L1 and target language as appropriate.

The kind of feedback used in CALL should depend on the level of processing being addressed, though it is a problem to know at which level the students are going wrong. Is it that they know the concept but have made a formal surface-error, or that the concept itself is not understood? Garrett holds that a lot of data and experience in understanding students' most common problems are needed to establish this; the kind of empirical work we have carried out on pupil misconceptions in Chapter 5 seems to be appropriate. Lessons should only deal with one structure at a time, and one-sentence explanations can be given after incorrect and correct answers in order to corroborate what might have been a guess. This 'provides an explicit anchor for TL [target language] forms which otherwise often float around in confusion' (1987, p. 192), a reminder of the problems of fragmentation encountered in Chapter 5.

To summarise, a psycholinguistic perspective on 'grammar as processing' suggests that learners should be led to recognise the kinds of semantic and syntactic meaning that are represented in grammatical form, and to master those forms. Garrett enthusiastically predicts that, 'those who are interested in developing CALL materials along the lines suggested ... have a unique opportunity to effect a significant change in the way students learn a foreign language' (1987, p. 195), with the caveat that evaluative studies should not ask if computers improve language learning generally, but must look at their usefulness to different learners under different circumstances.

A further appeal to psycholinguistic principles is made by Laurillard (1991), who starts from the increasingly accepted premise that current communicative methodology is unlikely to meet learners' needs, with only limited classroom time and resources available. The use of CALL may therefore be attractive, but should be based on defined psycholinguistic principles, which regrettably is not always the case. As an example of a principled approach to CALL, Laurillard adapts Klein's (1986) perspective on language learning problems, as follows. As the constraints of classwork do not provide the opportunities needed for inductive learning, CALL can help the learner analyse TL forms by the use of careful, individual sequencing. It can also help the synthesis, or production, of TL forms by anticipating the particular structures which cause difficulties. Laurillard is very aware that learners construct their own synthetic rules (which produce 'morphs' or basic forms, such as the infinitive as a default verb form), and is a strong advocate of classroom TL output analysis as a basis for instructional design.

CALL can also give support for 'disembedding', or the ability to extract language structures for use elsewhere. Teaching methodology, for Laurillard, 'must explicitly decontextualise the language constructs to be learned, if the learner is to acquire them in a form that is generalisable for multiple contexts' (1991, p. 147). It has been noted elsewhere that the communicative 'phrase-book' environment does not provide enough grammar that is adaptable, but CALL can offer scope for what Laurillard terms 'reflective decontextualising' (1991, p. 145). An explicit metalinguistic goal may in any case be more useful at times than an artificial communicative one, as teenage pupils become less and less motivated by classroom attempts to imitate the real world in role-play lessons. It was Higgins (1986) who pointed out that metalanguage, paradoxically, can be more meaningful than the TL in a classroom, as it is at least being used for real messages. Finally, CALL can provide the kind of explicit feedback needed for 'matching' learner output with the TL in order for the gap between the two versions to be noticed, a feat very hard to achieve using only implicit evidence.

Unfortunately, the design of many grammar-based programs violates the above requirements. Laurillard analyses, and finds wanting, a not untypical program against her criteria of: providing a goal, information and feedback; being integrated with previous knowledge; and requiring learner performance. The general standard of courseware could be raised by the application of these design criteria, supplemented by empirical information on the actual requirements of the target population.

7.1.3 The needs of the learner

Both Garrett (1987 & 1991) and Laurillard (1991) stress the importance of meeting the needs of the learner, rather than authoring an item of courseware and hoping for the best. This theme is taken up by several writers. Conoscenti (1992), for example, regrets the general lack of a pedagogical approach in CALL, and considers that student needs are best served by finding a specific didactic problem and solving it. Even ostensibly 'dull' grammar software can be effective, says McCarthy (1994), if it responds to genuine learning needs. Demaizière (1991) firmly endorses the collection of student data, both written and via interview, to inform courseware design. In her work on French learners of English, she found that student descriptions of tenses did not match her expectations. Explanations were unclear, clumsy and inconsistent, with mindless recitation of rules in evidence. Important metalinguistic, conceptual and terminological problems were identified, with the finding that, 'learners' verbalisations very often are, in fact, nothing but a degraded version of the original discourse of teachers and books' (1991, p. 73). These data helped the author produce courseware which labelled grammatical forms in a 'friendly', descriptive and unambiguous way, and provided the basis for a bank of appropriate feedback comments.

A review of research trends by Dunkel (1991) shows that interest is less in simplistic 'CALL vs. non-CALL' studies than in research which establishes the effectiveness of specific software for particular groups of learners, a move from technocentric to psycholinguistic considerations. Making the key point that not all students may benefit from CALL, she cites Chapelle and Jamieson's (1986) insistence that, 'effectiveness must be analysed in terms of the effects of defined types of lessons on students with particular cognitive / affective characteristics and needs' (1986, p. 42). The process should involve student assessment and an analysis of different approaches, giving a successful match between program and learner. This is the route taken by Laurillard and Manning (1993), whose work on CALL for teaching French gender involved the investigation of learner misconceptions by means of interviews. They concluded, 'if the design begins with an analysis of the specifics of students' learning needs, then this is more likely to achieve genuine learning gains' (1993, p. 13). The relevance of this statement to the predicament of so many weak GCSE pupils cannot be over-emphasised.

This selective view of grammar CALL issues has stressed the need to avoid meaningless formal work, while at the same time encouraging the learner to appreciate the value of structural accuracy. A balance must be found between the use of completely decontextualised grammar, and the learner's need to 'disembed' structures in order to adapt them for a variety of contexts. It is important that data are gathered from the students themselves in order to ensure that their needs are met sensitively.

7.2 Recent reviews of CALL for grammar teaching

Before undertaking our own analysis of current CALL grammar programs, and evaluating them against suggested criteria, we first examine a selection of reviews of grammar programs from the CALL literature.

7.2.1 Metalanguage and pedagogy

Glencross (1993a) examines a range of CALL courseware which can be used or adapted for improving grammatical accuracy. A typical example of a dedicated grammar program is *Educa Grammaire Française,* which has exercises on verb form and tense usage involving gap-filling or transformations. The exercises mainly require choices from a list, which speeds up the process but provides no written production. The grammatical explanations (in French) are seen as disappointing as they rely on translation instead of giving a description of the system internal to French. Glencross takes issue with grammatical terminology and the discreteness of grammar topic presentation, thus highlighting the typical problems faced by anyone authoring dedicated courseware, namely. what grammar to select and what framework of grammatical description to provide. Smalley (1992) notes elsewhere that this is a well-liked program, but its weakness is the assumption 'that students are as familiar with grammatical terminology as we are. Plainly these days they are not' (1992, p. 30).

The types of sentences used in *A Demi Mot* and *A Votre Avis* are described by Glencross (1993a) as more natural than in *Educa,* and provide gap-filling and multiple-choice approaches to grammar exercises, offering both morphological and syntactic verb work. *Fun With Texts* can be used for grammatical purposes, but is mainly for developing lexis and text cohesion. All these 'drill-type' programs have the merits of interactivity, feedback, scoring and limited explanation, but have no extensive reference grammar of French.

Glencross (1993a) goes on to describe software which has such a feature. *Ortho 1* is intended for French native speakers and uses traditional grammatical terminology, while *Speakwrite* is a business-oriented program which uses a superb interface incorporating graphics and speech, but with very traditional grammar organisation and unusual choices of tense. There is a disappointing mismatch between 'high-tech' software and pedagogy, with unnatural grammar sentences divorced from situational use. The French version of *Grammatik* (a grammar checker for word-processed material) is not a perfect checker. Being targeted at French L1 rather than L2, it misses elementary errors not made by native speakers. Though Glencross states that *Grammatik* can be used as a grammar-teaching program, he concedes that the unreliability of students' grammatical terminology makes this problematical. Although these programs have elements of good practice, such as individual learning possibilities and immediate feedback, the shortcomings centre round the lack of a descriptive grammatical framework for grammar (much of which is described as 1950s O-Level) to match the technology. This will be even more problematical for GCSE pupils, who may not want a complete reference grammar in any case. Jowitt's (1990) review of *Un Menu Français* warns us against accepting 'dubious' claims that these sorts of program are useful at all school levels, because inappropriate metalanguage and unusual conjugation descriptions are potential difficulties.

An evaluation of *Questionmaster*, *Concorde* and *TestMaster* by L'Huillier (1990) is presented from the point of view of university students. Slot-filling verb exercises are of the following type:

verbe=passer

temps=passé composé

Nous --- de très bonnes vacances

avons passer

Il y a une erreur dans le participe passé.

Though there are help notes with verb paradigms for students to deduce the stem and endings, this approach may be disconcerting for weaker pupils. Other formats include guided translation and sentence re-ordering (involving much copy-typing), but the students' preferred mode was slot-filling, as above, which they saw as an adequate test of knowledge. However, no formal data are provided for the benefits of any particular approach, and there is no discussion of the pedagogical principles behind the verb programs. We will consider later whether this format will help or hinder weaker pupils who need assistance with verbs.

An optimistic review of *Porson French* is given by Cutler (1991), who feels that this business program could be used in schools for verb learning. Hundreds of verbs are available for gap-filling treatment, with learner choice of conjugation and tense. Cutler feels that this work will be useful for beginners as they can define what they want to learn, but one wonders whether such choices and decisions can be made effectively at that level. As the program corrects errors without giving feedback, the user is being led into a world where form has more value than meaning. The dangers of presenting grammar as an alphabetical checklist are pointed out by Glencross (1993b), when he says of *PC Français* that, 'the authors have missed the opportunity of linking topics and of making structural and syntactic connections and have instead fragmented their treatment of grammar into discrete items' (p. 40). Morphological information is available on many verbs, with the main forms available at the touch of a key, but the use of traditional grammatical terminology is once more a barrier to many learners.

7.2.2 Beyond drill-and-practice

Chun and Brandl's (1992) analysis is that much traditional drill-and-practice software is still at large, even though it may be disguised by the use of sound and graphics. In their view, we should be moving in the direction of meaning-enhancing programs, as 'present options do not provide learners with opportunities to see how language form clarifies communicative objectives' (p. 257). Programs often have some generic messages, such as 'remember to use the present perfect tense' but this message does not pinpoint the actual error or explain why the answer is wrong. The authors maintain that users are not being given feedback on how their formal errors can affect meaning, and that not enough is being done to anticipate common errors and put in a specific error message. They suggest the use of goal-oriented 'communicative gap' exercises requiring grammatically-restricted answers in order 'to develop foreign language software beyond the typical drill-and-practice stage and begin to foster more genuine conveying of messages ... and understanding of how form affects communication' (p. 263). This approach appears to harmonise with consciousness-raising ideals (see Chapter 6), and with the search for a 'middle way' between meaningless grammatical accuracy and unmodified reality (Chapter 4).

In the above reviews, almost the only concession to student weakness is that there may be difficulties with traditional grammar descriptions and metalanguage, which, as we have seen, is a fairly general problem. Despite the call for a response to learner needs in the preceding section, these grammar-teaching reviews do not show a profound consideration of the specific needs of less able pupils, who seem to be a 'lost audience' as far as grammar CALL is concerned. The next section looks at current verb-teaching software through the eyes of this large target population, establishing the criteria that mixed-ability CALL programs should meet.

7.3 A critique of current CALL programs for grammar

Verb-learning and other grammar courseware which is genuinely for 'all abilities and all levels' is hard to find, despite manufacturers' descriptions (Pederson, 1987), and weaker pupils are ill-served by programs which are too complex. On the other hand, if we reserve grammar courseware for the more academic pupils, we are depriving less able students of a chance to profit from the technology. As courseware is not endlessly adaptable and we cannot wait for the AI revolution to discriminate accurately between program users, it is better to think about producing material for a particular purpose aimed at a particular population (see the discussion on pedagogical grammar in Chapter 6). Tailoring work for mixed-ability use does not mean 'writing down', but rather opening up information to all levels. Mixed-ability grammar courseware could equally well be used as introductory exercises for academic pupils and a basic resource for learners at GCSE C/D level and below. In this section, examples of current practice in some twenty verb-learning programs (listed in Appendix F) are analysed to reveal areas of potential difficulty. Recommendations are made for program design features which will accommodate those pupils who see grammar as problematic - i.e., the majority.

7.3.1 Access to Information

In many programs, the menus are too daunting for less able pupils. They assume knowledge of tense names and understanding of grammatical metalanguage, and are also often overwhelming in size and choice. Examples from two current programs are given verbatim in Figure 7.1.

Menu Example 1

1 infinitives (1)
2 infinitives (2)
3 present tense -er verbs
4 present tense regular verbs
5 present tense irregular verbs
6 regular perfect (avoir)
7 irregular perfect (avoir)
8 perfect with être
9 imperfect
10 pluperfect (avoir and être)
11 past historic regular
12 past historic irregular
13 future regular
14 future irregular
15 conditional
16 participles
17 present subjunctive
18 perfect subjunctive
19 questions
20 negatives
21 verbs with prepositions
22 exit

Menu Example 2

Passé Composé Part I
"-er" Past Participles: No Agreement
"-er" Past Part.: Subject Agreement
"-er" P. P. with Preceding Dir. Obj.
"-er" Past Participles: Review
"-ir" Past Participles: No Agreement
"-ir" P. P. with Preceding Dir. Obj.
"-re" Past Participles: No Agreement
"-re" P. P. with Preceding Dir. Obj.
"Descendre" P. P. Agreement with Subj.
P. P. of "-er" "-ir" and "-re" Verbs
Past Participle of "Etre"
Past Participle of "Avoir"
P. P. of "Etre" and "Avoir"
Past Participle of "Faire"
Past Participle of "Aller"
P. P. of "Faire" and "Aller"

Figure 7.1. Menus from grammar-teaching programs showing items that are unusable for most pupils

These sorts of menu often cover several screen pages. Even some of the most 'modern-style' programs, specifically aimed at GCSE and complete with graphics, still have this type of menu. If pupils are able to understand these choices and decide which section they want to access, they are *ipso facto* in the highest ability level. For the vast majority of pupils, a different means of access, based on what pupils really think about verbs, might be more helpful. A program aimed at providing conceptual help rather than extensive formal practice could provide options based on statements made by pupils about their problems. For example an opening query, such as, 'Do you think verbs are hard?' could offer the following choices:

1. 'Don't know - what is a verb, anyway?'
2. 'No - a verb is just a word'
3. 'Yes - there's just so many verbs'
4. 'Yes - there's so many endings'
5. 'Yes - they all sound the same but look different'.

These would lead to appropriate tutorials on language awareness, learning strategies, verb patterns and sound / spelling distinctions, all of which could be of fundamental importance for pupils, according to the data presented in earlier chapters.

Another approach could access the verbs via nouns, pronouns and endings rather than by starting with the infinitive and going through all the tense endings. For example, an opening query could be, 'What do you want to write about?', followed by choices like:

1. Things I do
2. Things I did
3. Things I will do
4. Things another person (he / she) does.

Although pupils would be shown patterns across tenses common to particular pronouns, this approach has the danger of not showing patterns within tenses, and leading to a fragmentary understanding. However, a fuller picture could be achieved by a combination of approaches.

7.3.2 Access to verbs

We have already established that one of the most common verb errors at GCSE is the use of the infinitive instead of a finite verb, and we have seen in Chapter 5 that the reasons for the error may be systematic and complex. It is possible that some aspects of CALL methodology might reinforce this error; a 'pedagogenic' or teacher-induced error, in Laurillard's (1993) terms. It will be noted from the two example menus in Figure 7.1 (above) that the initial access point for verb practice is via the infinitive. Indeed, the instructions for Menu Example 1 recommend doing the two sections on infinitives first, to get to know verb meanings. Apart from initial access via the infinitive, many CALL verb exercises use the infinitive extensively to provide the basic information for completing a sentence, as these examples from different programs show:

1. (trouver) elle a ----- la porte

2. Tense- Present. Verb- Arriver.
Cinq minutes plus tard vous ------ à l'Hôtel de Ville

3. Soyez patients! Je....... (arriver)

4. Je (savoir) que ce (être) là que (se rencontrer) les étudiants. La vie étudiante me (sembler) alors bien séduisante.

Some exercises stress the infinitive even more explicitly:

5. What is the French for ?
- to speak.

More understandably, the infinitive is also used as the main reference point in on-line databases within programs. Given an infinitive, many programs can produce the finite parts of nearly all French verbs in a dozen or so tenses. It is hard to make recommendations to change a verb classification which is convenient and well established, but it may be that this form of presentation is better suited to the more able student who is used to using reference books. A weaker learner might benefit from exercises and reference programs which avoid the infinitive as the starting point. In this way the remorseless reinforcement of the infinitive as a perceived default form may be halted.

Another problem connected with access to verbs is the tendency to adopt a lexical, 'dictionary' approach rather than a grammatical one when searching for information (see Chapter 4). Guillot (1993) describes a CALL project in which students carrying out French translation could access what appeared to be a computer database but was in fact an on-line native speaker. Students tended to surrender responsibility for analytical problem-solving, resulting in numerous requests for direct equivalents of lexical expressions rather than a consideration of the context. The following exchange between computer (C) and student (S) is an example of the problems that can arise:

C. il n'était jamais y -----

S. aller which tense

C. pluperfect

S. give the word itself

C. même / lui-même / elle-même

S. (gave up and typed in 'aller')

(adapted from Guillot, 1993, p. 18).

The fact that university students have these sorts of difficulties must make us even more vigilant in our consideration of the best means of access to verb information for average GCSE pupils.

7.3.3 Language of instruction

It is taken here as a given that the language of instruction (i.e. for grammar explanations and program navigation) for weaker pupils should be English. The use of the target language (TL) in grammar instruction is at present the subject of intense debate. The current orthodoxy, as represented by National Curriculum proposals, is that the TL should be used for all classroom communication, whether spoken or written, with a corresponding requirement for all testing to be carried out in the TL. These ideas have met with hostility from some of the teaching profession. An article by Clarke (1994) criticises an Education Department video-recording showing TL being used to good effect in communicative lessons with able students, but neglecting to show a weak class being taught grammar in the TL. There are too many time constraints on the teacher for TL work to be effective, and unrealistic demands will be put on pupils, who, in the end, will be disenfranchised. Clarke's pragmatic view is that, 'two minutes of explanation in English can avoid a whole lesson of confusion in French' (1994, p. iv).

Atkinson (1993) also feels that TL teaching is neither feasible nor desirable in most classrooms, and Shawford (1995) thinks it has become a sacred cow. His concern is that we will be forced to return to the use of inauthentic tasks and penalising pupils unnecessarily. The issue of authenticity is a valid one. As Heafford puts it, 'learners normally neither desire nor have the opportunity to discuss grammar with native speakers' (1993, p. 57). The Open University's teacher-training textbook, *Teaching Modern Languages*, is equivocal on TL teaching, with Kalivoda (1994) arguing that different methods should be used in different cases. The TL-teaching literature assumes that all learners are efficient communicators, but it has little relevance in classes where pupils are often struggling to communicate. In the type of program that we envisage, the aim is to teach understanding of written verbs and not target-language grammatical terms or technical vocabulary which could be a barrier to progress. Indeed, most of the programs analysed here do use L1 as the medium of instruction. As shown in my earlier review article (Metcalfe, 1994), there are even some verb-learning programs written for very able students which include, and actually recommend, use of an L1 translation of program commands and explanations. Deville *et al.* (1996) have recently favoured the use of L1 even within a university-level multimedia course recorded on CD, because the students find it reassuring and the teachers find it efficient.

7.3.4 Readability

The question of differential readability at GCSE is a problem for all educators, whether concerned with the production of text-books, work-sheets, examination papers or courseware. The issue arose several years ago, but has unfortunately not been prominent again until very recently, with OFSTED now showing an interest in classroom language differentiation, and with the importance of readability in forthcoming differentiated National Curriculum examination papers. A pioneering work by Mobley (*Making Ourselves Clearer: readability in the GCSE,* 1987) seems to have been largely forgotten, but its advice appears eminently appropriate for program design at the level we are dealing with. Text readability has a dramatic effect on comprehension, with the result that pupils may underperform not through lack of knowledge, but through failure to understand. Factors affecting readability include organisation of information, conceptual difficulty and visual aspects, but Mobley (1987) identifies language, in terms of vocabulary and sentence structure, as the key factor. The most significant element of vocabulary influencing readability is not word length, but unfamiliarity. Problematic vocabulary includes specialist technical terms, abstract conceptual words, specialist use of otherwise non-technical words, and what Mobley calls 'text-book vocabulary'. These are words not in everyday use, having a remote, passive, formal or metaphorical perspective. Sentence complexity, rather than length, also has a profound effect on readability. The more complex the information, the simpler the patterning should be, achieved either by breaking the material into its component parts or by using logical sequencing. A pupil confronted with very dense sentences has to 'un-pack' the information into manageable units, and re-sort and internalise it before even attempting to act on the information.

Examples of potentially problematic vocabulary and sentences appearing in current grammar programs include:

- metalinguistic terms, such as all the tense names listed in Figure 7.1, and;

auxiliary, prefix, impersonal verb, compound tense, transitive, voice, mood, pronoun, reflexive, conjugate, stem, aspect, article, indefinite.

- technical vocabulary;

characters, specified, look for a match, a 'fuzzy' match, slice the search string, toggle.

- text-book vocabulary;

appropriate, refer, select the expression, the majority, encounter, indicates.

- complex or potentially confusing sentences;

Do not type the article, just the word.
It agrees in gender with the noun counted.
For each article indicated, select an appropriate noun.
In French, therefore, adjectives can be modified by nouns.
A few adjectives precede their nouns, but they are the exception.
Type in the third person singular of the perfect tense of the verb 'see'.
Type the letter a b or c that corresponds to the verb that best completes the sentence.
If you opt for 'ira' the program will first match 'boire' (future 'boira') and only later 'aller' (future 'ira').
The present tense is used to refer to what is happening at the moment or with "seit" to refer to an action that began in the past and is still going on.
Complete the second sentence in each group using the same article and noun as in the first sentence. Use the same adjective as in the first sentence where appropriate, otherwise use an adjective with the opposite meaning.

Many of these expressions appear in courseware theoretically aimed at 'all levels and all abilities'. Even in courseware which does not specify the ability, we may be erecting barriers to learning if authors do not carefully test lexical items for clarity. The onus is also on classroom teachers to check the program's actual ability level (rather than the level printed on the label) against the level of their own pupils.

7.3.5 Context and meaning

A discussion of context and redundancy in relation to verb learning is provided in Chapter 4. There appears to be inconsistency in the way context is defined in courseware; is the context at word, sentence or narrative level? The sentence,

Cinq minutes plus tard, vous ------ à l'Hôtel de Ville

is described in one program as 'contextualised' even though it is not part of a narrative, while a decontextualised item would simply be pronoun + verb. The move away from meaningfulness into surrealism is exemplified by these sentences, ostensibly contextualised by some definitions, in a program for 'all abilities':

Voici les chapeaux qu'elle a regardés
Son insolence? On l'a punie
A quelle loi n'as-tu pas obéi?

Even a proper narrative, with a selection of verbs in context, could pose problems if the program ability level is set too high. The following is taken from a passage in a program widely used in secondary schools even though it was not written with them in mind (personal communication from the author):

À bord du Titanic, la vie continuait, joyeuse: on fêtait la royauté de ce prince de la mer. Ne s'appelait-il pas 'Titanic' en souvenir des géants de la mythologie grecque, les Titans?

This kind of passage would present severe problems even to the most able A-level student.

7.3.6 Interface

The majority of verb-teaching programs rely on the pupil's ability to use a keyboard. This sort of skill is very useful in school and future employment, as reflected in National Curriculum requirements, but for the purposes of French examinations it is not a priority. The point of a verb-teaching program should be to teach understanding rather than keyboard skills. The mechanical typing of sentences, words or even letters could be seen as examples of 'inauthentic' labour as described by Kemmis *et al.* (1977), the very sort of 'instrumental' task (cf. Fox, 1989) that CALL ought to alleviate. In any case, extensive typing increases the likelihood of mistakes being made which have nothing to do with learning, especially in the case of diacritics, the bane of most CALL programs. Diacritics add a further dimension of potential inaccuracy, with requirements on a Macintosh keyboard for up to three keys being held down together, and on other keyboards for a variety of function keys to be pressed in careful sequence. Often, the instructions for diacritic use have to be summoned from different parts of a program, thus interrupting concentration on the task in hand. The fact that there is no overall standard practice erects another barrier.

Furthermore, it is not just accurate typing or the key combinations which are a concern, but the various ways in which details must be entered in the answer. Divergent use of upper-case letters, spaces, punctuation, or writing too much, give 'wrong' signals for essentially 'right' answers, and, once again, there is no standard specification between programs. One program warns the user that it is 'extremely strict on accuracy', referring as much to the precise placing of punctuation as to correct grammar and spelling. For example, the only acceptable answer to one particular question is Comment savez-vous ce que j'ai visité?, exactly as shown, with no compromise on spacing or punctuation. Although the importance of accurate rendering is highlighted, it is questionable whether there is a positive correlation between accuracy at the keyboard with multiple-function keys and accuracy in normal handwriting conditions. If we are dealing with the conceptual importance of inflections rather than good typing, then less able pupils might appreciate the use of the mouse both for branching choices and for a simulated 'concept-keyboard' approach for on-screen writing.

7.3.7 Presentation

The presentation of almost all CALL material connected with verb learning is overwhelmingly textual. This is a reflection of the reference-oriented approach in most programs, where the aim is to access large bodies of information as quickly as possible. In CALL which does not take a reference approach, but deals more with actual verb use, a greater use of graphics seems appropriate, especially when dealing with mixed-ability pupils. The use of visual support for facilitating language learning (particularly of abstract content) is advocated by Sharwood Smith (1988d). He sees this as a sound cognitive principle, backed up by research, which should not just be reserved for children but usefully extended to adolescents and adults. The verb must remain the central focus, as this is the point of the exercise, though its presentation can be enhanced by integrating it with graphic elements which can both highlight its formal appearance and emphasise its strategic importance in appropriate problem-solving tasks.

Some tempting work on the use of 'iconic mediators' for teaching tenses has been undertaken by Engels *et al.* (1989). This involves the use of abstract symbols which the learner has to interpret with a temporal meaning. The concept at first seems ideal for adaptation to a CALL program, and has the intention of providing a short-cut to learning, but in fact it may put too many demands on the learner. There is a joke about a drunk struggling from the bar with a large round of drinks, who was offered a tray. 'No thanks, I've got enough to carry', was the reply. Weaker pupils may have enough abstractions to worry about in the subject matter without having abstract 'aids to learning' imposed upon them. Indeed, very recent work by McBride and Seago (1996) shows that even university students have difficulties understanding iconic screen 'buttons' because another layer of learning has been imposed. If graphics are to be used, then they should be simple and 'concrete' with sight never being lost of the teaching aim, a better understanding of the written word.

7.3.8 Power to the user!

Educational technologists are exhorted to make full use of the computer's power to store, retrieve and manipulate huge quantities of information. This is reflected in programs with large databases which can produce huge quantities of verb forms. Given pupils' concerns about verb endings (cf. 'there's just so many'), should not the computer provide verbs in limited *quantity* but carefully selected *quality*? According to Swan (1994), effective grammar teaching focuses on the specific problems of specific learners, which 'will necessarily mean giving a somewhat fragmented and partial account ... rather than working through a "complete" grammar syllabus giving "complete" rules. ... [T]he grammar classroom is no place for people with completion neuroses' (1994, p. 53). There are many admirable grammar programs for able students, and many communicative programs for less able ones, but, as we have seen, very little appropriate grammar work for weaker pupils. Authors and teachers should not disenfranchise weaker students from success in grammar by producing or using programs which put barriers in their way. A product that works well with some learners may be 'the courseware from Hell' for others.

Accordingly, recommendations for mixed-ability verb-learning courseware derived from the literature and critique are presented in the following section.

7.3.9 Recommendations for mixed-ability grammar CALL

Having considered suggestions for best grammar-teaching practice from recent CALL literature and analysed in depth how some current CALL grammar programs rate against mixed-ability criteria, we can offer two sets of recommendations. Firstly, whatever the ability level of the pupils, there are certain features which are desirable in all grammar-teaching courseware. These include:

- a focus on the needs of the learner
- anticipation of problem structures
- explanatory feedback after correct and incorrect pupil responses
- selected and carefully-sequenced linguistic information
- a clearly-defined goal
- a requirement for actual performance by the user
- use of language structures which can be reused in other contexts
- meaningful TL content.

Secondly, the focus can be narrowed to recommendations which specifically (but not exclusively) address mixed-ability needs. These are:

- access to information should be via short menus, low on metalinguistic terms
- the infinitive should not be given undue importance
- the language of instruction to be the L1
- program rubrics must be checked for readability at word and sentence level
- non-abstract graphic elements can relieve text overload and enhance learning
- the quantity of grammatical information should be strictly limited
- keyboard use to be avoided or minimised, using a simple interface.

These recommendations can usefully be integrated with principles of pedagogical grammar to provide a framework for program design, an undertaking to be described in Chapter 8.

7.4 Bringing back the lost audience

We do not know *a priori* whether CALL will help resolve the verb difficulties of the particular learners described in this thesis. As Garrett (1991a) points out, we cannot ask if the computer 'works', as it is a medium, not a method. Instead she asks elsewhere, 'at what level of learning will what kind of learner get most benefit for what aspect of language learning from what kind of activity?' (1991b, p. 19). The sheer diversity of CALL contexts, needs and programs, from multimedia to grammar drilling, can be seen in any CALL Conference Report, and endorses Garrett's (1991a) view that there is no agreement on parameters of research hypotheses or measurement, and (1991b) that current pedagogy has no comprehensive or coherent theory. Her feeling that, 'we have to begin with small research steps by using software which is designed to support significant learning and investigating its efficacy in local and carefully specified contexts' (1991a, p. 75) is exactly the 'horses for courses' approach taken in this thesis. Although L'Huillier wrote a decade ago that 'the treatment of verbs is probably the area of grammar that has been covered more than anything else in Computer Assisted Language Learning' (1986, p. 78), we still do not seem to have found a suitable CALL program to support less able or mixed-ability GCSE pupils in this area. We should nevertheless now have enough theoretical and empirical data to inform the design, implementation and evaluation of such a program, and perhaps to bring back the 'lost audience'.

Chapter 8

Making a better mousetrap: the development of a grammar CALL program for less able learners

'If a man write a better book, preach a better sermon, or make a better mousetrap than his neighbour, though he build his house in the woods, the world will make a beaten path to his door'.
(Ralph Waldo Emerson, *attrib.*)

This chapter begins by drawing together, in summary form, information from earlier chapters on the problems encountered by pupils learning French verbs. Recommendations and conclusions from the preceding chapters on grammar teaching and CALL are listed. The list of pedagogical concerns is then consolidated to produce population-specific CALL design principles, which are matched with realisable proposals for courseware production. The use of HyperCard is justified, with certain reservations, as a CALL authoring medium. This is followed by a description of the courseware development process.

8.1 Résumé of pupil problems with verbs

8.1.1 Examiners' Reports

The discussion of Examiners' Reports in Chapter 3 isolated the following trends in the written production of French verbs at GCSE level:

- inability to separate tenses
- inconsistent use of tenses
- use of the infinitive as a 'default' form
- an oral influence on written production
- word-for-word translation
- a mismatch between redundant verb morphology in comprehension material,

and the need for accurate inflections in production.

8.1.2 Literature review

The analysis presented in Chapter 4 brought to light a wide range of linguistic, psycholinguistic and pedagogical barriers to written French verb production. In considering which problems should realistically be addressed by instruction, the minor ones and inherently intractable ones can be set aside. Using the criteria of importance, feasibility and interest, we suggest that the following difficulties deserve most attention:

- saliency (the verb inflection may not be noticed)
- opacity (inflections have non-transparent structure and abstract meaning)
- homophony (many inflections sound the same)
- quantity (the number of inflections can be overwhelming)
- naivety (word-for-word translation of verbs as lexical items)
- accessibility (paradigm learning is questionable)
- methodology (too much prominence given to the infinitive)
- terminology (inappropriate metalanguage)
- redundancy (context over-determines meaning).

8.1.3 Pupil data

Finally, the data obtained directly from the pupils (Chapter 5) revealed the following key problems with verb learning:

- unclear tense definitions
- verbs not recognised (concern for word form rather than sentence structure)
- information overload
- unreliability of paradigm learning
- fragmentation of grammatical knowledge
- homophony of verb endings

- word-for-word translation
- inconsistent written verb production
- use of the infinitive as a 'default' form.

There is clearly considerable overlap in the types of pupil problem revealed by these three sources. Attention is now focused on solutions to these problems.

8.2 Rationale for grammar courseware for less able pupils

8.2.1 Explicit grammar for CALL

The use of explicit grammar instruction can be justified by our defence of formal language teaching in Chapter 6. To summarise, explicit language instruction is:

- compatible with current theoretical and empirical findings
- appropriate for adolescents in classrooms
- essential as a short-cut to learning in a GCSE course
- suitable for writing skills.

However, Chapter 7 expressed concerns about CALL returning us to 'traditional' grammar teaching, involving:

- sterile language drills
- overuse of metalanguage
- meaningless context
- excessive quantity
- overemphasis on surface forms.

This leads us to suggest that grammar CALL can be modified by a pedagogical grammar approach to the particular learner problems we are confronted with.

8.2.2 Pedagogical Grammar for CALL

A pedagogical grammar approach allows for restriction of content, with structures adapted to suit the learners' needs, in accordance with current ideas on:

- consciousness raising
- input enhancement
- psycholinguistic processing of form and meaning

A recent summary of design criteria for pedagogic language rules is given by Swan (1994), who captures the new mood in grammar teaching. His six criteria could usefully be applied to CALL courseware design, especially as some current programs seem to operate on outmoded principles (see Chapter 7). The criteria are:

- truth (language descriptions must be true, but may have to compromise with clarity and simplicity)
- demarcation (the limits of use of a form must be shown)
- clarity (terminology must be clear, and vague terms avoided)
- simplicity (have regard to the audience)
- conceptual parsimony (work within the reader's conceptual framework, using simple notions instead of technical terms)
- relevance (the rule must respond to a problem generated by learner need).

8.2.3 CALL for less able pupils

(a) A richer diet

The needs of less able pupils are specifically addressed by McLagan (1994), who observes that we often avoid teaching abstract grammar to such pupils, and instead teach phrases in 'topic chunks'. She makes a plea for a richer diet, as 'in planning courses for the less able it is perhaps assumed that it is possible to progress without deliberately teaching language structures ... How can we give some opportunities for personalisation and increased liberation of language at a low level?' (1994, p. 70). We should consider which language patterns are likely to be most useful, both for communication and examination success. Significantly, she mentions that the concept of tense is traditionally taught after that of gender, even though the former is more useful in all ways. To prevent low achievers becoming bored, teachers could use a variety of techniques for presenting the same thing frequently and making it fun. Although McLagan herself does not propose the use of CALL, her suggestions for a 'multisensory approach' seem largely realisable by that medium. For weaker pupils, language patterns should be:

- signalled, by introduction in a heading
- seen, by grouping and highlighting
- heard
- felt, by drilling
- explained
- used in real communication.

(b) Recommendations

The critique of verb-learning courseware in Chapter 7 produced the following recommendations for meeting the needs of less able pupils:

- accessible menus and readable program rubrics
- appropriate metalanguage with limited, sequenced grammatical information
- explanatory feedback, anticipating problem structures
- de-emphasis of the infinitive
- English as the language of instruction
- meaningful TL content
- visual support

- task performance with a clear goal
- simple interface with minimal use of keyboard.

It may be impossible to construct a matrix or table which will neatly match all the overlapping problems outlined in section 8.1 with the 'pedagogical grammar CALL' solutions in section 8.2. Instead, the following section synthesises the data on learner problems with insights from a pedagogical grammar approach, constrained by the ability level and course requirements of the pupils. This synthesis appears as a list of design principles, each of which is matched with a realisable proposal for courseware development.

8.3 CALL design principles and proposals for French verb learning in a mixed-ability GCSE environment

1. The language content must be meaningful

Proposal 1: a teaching program is never as meaningful as a natural setting, but use should be made of French text that the pupils can relate to.

2. The verb forms must be noticed, and the inflections made salient

Proposal 2: input enhancement should be achieved if we isolate the verbs, highlight inflections, and promote separation of tenses.

3. Avoid inflectional redundancy

Proposal 3: although English translation will make verb endings redundant, inflections can be made artificially 'non-redundant' by requiring correct usage in order to make progress through the program. This artificiality is acceptable as the pupils are not here participating in a genuinely communicative exercise and must realise that some focus on form is needed for GCSE success.

4. Processing of form and meaning is more useful than practising surface forms

Proposal 4: 'Help' routines should closely relate inherently abstract inflections to their meanings, while mindless drilling and production of formal examples should be avoided.

5. Attention should be drawn to homophony of inflections, and to sound / spelling dichotomy

Proposal 5: incorporate contrastive voice recordings of verbs, in harmony with their written appearance on screen.

6. Do not aim for complete paradigm learning

Proposal 6: the program should limit itself to the most common or problematical inflections, aiming for quality rather than quantity.

7. The infinitive should not be overemphasised

Proposal 7: treat the infinitive as just another inflection, not as an initial information source, nor as a paradigm reference point.

8. Avoid fragmentation of knowledge

Proposal 8: although only a limited amount of grammar work can necessarily be done, the work should be a coherent unit.

9. Appropriate metalanguage is required

Proposal 9: use grammatical terms that the pupils will understand, or else provide an explanation.

10. Vocabulary and sentences must be 'readable'

Proposal 10: use straightforward English in uncomplicated sentences.

11. Do not encourage word-for-word translation

Proposal 11: access to grammatical information should not be by reference to a 'dictionary' of English words.

12. The Target Language is not used for instruction

Proposal 12: support the pupil with English translations and program navigation.

13. Visual aids promote learning

Proposal 13: use appropriate, non-abstract graphic support for the pupils.

14. Access to information must not be impeded

Proposal 14: program menus must be clear and brief.

15. Use of the keyboard may be 'inauthentic labour'

Proposal 15: pupil answers and program actions should be effected by mouse-clicks or minimal use of keyboard.

16. Use explanatory feedback for problem structures

Proposal 16: feedback must explain rather than simply correct, and should relate only to the task in hand.

17. Ensure pupil interaction and a defined goal

Proposal 17: pupils should be engaged in tasks rather than in 'page-turning', and should be motivated by a goal.

The above pedagogical principles and CALL design proposals appear to accommodate all the findings and constraints itemised in sections 8.1 and 8.2 above, with the exception of 'use in real communication' in 8.2.3(a). No attempt is being made here to produce 'real' (classroom) or *real* (genuine, natural) communication, but to improve the formal accuracy eventually needed for unambiguous communication, as argued in Chapter 3.

8.4 The authoring medium

8.4.1 HyperCard

HyperCard was chosen as the courseware authoring medium because of personal experience with this application. Its specification can be found elsewhere (e.g. Fox *et al.*, 1992) and will not form part of this thesis, though brief technical details appear at the end of section 8.4. We can briefly mention that it is a user-friendly authoring tool for use on Apple computers, which allows the creation of 'hypertext' features, such as the linking of program elements in a non-linear fashion. It uses the metaphor of a stack of cards (screen pages) which can be navigated by the user. These cards contain text fields, graphics and access to recorded sound, and are manipulated by means of mouse-clicks on on-screen 'buttons'. The courseware author uses a very accessible, high-level programming language (HyperTalk) to give functionality to individual cards, buttons and fields. This OOPS (object-oriented programming system), modular approach makes HyperCard an ideal prototyping tool, as features can be added, tested, altered or removed very quickly. Above all, it can be tailored to meet the exact needs of particular target populations.

In recognition of these qualities, HyperCard now boasts a respectable pedigree in the CALL domain. Enthusiasts include Burgess, who announced that, 'hypertext has arrived, is very much alive, and is kicking down the door of CALL' (1990, p. 16), and Garrett, who finds the possibilities of HyperCard 'intoxicating' (1991a, p. 87). It has been used for a wide variety of projects, such as lexical expertise (Sussex, Cumming and Cropp, 1994) and vocabulary learning (Swartz *et al.*, 1990), but despite its huge potential, several authors have issued caveats about disorientation and quantity of information which we can relate particularly to weaker language pupils,

8.4.2 'Hyperspatial awareness'

The term 'lost in hyperspace' is frequently used to describe the disorientation felt by users of hypertext systems. Conoscenti (1992) sees it as a common problem in this type of CALL, while Galletly, Butcher and Daryanani (1992) distinguish being objectively lost (confused links) and subjectively lost (feeling out of control). We here propose a further term, that of 'hyperspatial awareness', to define the user's degree of orientation within a hypertext learning environment. Whether there is any link between hyperspatial awareness and language ability, in the same way, say, as there is believed to be between spatial awareness and gender (cf. Boardman, 1990), is an interesting matter for future research, but one feels intuitively that weaker pupils have enough concerns without adding orientation burdens in a program. Books have a reassuring physicality which is not present in hypertext, observes Burgess (1992), who warns that fragmentation and tangential connections discourage a linear, structured approach. Using over-elaborate hypertext may therefore be effortful for the learner. The book metaphor is used by Evans (1993) in his HyperCard program for GCSE French reading competence, as he deliberately curtails navigational control for pedagogical reasons. We are not therefore tempted by the CALL software trialled by Galletly *et al.*, in which the user 'simply learns by wandering about in the HyperCard system' (1992, p. 32). Our pupils have already wandered about enough.

8.4.3 Cognitive overload

Excess of information quantity can apply both to screen presentation and to grammatical content. In relation to HyperCard, Garrett (1991a) points out that screen design is as much a pedagogical matter as an an aesthetic one, while Gillespie and Gray's (1992) recommendations, based on experience, are for uncluttered and consistently-organised screens. Users might be faced with too many decisions on links through the program. We have already noted that pupils can be overwhelmed by grammatical information (Chapter 5), particularly concerning verbs, and that this information may not in any case be in a usable form (Chapter 3). Harland (1990) touches on the pedagogical dilemma of liberation or constraint, while Burgess (1990) warns of the dangers of overprescription being replaced by a free rein. As he advises, 'availability of facts, after all, does not necessarily equate with meaningful instruction or learning' (1990, p. 18). In a later paper, the same author worries about students being offered too much too soon, and wonders, despite claims for the potential of student-directed, explorative work, whether students are the best judges of their needs. 'It could well be argued that, in allowing students so much freedom ... the teacher ... is abrogating an essential, and fundamental, aspect of the pedagogical role: that of advising and guiding' (Burgess, 1992, p. 135). Evans (1993) concurs that freedom of movement can be an obstacle to learning, especially at school level where grammatical support might need to be more structured than at degree level.

The above constraints on the power of HyperCard can be summarised as follows:

- weaker students need more direction than freedom, so 'discovery learning' is not always appropriate
- the quantity of grammatical information should be limited to a usable amount.

These statements are reconcilable with CALL design proposals 6 and 14 outlined earlier. Program development therefore adheres to Harland's (1990) recommendation to treat HyperCard as a versatile construction kit rather than to overuse all its possibilities. Learners may in the end derive more benefit from simplicity, as the subject area is complex enough.

The programs were created on an Apple Macintosh LC computer, using Apple's HyperCard Version B-2.1 (1991), with technical help from D. Goodman's (1990) *The Complete HyperCard 2.0 Handbook, 3rd ed.* (New York, Bantam), and D. Winkler, S. Kamins and J. Devoto's (1994) *HyperTalk 2.2: The Book, 2nd ed.* (New York, Random House). The courseware was authored personally in its entirety, though, in keeping with HyperCard tradition, some HyperTalk scripts from other stacks were plundered and freely adapted.

8.5 Program development

The three programs described below were developed over a period of approximately six months. Although they are discrete items of software, their common core meant that formative evaluation feedback from one program could produce modifications to another. The programs therefore emerged in harness rather than consecutively.

8.5.1 Program format

The opportunity was taken to trial three interesting and contrasting CALL approaches, using identical grammatical content:

1. A 'cognitive' program, in which the language content represents the information needed to carry out a task (cf. Schmidt, 1990)
2. A straightforward tutorial program, designed to be user-friendly for the target population, but with no frills
3. A motivating game format, in which the user tries to 'beat the system' in

some way (cf. Cameron, 1993).

Although the common grammatical core remained the central area of research, it was felt that much useful data could be obtained on pupil performance and preferences under differing program conditions.

8.5.2 The common core

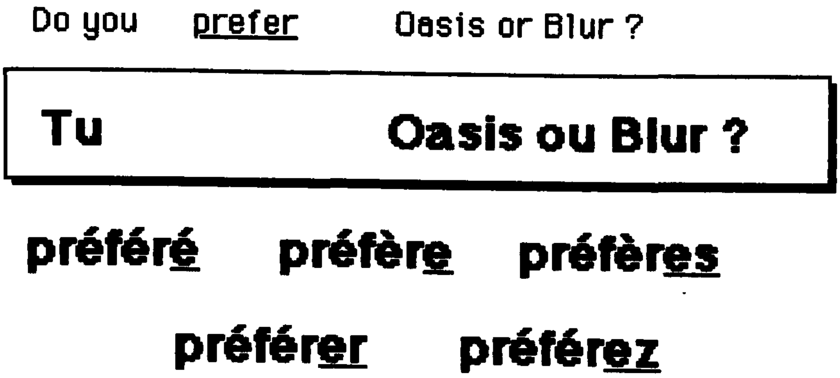
Each program has a common language and task content and certain common design features. At the end of each of the following descriptions, the appropriate CALL design proposals listed in section 8.3 above are invoked.

(a) Grammatical content

The content was restricted to verbs with the infinitive in -er, which is the most common conjugation and the subject of the empirical work described in Chapter 5. The choice of inflections was limited to five, using the lower end of the cognitive rule of thumb that no more than seven randomly-ordered items, plus or minus two, can be held in short-term memory at any one time (Brown, 1987). The five most problematic verb endings, based on previous data, are -e, -é, -er, -ez and -es. These endings comprise two homophone groups (with -e and -es being silent [-], and -é, -er and -ez pronounced [e]), and provide good examples of the spelling / sound dichotomy. The endings also conveniently allow for work with three tenses, namely, present (-e, -ez, -es), future (aller + -er) and past (auxiliary + past participle -é). A range of pronouns for the present tense (je, tu, il / elle, vous) could also be used. In other words, a limited range of problematic inflections had the potential for a lot of work on tenses, pronouns and homophony. [Proposals 2, 3, 5, 6, 7, 8]

(b) Input

A common means of input was required which avoided using a keyboard. Use was made of previous work by Dennis (1992), whose HyperCard program emulated the workings of a concept keyboard. Essentially, his 'Concept Mac' screen shows an imitation keyboard consisting of 'buttons' which each represent a target-language word. The user simply has to mouse-click on a button for the words to appear in a text area at the top of the screen. In this way, if the author has provided a careful choice of word-buttons, the user can put words together like *Lego* bricks to form sentences without touching a real keyboard. An adaptation of this approach for the purposes of verb-learning programs produces an exercise as in Figure 8.1 below.



Do you prefer Oasis or Blur ?

Tu Oasis ou Blur ?

préféré préfère préfères

préférer préférez

Figure 8.1. Example exercise

The user clicks on the chosen isolated verb form with its underlined inflection. This completes the sentence and initiates a feedback routine, with further attempts as appropriate. Formative evaluation suggested that mouse use is seen as quicker and easier than keyboard use. [Proposals 1, 2, 3, 4, 6, 7, 8, 12, 15, 16]

(c) Task content

All three programs have ten tasks, similar to the one shown in Figure 8.1 above. Each task requires a gapped sentence to be completed by a verb containing the appropriate inflection. To ensure comparability, the ten series of inflection choices appear in the same order in all three programs, as shown in Figure 8.2 below (correct choice in bold).

1.	ez	es	e	**er**	é
2.	ez	**é**	e	es	er
3.	er	é	ez	es	**e**
4.	ez	es	e	**é**	er
5.	é	e	**es**	er	ez
6.	**er**	ez	e	é	es
7.	**e**	é	er	ez	es
8.	es	er	ez	e	**é**
9.	e	**ez**	é	er	es
10.	es	é	**er**	ez	e

Figure 8.2. Inflection choice patterns in all program tasks

This represents three -é answers, three -er, two -e, one -ez and one -es in each program. Although the task may appear to be a straightforward multiple-choice exercise, the rationale is rather different. Instead of incorporating the problematic features often identified with this kind of exercise, such as inappropriate 'distractor' answers (cf. Oller, 1979), the programs use five repeated inflections which remain the focus of attention throughout. [Proposals 2, 3, 6, 7, 8]

(d) Language

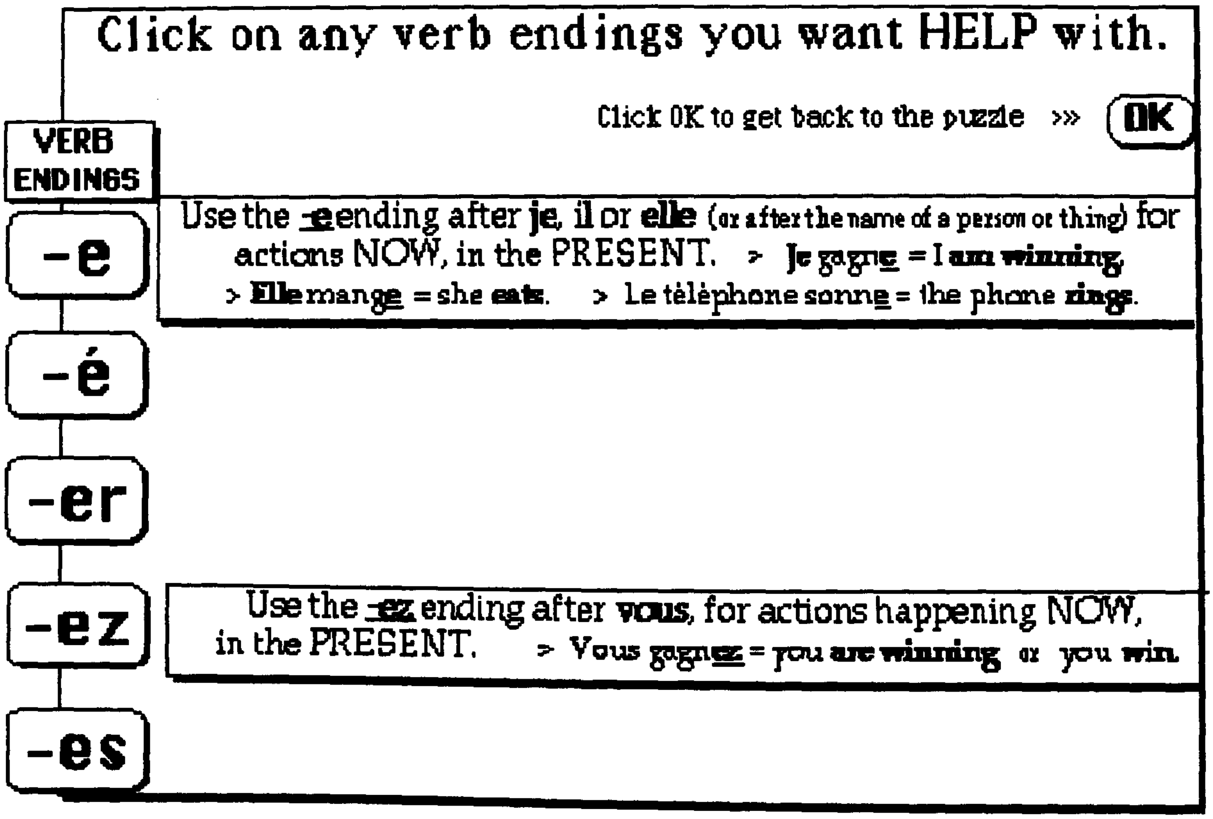
It will be noted from the example in (b) that the language content makes some concessions to adolescent preoccupations. HyperCard, like other authoring programs, can be quickly edited to meet the changing tastes of a particular age-group, or for wholesale conversion to another target group. An English translation is provided for the target population. [Proposals 1, 12]

(e) Highlighting and sound

At the start of each task, the five verb forms are highlighted in turn as an audio recording is played of each one. At any point in the program, the user can click a special 'Soundbite' button, which will replay the five verbs and show the coordinated highlighting. No explicit reference is made to the sound content in the program. It is hoped that the user will learn implicitly that if two different sounds alone can represent at least five different verbs with inflections (see **(a)** above), then the sound will not be a reliable guide to spelling, and that more attention should therefore be paid to the inflections. [Proposals 2, 3, 4, 5, 6, 7, 13, 15]

(f) Help and Feedback

An identical Help screen was prepared for each program. As can be seen in Figure 8.3 below, access to information is not through a vast, disorienting menu, or an on-line English dictionary (which would encourage word-for-word translation), but through a limited, manageable column of 'buttons' consisting of the inflections themselves (encouraging a 'processing for meaning' approach).



Click on any verb endings you want HELP with.

Click OK to get back to the puzzle >>>

Use the **-e** ending after **je**, **il** or **elle** (or after the name of a person or thing) for actions NOW, in the PRESENT. > **Je** gagn**e** = I **am winning**. > **Elle** mang**e** = she **eats**. > Le téléphone sonn**e** = the phone **rings**.

Use the **-ez** ending after **vous**, for actions happening NOW, in the PRESENT. > Vous gagn**ez** = you **are winning** or you **win**.

Figure 8.3. Help screen

The infinitive is not singled out as the source of information and sits quietly with the other inflections. The quantity of grammatical information for each inflection is restricted to pupil needs, while its quality is carefully tailored to ability level. The language of instruction is in English, there is a notable lack of 'text-book' vocabulary or complex sentences, and metalanguage is minimal. All five explanations can be called on screen at once, allowing comparison of the form and meaning of each inflection, and reducing the likelihood of knowledge becoming fragmented. As for feedback, the content (a simple grammatical explanation) is similar to that contained in Help and virtually identical in all three programs. Though the feedback routines vary slightly in each program, explanatory feedback is always given for both correct and incorrect answers. [Proposals 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16]

(g) Scoring

Earlier versions of the programs penalised users if they called up Help for any particular ending more than once. In other words, pupils were allowed one 'free go' at each inflection on the Help screen (Figure 8.3), in the hope that the threat of losing points for further use would encourage retention of grammatical information. However, the final version did not penalise recurrent Help, because; (i) formative evaluation revealed that users were misunderstanding the instructions (though very clearly explained) and believed *all* Help use would be penalised and were therefore not using the facility, and; (ii) even if the Help rules were understood, the program might be too harsh on weaker learners who really need as much exposure as possible to information. Access to the score and awareness of overall task goals were seen as essential for motivation. [Proposal 17]

8.6 DRAGONQUEST: the 'cognitive' program

8.6.1 Realisation

The first 'cognitive' prototype put the pupil in the position of a detective trying to determine the whereabouts of crime suspects at various times, by piecing together scraps of diary entries containing verbs in appropriate tenses. This provided a program in which the language content was needed to complete the task, but in the end it proved too time-consuming to realise and seemed too intellectually demanding for the target population (but may have potential for more able subjects). A new program was therefore developed in which the language tasks were made an integral part of a 'fantasy quest' game. The user is required to carry out ten language tasks, each of which corresponds directly to an on-screen task related to the overall program aim, in this case the liberation of a dragon from a castle. It is accepted that this is at some remove from a real task, but, since the only *real* French tasks are those carried out with a native speaker or programmed device in a genuinely interactive situation (such as asking the way, or using a cash-point), this may be the best one can do in a school.

HyperCard screens were extracted from *The Manhole* (Miller and Miller, 1988), an interactive adventure stack incorporating fantastical characters in an apparently 1960s-influenced environment (see Figure 8.4 below).

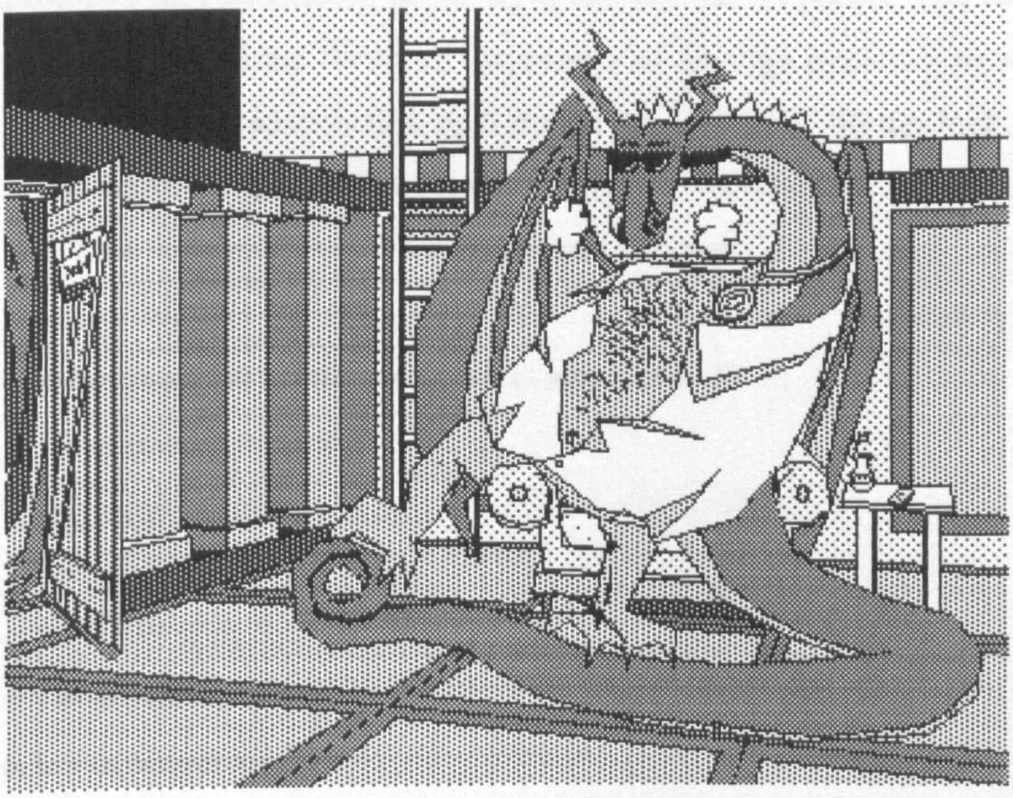


Figure 8.4. Example of DRAGONQUEST graphics

This took advantage of highly motivating graphics and sound effects. The original *Manhole* stack is a free-roaming, open-ended exploratory program with no goal and multiple outcomes, but this approach had to be tightened in order to restrict choices and provide a definite goal. However, the illusion of general freedom of movement was achieved by retaining a few genuine choice sub-routines (such as choosing a drink, or opening a drawer) which always returned to the main quest and did not avoid any language tasks.

In each task, the user must choose the verb with the correct inflection before continuing with the quest. If a correct choice is made, the grammatical rule is briefly summarised, 1000 points are awarded and the user can proceed. A wrong choice means a delay while the mistake is explained and another choice allowed. A correct choice at this stage again triggers confirmatory feedback, but only 500 points are awarded before proceeding. A second wrong choice produces an explanation of the right answer but no points. The user is finally allowed to continue. With an awareness of teenage cynicism towards hearty exclamations of approbation or criticism ('Great stuff!', 'Better luck next time!', etc.), the three messages accompanying the feedback are 'Correct', 'Wrong' and 'Still wrong - this is what you need to know'.

The ten tasks are listed, with correct answers in bold:

1. Je vais **pousser** la plaque!
2. J'ai **frappé** à la porte
3. Le bouton **marche** bien!
4. J'ai **écouté** la musique
5. Tu **prépares** une boisson?
6. Je vais **trouver** le château!
7. Je **monte** l'escalier
8. J'ai **sonné** à la porte
9. Vous **brûlez** mon gâteau!
10. Je vais **libérer** le dragon.

The scoring procedure went through several design stages. The earliest version was for a 'Scoreboard' screen to be available on request, but as most pupils want to know their score anyway, this need for an extra mouse-click was removed and the score appeared automatically on the task screen. The next version recognised that the feedback should take precedence, and showed the error message on a separate screen with the score appearing there after a pause. However, the screen was too cluttered and the score took attention away from the feedback, so the final version showed a feedback screen, removable after a mouse-click (allowing the user as much time as needed), followed by a brief glimpse at the Scoreboard before automatically returning to the game.

The homophone pairs for each of the ten verbs, described in section 8.5.3(a), were recorded and edited within the program, using the HyperCard Audio recording facility. In an early version, the user could play the sound for individual verbs by clicking an 'enable sound' button followed by the particular verb button. This proved cumbersome, so the user was then allowed the option of clicking a button which played and highlighted all five verbs. As one of the program aims was to draw pupils' attention to the problems of homophony, making the whole process optional seemed counterproductive (but see discussion in Chapter 9). This meant that the final version played an obligatory recording and highlighted the verbs at the start of each task, with a 'Soundbite' button made available for optional replay. Formative evaluation was ambiguous about the recorded speech, with comments like, 'could have done without it' and, '[useful] for pronunciation' from the same evaluator. To clarify the final result, a sample task procedure is now described.

8.6.2 Task procedure

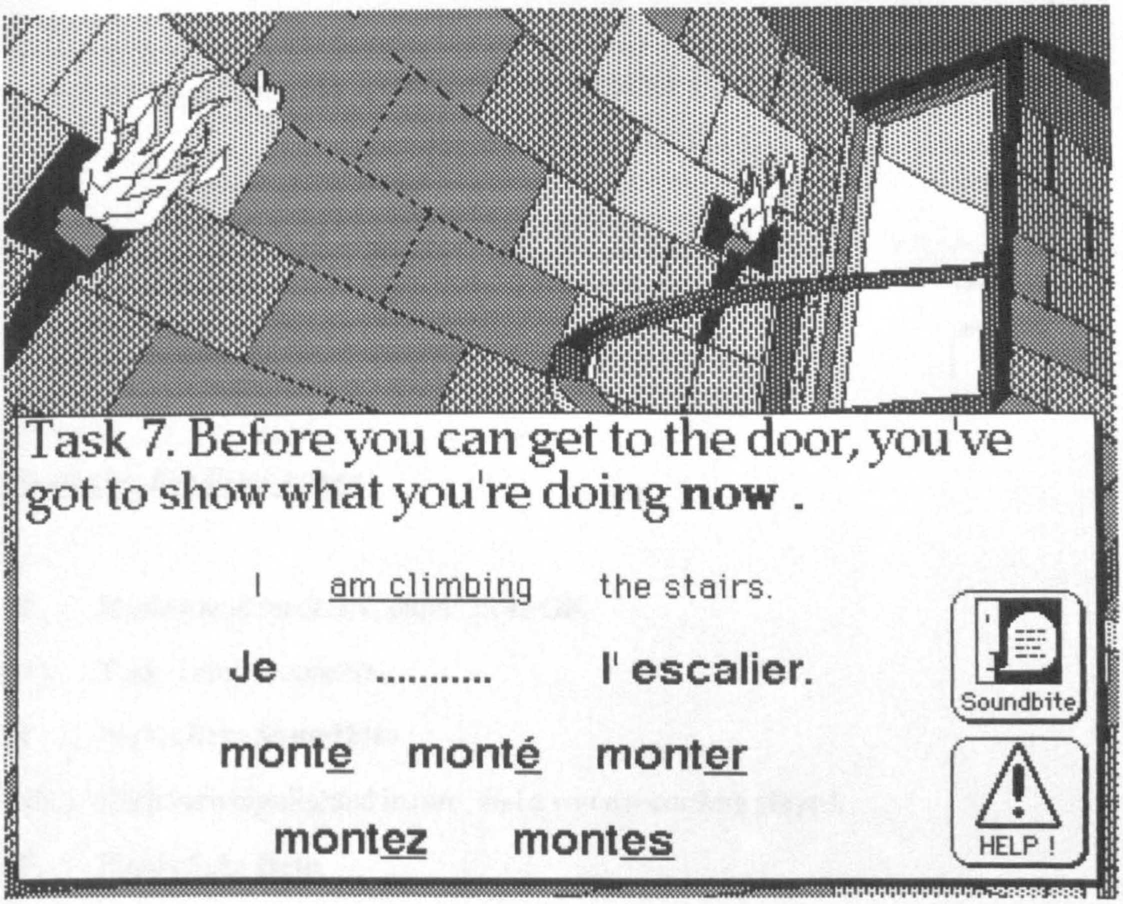
PI = Pupil Input **CO** = Computer Output.

(Pupil is part way through the program, trying to locate the dragon)

CO Picture of staircase appears

PI Pupil clicks on stairs in order to go up to a door

CO Task overlay appears as in Figure 8.5 below. The gapped sentence and English translation appear first, followed by the verb choices



Task 7. Before you can get to the door, you've got to show what you're doing **now** .

I am climbing the stairs.

Je .... l' escalier.

monte monté monter

montez montes

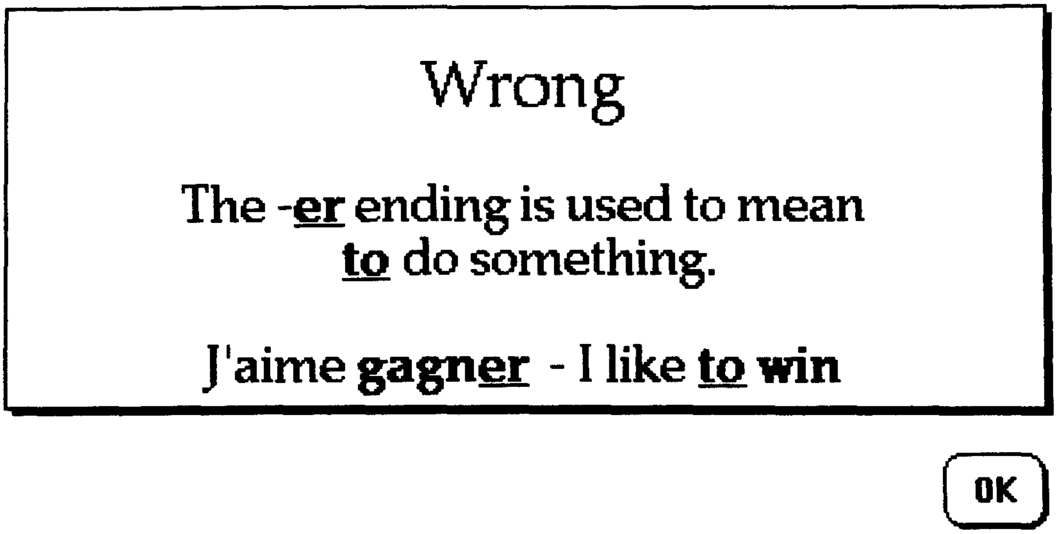
Figure 8.5. DRAGONQUEST graphics with task overlay

CO Each verb is highlighted in turn, and a voice recording played for each

Help and **Soundbite** buttons appear and briefly flash as reminders

PI Pupil clicks **monter**

CO Feedback screen appears (Figure 8.6 below)



Wrong

The -**er** ending is used to mean **to** do something.

J'aime **gagner** - I like **to win**

Figure 8.6. Feedback screen

PI	Having read feedback, pupil clicks **OK**
CO	Task screen reappears
PI	Pupil clicks **Soundbite**
CO	Each verb highlighted in turn, and a voice recording played.
PI	Pupil clicks **Help**
CO	Help screen appears (see Figure 8.3 above)
PI	Pupil clicks chosen **Help** inflection (**-ez,** then **-e**)
CO	Grammatical information appears (as shown in Figure 8.3 above)
PI	Having read information, pupil clicks **OK**
CO	Task screen reappears
PI	Pupil correctly chooses **monte**
CO	Feedback screen appears, similar to Figure 8.6, but with 'Correct' message and feedback on **-e**
PI	Having read feedback, pupil clicks **OK**
CO	Scoreboard shown briefly
CO	Return to the staircase screen
PI	Pupil clicks to go upstairs to door and continue the quest.

At the end of the quest, the user is given a final score out of 10000 and a congratulatory comment.

8.6.3 Formative evaluation

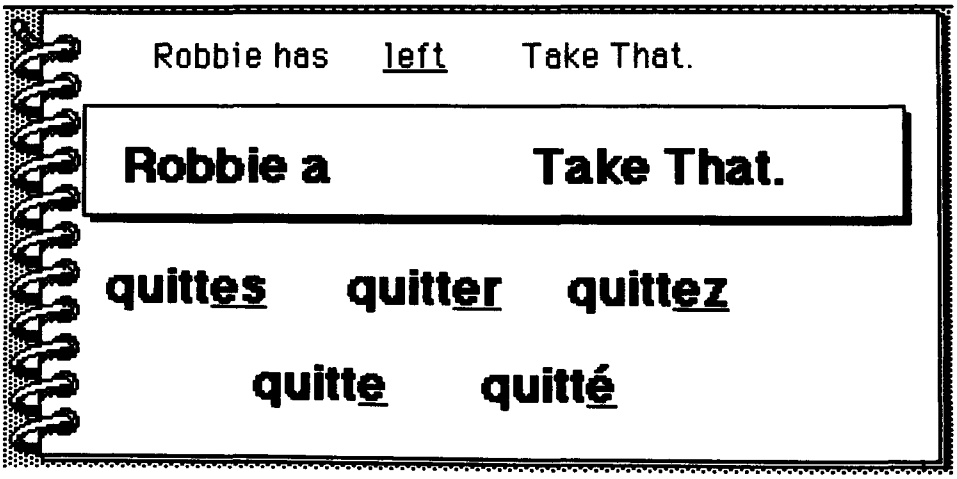
A GCSE pupil of average ability and technophobic tendencies was persuaded to evaluate the program. It was felt that she would provide more useful feedback than would a high-flier or computer-game enthusiast. Generally-applicable evaluation findings are reported in sections 8.5.2 and 8.9, but those relating to DRAGONQUEST are listed below:

1. Assurance that the quest is not too childish. Better than a lesson, in any case
2. More 'signposting' needed on where to click on doors, etc. in graphics
3. Knew the program was about verb endings, but unclear on details
4. Level of French and storyline confirmed as 'just right'
5. Text, sound and graphics came together 'brilliantly'. Really enjoyed effects
6. Instructions 'mostly' clear, but introduction and rules taken at quite a pace.

More 'signposts' were added to the program in the light of (2), and further evaluation by a teacher of GCSE English helped clarify the problems in (6), and revisions were made.

8.7 VERB-ENDS: the tutorial program

The original tutorial program attempted to emulate the classroom activity of letter-writing. The earliest version was similar to the original Concept Mac program described earlier, but had too many word-buttons and potential sentences for a weak pupil to make effective use of. The second version was limited to three gapped sentences per screen, to be completed by a choice of several verb-buttons and inflection-buttons. Once more, too much was required from the pupils. Finally, a task overlay similar to that described in DRAGONQUEST was arrived at, with each screen showing only one gapped sentence and a repeated verb with five different endings, as shown in Figure 8.7 below.



Robbie has left Take That.

Robbie a Take That.

quittes quitter quittez

quitte quitté

Figure 8.7. Part of VERB-ENDS screen

Instead of providing a quest or game, a deliberate attempt was made to emulate a classroom approach. The program introduction mentioned the need for verb knowledge for examinations, and gave an example of the sort of letter / essay that might be expected. Pupil input was 'marked' by an on-screen tick or cross, and the score (10 if correct first time, 5 second time) was shown on a 'Teacher's Markbook' screen. No sound effects were added, though a graphic of the 1960s cartoon 'Mr Natural' made an occasional appearance.

The ten tasks were as follows:

1. Je vais **jouer** au tennis
2. J'ai **travaillé** dans un magasin
3. Elle **écoute** ma cassette
4. Il a **acheté** le dernier disque
5. Tu **préfères** Oasis ou Blur?
6. Je vais **gagner** à la Loterie
7. Je **trouve** le temps de me reposer

8. Robbie a **quitté** Take That

9. Vous **marchez** trop vîte

10. Elle va **porter** son jean.

The procedure was as described for DRAGONQUEST, but without the graphic adventure background. Evaluation comments appear at the end of the next program description.

8.8 HANGMAN: the game program

It is an onerous task to produce a language game which will motivate the present generation of pupils, so the decision was taken not to try to compete with the glamorous computer games now available. Enquiries revealed that the game of Hangman is still played on blackboards, and that pupils would not be unhappy with this game format. The ten tasks are listed below:

1. Je vais **gagner** cette partie

2. J'ai **trouvé** mon vélo

3. Elle **écoute** ma cassette

4. Il a **acheté** le dernier disque

5. Tu **préfères** Oasis ou Blur?

6. Il va **jouer** de la guitare

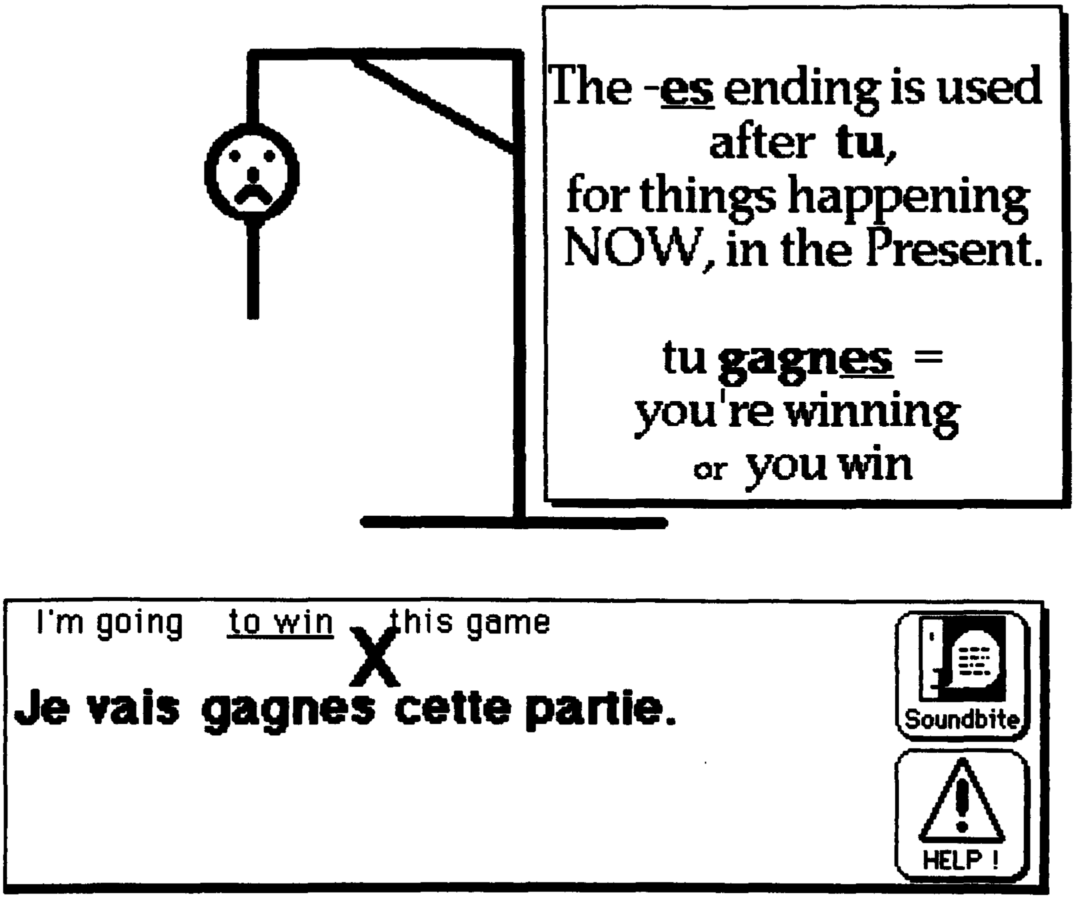
7. Je **travaille** six heures par jour

8. Robbie a **quitté** Take That

9. Vous **marchez** trop vîte

10. Elle va **porter** son jean.

A different program procedure from those already described had to be adopted to accommodate the rules of Hangman. Four attempts were allowed at each task, with points available declining through 10, 5, 2 and 1. As well as reducing points, each incorrect answer triggered a downbeat hooting noise and added limbs to the hanged man, culminating in a flashing screen and 'game over' message. Correct answers triggered a round of recorded applause. Because four choices per task might have involved a lot of movement to and from feedback and score screens, the feedback was instead overlaid on the task page for several seconds (see Figure 8.8).


The -es ending is used after **tu**,
for things happening NOW, in the Present.

tu **gagnes** =
you're winning
or you win

I'm going to win this game
Je vais gagnes cette partie.

Figure 8.8. Part of HANGMAN screen

The number of points available was shown permanently in the top left-hand corner, with a running score briefly appearing in the top right. The drawbacks are that the screen would at times be cluttered, and might have too much activity in one space. A comparative formative evaluation of VERB-ENDS and HANGMAN showed a preference for the simpler tutorial style, as the information was perceived to be 'explained better' (in fact the information was identical in both), but no drastic alterations were necessary. The pupil-evaluator made a genuine attempt to gain full marks in both programs, despite being a non-competitor in other fields. No use was made of the Soundbite facility, but Help was called for.

8.9 Technical considerations

Authoring in HyperTalk presents the perennial problem of the programming scripts being unable to recognise diacritics. This meant that any script reference to -e̲ and -é̲ would confuse the program, hence the need to reprogram many screen 'objects' with ID numbers. This problem was resolved before the formative evaluation process. A more serious problem emerged at a very late stage of evaluation, shortly before the programs were to be used empirically. None of the target pupils had any experience of HyperCard use, which only requires one click on a button for an action to ensue. Being PC users, their tendency is to double-click any icon. The problem for HyperCard is that the second click of a double-click remains as a 'ghost' on screen and activates any button appearing at that point on the next card. Fortunately, this problem was identified in time for it to be remedied, but necessitated the reprogramming of many of the buttons on all three programs.

The final version of DRAGONQUEST consists of two stacks, the first with 115 cards (stack size 980K) and the second with 56 cards (660K). The program had to be broken into two for reasons of portability, but (after more programming) both stacks operated seamlessly as one program. VERB-ENDS has 26 cards at 440K, while HANGMAN contains 17 cards at 570K. The large size of the latter in relation to card numbers is explained by the extremely dense programming required to run the version of the game as described in a previous section.

On each program, a special HyperTalk routine was included at the start of the script of every button and card in order to send a record of every user action to a hidden 'trace' card. At the end of any session this card can be accessed by the instructor for a complete read-out of everything that took place, together with the time of action.

8.10 Conclusion

The development of the programs described above was an iterative process. Although they are detailed separately, work was done on all three concurrently, with scripting or design improvements from one program freely informing and enhancing the development of the others. There were always features that might have run better, and the work might have been less time-consuming, if a professional programmer had been employed, but carrying out one's own programming meant that pedagogical aims and consideration of the pupils were always the driving force behind the development process. While the programs may have been less than perfect, they were based on carefully-justified pedagogical principles and appeared robust and 'de-bugged' enough to make very serviceable prototypes for more refined commercial versions. They certainly seemed fit for use by GCSE pupils for empirical purposes, and we turn now to the learning outcomes and reactions of that target population.

Chapter 9

A peculiar question: empirical data from the CALL programs

Boy: 'Please, Teacher, what did I learn today?'
Teacher: 'That's a peculiar question'
Boy: 'Well, they'll ask me when I get home'
(1929 Cartoon Caption, *A Century of Punch*, 1956)

9.1 Methodology

9.1.1 Background

Although Year 11 pupils were used for the initial data-gathering exercise (see Chapter 5), the decision was made to restrict the final empirical work to Year 10 pupils. This was principally because of reasons of availability and the doubtful ethics of asking the current Year 11 to work on untested programs in their GCSE final year, just before trial examinations. The validity of the present exercise was ensured by using the same comprehensive school as in the initial research, whose claims for being representative have already been established. No significant changes in school policy or population had occurred since then, and even the French teaching staff had remained unchanged over three years (apart from the return of one teacher after maternity leave). The exercise therefore took place in conditions of enviable continuity and minimal variability. The only internal difference between the two cohorts of pupils was that the present subjects had completed one year less of French than the earlier group. One would therefore expect Year 10 results to be slightly lower on any scale of measurement than results from a Year 11 group, but the fundamental conclusions should be unaffected, with both cohorts following the same course for the same examination. The only policy change was an external one, namely, the National Curriculum requirement for all pupils to study at least one foreign language.

The empirical work took place during October and November 1995. In general there is a desperate shortage of language-learning and CALL data from the secondary sector because of curriculum demands and logistical difficulties such as access, pupil organisation and curriculum requirements. It was therefore a privilege to be given a room to work in, complete freedom of access to pupils in their free time and the support of staff in case of any queries or problems. The data eventually acquired would simply be unobtainable in many circumstances. The only hardship was the need to bring in a personal Apple computer each day, the school being equipped solely with PCs.

9.1.2 Allocation of subjects

The main principle was to adhere to the class teachers' own assessments of overall pupil ability in French (based on a combination of speaking, listening, reading and writing skills), using class lists which were kindly made available. For school timetabling, the 108 (62 female, 46 male) Year 10 pupils studying French, out of a year total of 149, had been divided into two year-groups of A (65) and B (43). (These were option groupings, not ability groupings). Within these option groups, A had been divided by the teachers into High (26), Middle (22) and Low (17), while B was divided into High (28) and Low (15).

The two Low groups comprised those who might not sit a GCSE written examination at all, even at Basic Level, and were only studying French because of new National Curriculum requirements. These particular pupils were not considered for investigation as they were a new phenomenon and not the original subject of research. Once these unrepresentative 32 pupils (10 f, 22 m) were removed from the equation, the remaining 76 pupils (52 f, 24 m) were considered to be the appropriate target group.

The group (A) 'middle ability' class set of 22 (15 f, 7 m) was chosen for first testing. This class contained no-one from either extreme of the ability range, being mainly composed of pupils of estimated grades averaging D / C. The pupils were asked to form eleven friendship pairs, and nine of these pairs were chosen at random to form the LOWER group of 18 (11 f, 7 m) for this exercise. Within each pair, the pupils were designated as 'a' or 'b', and each pair was then assigned at random to one of the three programs, and numbered accordingly (Pair 1ab DRAGONQUEST, Pair 2ab HANGMAN, Pair 3ab VERB-ENDS, Pair 4ab DRAGONQUEST, etc.).

9.1.3 Procedure

At each chosen lunchtime one pair came to the allocated room, prepared to stay for about 45 minutes. After receiving a brief explanation about procedure, the pair spent five minutes separately completing the 20-question pretest on verb endings (Appendix G). Though using different vocabulary, the pre- and posttests each contained six -é answers, six -er, four -e, two -ez and two -es, maintaining the same ratio of different inflections as the programs. The pupils then immediately sat down together at the computer, and were shown how to run the program. During the 15- to 20-minute period of operation, a tape-recording of their conversation was made, and an observation record was written. The program itself automatically kept a record of all mouse actions made during its progress. As soon as the program was finished, the pupils separately sat the 20-question posttest for 5 minutes (Appendix G). The final procedure was to conduct a 5- to 10-minute recorded interview with both pupils together, based on a fairly open-ended questionnaire (Appendix H).

The process generated interesting and extensive qualitative data, but the quantitative data showed that a few pupils were doing slightly worse in their posttest than in the pretest. The need for calibration of the program against more able pupils became apparent. Class teachers were therefore asked to identify the 15 most able pupils from each of the year-groups A and B, providing a 'top 30' or hypothetical 'upper stream' (21 f, 9 m) whose estimated grades averaged B / C. The pupils were put in pairs, accommodating friendship groups where possible. Nine pairs were then chosen to form the HIGHER group, with a deliberate weighting (12 f, 6 m) to maintain approximately the same 2:1 sex ratio as the original 'top 30', and to correspond with the LOWER group ratio. Each pair was assigned at random to one of the three programs (Pair 10ab DRAGONQUEST, Pair 11ab HANGMAN, etc.). The procedure then continued exactly as for the LOWER group, providing in the end a total of 36 pupils in two groups of 18 (2x18=36), with 12 pupils overall on each of the three programs (3x12=36).

The entire exercise went surprisingly smoothly, considering that pupils had to be persuaded to give up their free time (though, exceptionally, two of the sessions took place during lesson time, with the pupils released to try the program). The research could not have taken place without their patience and good grace. Only one pupil refused to take part, but another from the same ability group took her place. The only technical problems were a minor 'bug' on the scoring routine of one program, which was quickly corrected, and two occasions when the program briefly left the screen. This is always a hazard if the cursor in a HyperCard program is moved to the extremities of the screen. A slight change in procedure became necessary after the first pair were interviewed. They had not used the Help facility as they thought it provided 'program help' rather than 'verb help' (this despite clear instructions on screen). One has to accept that many people ignore written instructions, so each succeeding pair was at the outset given a verbal summary of what the Help and Soundbite buttons were for.

To summarise, the data generated from this exercise consisted of:

- 36 pre- and posttests
- 18 tape-recordings of pair discussion while using the program
- 18 tape-recordings and notes of pair interviews with the researcher
- 18 program traces
- 18 sets of observation notes.

The discussion recordings were transcribed and combined with observation notes and program traces to provide a complete picture of everything that was said and done by the pupils during each session. It is these that form the basis for the main qualitative analysis. Firstly, a quantitative analysis is given.

9.2 Analysis of the quantitative data

9.2.1 Initial analysis: by school-based ability group

The tables in Appendix I show the complete results of the pre- and posttests for the HIGHER and LOWER groups of pupils. Apart from the total scores out of 20, the tables also show the number of times each inflection was actually used by each pupil, and how often the inflections were used correctly. An initial analysis is given in Figure 9.1 below, showing both actual improvement and proportional improvement (calculated by dividing the increase in score by the original score).

LOWER GROUP (N=18)

Total	20	%
Mean Pretest Score	5	25
Mean Posttest Score	6.5	32.5
Mean Improvement	**1.5**	**7.5**

(Proportional Improvement 30%)

HIGHER GROUP (N=18)

Total	20	%
Mean Pretest Score	6.5	32.5
Mean Posttest Score	9.4	47
Mean Improvement	**2.9**	**14.5**

(Proportional Improvement 45%)

ALL PUPILS (N=36)

Total	20	%
Mean Pretest Score	5.7	28.5
Mean Posttest Score	7.9	39.5
Mean Improvement	**2.2**	**11**

(Proportional Improvement 38.5%)

Figure 9.1. Initial analysis of pre- and posttest results

In terms of actual increase in scores, these results can be summarised by stating that the LOWER group made some improvement, but that the HIGHER group were able to improve at nearly twice the LOWER group's rate. The HIGHER group also performed better in terms of proportional improvement. The overall improvement after a 15-minute program session seems very pleasing, and might compare favourably with the effects of conventional instruction over a similar period.

This first analysis is based on the pupil groupings as described at the start of this chapter. These groupings were themselves based on the overall-ability teaching groups established by the class teachers. We recall that 'overall' ability takes speaking, listening, reading and writing skills into equal account, in line with GCSE examination criteria. It follows that there will be some pupils in the HIGHER group who may be weaker in their written work than some in the LOWER group, as suggested by several individual results in the tables in

Appendix I. From the point of view of ability in writing French verbs, therefore, the division into HIGHER and LOWER which we found useful as a framework for conducting the investigation, may now seem rather arbitrary. As the research question is derived from problems in written French, a more meaningful analysis may be carried out if the pupils are categorised according to their 'French verb writing ability', as defined by their pretest scores. This more apposite categorisation allows us to divide the pupils in three groups and make a more interesting and revealing analysis.

9.2.2 Revised analysis: by pretest score

The following illustration (Figure 9.2) shows how the pupils can be divided into new groupings (with new names) based on pretest results. The LOWEST group is the eight pupils who scored 0-3, while the HIGHEST group is those eight who scored 8-13. The remaining twenty pupils form the MIDDLE group, with a pretest score between 4 and 7.

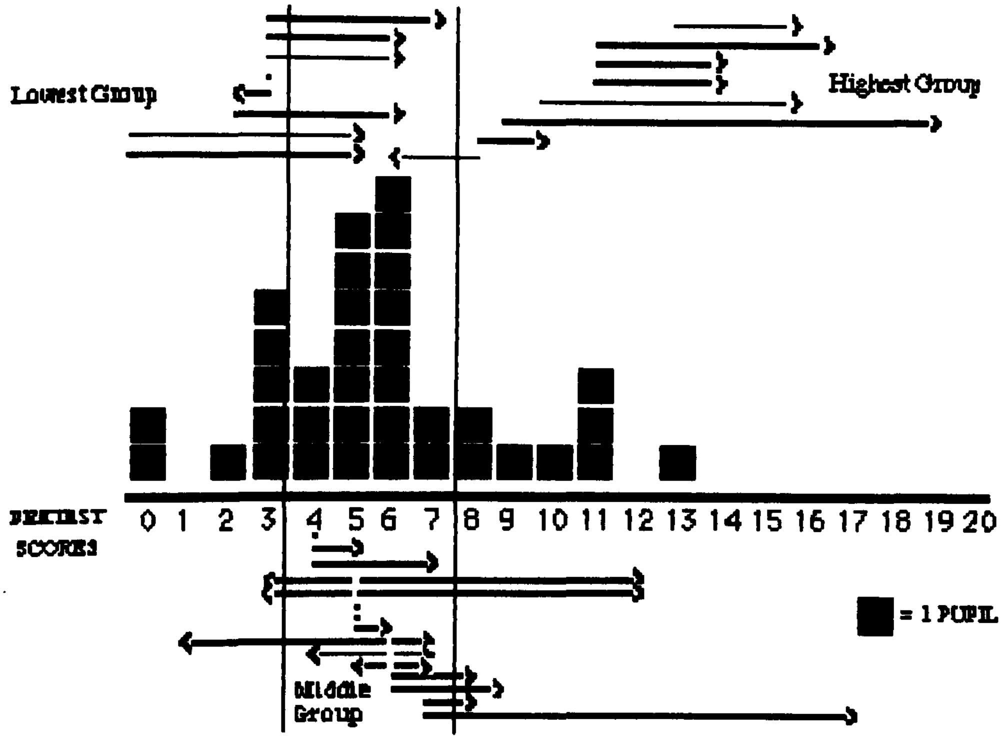


Figure 9.2. Group distribution based on pretest score, with posttest movement

The blocks in Figure 9.2 represent pupils making a particular pretest score, while the arrows represent improvement or regression in the posttest, with the dots showing no movement. This illustration shows quite clearly that both the LOWEST and HIGHEST groups generally improve their scores, with only one pupil in each group regressing in the posttest. The LOWEST pupils do reasonably well, with six moving to the middle, and two remaining. The HIGHEST group mostly improves well, with one regression to the middle. The MIDDLE group on balance makes an improvement but appears unstable, with six pupils moving up a group, three moving down and eleven remaining in the middle.

The rounded-up calculations for each group are shown in Figure 9.3.

LOWEST GROUP (N=8)

Total	20	%
Mean Pretest Score	2	10
Mean Posttest Score	5	25
Mean Improvement	**3**	**15**

(Proportional Improvement 150%)

MIDDLE GROUP (N=20)

Total	20	%
Mean Pretest Score	5.4	27
Mean Posttest Score	6,7	33.5
Mean Improvement	**1.3**	**6.5**

(Proportional Improvement 24%)

HIGHEST GROUP (N=8)

Total	20	%
Mean Pretest Score	10	50
Mean Posttest Score	14	70
Mean Improvement	**4**	**20**

(Proportional Improvement 40%)

Figure 9.3. Analysis by pretest score

These results are represented graphically in Figure 9.4 below.

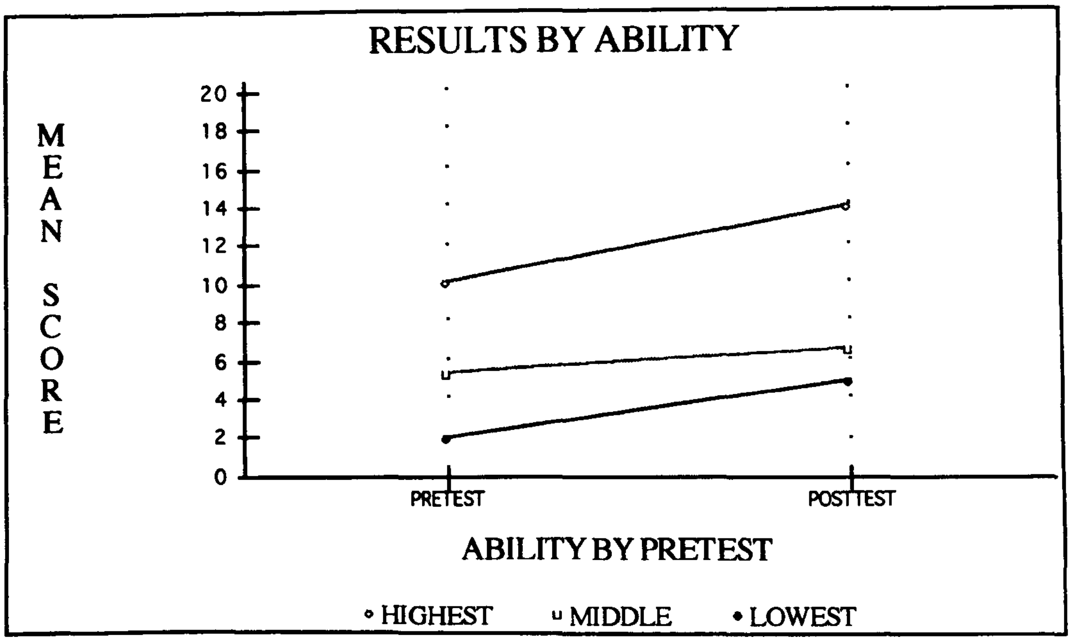


Figure 9.4. Mean scores for the three pupil ability groups

In considering actual improvement, all three groups increase their scores, with the LOWEST group making surprisingly good progress considering their capabilities and the length of exposure to the program. The HIGHEST group made very pleasing progress, suggesting that the more previous knowledge one has, the easier it becomes to improve. However, in proportional terms, the LOWEST group easily outperforms the other two groups. The instability of the MIDDLE group has already been remarked upon. One interpretation of their results is that pupils need more program exposure time before they are able to move up to the highest level. In all events, teachers might need to use caution when trying to analyse pupil performance during this unstable stage.

9.2.3 Analysis by program style

Although the primary intention of the research was to determine the effects of principled instructional design on the pupils, we recall that the opportunity was taken to present the content in three different program environments in order to gauge pupil reactions. As described in Chapter 8, the three programs were;

DRAGONQUEST, a 'cognitive' fantasy in which the language tasks were directly related to the program action; a HANGMAN game; and a straightforward tutorial called VERB-ENDS. Each program was used by twelve pupils, with the results shown in Figure 9.5.

DRAGONQUEST (N=12)

Total	20	%
Mean Pretest Score	7.2	36
Mean Posttest Score	9.2	46
Mean Improvement	**2.0**	**10**

(Proportional Improvement 28%)

HANGMAN (N=12)

Total	20	%
Mean Pretest Score	5.2	26
Mean Posttest Score	7.4	37
Mean Improvement	**2.2**	**11**

(Proportional Improvement 42%)

VERB-ENDS (N=12)

Total	20	%
Mean Pretest Score	4.7	23.5
Mean Posttest Score	7.2	36
Mean Improvement	**2.5**	**12.5**

(Proportional Improvement 53%)

Figure 9.5. Analysis by program style

These results by program style are represented graphically in Figure 9.6 below.

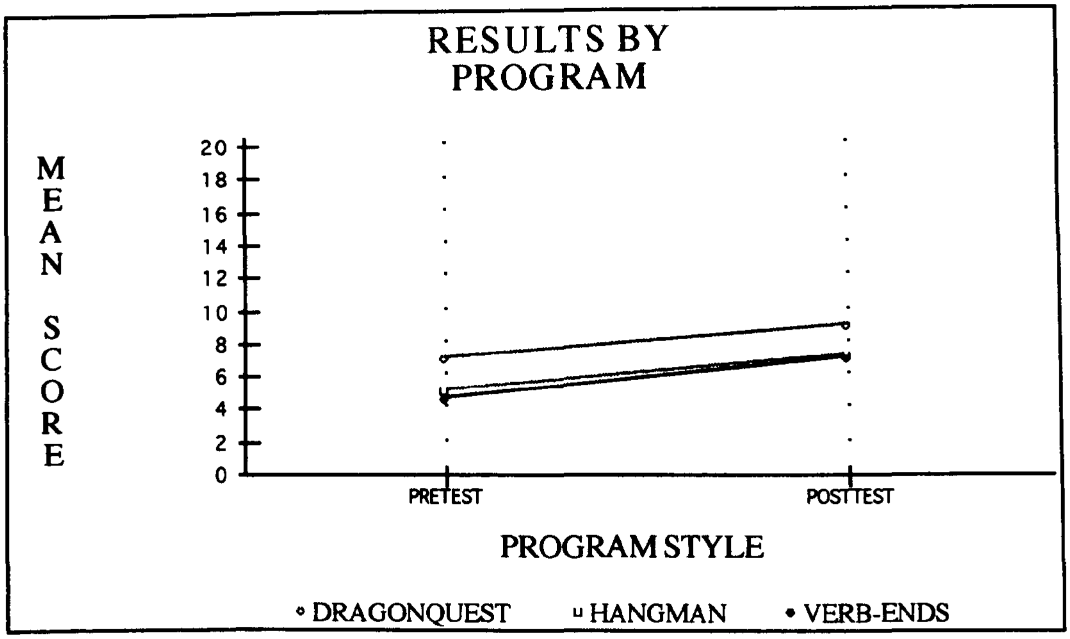


Figure 9.6. Mean scores for the three program styles

All three programs show improved performance, with VERB-ENDS producing the greatest increase, both actually and proportionally.

9.2.4 Analysis by sex of pupils

The present research was not intended as a contribution to the debate on the role of sex difference either in second-language learning or interaction with CALL. However, we acknowledged the interest in this issue in Chapter 5 and have been sensitive to pupil sex ratios in both the initial empirical work described there and in the empirical work presented in this chapter. The calculations are presented in Figure 9.7.

FEMALE PUPILS (N=23)

Total	20	%
Mean Pretest Score	5.9	29.5
Mean Posttest Score	8	40
Mean Improvement	**2.1**	**10.5**

(Proportional Improvement 35.5%)

MALE PUPILS (N=13)

Total	20	%
Mean Pretest Score	5.3	26.5
Mean Posttest Score	7.7	38.5
Mean Improvement	**2.4**	**12**

(Proportional Improvement 45%)

Figure 9.7. Analysis by sex of pupils

These results by sex of pupils are represented graphically in Figure 9.8.

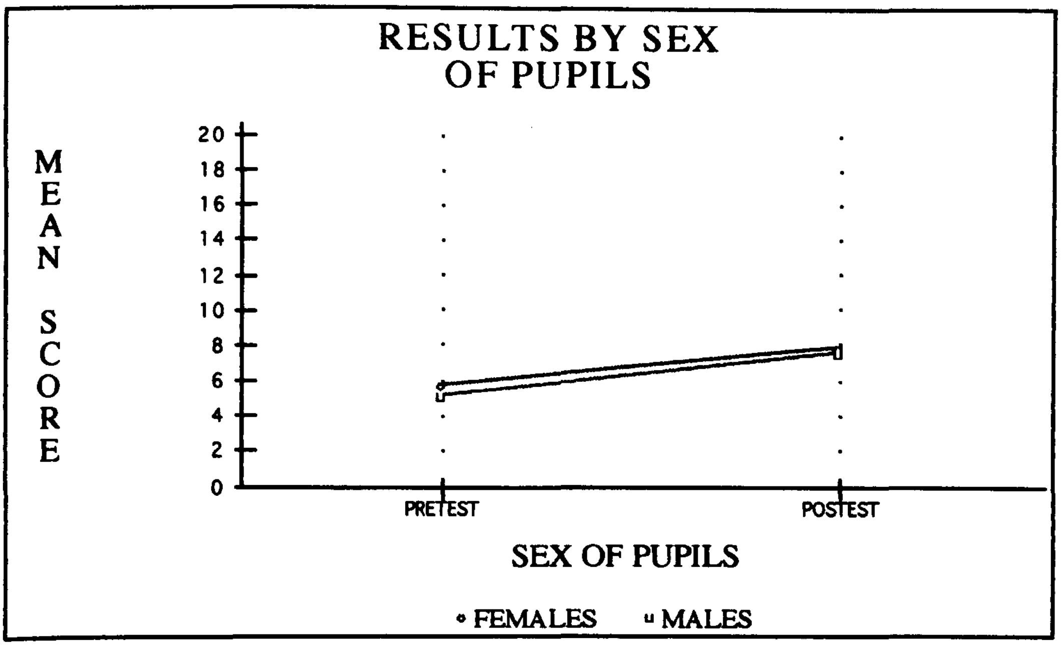


Figure 9.8. Mean scores for male and female pupils

There was very little difference in the performance of female and male pupils. Both groups improved, with the males improving at a slightly better rate, though from a marginally lower posttest base.

9.2.5 Use of inflections in the tests

The test result tables in Appendix I show which inflections were used in answers and how accurate this use was. Without giving a detailed mathematical analysis of inflection use in pre- and posttests, it is nevertheless possible to make some general points based on the outline in Figure 9.9. This shows the required instances of each inflection in the tests with their mean overall use and mean accurate use.

Inflection	**Required instances**	**Pretest used**	**Posttest used**	**Pretest correct**	**Posttest correct**
-er	6	4.9	4.3	1.8	2.6
-é	6	1.7	3	0.7	1.6
-e	4	8.2	6.5	2.6	2.2
-ez	2	1.2	2.5	0.3	1.2
-es	2	1	1.8	0.1	0.4

Figure 9.9. Mean overall use and accurate use of inflections

All the inflections are used more accurately in the posttest, with the exception of -e. This seems to be because the -e ending was used so widely in the pretest that it must have been right more of the time there. Although accuracy has dropped slightly, overall use of -e has dropped considerably, indicating that it is at least used with more discrimination. The -e inflection does seem to have emerged as the main 'default' ending in the pretest, more so than the -er inflection which was considered a more frequent default form in the Examiners' Reports in Chapter 3. It was pleasing to note that the usual default form of -er was used less often but with more accuracy in the posttest, showing discretion in its use. The less well-known inflections -é, -ez and -es all seem to become more 'noticed' as a result of the program, being more widely used, with corresponding increase in accuracy, in the posttest.

9.2.6 Summary

From a teacher's point of view, the quantitative data show interesting and pleasing results from the use of the three programs. There was a general improvement in performance and, although this would be expected after most forms of instruction, it was pleasing to note that improvement occurred after such short program sessions. All three programs performed well, with results favouring the VERB-ENDS tutorial approach. It was no surprise that the female pupils outperformed the males in both pre- and posttests (see SEAC, 1991), though of interest that the boys made more improvement. However, the actual differences involved do not appear to be of great significance.

The most interesting results were that a division of the pupils into three groups based on pretest scores showed that the top group improved by around 20%, the lowest group by about 15%, with the middle range only improving by 6.5%. A brief exposure to the program seems to have been quite beneficial to the pupils that knew very little, and even more so to those that had good knowledge to start with. Armed with the assumption that the effects of the program itself are generally benign, it is suggested that the instability of the middle-range pupils could be remedied by a longer program, or repeated exposure to the same program.

It was hinted in the description of procedure earlier in this chapter that although the quantitative data looked sound, the extensive qualitative data, based on observing the pupils' interaction with the programs, looked worthy of close analysis. It is these findings that are now given attention.

9.3 Analysis of the observational data

9.3.1 Establishing an analytical framework

The observational data were obtained from three distinct sources, and were recorded concurrently while each pair of pupils used a particular program. In the first place, all pupil utterances were recorded on audio-tape and later transcribed. Secondly, the observer made notes about the pupils' body language, and thirdly, a trace routine in the program itself recorded all choices and movement made within that program. These three data sources were synthesised into one transcription giving a complete inventory of all pupil actions. These transcriptions were then edited to remove irrelevant comments and actions. allowing a clear focus on the language-learning process. Two edited transcriptions appear later in this chapter, while the remaining sixteen are in Appendix J.

Because of the very distinct nature of the final product, a distinct means of analysing it must be used. The rituals and negotiations of discourse analysis seem entirely inappropriate. Our interest is not in the L1 linguistic data, but in the metalinguistic data; that is, the explicit use of grammatical terms. As no suitable analytical framework seems to exist, a new one is proposed which adapts ideas from other fields as well as creating its own analytical categories.

In the same way that it has been argued that people are divided by their use of everyday language, we suggest that second-language learners may be divided by their use of metalanguage. One form of sociolinguistic analysis (see Wood, 1988) describes speakers as being either 'restricted-code' or 'elaborated-code' users, a distinction seemingly related to social class. In the present analysis, pupils will be described as 'restricted-expression' or 'elaborated-expression' users, based on evidence of their grammatical awareness. As already stated, this analysis is an attempt to establish a working framework for these new data. It recognises that just as the 'code' distinctions were criticised because the way people talk may depend on context (more elaborate speech being more likely in a relaxed environment), so pupils may be metalinguistically capable but reluctant to express themselves on grammar while being observed. However, the great majority of the sample *did* express themselves, and the numerous occurrences of the use of elaborated expression following a period of restricted expression seem to show positive evidence of a developing grammatical awareness while using the programs.

The sociolinguistic and metalinguistic analyses have further useful parallels for this study. In the sociolinguistic context, restricted-code users employ 'non-determinate' (Wood, 1988, p. 88) references such as deictic 'this' or 'that', which are dependent on non-verbal indication and require the listener to share the speaker's physical situation. Elaborated-code referents must be established verbally, however. They are more specific and more similar to written text, and do not require a shared physical environment. In the present metalinguistic context, the 'restricted' pupils similarly rely on physically pointing to a verb choice, while the 'elaborated' ones have the ability to extract themselves from their physical milieu and discuss verbs on a more abstract level. It is this degree of language awareness which will be most prized by teachers and examiners.

9.3.2 Analytical categories for metalinguistic data

With the foregoing considerations in mind, the following categories were developed specifically to help the interpretation of the large body of 'grammar-talk' data produced by the pupils while using the verb-learning programs.

(a) Category 1. Restricted Expression

This represents the lowest level of pupil engagement with the program, with no evidence of metalanguage or language analysis. At this level, the pupils simply refer to the verb choices as objects rather than meaningful words. The most basic form of Restricted Expression is simple deictic reference, such as 'this' or 'that one'. This could be slightly enhanced by comparison ('this or that'; 'one of them') or by elimination ('not that or that'; 'we've had that'), but these examples (taken from the data) only seem to show strategic 'game-winning' strategies rather than any linguistic motivation.

(b) Category 2. Quotation

This category is perhaps the most minimal behaviour which a teacher would consider useful. The reading aloud of extracts from the Help screen or program feedback (such as 'what's happening now, in the present') demonstrates attention to key phrases and could be a helpful learning strategy. It does not in itself provide evidence of understanding or encoding into the pupils' internal system.

(c) Category 3: Elaborated Expression

A higher level of pupil interaction is characterised by the use of metalanguage and explicit analysis of French or English language extracts. Here, there is genuine 'grammar-talk', which uses the pupils' own words rather than quotation. This category is divided into three subsets

(i) Awareness

Attention to key features is shown by the noticing and articulation of different inflections. Examples from the data include:

'the one with just the -e on'

'that's the -e',

This is the simplest metalanguage and the point at which we see evidence of input enhancement leading to consciousness raising (see Chapter 6)

(ii) Identification

Key features are identified by a 'name' being put to a verb or inflection. This could involve a pronoun identifier:

'that's the you'

or a tense implied:

'going to do it'

or indeed named:

'it's 'bought', it's past'

(iii) Rule Articulation

This subset comprises a propositional form which relates one item with another. Here are examples of the inflection being explicitly linked with a tense or pronoun in the form of a 'rule':

'-ez is after vous'

'-e accent is for the past'.

(d) Category 4: Paradigm Creation

At the highest level, there appears to be some attempt by pupils, singly or jointly, to find ways of combining several rules in order to create their own paradigm. The following three extracts from the data illustrate this concept:

'*no*, that's something they've already done - that's *she* wears, that's wears isn't it? - that's something that's happening now (pointing to -e)'

'that's the tu, that's the past, that's the to do something, that's the vous and that's [in unison] your present' 'that's vous, that's you, that's you plural, not that 'un, that's past, perfect'.

The pupils seem to be rehearsing a way of articulating the rules in order to organise the information into a form most suitable for their own future use. Although 'paradigm creation' may appear an inflated term, it is a reminder of the constructive organisation of verb patterns being attempted by the pupils.

It should be added that the pupil utterances in Categories 3 and 4 may be either aided or unaided by feedback on the screen, and may consist of either accurate or inaccurate information.

9.3.3 Case Studies

In order to illustrate the analytical categories and demonstrate how the observational data can be interpreted, two contrasting Case Studies are presented. The Case Study of Pair 7ab shows weak pupils on the 'cognitive' program, while that of Pair 15ab reveals how able pupils interact with the tutorial program. Although the two pairs work in different ways and make differing use of program facilities, they both derive measurable benefit (in terms of test scores) and linguistic enhancement (in terms of metalanguage use) from the programs.

Key to Abbreviations

RE	Restricted Expression
Q	Quotation
EE	Elaborated Expression
PC	Paradigm Creation
[verb]	recording of all five verbs played (each example given is the correct answer)
[Soundbite]	recording replayed
(Help -er)	inflection(s) consulted on Help screen
(-er) (✓)	inflection chosen as answer (followed by positive feedback and explanation)
(-ez) (x)	inflection chosen as answer (followed by negative feedback and explanation)
[-]	silent 'e' (-e or -es) in pupil utterance
[´]	accented 'e' (-é, -er or -ez) in pupil utterance

Note: Each transcript is verbatim, except for the removal of irrelevant non-metalinguistic utterances and actions. Though it was not always possible to determine which pupil from each pair was talking, each new line of speech indicates a change in speaker. The numbers correspond to the separate tasks set by the program, and each task section is followed by an interpretative summary of events.

(a) Case Study of Pair 7ab (Program: Dragonquest)

Transcript	**Analysis**
1. that one	RE
[pousser]	output
the first one (referring to -ez)	RE
yeah	confirmation
(-ez) (x)	input, incorrect
" ...-ez ... -e"	Q from feedback
(-ez) (x)	input, incorrect

1. The pupils use guesswork with no metalanguage and make two incorrect answers.

2. [frappé]	output
-ez one?	EE, awareness
is it singular, feminine singular?	EE, inappropriate, query
that one	RE
(-é) (✓)	input, correct

2. Their attempt at metalanguage is inappropriate ('feminine'). A 'correct' answer for the wrong reason appears to confirm that their faulty analysis is correct.

3. [marche]	output
-es or -er? is it masculine? that one?	EE, inappropriate, query
yeah	confirmation
sure? march[-]	EE, identification
that one	RE
you sure? no	
let's try it	
(-es) (x)	input, incorrect

that one then	RE
which one?	query
it's masculine, I think	EE, inappropriate
it's masculine cos it's that one	EE, inappropriate
that one	RE
that one	RE
(-é) (x)	input, incorrect

3. They therefore use more inappropriate metalanguage ('masculine'). Both answers are wrong.

4. [écouté]	output
it's écout[-] or is it écout[-]?	EE, identification
"look at the endings"	Q from instructions
press Soundbite	searching for help
[Soundbite]	output
that one or that one?	RE
go for that one	RE
(-er) (x)	input, incorrect
(muttering about -er)	reading feedback
(-e) (x)	input, incorrect

4. The pupils are struggling, so they play a Soundbite. Both answers are wrong again, so help from sound is not confirmed.

5. [prépares]	output
that one	RE
the last one (referring to -ez)	RE
(-er) (x)	input, incorrect
"to do something"	Q from feedback
that one then	RE
(-é) (x)	input, incorrect

(tutting, no real attention to feedback)	missing clues

5. A wrong guess is made. Feedback is read, but a wrong answer again chosen. Feedback is not read this time.

6. (indistinct reading off screen)	early engagement
[trouver]	output
-ez isn't it?	EE, awareness
sure?	uncertainty
no	uncertainty
(muttering about help)	recognising need for help
(Help -ez)	checking inflection already discussed
is it -ez, action happening?	EE, rule articulation
(Help -es, -er, -é, -e)	browsing for clues
no, it's -er, going to do it	EE, rule articulation
try -er	EE, awareness
(-er) (✓)	input, correct
yeah! phew!	

6. At last they turn to Help, and compare all the inflections. Accurate metalanguage emerges ('going to do') and the answer is correct.

7. (reading off screen, pointing)	early engagement
"I am"	Q from translation
what is it for doing now, -es isn't it?	EE, rule articulation
[monte]	output
(-ez) (x)	input, incorrect
(no real attention to feedback)	missing clues
(muttering about Help)	recognising need for Help
(Help -e, -é, -er, -es)	browsing for clues
"I am going to", is that it, -er?	Q from Help, EE, awareness
no, it's -er isn't it, to do something	EE, rule articulation

(-er) (x)	input, incorrect

7. The pair now start pointing to verb choices at an early stage. They discuss tense, but choose a wrong answer. Help on all the inflections is sought, with more discussion on tense, but again a wrong answer is chosen. This is the critical point. As the Help has not immediately solved their problems, will they stabilise or reject Help and go back to guessing?

8. [sonné]	output
(pause)	thinking
(help -e, -é)	quite discriminating
(pointing at -é)	correct indication
yeah -er, -e with the thing, sonn[-] that one	EE, identification
(é) (✓)	input, correct

8. After a thoughtful pause, they compare just two Help inflections, showing discrimination, and choose the right answer first time.

9. "you're burning"	Q from translation
[brûlez]	output
(long pause)	much thinking
(help -e, -é, -er, -ez)	browsing
'you are', -e [?] -z	Q from Help, EE, awareness
(-ez) (✓)	input, correct
(looking at score) half-way nearly!	

9. After another period of reflection, they request Help again on four inflections, discuss, and choose the right answer first time.

10. [libérer]	output
(help -er)	very discriminating
that was 'going to', is it -er?	EE, rule articulation
(-er) (✓)	input, correct

-er, we got it right	EE, awareness

10. They again use Help, but show great discrimination by checking only on the eventual right answer. They use appropriate metalanguage and choose the right answer first time.

Program score: 50%.

Help used: -ez 2, -es 2, -er 4, -é 4, -e 4. Soundbite used: 1.

Change in Pre- > Posttest scores: Pupil 7a 2>6, Pupil 7b 7>8.

(b) Case Study of Pair 15ab (Program: Verb-Ends)

Transcript	**Analysis**
1. (discussing while rules being shown)	early engagement
"je vais"	Q from task
that's in the future	EE, identification
[jouer]	output
that means to play, I'm going to play,	EE, identification
that's just like the way you see in the dictionary	recognition, supplementary information
I think it looks wrong	uncertainty
actually it does look wrong, "je vais jouer"	uncertainty, Q from task
that's definitely not right	uncertainty
(-er) (✓)	input, correct
(read feedback, laugh at score)	attentive

1. The pupils show immediate involvement, quoting the French verb and assigning the correct tense. They show perception of the role of the infinitive both in future constructions and as a reference. Despite having some doubts, they risk answering without Help. They pay attention to the positive feedback..

2. "I *have* worked"	Q from translation
[travaillé]	output

not that (pointing at -es), not that... that?	RE
the past tense has the accent on the end	EE, rule articulation
yes it does... it happened in the past	EE, identification
(-é) (✓)	input, correct
(read feedback)	attentive

2. Immediate emphasis is placed on the auxiliary 'have' as the key past tense determiner. The past tense rule is recalled and successfully applied to the task. The feedback is again read.

3. This is where it gets difficult.	lack of confidence
I'm not very good at the present	EE, identification
[écoute]	output
is -es for tu?	EE, rule articulation
(Help)	recognising need for Help
are we going for -es? - it's -es or -e without	EE, awareness
an accent	EE, awareness
(Help -es, -e)	checking inflections already discussed
-es for tu	EE, rule articulation
I think it's that, il or elle, now in the present	EE, rule articulation
yeah it's that one	RE
(-e) (✓)	input, correct
(read feedback)	attentive

3. The present tense is a difficulty, but one rule is cited and two inflections discussed before Help is called. It is used discriminatingly, with the rules for the two inflections already discussed being compared. The right answer is chosen and the feedback read.

4. "bought"	Q from translation
what's that, in the past? "bought"	EE, identification
bought! past	EE, identification

[acheté]	output
(pointing at inflections)	
not that, that is 'to buy'	EE, rule articulation
that's got an accent	EE, rule articulation
that's for vous	EE, rule articulation
that's present	EE, rule articulation, jointly PC
it's that one	RE
(-é) (✓)	input, correct
(read feedback)	attentive

4. There is more immediate quotation and tense discussion, this time highlighting the past participle as English past tense determiner. They compare several of the verb choices, jointly creating a paradigm for their own reference. Feedback is again read.

5.[préfères]	output
"do you prefer" with the accent	Q from translation
it's present	EE, identification
present tense, "do you", yeah it is,	EE, identification, Q from translation
it's not the future	EE, identification
it's present, it should be that (points to -e)	EE, rule articulation
no that's tu	EE, rule articulation
(-es) (✓)	input, correct
well spotted (!) [ironic]	humour, cooperation

5. The verb is again rehearsed and the present tense correctly identified, eliminating the future. One pupil automatically chooses -e on grounds of tense rather than pronoun (prefigured by an unqualified 'that's the present' in the previous task), but his partner realises the importance of the pronoun.

6. "going", that's future, yeah definitely	Q from translation, EE, identification
"I am going to"	Q from translation

[gagner]	output
yeah it's gagner, that to do	EE, rule articulation
(-er) (✓)	input, correct

6. The verb is immediately rehearsed in English and the tense identified. The French verb is then matched to the English.

7. "I find"	Q from translation
that's past isn't it?	EE, identification
I find, I found (reciting)	rehearsing tenses
[trouve]	output
I find... if it was present, wouldn't it be 'I will	EE, identification
find the time'? I have found is the past	EE, identification
I find (mutter) I find that's the fut...	EE, identification
it must be present, because I will find, I have found	EE, identification
I find, yeah, if it is it means...	rehearsing verb
that's the future, that's tu, that's the past, that one	PC
(points to -é)	
if it is present, but if it's not present it's wrong	EE, identification
look on Help	suggesting need for Help
it won't tell us if it's present, it'll just tell us...	Help not needed
it doesn't	confirmation
(-e) (✓)	input, correct
"-e endings use...." oh yeah,	Q from feedback
"action now in the present"	

7. Once again, the present tense poses a problem to the pair. They make their first task the identification of the English verb tense, which is tentatively achieved by reciting 'find' in three tenses. The pair then move on to the French verb and create a paradigm by identifying a series of inflections and relating them to tenses or pronouns. Help is considered but rejected, because, although it will match French inflections to tenses (information they no longer need,

having just created a paradigm), it will not tell them directly the tense of the English verb. The correct answer is chosen and key phrases in the feedback are read out.

8. "Robbie has left" it's the past, that	Q from translation
[quitté]	output
it's the last one in't it? (referring to -é) it's the past	EE, rule articulation
with an accent over the -e, that's tu, that's future,	PC
that's vous, that's il or elle, that's present	PC
(é) (✓)	input, correct

8. The English past tense is quickly established and another paradigm created, again matching a series of verb inflections to separate tenses and pronouns.

9. Is that present, you walk?	EE, identification
you walked is past.	EE, identification
[marchez]	output
it's that one	RE
yeah it's -ez, vous	EE, rule articulation
(-ez) (✓)	input, correct

9. Past and present English verb forms are compared to establish the tenses. The -ez ending is already known, as revealed in previous paradigm articulations.

10. "going to wear", that's future	EE, identification
[porter]	output
-er	EE, awareness
that's the easiest one	confidence
(-er) (✓)	input, correct

10. The future tense and infinitive inflection are quickly and easily identified.

Program score: 100%.

Help used: -es 1, -e 1. Soundbite used: 0.

Change in Pre- > Posttest scores: Pupil 15a 9>19, Pupil 15b 0>5.

9.3.4 Commentary on the Case Studies

Pair 7ab make visible progress along the spectrum in a short space of time. They seem to blossom from guesswork and inappropriate metalanguage to the upper reaches of Elaborated Expression, with an understanding of the concepts and an ability to discriminate well between inflections. This result is especially pleasing as this particular pair are less able pupils, one with a poor attendance record and discipline problems in school. These pupils do not always make effective use of feedback, especially the positive feedback in task 2 which would have avoided a false trail. Only after Soundbite and guesswork have failed do the pair turn to Help. In contrast with their approach to feedback, they are very willing to read this information, even though it does not help them at once. The arrival of Help seems to transform their attitude. They take more time over decisions and start using metalanguage related to verbs rather than to gender. The evidence suggests that the program would be more beneficial if it lasted longer. Weaker pupils may well spend some time guessing and following blind alleys before the value of Help is realised. There will then need to be a period of consolidation, with some pupils just starting to reap the benefits by about task 8. This pair improved from pre- to posttest, moving from a mean of 4.5 to 7.

The stronger pair (15ab) have far less need of Help, partly because of their previous knowledge, but largely through their readiness to read positive feedback attentively and their ability to make use of it. For those with more interest simply in winning a game, the tendency may be to ignore positive feedback as irrelevant and time-wasting. These pupils have an interest in the linguistic tasks and the intelligence to realise that positive feedback can save time in the long run whatever the task. One of their strategies for success is to create verb paradigms based on the five inflection choices offered by the program. This learning strategy enables them to complete the last three tasks very quickly. There is a striking improvement in the pupils' confidence when reactions to tasks 1 ('that's definitely not right') and 10 (that's the easiest one') are compared, though both use the infinitive. This pair made dramatic improvement from pre- to posttest, moving from a mean of 4.5 to 12.

9.3.5 Summaries of further selected observational data

The remaining sixteen transcriptions of observational data and their analyses can be consulted in Appendix J. Interpretative summaries of six of the more illuminating ones are now presented, followed by a discussion of the principles which emerge from the data. The first five summaries illustrate successful use of the program, while the sixth (Pair 8ab) shows that not all pupils make the most of their opportunities.

Key to abbreviations

%	Program score
4>6,6>9	Pre- > Posttest results for Pupil a and Pupil b respectively
Help -ez 3	Number of times Help inflection(s) consulted
SB 1	Number of times Soundbite played

(a) Pair 4ab (Program: Dragonquest)

1. Immediate and systematic use of Help with quotation of rules from three inflections. Correct answer.
2. Failure to recall last answer leads to right tense being assigned to wrong inflection, but discriminating use of Help eventually produces the correct answer.
3. First search of Help is badly done, and another failure to recall the previous

answer leads to an error. Use of restricted expression and a pessimistic tone are remedied by a more careful return to full Help and an excellent comparison of information with the task demands ('the phone rings' is recognised as the same construction as 'the light works'). This is rewarded with a correct answer.

4. All of Help is again used but an apparent misunderstanding between the pupils leads to an error before the correct answer emerges.

5. Full Help still required, with an interesting discussion on whether 'are you making' is future (needing -er) or requires -es. The strength of the tu pronoun eventually gives the correct result.

6. The sentence is correctly identified as future, but the reading of a present tense inflection in Help brings an incorrect answer (-e). Then Help information on -es leads to that inflection being incorrectly chosen. No reference to earlier feedback. Possibility that the use of -es for an apparent future in the previous task produced -es for a real future here.

7. All Help is called, followed by an accurate discussion of past and present tense. The -es ending is used for the present tense irrespective of pronoun, until the information is read more carefully.

8. Most of the Help is used, with the English past tense forms being successfully compared in the task and in the Help.

9. More discussion on whether 'you are' is future or present (see task 5), but the vous pronoun is enough to ensure an -ez answer.

10. Help is searched very systematically, producing a correct answer at the first attempt.

70% 6>5, 6>7 Help -ez 7, -é 8, -er 8, -es 6, -e 7, SB 0

(b) Pair 5ab (Program: Hangman)

1. Failure to read Help instructions leads to guesswork, but attention is paid to negative feedback. An apparent guess is correct. No metalanguage used.
2. An apparent guess is correct.
3. Help is only used on the -ez inflection, but more attention is paid to the present tense than to the vous pronoun because the task has been identified as in the present The -ez inflection is chosen incorrectly. On returning to Help, a more systematic search is made, but reference is again to tense instead of pronoun, although -e is correctly chosen. Great increase in metalanguage.
4. A quick appreciation and discussion of past tense leads to a systematic and successful search through Help for the corresponding inflection.
5. Help is used, but rather indiscriminately. An incorrect choice leads to Soundbite use. All Help inflections are again consulted, but not read or compared orally. Guesswork and Soundbite are used in desperation. Yet another return to Help (all inflections) fails to provide the answer. The pupils seem to know the tense required, but cannot resolve the -es pronoun problem. Metalanguage is not now used.
6. A wrong guess leads to full Help use. The future tense is sensibly discussed, a metalinguistic rule articulated, and a correct choice made.
7. An apparent guess.
8. Past tense is correctly identified, but the full range of Help is needed as the appropriate inflection cannot be recalled. After a careful comparison of the inflections, the rule is articulated and a correct choice made.
9. Help is used fairly indiscriminately, and more attention is still paid to the present tense rather than the pronoun (here, vous), but a rule is articulated and correct choice made.
10. The sentence is quickly identified as future and the correct inflection chosen without Help. The information from task 6 has obviously been recalled.

75% 6>7, 5>3 Help -ez 8, -e 6, -er 8, -es 6, -é 6, SB 4

(c) Pair 9ab (Program: Verb-Ends)

1. An incorrect guess leads to Soundbite use followed by a successful guess. No metalanguage used.
2. A hasty incorrect guess brings about some discussion of inflections from previous feedback, but another incorrect choice is made.
3. English 3rd-person -s in the task sentence translation leads to a consideration of -es as the French inflection, but there is some recall of feedback from the -e inflection. Help is used for the first time, but only one inflection is consulted, with that inflection being incorrectly used for an answer. The second attempt is an incorrect guess, but the feedback is studied.
4. An attempt at metalanguage is made, but an incorrect guess follows. The feedback is carefully read, but they make another wrong guess. Help is invoked, but too late for this task.
5. Help on one inflection is immediately called up, and the information most effectively compared with the task sentence. Further Help is not called upon, even though the task inflections are discussed. Some guesswork and elimination seem involved in producing the right answer.
6. Guesswork and elimination are combined with some grammar discussion to produce a correct answer at the second attempt, but no Help is used.
7. Help is used, but still in a very limited way, though the discussion is useful. Guesswork is still involved. There is some understanding of which endings are used for the present, but pronoun use is not clear.
8. Instead of guessing, the pair turn first to Help, this time using it systematically to make comparisons and inform discussions on tense. The correct answer at last emerges for the right reasons.
9. An immediate and richly articulate discussion of inflection use ensues, with excellent comparison of Help information with task requirements. The importance of both tense and pronoun are articulated. Evidence of pupils' genuine excitement at how useful Help can be, and pleasure in their

achievement of another correct answer.

10. There follows more rule articulation and discussion of tense and pronouns, with great care taken in choices (compare 'oh put that then' in task 3 with 'I'm not risking it' in this task). Effective comparison is made of inflections in Help to produce another successful outcome.

60% 5>12, 4>7 Help -er 4, -é 4, -ez 3, -es 3, -e 1, SB 1

(d) Pair 13ab (Program: Dragonquest)

1. Quotation of relevant English infinitive, but no metalanguage used. Quick success.
2. Similar quotation and success with the past tense, but still no metalanguage.
3. After English 3rd-person -s produces an incorrect French -es answer, to the pupils' great surprise, the feedback is carefully read out. However, an incorrect guess is made and the next feedback seemingly ignored.
4. One of the pair knows the -é rule and quickly answers with no discussion.
5. The English verb form is rehearsed at length ('are you...'), but the tu pronoun is quickly seen as the key. The tu + -es combination is apparently recalled from task 3. A correct choice is made and the feedback is read and evaluated favourably by the pupils.
6. The English verb form is rehearsed and quickly matched to the -er inflection. After some discussion of the English form 'to do...' the correct choice is made.
7. Rules from previous feedback on the -e inflection are used to great effect, with discussion of pronoun rather than tense.
8. The English translation is rehearsed and quickly analysed as past tense, followed by an articulated match to the -é inflection and a correct answer. Both partners now seem to know the -é rule, while only one pupil did in task 4.
9. The pair relax into humour, but use no metalanguage as one partner knows the answer.

10. After rehearsing the English verb, there is intense metalinguistic discussion with excellent recall of past feedback. Without any use of Help in the program, a paradigm of all five inflections is recited. 'Past', 'to do', tu and vous are cited, but the -e inflection, interestingly, is simply classified as 'present' with no pronoun reference. A correct choice is again made.

90% 13>16, 11>14 Help 0, SB 0

(e) Pair 18ab (Program: Verb-Ends)

1. No metalanguage, possible guesswork, but success and attention to feedback.
2. No metalanguage, but guesswork fails this time.
3. Still no real metalanguage, and little expectation of success. After an incorrect answer, Help is called but not used. Feedback from the previous task seems to be recalled and the English verb rehearsed. After a correct choice the feedback is closely read.
4. Apparent guesswork produces a wrong answer, but the feedback is earnestly discussed. The -é inflection is discussed and discriminating Help sought on it, with a successful result.
5. Immediate reference to tu with the realisation that the inflection must be assigned to the pronoun. The -er inflection is considered, viewed in Help and rejected after a good metalinguistic discussion. After a systematic search for clues in Help, the right answer is chosen.
6. The future tense is correctly assigned, but the pair cannot remember earlier feedback which might help. Help is systematically consulted and the tenses discussed. Correct answer.
7. Very discriminating use of Help with quick results.
8. Suggested inflections are very systematically checked in Help, producing rule articulation and valuable discussion of tenses with the right answer.
9. The pair are now confident enough to try without Help, and succeed.

10. Help is used discriminatingly to produce discussion of past, present and future tenses. The Help information on -er is extremely effectively compared to the English translation in the current task, and the correct answer chosen.

80% 4>4, 6>7 Help -é 2, -er 4, -ez 1, -es 1, -e 4, SB 0

(f) Pair 8ab (Program: Hangman)

1. Despite signs of engagement, defeatist guesswork is unsuccessfully used for three attempts, with Soundbite played to no advantage. Elimination strategies are then used and the only metalanguage uttered is inaccurate ('plural' for -es). Feedback is not discussed and guesswork is finally successful.
2. Guesswork and the avoidance of responsibility bring a wrong answer. The feedback is read and the future tense of the previous task compared with the past in the current one, but the appropriate inflection cannot be recalled. Instead of using Help, the pair use Soundbite and make two more wrong guesses, though the feedback is read.
3. Still thoughtful, but guesswork and limited metalanguage bring a correct answer. Feedback not discussed.
4. Good identification of tense is spoiled by the pair working at cross-purposes (one guessing, the other trying to work things out). Elimination strategies and much inaccurate metalanguage lead to general failure.
5. Successful guess with no reference to feedback.
6. Successful guess with reference to the score but not to the feedback.
7. Apparent elimination and guesswork succeed again.
8. Initial discussion of tense, but reversion to elimination, lack of metalanguage and apparent guesswork. After some disagreement, three wrong answers ensue and feedback is not discussed.
9. Tense is inaccurately discussed at first, but even when the right one emerges the wrong inflection is assigned to vous. After defeatist elimination strategies, the right answer is found.

10. Excellent discussion of tense, and a sudden joint effort at creating an organised paradigm. However, there is reversion again to guesswork, elimination and lack of metalanguage with not much expectation of success. There is some attention to feedback and apparent disappointment at the failure of two guesses.

50% 5>3, 3>6 Help 0, SB 2

These summaries show striking amounts of pupil interaction related to language tasks. The following section tries to capture the design features that encouraged productive learning behaviour.

9.3.6 Help, feedback and metalanguage

The most obvious feature of metalanguage use by the first five of these six selected pairs, is how little is used in the early stages compared with the last few tasks. Almost all start with Restricted Expression and move on to Elaborated Expression, with some pupils successfully articulating rules and even creating paradigms. The dramatic increase in metalanguage use seems to be a direct reaction to grammatical information offered by the program, either through the Help routines or through positive and negative feedback given after tasks are attempted. Evidence for this comes from a qualitative analysis of the selected observational data above.

(a) Use of Help initiates use of metalanguage

Of the four selected pairs that accessed Help, 4ab were obliged to make heavy use of it on a task-by-task basis as they were unable to remember much feedback. On occasions the information was not used or read properly, but generally the Help was used systematically and discriminatingly, producing rewarding comparisons and discussion of pronouns and tenses. After early and successful guesswork with no metalanguage production, Pair 5ab also went on to make heavy use of Help. At times it was used systematically, eliminating inflections as they appeared, but the general approach was a 'blanket' coverage of all inflections followed by comparison of information. This strategy was a result of the pupils' inability to remember much feedback from previous tasks. Metalanguage use increased dramatically, though with some gaps, once Help began to be used.

(b) Increasing use of Help or feedback produces increasing use of metalanguage

Starting with guesswork and no metalanguage, Pair 9ab went on to make limited use of Help (not seeming to realise that more than one inflection could be consulted) and to pay attention to feedback. They continued to use some guesswork, often combined with elimination strategies, but with slowly improving metalanguage. By task 8 they started making systematic use of Help with a very dramatic late flowering of rule discussion, comparison and contrast, with a corresponding increase in pleasure, confidence and success in the program. Though quite able, Pair 18ab were very unsure of themselves. After a period of guesswork, limited or no metalanguage and problems using Help, they adopted a thoroughly effective, though cautious, strategy of consulting Help. Great attention was paid to detail, and metalinguistic analysis, especially on tenses, was thorough and accurate. They summoned up the courage to answer without Help at one point, and with a longer program could well have managed without Help altogether, increasing in confidence all the while. In contrast, Pair 13ab managed without any Help at all because of their ability to make use of feedback. For these two, early success coincided with a lack of metalanguage. Then, after a (to them) surprising failure the pupils recovered well, through expansive metalanguage derived from excellent recall of positive and negative feedback. The final task produced a climax of metalanguage and virtual elimination of 'this' and 'that' expressions, with previous feedback being used to create a paradigm.

(c) Failure to use Help produces limited metalanguage

Pair 8ab also made no use of Help, but for entirely different reasons. There were moments in the proceedings when this weak pair seemed to have moved from inaccurate metalanguage and guesswork to sound principles. The final isolated flourish of coherent rule articulation in the form of a paradigm shows what might have been achieved overall had they paid more attention to feedback or used Help. Despite being prepared to use Soundbite, interviews revealed that they 'couldn't be bothered' to use Help as they 'wanted to get on with it'. The objective fact that they would have finished more quickly and successfully with Help could not override their subjective feeling that Help slows progress. Despite being a friendship pair, and both apparently wanting to succeed in the program, these pupils were working to different agendas. One was prepared to consider tenses, while the other simply wanted to exhaust all possibilities, often by guesswork. The program did promote metalinguistic discussion, even for this pair, but the pupils' approach hindered any structured learning, and the use of restricted 'this' and 'that' terminology continued throughout.

The metalinguistic conversations are a revelation, considering the age, ability and motivation of the pupils involved, and the length of exposure to the program. Under how many other circumstances could unexceptional 14-year-olds spend their free time discussing grammar in this way? Personal experience as a teacher of such pupils suggests the answer, 'very few'. No claim is made that the first five selected pairs are perfectly representative, but they show what it is possible to achieve, even in a short time. It is conceded that Pair 8ab do not progress as intended (cf. Pairs 1ab, 11ab and 12ab in Appendix J), producing only a very limited amount of 'grammar talk', and that not all rule formulations are completely accurate. However, the clear majority of pupils do blossom in the course of using the program, the late flowering which is evident in many cases strongly suggesting that a longer program would be more helpful still.

9.3.7 Overall Help use and written performance

Turning from selected pupils to overall trends, we note that where Help was used, it did indeed appear to be helpful for task completion. It was employed in several different ways, but three seem to stand out. Some stronger pupils went systematically through the endings one by one until the right one was found (e.g. 10ab, task 5). On the other hand, weaker pupils who had not remembered much feedback seemed to use 'blanket coverage' to compare all the information at once (5ab, task 8), very much treating each program task in isolation. The third procedure was simply to check one or two inflections and then use one to complete the task. For stronger pupils, this represented a cautious, discriminating check on a couple of inflections which they had discussed earlier (15ab, task 3), with the answer probably fairly well known already. The result was usually a correct answer. For weaker pupils, the strategy of consulting one or two inflections without much discussion, and then choosing one or both as an answer, was hardly ever successful and seemed to be a form of guesswork (4ab, task 6). Help was used on average just over four times per session, with inflection totals as follows; -er 38, -é 30, -e 29, -ez 28 and -es 24. This is some indication that the Help facility was valued and had meaningful content for these pupils.

However, there was no unambiguous positive correlation between the amount of Help use during program sessions and improvement in written test scores. The twelve pupils who used Help 10 times or more fared no better than the fourteen who did not use Help at all, increasing their score by a mean of around 1.6 (8%). The remaining ten pupils who used Help between 1 and 9 times improved by 4.3 (21%), which suggests that intelligent use of grammatical information is more important than repeated exposure to it. It seems to be a question of quality rather than quantity. In addition, there was no positive correlation between the actual amount of feedback from program tasks and improvement in test scores.

9.3.8 Limited value of Soundbite

Whereas the use of Help might be considered a success, the Soundbite facility appeared far less useful. It was only used 16 times in all, and it was noticeable that there was little or no discussion of the sound output after it had been heard. When this is compared to the amount of discussion generated by Help, Soundbite's contribution to learning must be called into question. It will be determined later whether the pupils themselves value the facility.

9.3.9 Effect of program style

Total Help use for each program style was; Dragonquest 63, Hangman 54 and Verb-Ends 32. It is possible that the users of the 'straight' tutorial needed far less help than others as they were not distracted by a game or quest and were more able to make use of feedback and concentrate on the language tasks. Though Dragonquest and Verb-Ends produced similar amounts of feedback from answers to program tasks, and had similar word-counts for general use of metalanguage, Verb-Ends generated 36 accurate higher-level rule articulations as opposed to 12 from Dragonquest. ('Higher-level' rule articulations are those from Categories 3iii and 4 in section 9.3.2). Hangman produced the most 'general' metalanguage and the most feedback, simply because it allowed more task attempts, but provoked only 15 accurate rule articulations. As noted in section 9.1.3, although the users of Verb-Ends were weaker than users of the other two programs, they improved at the best rate.

9.3.10 Metalanguage use and written performance

There was no straightforward relationship between the amount of pupils' metalanguage and their written performance. Word-counts of general metalanguage use, taken from the transcription data, show that conversations of 300-400 words relate to higher test scores, while movement above and below this optimum relate to lower scores. These general figures may not mean very much, but if we consider only higher-level rule articulations, it is interesting that the twenty-six pupils who made fewer than five such articulations added a mean of only 1.6 (8%) to their scores, while those ten pupils who produced five or more spoken rules added 4.5 (22.5%). This is a long way from claiming that verb-rule articulation is beneficial (recall the examination candidates, described in Chapter 5, who could not use pre-learnt paradigms productively), but hints that if pupils have been able to construct their own paradigms their performance might be enhanced.

9.3.11 Effect of the English translation

It is interesting that assignment of French inflections to verbs was sometimes less of a problem than establishing the tense of the English translation, and that the translation had a strong effect on the way pupils approached the tasks. When Help was used as intended, Pair 4ab's problems over the assignment of futurity to a sentence in the English present continuous tense (a phenomenon discussed in Chapter 3) were eventually resolved with reference being made to the French pronoun rather than the English translation. 5ab also had problems with the present tense and tended to ignore the French pronoun. Pair 16ab quoted the English translation at the start of almost every question. The overriding concern for English tense rather than the preceding French pronoun nearly led to Pair 15ab making an error in task 5. Similarly, 9ab started with present-tense difficulties, but eventually realised that tense *and* pronoun must be considered, while 13ab were also waylaid by the possibility that 'are you' might refer to the future, but eventually realised that the French pronoun holds the key. A better balance was achieved in the same task by Pair 18ab. They made immediate reference to tu as the key, yet managed a good discussion on English tenses with reference also made to the importance of French pronouns to inflection choice. It was interesting to note that many pupils made reference to 'the future' in relation to the use of the -er inflection, even though the word 'future' at no stage appeared in the program. Finally, we should add that unfortunate L1 transfer occurred when the English 3rd-person -s in the translation caused a French -es ending to be considered by Pair 9ab, and actually used by Pair 13ab.

All this raises the pedagogical question of whether any translation should be given in the task. A French speaker would presumably know that only one answer was possible because of the preceding pronoun or structure, rather than through an explicit consideration of tense. It may be a better psycholinguistic approach (see Chapters 5 and 6) to let the pupils use feedback and Help from each inflection as they already do, but without the intervention of a prior English translation, in order to appreciate how a French speaker processes language. For example, the appearance on screen of elle ----- and a choice of five verbs with no translation, should produce the only possible answer, logically derived from the preceding pronoun and sentence structure. After answering and getting a translation to confirm, the pupil could then deduce that the -e inflection is the means of expressing the present tense after 3rd-person pronouns. However, if a prior translation ('she is speaking') is given, many pupils would tend to discuss whether this English sentence is future or present instead of using the French structure to solve the problem. Even though the English translation is deliberately in a far smaller font size than the French sentence, it sometimes proves impossible to resist considering it before the French.

For weaker pupils who may need the security of an English version, it may be harder to abandon a translation approach and, for all pupils, there is the danger that more attention may be given to form than meaning if the form is not fully understood at the outset. Without a prior translation it would be possible to go through some of the program without understanding very much, as pupils might not bother to read a confirmatory translation once they had answered the question. In any case, teachers might be prepared to sacrifice some of the 'language-processing' approach in the program if it meant that their pupils were at least discussing tenses, whether English or French, in a constructive way. Whether a prior translation is included or not, at least access to the Help facility is made through the French 'meaning-carrier' inflections, rather than by an English reference system. We note that CALL programs reviewed elsewhere (e.g. in Metcalfe, 1994) give the option of a translation, but suggest that the foregoing data may be the first evidence of the effects of its inclusion. Though weaker pupils may need a L1 translation to ensure full understanding, the L1 structure may become the unintentional focus of discussion instead of that of the L2.

9.3.12 Operational issues

At the beginning of each program, a screen of information or instructions was presented to the pupils in a series of sequenced chunks. The aim was to present one sentence at a time until the screen was filled in order to ensure that everything was read. However, the sequence was too slow for some pupils, who impatiently shook the mouse, and was too distracting for the slower readers. A simple solution is to present one stable screen at a time.

Another clear design fault was the playing of recordings of the five verb choices, with visual highlights, *after* the gapped sentence and translation had appeared on screen, as very many pupils had already started discussing the answer and continued talking and pointing while the sound played. This must have reduced the impact of the sound, and could have been a distraction to a consideration of the answer. Two possible solutions are; firstly, to give an option for sound after the pupils have had time to consider the written information, or; secondly, to show the French sentence and choices, play the sound and then give an option for translation. After all, most of the 'talking over' related to the English translation. The preferred choice will depend on the teacher's attitude to the value of pupil discussion of the English translation, as described in the last section.

The average length of time spent on each program style was as follows: Dragonquest 15m 53s, Hangman 15m 20s and Verb-Ends 13m 26s. What differences there are may be due to Dragonquest being a 'journey' with diversions, and Hangman a game allowing more attempts than the other programs, while Verb-Ends has a more straightforward format.

9.3.13 Summary

The programs produced a very surprising amount of metalinguistic dialogue in relation to the pupils' ability in both English and French, triggering a range of 'grammar-talk' not otherwise likely in a normal classroom context. From a teacher's point of view, the 'Awareness' level of Elaborated Expression at least indicates some attention to different verb endings, but 'Rule Articulation' in the pupils' own words is a real achievement (if done accurately). Even after a short exposure to the material we seem to see a heightened awareness of language generally, and of verbs specifically, in fairly weak pupils who are a year younger than the group originally interviewed. The pupils portrayed in the samples showed what could be achieved by making use of Help and feedback. However, overall results seem to show that the actual amount of grammatical information to which pupils are exposed is less important than how it is used. An increase in Help and feedback shown on screen will not necessarily lead to an increase in metalanguage or an improvement in written results. However, there does seem to be a link between pupils' ability to produce their own higher-level rule articulations and an improved written score. Verb-Ends appears to be the program most likely to generate such articulations, with its tutorial format allowing more focus on grammar without the distraction of a game.

In the first part of this chapter, it was felt that the quantitative data revealed that the programs had generally positive effects on learning. It now appears that we can claim that the programs are excellent initiators of metalinguistic talk and providers of knowledge about language for most of the users. There remains a final source of data to be analysed, namely, the opinions of the pupils themselves.

9.4 Analysis of the interview data

Once the test and program procedure had been completed, each pair of pupils was interviewed in order to add another dimension to our overall analysis of the programs' effectiveness. The interview structure was not rigid but generally conformed to the questionnaire in Appendix H. The pupils' comments could be broadly categorised as relating to evaluation of teaching strategies, attitudes to learning, and operational issues.

9.4.1 Evaluation of teaching strategies

(a) Some approval of sound

Sound was liked for a variety of reasons. Pupils saw it as a contextualising factor, with the words being identified as part of a reassuringly familiar pattern: 'you could hear the teacher saying it in class ... you sort of like refer to her to see if it sounds like it'; 'you recognised what you'd heard before'. Sound was also seen as a means of focusing attention: 'it makes you more aware of the game', as well as a means of elimination: 'if you're down to two and you listen to it and one sounds wrong, it helps'.

However, some supportive comments were vague in their content ('with pronouncing them it helps put the sentence together'; 'it's easier if you hear it.. to write it down') or ambiguous ('you hear one and you think it's right, hear the next one and think it's definitely not it, and the next one sounds exactly the same as the first one again, so you're not so sure then. It was a help but sometimes confusing'). Support for sound should be seen as qualified rather than firm.

(b) Questionable value of sound

On the other hand, several interviewees did not think sound could be a help with verb endings 'because a lot of them sound the same anyway', and for some, sound did not even work as an eliminator ('you can't really tell from the sound ... not out of three which is the one'). Though a suggestion was made for sound to be optional, it was often considered an irrelevance ('we decided before the sound') with the emphasis very much on writing ('you recognise it more by looking at the endings').

(c) Inadequate session length

There was an overwhelming feeling that a longer program or a repeat of the same program was needed to learn the given content. Comments included: 'you might have to use it a few times to make sure you learn all the endings'; 'you'd remember more if you had longer doing the game. In a lesson it needs twenty [tasks]'; and 'you don't have time to take them in, you need to think about it'. However, some method of streamlining the program, perhaps by making sound optional, might be necessary to avoid boredom. More work was suggested on inflections like -es and -ez, which only appeared once each. It was clear from the observational data that pupils need time to have a few guesses, follow hunches and try out the Help before settling into a steady pattern, and comments like 'with ten you can guess a few' and 'we were just getting into it at the end', appear to confirm this finding.

(d) Value of Help content

Those that did use Help saw it as a good system, well worded and with appropriate examples. Pupils valued the opportunity to check, compare and eliminate inflection choices using the Help content, thus, 'you could go through it, read it, and say, no, that's not the one I want'.

(e) Value of feedback content

The interviewees were surprisingly enthusiastic, and spontaneously so, about the content of the feedback, giving the impression that they had not really expected more than a simple right / wrong message. The value of feedback seemed confirmed by the fact that several pairs did not need to use Help because the feedback was informative enough. Some were able to remember exactly how helpful the feedback had been, as in, 'it said wrong, -es is used for tu, it helps you, I remembered that for the next one'.

(f) General acceptance of program style

There seemed to be no strong feelings on program style. Pupils were at worst mildly critical and in general rather defensive of the program they used. Dragonquest was liked, with the caveat that the format of the adventure was 'a bit young', but overall, 'it's much more interesting having a game'. Hangman attracted generally neutral comments like, 'you're trying to get them right but you're not mad about it'. The broadest support was for Verb-Ends, ranging from acceptance ('I'd prefer a game, but you don't expect to come to school and play a game, do you?') to positive endorsement ('[a tutorial is] the best way of learning ... 'cos you get distracted [by games]... primary school would more enjoy a game, but [a tutorial is] definitely better for learning').

(g) Effectiveness of the core teaching program

Although the pupils were not always able to give the exact details of what they had learnt, they did feel they had been taught effectively. It is generally hard for such pupils to articulate their explicit grammar knowledge. Hooper, Mitchell and Brumfit (1994) identified pupils of similar age who had a developing knowledge but could not explain verb morphology with precision, using examples instead. The present program was for some a memory jogger or a chance to recap information they already knew. Others were able to identify new specific rules they had learnt, or a contrasting use of tenses or pronoun, or simply the general fact that different inflections are needed in different circumstances.

9.4.2 Attitudes to learning

(a) Confirmation of learning

There was a firm desire among the pupils to be sure that they were learning something. This was reflected in their wish for a longer program ('if I'd done 20 I'd be more reassured') and in their appreciation of the feedback, both negative ('it was very good the way it said "wrong" and then why') and positive ('every time you got it right it reminded you'), as well as in Help ('it checked what you thought'). Attitudes to Verb-Ends (reported in 9.4.1(f) above) also indicate a serious approach to learning.

(b) Wanting a challenge

Apart from those who did not care about or need the use of Help, several pupils either avoided it altogether ('I wanted to see if I could do it without') or postponed its use ('have a go at it first') in order to make the tasks more challenging. Interestingly, two pairs considered the Help almost as a form of cheating, commenting, 'it didn't make you think, if you use the Help you wouldn't think about it' and, 'it gave you the answer rather than helping you', though Help clearly only gave examples rather than answers, and pupils *did* have to think in order to apply the examples to the tasks. Burgess (1991) once observed that many students see CALL learning exercises as a competitive test and need prodding to use Help facilities.

The pupils' almost unanimous assessment that fewer than five verb choices for each task would have been too easy confirmed that tasks which are not challenging hold little appeal. This feeling was equally strong among both weaker and more able students, with the view that fewer choices require less skill summed up as, 'if there were only three it'd be more luck than owt else'.

(c) Clear organisation

Despite the need for a challenge, many pupils still appreciated clearly organised information. It was felt that too many verb choices would be confusing and 'getting a bit over the top'.

(d) Pair work discussion promotes learning

Although a few interviewees would have liked to try the program on their own, they were all enthusiastic about working in pairs. Discussion was seen as being helpful for learning, not just through checking the content ('you can discuss if you're not sure'), but also because it took pressure off the individual and made the process more enjoyable. Not all pair work actually produced discussion or success, however.

9.4.3 Operational issues

(a) Confusion about what Help offered

The first pair to use a program did not turn to Help as they thought it was for help in running the system, despite clear instructions. All subsequent pairs were told verbally what Help was for, but there remained a few pupils who were unclear about its purpose and who were unable to use it properly on their first access to the Help screen.

(b) General preference for the mouse

Pupils were generally happier about using the mouse rather than the keyboard for answering program questions. The reasons given were ease and speed of use ('it makes it boring if you have to keep looking down and typing'), and the avoidance of typing errors which 'could get wrong, wrong, wrong'. There was considerable concern that 'fiddling', 'faffing' and 'messing around' with diacritics would be a problem. Despite the concession by some that typing 'might get it into your head a bit better', the typing process was seen as rather tedious. A bizarre exception was the pupil who thought typing 'passes more time like you're doing something... it feels like you're doing more than sitting there clicking'.

(c) Ease of use of programs

Dragonquest was both praised and criticised for its adventure format, by those who liked finding their way round and those who were not sure where to go, respectively. Hangman was seen as rather slow and requiring too much clicking, with not enough control over feedback display, while Verb-Ends was admired for the control it allowed and because 'it was very easy to use ... when you did it, it was self-explanatory'.

(d) Special effects desired

Verb-Ends was deliberately kept free from graphics or sound effects, but pupils remarked that these would have been appreciated to make the program more exciting. There was a universal desire for colour in the programs.

9.4.4 Summary

These pupils were extremely frank and helpful in their comments and took a genuine interest in the exercise, with advice even offered on such strategies as penalising recurring Help use (an option which was actually considered at the design stage). Their evaluation is therefore taken seriously. It is pleasing that Help and feedback content and presentation seem to be entirely appropriate (though some operational adjustments may be needed), but it was clear that the use of sound is problematical, with no clear appreciation of its value, if indeed it has any. We also know that the pupils like a challenge but need some limit to the amount of material they can digest, and need reassurance that they are learning. They are generally serious about learning and success, and appreciate being enabled to achieve this. We only have limited comparative data (from formative evaluation) to show which program style was preferred, but can state that the interviewees were fairly happy with what they got. All pupils seemed to value the experience of pair work, but the most strikingly uniform comment was that the program session should be longer, confirming the impression obtained from the observational data.

9.5 Conclusion

The conclusion to this empirical chapter offers summaries of the effects of program features and styles, with an evaluation of the extent to which learner needs have been met.

9.5.1 Global profile of program features

(a) Feedback

Observation showed that the feedback was noticed, read and understood, while interview comments were uniformly enthusiastic. A testimony to the good quality of the feedback was the fact that several pairs had little or no need to use Help.

(b) Help

The pupils made varied use of Help, adapting its possibilities to suit their style of learning (systematic, contrastive, etc.). Its reasonably frequent use and the amount of discussion it generated confirm its appropriateness. For some pupils, a clearer explanation of Help's purpose and deployment might be necessary, but comments were almost all favourable.

(c) Sound

The most problematic feature was the use of sound recordings of the verb choices, whether as automatic output or an option in Soundbite. It was frequently observed that pupils were engaging in discussion or non-verbal activities while the sound was playing, suggesting that its location in the program is unsatisfactory and may be distracting. It was noticeable that Soundbite was hardly used at all and that virtually no worthwhile discussion was generated by its use. Nevertheless, some pupils said they found it helpful, though it was hard to identify any specific benefits it brought. We recall that sound was included so that the user would implicitly realise that pronunciation was no guide to spelling and might therefore take more care with the written word, and it was pleasing that some pupils did articulate this notion. As opinions were divided and little observational data support the use of sound in this form, one could recommend its adaptation, change in location, removal or inclusion as an optional item. Any of these changes would make the programs run more smoothly and more quickly. We add that these programs were prototypes using the author's voice, but final versions would of course require a native speaker.

(d) Length

The prototypicality of the programs also determined their length. There seemed little point in spending time producing long programs whose effectiveness had not been validated. In the end, so much observational evidence showed that pupils went through several *necessary* stages of confusion, guesswork and experimentation that the need for a longer or repeated program session became unquestionable. This was strongly reinforced by the pupil's own recommendations, *nem. con.*, that more time was needed to learn the material, though the programs might have to be streamlined.

(e) Content

None of the observational or interview data suggested that there was any difficulty with English readability or French language content, though further research and opinion will be needed to clarify the role of the English translation. The grammatical content, restricted to five verb forms, worked well in practice and was universally approved of.

9.5.2 Global profile of program styles

Although the above features were the same in all the programs and are the main focus of research, the following conclusions are offered on the three program styles.

(a) Dragonquest

The 'cognitive' program:
- produced the least actual and proportional improvement
- was generally liked, but mildly criticised for being 'young'

- prompted twice as much Help use as the Verb-Ends program
- produced about the same amount of feedback as Verb-Ends
- produced the least 'general' metalanguage
- generated the lowest number of accurate rule articulations.

(b) Hangman

The game program:

- produced better actual and proportional improvement than Dragonquest
- was generally liked, but criticised for slowness
- prompted slightly less Help use than Dragonquest
- produced much more feedback than the other programs
- produced the most 'general' metalanguage
- generated a few more rule articulations than Dragonquest.

(c) Verb-Ends

The tutorial program:

- produced the best actual and proportional improvement
- was liked for ease of use, but criticised for limited 'special effects'
- prompted far less Help use than the other program styles
- produced about the same amount of feedback as Dragonquest
- produced a moderate amount of 'general' metalanguage
- generated three times as many accurate rule articulations as Dragonquest, and more than twice as many as Hangman.

In the light of the above evidence, and given that Verb-Ends required far less programming and authoring time than the other programs, it would be recommended that any future program development would use Verb-Ends as its model, but with enhanced 'effects'. We recall the comment of one pupil evaluator, the only person to compare two programs, who thought that the information in Verb-Ends was clearer than in Hangman, even though the content was identical. A personal view is that Verb-Ends is leaner and 'cleaner' to use, with less distraction from non-linguistic features. It seems counter-intuitive to recommend a tutorial approach rather than an adventure or a game for mixed-ability adolescents, but is conceded that other game formats might have been more appropriate and successful. Our findings at least challenge assumptions that any game is always more suitable than any tutorial for this target population. A tutorial program which does not alienate or confuse pupils can be beneficial both for metalanguage and written performance. In the final analysis, whatever program is used, the amount of exposure to grammatical information seems less important than how that information is used.

9.5.3 Other research with GCSE pupils

It is not straightforward to make direct comparisons of our findings with other recent research as no similar work has been done in the domain of verb learning. However, we can make a useful comparison with Manning's (1996) work which, although it is concerned with gender agreement, similarly deals with GCSE pupils and similarly stresses the importance of analysing learner misconceptions to inform CALL design. Manning used three program modes for her research; Exploratory (student-centred), Explicit (tutorial-style) and Implicit ('communicative'). She found that the Exploratory mode was most efficient in use of time and had the greatest potential for high scores and rule acquisition, as well as being the most enjoyable. However, with a difficult topic the percentage of successful learners dropped and the Explicit mode fared better. The Implicit mode led to confusion, especially for weaker pupils, and was least efficient and led to more incorrect hypotheses. There were also serious failures when the Exploratory mode was used in an implicit way, without using the rule explanation options.

The Explicit mode was seen as less enjoyable, but safest for most and reassuring for weaker pupils, who 'appeared to prefer to work within a well-defined framework in which they know what to do' (Manning, 1996, p. 28). Overall, no matter which mode was used, misconceptions still abound. It is very difficult to explain and predict all errors, which makes the error categorisation needed for student modelling in intelligent programs an intractable problem, as already suggested by Laurillard and Manning (1993). Manning's own summary is that, 'the more difficult the rules and the less able the learners, the more important it is to provide a structured framework in which to practise the rules and make these rules as explicit and as transparent as possible, to avoid unnecessary misconceptions' (1996, p. 28).

The results of the present research, which only allowed an explicit mode within three different presentational styles, do not conflict with Manning's (1996) findings. We, too, found that less able learners generally appreciated and made worthwhile use of explicit rules in feedback and Help routines. The reassurance and safety offered by explicit formulations to weak students in both Manning's (1996) and this research support the feeling that the use of implicit or unguided exploratory modes might be problematic for this category of learner. Without discussion of individual errors, no claim can be made that misconceptions about verbs do not remain after using the verb-teaching programs. However, there is reasonable evidence from the observational data that some misconceptions are eradicated, at least temporarily. Pairs 7ab and 8ab, for example, stopped making reference to 'masculine' and 'feminine' as determiners of verb inflection, 8ab seemed to stop seeing -es as plural (by analogy with adjectives), and the L1-influenced -s ending for 3rd-person verbs used by Pair 13ab was eliminated.

9.5.4 Program evaluation by reference to pupil problems

One way of providing an appropriate evaluation of the effectiveness of the verb-teaching programs is to relate the quantitative and qualitative data from this chapter to the pupil problems identified in Chapters 3, 4 and 5, and summarised in Chapter 8. By isolating particular problems, we will obtain a more precise picture of the programs' successes and failures.

(a) Saliency: the verb inflection may not be noticed

There is no doubt that the verb inflections were noticed by the pupils. The observational data reveal almost universal articulated reference to the various endings, whether in the task, in the feedback or in Help. Even where no articulation was made, the more silent pupils at least pointed to the inflections.

(b) Opacity: inflections have non-transparent structure and abstract meaning

The straightforward grammatical summaries which were linked directly to inflections were instrumental in making the meanings less abstract and the structure clearer. The rich metalinguistic discussions provided evidence that the general conceptual difficulties often associated with verb learning were largely absent. Mistakes were of course made, but the pupils acquired the idea that inflections carry a meaning that can be grasped and applied.

(c) Homophony: many inflections sound the same, influencing written production

The software implicitly illustrated the homophony of several inflections, and it was very pleasing that this was converted to explicit knowledge by several pupils who made comments like 'they all sound the same', and therefore treated the written word with more respect. Thus in some ways, the general neglect of Soundbite (the sound replay facility) as a source of help with writing was reassuring, though we admit that it is a questionable practice to include a program feature in the hope that it will not be used too much. A personal view is that the reasons given by pupils for liking sound were not convincing or were too vague to be helpful. All the evidence suggests that the use of sound in the program needs to be rethought. One proposal might be to make it completely optional, while another suggestion is to include a 'sound game' at the start of the program and oblige the pupils to make some explicit decision about the value of the sound of an inflection when doing written work.

(d) Quantity: the number of inflections can be overwhelming

After analysing the interview data, we can state with some certainty that the limited number of inflections met the needs of the pupils and had universal approval. The posttest showed that a wider spread of inflections was being used more accurately than before program use.

(e) Naivety: verbs are seen as lexical items, encouraging word-for-word translation

The courseware was designed so that it was impossible to look up verb parts in a lexical way. The observational data contained no instances of pupils wanting to know the French for isolated untranslatable verb parts such as 'is' or 'are', but several instances where the whole verb structure was considered as one indivisible unit, for example 'you are burning'. The evidence is that even the weaker pupils did not take a lexical approach to verb use.

(f) Accessibility: paradigm learning is questionable

Recalling the view that pedagogic grammar is no place for people with completion neuroses, the programs deliberately avoided any form of paradigmatic completeness or artificial 'grammar-book' organisation. The inflections were presented in a style that was precisely tailored for a particular sort of learner and gave no unnecessary information. Pupils were clearly able to focus on the grammatical information needed to complete the task in hand.

(g) Methodology: over-emphasising the infinitive makes it a 'default' form

The programs treated the ubiquitous infinitive as one inflection among many, and avoided placing it at the head of the inflection list in Help. The pupils did not therefore need to 'log in' to information via the infinitive and could simply click on a chosen ending. No reference was made to '-er verbs' either by the program or by pupils, though one pupil did refer to -er as the 'dictionary entry'. The observational data show -er being discussed exactly like the other inflections, while the quantitative data show that -er was used less often but with more accuracy and discretion in the posttest, and that its default status has at least been challenged.

(h) Terminology: inappropriate metalanguage is a hindrance

The care taken in providing clear English and appropriate metalanguage seems to have been beneficial. There was very little confusion over the grammatical explanations, as words like 'tense' and 'pronoun' were not used in the program, though 'past' and 'present' were. Though no reference was made to 'future' in the program, the word was used 26 times in all by the pupils, and 'tense' 12 times. This shows that if learners bring a metalinguistic vocabulary with them, the programs give them the confidence to use it. However, the programs gave a chance of success to those that did not know or preferred to avoid such terms.

(i) Redundancy: context over-determines meaning

The problem of redundancy was described as the natural tendency for a learner to use the most accessible information available in order to find meaning. If a French text contains pronouns and adverbs of time, these will be used instead of inflections to determine person, number and tense. The result is that when inflections are needed for composition and translation, their status has been downgraded and their form unremembered. To make up for this neglect, the program made the inflections artificially non-redundant by requiring their correct use and understanding simply to complete the task. There is no guarantee that pupils will start paying more attention to inflections when *reading* French texts, but these programs at least make it more likely. More importantly, the evidence strongly suggests that pupils who use the programs will realise that if they want to *write* a sensible French sentence, they will have to make an informed decision on the verb. A new production strategy may have been instilled.

(j) Fragmentation: grammatical knowledge is incoherent

We saw some evidence of previously fragmented grammatical knowledge being put in its proper place by the program, as described in 9.5.3 above. Although from a loftier level the programs could be accused of taking a fragmentary approach by working with only five inflections, as far as the pupils are concerned these inflections represent a coherent unit. They have practised using them, compared and contrasted them, and seem to have placed these confusing little letters into an organised form, as shown by rule articulation and paradigm creation during program sessions.

(k) Inconsistency: inability to define and separate tenses consistently

The fact that pupils constantly alluded to 'past' 'present' or 'future' throughout their exchanges (over 120 references in all) presents strong evidence that the programs encourage clear definitions and consistent separation of tense, regardless of whether the correct inflection is chosen. Although a minority of pupils had an unsuccessful posttest, nearly all pupils were able to make decisions about tense while using the programs.

9.5.5 Future developments

Although the programs can be seen as a success, we must ask why some weak pupils did worse in the posttest than in the pretest, and if there is anything more they need from the programs. It is impossible to know for certain why some scores deteriorated, but suggestions include: inadequate session length; an inappropriate partner; an artificially high pretest score because of guesswork; or a strategic rather than linguistic approach. In the end, pupils may do worse simply because they are so weak and have not been able to restructure the new information in their memory, even though they are capable of sensible discussion and decisions while interacting with a program. A personal view, borne out by the evidence in the above sections, is that the programs cannot give the pupils anything much better than they did in terms of content, but may be more helpful if longer and if the use of sound is reappraised. The programs are clear, understandable, relevant, at the right level and are easy to use. If pupils approach the programs with the right attitude, they can derive much metalinguistic benefit and enhanced written performance.

From the point of view of future design, the main issues are use of sound, program length and program style. As far as sound is concerned, research will have to establish its optimum deployment, taking into account the shortcomings described in this research. As for program length, weaker pupils need more time to organise their knowledge and stronger pupils need more reassurance that their hypotheses are correct. Though a tutorial program style seems more beneficial, it may be that other game or 'cognitive' formats than those tried here could produce better results. Overall, there do not seem to be significant conceptual difficulties for any pupils. Other means of instruction can give a greater *quantity* of information, but the present programs certainly seem to provide these mixed-ability language learners with grammatical material of the appropriate *quality*.

Chapter 10

No longer 'just a word': conclusion to the thesis

10.1 Understanding SLA theories

The introductory chapter highlighted a problem in the written production of French verbs, and set this in the context of a decline in the grammatical capabilities of pupils and students. It hinted that a CALL solution might be feasible, but that no clear-cut answers were available on this or many other language teaching and learning issues.

Although the temptation is to make an immediate search for 'facts', we heeded Larsen-Freeman and Long's (1991) appeal for a theoretical pause before undertaking empirical investigation. These authors claimed that theories can protect teachers from simplistic and seductive advice, and provide a framework for research. Can these claims be justified in the light of the conclusions reached in Chapter 2?

The chapter gave a breathless and highly condensed review of some of the SLA theories which might be relevant to our problem, rather than attempting to do justice to all theories. Not being possessed of the specialist theoretical scalpel, a less expert job was done with a blunt instrument. The findings were both a disappointment and a relief. The disappointment was the result of a rather naive belief that SLA theories would provide a safe way ahead. Most, if not all, secondary-school teachers operate in a theoretical vacuum, having little time to read journals and no guidance on which theories to base their judgement. The external constraints of examination boards loom far more heavily. Indeed, the only occasions on which theoretical issues affect most teachers is when instructions arrive from government departments on how to teach. For example, the current requirement for target-language instruction (see Chapter 7) must have some theoretical basis, though its applicability is strongly contested. In short, not having a theoretical background, one is initially in awe and full of positive expectations of SLA theories.

Given this naivety, it was a surprise to note the degree of controversy aroused by the views of Krashen and his supporters and more recently by the Connectionist paradigm. Many theoretical positions, as Long (1993) points out, are not just different in perspective but actually oppositional. The key problem from the point of view of this thesis, is that they describe a universe which is not inhabited by the population which concerns us, that is, formally-taught adolescents with a writing problem. One approach, taken by Ellis (1990), was to steer a path between linguistic and cognitive positions, and take an integrated perspective. His theory, though itself criticised, at least gives a role for instruction that a teacher can relate to.

The main findings to emerge from the review of SLA theories were not sensational, but gave some assurance that the sort of written problem we are dealing with can reasonably be tackled through instruction. We were also warned that the language-learning process is complex, gradual, non-linear and variable. The disappointment at not finding any more specific guidance in SLA theories was at least tempered by these more general conclusions.

A feeling of relief was also mentioned. This was for the rather negative finding that professional theorists and expert educators are unable to agree on the fundamental nature of language learning. The implication, then, is that classroom teachers should not be unduly perturbed if they are unable to isolate theoretical *aperçus* which are of immediate benefit to their teaching effectiveness. This is not to dismiss SLA theories as worthless, as Larsen-Freeman and Long (1991) admitted was a temptation, but rather to put their value in perspective. On this issue, we can add that teachers will not be impressed by theoretical debates which appear to have a personal element and use metaphors that are hard to relate to. This will only serve to increase the divide between theorists and practitioners.

We asked whether Larsen-Freeman and Long's (1991) claim that SLA theories protect teachers and provide a research framework could be justified. It is hard to agree entirely that teachers have received much protection. Our review gave the impression that many teaching practices had been affected by pedagogical recommendations based on a partial understanding of given theories. We note the tremendous influence Krashen's supporters have had in reducing the status of L2 writing, whereas Krashen himself explicitly states (1988) that writing for formal purposes must be treated differently from other skills which can perhaps be addressed by a 'natural' approach.

Larsen-Freeman and Long's (1991) other contention, that theories can provide a research framework, may be more justifiable. For those who seek concrete solutions, it is a matter of concern to begin a research programme with equivocal material, both in content and outcome, but this is an unfortunate fact of life in the domain of SLA. However, the theories outlined at the outset have provided an essential background and reference point for many observations made in the rest of the thesis, and have established some consensus on the role of instruction, giving us good grounds for pursuing research in which this is the central issue.

Although the primary purpose of the SLA chapter is to underpin the thesis with some theoretical foundation, it would be an additional bonus if it could stand in its own right as an understandable and reassuring document for a Modern Languages teacher seeking guidance on theory, but unable to devote time to the necessary selection process. No theoretical breakthroughs have been made, but a contribution to knowledge may have been made by a culling process which offers a fresh interpretation of established and new theories, and renders them accessible to the class teacher.

10.2 A new 'single-issue' analysis

The Examiners' Reports described in Chapter 3 made an excellent starting-point for determining the state of knowledge of GCSE pupils. The reporters are hard-nosed, basing their findings on comments received directly from markers who routinely examine around a thousand scripts each and are in an unrivalled position to note general tendencies and specific problems.

However, the annual Reports in themselves do not provide the detailed picture we need. It was necessary to focus attention on one section of each report (writing) and within that skill area to highlight and bring together comments on verb use. It was not a surprise to note that general written grammatical awareness was in decline, but the scale and nature of verb problems were startling. It is only when specific analytical overviews of this nature are carried out that precise difficulties are identified. To our knowledge, this is the first time that a conspectus has been produced of verb-learning difficulties relating to the whole country and to a long period of time. This was a somewhat surprising gap in our knowledge given the pivotal role assigned to verbs in any form of communication.

Our specific conclusions were that inaccurate verb use in written French is endemic at GCSE, and that increased oral work has contributed to this. We also found that the problem affects all levels of learner, hence the current difficulties with university students. Restricted and inconsistent use of tenses and grammatically naive word-for-word translations feature strongly.

The analysis also made comparisons with GCE Reports of 25 years ago to emphasise how much grammatical expectations and reference points have changed since then, and to elaborate on the interaction between oral and written work. Another new approach was to make direct comparisons between actual GCSE and GCE question papers in order to see the problem at first hand. The comparisons were rather unscientific as the examinations are so different, but we retain the impression of two very different grammatical worlds. We recommend more historical comparisons of this sort on a given issue.

Mention has already been made of the contribution made by this new analysis, as witnessed by the publication of its findings (Metcalfe, Laurillard and Mason, 1995) and their citation by Engel and Myles in *Teaching Grammar: Perspectives in Higher Education* (1996). As well as arousing interest at university level, the findings have made a contribution at school level in Turner's (1996) discussion of National Curriculum syllabuses, described in more detail in section 10.9. Researchers could be advised to take up other 'single issues' from the invaluable data sources in the Reports and use them as a solid basis for a research programme.

As verb-learning problems seemed so widespread and long-standing, we suspected that there may be factors inherent to the domain which had not been fully investigated. Was it possible that verb learning is a 'special case' with more or less intractable features? Had the literature any clues which had been missed?

10.3 Barriers revealed

As an initial reference point, the Examiners' Reports constituted a manageable, if underused, body of knowledge. We could limit ourselves to twenty or so easily-obtainable documents and be sure of a fairly comprehensive picture. The academic literature was an entirely different matter, with the domain becoming more and more open-ended and references leading to a wide range of information sources. For this reason, a critique of Chapter 4 might suggest that some of the barriers to verb learning could equally be barriers to the learning of other linguistic items; for example, L1 transfer problems do not only relate to verbs, and the barriers of naivety, teachability and variability apply to many different structures. However, these general barriers have apparently not until now been analysed and presented in a form appropriate for research on verb learning.

It is hard to dispute that there are also specific barriers to the written production of French verbs. Time and its representation do seem to require more intellectual effort than other linguistic tasks, and several authors claim that the area is inherently demanding for learners from a cognitive point of view. As well as general verb-learning difficulties, such as the opaqueness and abstract nature of inflections, the French language seems blessed with features which render it more problematic still. The size, irregularity and homophony of its verb system are a permanent source of difficulty. These are exacerbated by the learner tendencies already mentioned, which manifest themselves as the urge to translate literally and regularise forms, the effects of developmental stages, and stress- or task-related control variability

We noted in Chapter 3 how language pedagogy can adversely affect verb learning. In a reprise of this theme we showed how the infinitive is overemphasised for a variety of reasons, and how metalinguistic terminology discourages the learner. The idea of teacher-induced errors must be taken seriously. They may be unintentional but are no less real. All the individual factors mentioned above are of interest to teachers, but when several factors apply they make a very powerful combination. We feel that the organisation and presentation of these barriers, together with pedagogical suggestions, have made a useful contribution.

However the main contribution to knowledge made in Chapter 4 may reside in the proposed Contextuality Paradox and the suggestion for a Scale of Redundancy in verb learning. The discussion of context and redundancy has surfaced sporadically in the literature over about 20 years, but not much notice seems to have been taken. Crucially, we find a point of convergence where the Contextuality Paradox meets recent insights from cognitive work by Zalewski (1993) and Schmidt (1990), and are able to relate these findings to the problems at GCSE level. The laudable aims of 'going for meaning' in GCSE French texts have a backlash as far as production of verb inflections is concerned, and we feel that this is the first time the danger has been pointed out in this context. Meaning, not form, is all-important in the comprehension exercises which long ago replaced translation from French, where each word would have to be looked at closely. In translation work a pupil could get reliable feedback on form, but this vital input has now gone and other factors have diminished the importance of verb form still further. This analysis has been taken seriously enough to warrant publication as part of an article on language pedagogy in CALL (Metcalfe, Laurillard and Mason, 1996). Through this, we hope that the examination boards will give serious thought to the issues of context and redundancy.

10.4 What the pupils say

The information received from the pupils regarding their perceptions of verb form and function was fascinating. There was striking evidence that many pupils had given their answers a lot of thought even though their ideas may be confused. New data were obtained which highlighted definitional and identification difficulties with English and French verbs, together with complex conceptual problems involving action and tense. We found that adjectives and nouns could be misinterpreted as verbs for formal and (surprisingly) functional reasons, and that the tense of a sentence could be erroneously determined by imagining it being spoken in the present, and we speculated on the existence of a 'personal distance effect' operating on decisions about tense. The findings on grammaticality judgements revealed the differences in production and judgement tasks and related closely to findings in the literature.

Chapter 5 contributed to the acquisition / learning debate by noting apparent shortcomings in both explicit and implicit approaches to language learning. With regard to explicit verb learning, it was unsurprising to find that the quantity of verb forms was a problem, but it was startling to find that several pupils had not grasped the purpose of a verb paradigm, instead treating each verb as a separate system. Fragmentation of the knowledge of grammar rules and of verb forms was shown to cause confusion. Our evidence seems to show how (presumably) communicatively-acquired implicit knowledge may not be flexible enough for accurate production,

There was quite strong evidence that there is indeed an oral influence on written verb work, as had been suggested in Chapters 3 and 4. As it does not seem possible to obtain categorical proof of this phenomenon, we rely on a reasoned analysis of the written evidence in the light of other findings, and on the comments made by the pupils themselves.

We added evidence to support the Naive Lexical Hypothesis of Bland *et al.* (1990), and produced first-hand accounts of how non-linguistic writing strategies can have a strong effect on linguistic data. With this in mind, and given the extraordinarily frank and revealing interview data, it will be hard from now on to take straightforward error analysis of written output as an adequate representation of the state of linguistic knowledge of a pupil.

To underline this finding, we were able to demonstrate that a simple surface error could have several distinct possible causes, none of which could have been identified without consulting the pupils. This demonstration should make a contribution to language pedagogy, in that a pupil who makes verb errors can no longer simply be told to 'go and learn tables' for homework. The insights from this finding could have a significant effect on teaching and perhaps reduce incredulity and frustration in future Examiners' Reports. Above all, of course, it should help the pupils. There is a huge gap between the perceptions of experts and novices, who have very different language learning agendas.

It was pleasing to make a contribution to knowledge which has been published in different forms for different audiences, namely the language-teaching profession (Metcalfe Laurillard and Mason, forthcoming) and CALL practitioners (Metcalfe, Laurillard and Mason, 1996), with this dissemination leading to the hope that teachers and examiners can act on the findings. The pleasure is tinged with guilt that one's teaching career could have been more profitable if pupils had been interviewed years ago. The sad fact is that teachers have no time for this sort of exercise.

This brings us to suggestions for future research. There is so much we do not know about what school-pupils do not know. We suggest a general movement to persuade researchers to direct their efforts away from the university minority towards the school majority, even though more logistical organisation and effort are required. Specific research areas could include: work with other verb forms and other tenses; the relationship between explicit knowledge of L1 and L2 as taught in schools; the effects of paradigm learning in other contexts; and more evidence for an oral effect on written production.

Clearly, the present research could have gone in one of several directions at this point, but it was felt that enough literature and empirical data had been obtained on the pupils' problems for a start to be made on finding solutions.

10.5 A fresh justification for grammar teaching

In many ways, the discussion of approaches to grammar instruction is a continuation of the analysis of SLA theories and of verb-learning barriers in earlier chapters. Krashen and Schmidt are again cited, and context and redundancy once more come into focus. However, the emphasis now has shifted from theoretical issues to practical pedagogical matters; in simple terms, a move from learning to teaching.

Having identified a problem and established that instruction in some form plays a part in several SLA theories, there was a need to justify an explicit form of grammar teaching, given the perceived limitations of the communicative approach. We showed that great strides have been taken towards redefining the role of grammar teaching. The concept of pedagogical grammar is a reminder that the teacher is responsible for the adaptation or emphasis of any part of the target-language grammar in order to match the needs of the learner. It is now a *sine qua non* that any article on grammar teaching must define exactly what is meant by 'grammar'.

It was then suggested that one useful way of realising pedagogical grammar is to apply consciousness-raising techniques such as selection, timing and focus on patterns; in other words, an openly artificial organisation of language. We were reminded by the concept of input enhancement that teacher input does not automatically become pupil intake, and we reviewed several experiments which show explicit instruction has a role.

To add depth to this picture, support for grammar teaching was taken from other sources. Interesting work on 'processing grammar' has been undertaken, though the term is variously defined. Our interpretation is that it is a way of looking objectively at language, showing how different structures express different meanings. In some ways it appears to be a more focused form of 'language awareness' or 'knowledge about language', which are current subjects of debate in the literature and the media. A very interesting corollary is that contrastive or interpretative work may be as or more useful than production, with the role of practice being called into question.

Support for attention to grammatical form was also received from psychological research. We trod gingerly around definitions of consciousness, but found a remarkably apposite justification for explicit teaching of verb inflections. Inflections are learnt naturally by children as they notice everything. However, as adults can control their attention they ignore inflections because (as we have seen) they are redundant. It was therefore suggested that it is psychologically *necessary* to teach these particular forms explicitly. It is hoped that this conclusion can be shared with examiners and teachers. The fact that form-focused teaching is helpful with verb learning even in naturalistic immersion classes adds weight to our cause, as does Terrell's (1991) recent support for explicit grammar instruction for exactly this domain.

It was a genuine surprise, and may be to other educators, to find that Krashen himself long ago justified explicit teaching for written work, especially for adolescents and specifically for verb morphology. One hopes that these well-hidden comments of Krashen's can now be shouted more loudly. The feeling emerges that some of the 'blame' for the decline in grammar teaching lies as much with Krashen's interpreters as with the man himself.

Finally, as this is still disputed territory, we felt the need to reassure ourselves that we were heading in the right direction, even though a strong convergence of opinion had been noted. Some very authoritative recent literature supports the move back to explicit grammar teaching and supports the strong finding that an adapted version of real French may be what is required in classroooms. We thus have some confirmation that the present thesis is both timely and relevant in content.

One can recommend that further research should concentrate on comparing explicit grammar teaching methods, now that this idea is 'respectable' again, rather than on comparing explicit and implicit approaches. This is not to establish whether one method is globally 'better' than another, but to find what degrees of explicitness or which pedagogical grammar techniques are effective for particular pupils learning specific structures.

10.6 The needs of the many

Given our claim to take the needs of the learner seriously, and the hints in other research that weaker learners may have problems with understanding, we found that there had been no full analysis of any aspect of grammar CALL which confronted the issue of mixed-ability learners. This thesis offers such an analysis, showing how access to information, readability, language content, context, interface and presentation are all critical and at times neglected factors in courseware production. A small contribution has been made to the debate on target-language instruction, but a more important contribution to learning may be the bringing of Mobley's (1987) work back into view by relating it to CALL, seemingly for the first time. It is refreshing to look at programs which may be excellent for a particular learner through the eyes of the weaker majority, and as the present critique of current CALL has been published (as part of Metcalfe, Laurillard and Mason, 1996), it is hoped that the ideas will be taken up by course designers and researchers.

Further research might experiment with 'language awareness' or 'verb awareness' software which uses new conceptual access points (e.g., 'What are verb endings for?'), or with verb programs based on what message the learner wants to carry rather than which tense category to use (e.g. 'What I did' rather than 'Perfect Tense'). Other work could proceed with the use of iconic mediators for verb learning, with an effort to find the ability level at which this approach might be worthwhile. More useful, perhaps, would be further critiques of CALL programs for 'readability', using Mobley's (1987) invaluable but neglected criteria. One feels that this kind of overview from researchers sympathetic to and experienced with less able pupils is long overdue, and should focus not just on grammar CALL but the whole range of courseware, given the emerging importance of differentiation in schools.

There has long been a call for language teachers to make a direct input into the courseware-production process instead of relying solely on programmers. This may no longer be enough. We can now refine the requirements by stating that a certain *kind* of language teacher must now be used in order to make programs suitable for all abilities.

10.7 A version of pedagogical grammar

Having obtained information on verb learning from Examiners' Reports, the literature and the pupils themselves, and having reached conclusions about the sort of CALL grammar teaching the pupils needed, it was important to draw the findings together to form a coherent whole. It was striking that the different 'problem' sources showed very similar areas of concern, making the synthesis of CALL design principles a powerful and strongly-validated source for courseware development. One was also struck by the compatibility of pedagogical grammar recommendations with our concerns for mixed-ability pupils and their potential difficulties with current CALL grammar programs. This allowed a close matching of specific design proposals to the design principles that were isolated in Chapter 8. Our contribution has therefore been to draw together a series of richly-informed insights into pupil problems and combine them with a convergence of pedagogical ideas to produce a set of specific recommendations for teaching less able learners in a CALL environment. Further research could produce similarly-structured principles and proposals for particular pupils with problems in different areas of grammar.

We also gave an insight into the CALL development process, showing how the core program design proposals could be realised within three different program styles, and we added to the growing literature on the use of HyperCard both as a general prototyping tool and as a specific application for the production of CALL courseware. In this respect, an important dimension has been added in relation to the tension between the potential of hypertext and the constraints of mixed-ability pupils with a specific grammar problem. Future research could develop the idea of a 'detective' program (see section 8.6.1), though this might be more appropriate for stronger students. Other CALL approaches to verb learning for less able pupils could be developed, using a range of formats.

10.8 A visible transformation

The results outlined in Chapter 9 make a contribution to our knowledge about the interaction of mixed-ability pupils with population- and domain-specific courseware. At first sight, the quantitative data were something of an anticlimax, as personal hopes were for a more dramatic program effect, given the high degree of planning and preparation of the software. On reflection, the results appeared very pleasing when a realistic assessment of the pupils' ability and the brief time spent on the program were taken into consideration. We found that the sex of the pupil made little difference to written performance, but that the use of a tutorial program seemed to encourage more higher-level metalanguage and better written results than the game and cognitive programs. Interestingly, we showed that pupils at either extreme of the ability range were more likely to improve their performance than were the middle-range majority. In the light of overall findings, we concluded that the program content was validated, but that a longer program session was needed.

The richness of the qualitative observational data came as a genuine surprise. The pupils were originally assigned to pairs as much to double the written data as to encourage dialogue, as metalinguistic discussion on this scale and of this quality had not been anticipated. In many respects, these unexpected data have become one of the key contributions made by the research. Firstly, they have enabled us to propose a new instrument with which to measure the success of a grammar program. This is embodied in the analytical categories developed to assess the quality of metalinguistic data in pupils' conversations. Further research could add refinements to this, or adapt and apply the instrument to other grammatical domains. Secondly, the observational data have shown how even weak pupils' conceptual frameworks can be altered in a short space of time by a grammar CALL program. The restricted and precisely-tailored nature of the feedback and Help encouraged learners to move from naive and fragmented grammatical assessments, combined with inadequate deictic reference, to articulate metalinguistic expression. It was a fascinating experience actually to see and hear the changes taking place as the pupils argued and analysed the tasks. We hope that this will be a useful contribution to language pedagogy and CALL alike.

Several ideas for further research present themselves. Similar programs could be used using different verbs and different inflections, but more useful experiments could certainly be done which examine the effects of increased program length. A personal plea would be to try to resolve the issue of homophony and effective sound use, and to see how similar pupils would react to the same programs with the English translation removed. Would the quality or quantity of metalinguistic dialogue be different? It would also be instructive to use the programs with Year 11 (i.e. examination year) pupils in order to assess their effectiveness with this age-group. We should not forget the emerging needs of a new 'underclass' of language learner, namely, the very low ability pupils who are obliged by the new National Curriculum to study a foreign language but who are not able to produce worthwhile written work. Can adapted grammar courseware do anything for them? We argued in earlier chapters that grammar should be a liberating agent, giving control of language to users rather than enslaving them, There seems huge scope for work with a new population of very weak language learners who must not be disaffected or disenfranchised by inappropriate pedagogical material. It is hoped that the present research will be a timely first step towards production of suitable pedagogical material.

10.9 Relevance of this research to the National Curriculum

In respect of National Curriculum requirements, a very timely article by Turner (1996) echoes many of the findings offered by this thesis. It appears that the new criteria for GCSE under the National Curriculum will require learners to move easily between past, present and future tenses in order to obtain a pass grade. 'We can identify here a sharper focus on grammatical skill and accuracy than has been the norm in the GCSE to date where the emphasis on communication has led to the neglect of the formal aspects of language' (Turner, 1996, p. 14). The relevance of all we have pleaded for in this thesis can clearly be seen.

Turner maintains that the use of topic work (shopping, holidays, etc.) has led to grammar being taught in unconnected snippets. As for verbs, too much 1st-person work has been done at the expense of 3rd-person structures because of 'semantic primacy', i.e., the perceived importance of making language items personally meaningful. There is a failure to link 3rd-person subject nouns to subject pronouns, so that pupils may not realise that ma mère and elle require the same inflection. She cites recent coursebooks whose approach 'mystifies rather than clarifies the underlying grammatical system for learners' (1996, p. 16). In one current coursebook, the pupils' introduction to the verb system is through the imperative, using thirteen structurally- and lexically-mixed commands. As Turner points out, 'there is no pattern, no regularity ... for learners to hang on to. ... Learners have not encountered language they can learn from, only language they must learn by rote' (1996, p. 17). She adds that in some coursebooks too many grammatical structures are introduced at a time.

Turner has taken account of our work in Chapter 4 of this thesis (Metcalfe, Laurillard and Mason, 1995) in outlining her proposals for a new model for syllabus planning in the National Curriculum. This involves pedagogical grammar not being based on formal language classifications but on learner need. As the needs of the learner have been the driving force behind this thesis, it is reassuring to find that our empirical work is timely and relevant, and may indeed inform the continuing debate on future National Curriculum requirements.

10.10 An Unnatural Approach

In sum, the research described in this thesis has provided an analysis of a wide range of written sources and synthesised the findings to focus on a particular problem area. It has also provided extensive data from the pupils themselves. We note the large scale of pupil involvement, with over one hundred written papers and sixty-four interviewees overall. Though the literature findings are very useful, a personal view is that the pupil data have made the greatest contribution. This applies both to the data on grammatical misconceptions and those generated by the program.

We have given a perspective from a former teacher of languages to mixed-ability pupils who has had a rare opportunity to analyse a problem and suggest solutions, and a convergence of pedagogical ideas has been exploited to produce a set of specific recommendations for teaching. Our courseware did not give the pupils traditional grammar but genuine pedagogical grammar, as no amount of 'friendly' games techniques can make up for an 'unfriendly' quantity or quality of language information. We have drawn attention to the relevance of the present work in the light of National Curriculum demands for universal language learning and more grammatical accuracy.

To meet examination requirements at all levels of ability, language teaching should incorporate what can be termed an 'Unnatural Approach'. We have mentioned that for many pupils, French is seen as a school subject rather than a natural language. While encouraging more natural communicative methods in oral work, we should not distance ourselves too far from the pupils' perceptions. We try to make pupils into natural speakers when for GCSE they have to be analytical at least some of the time. French is a language, but is also an examination subject and should be treated as such for explicit written language work, as classrooms and examinations are very far from being 'natural'. Indeed, the 'language-processing' paradigm, which encourages looking objectively at language structures, is surely compatible with this approach.

In terms of the hypotheses set out in Chapter 1, we have firstly demonstrated that there is persuasive evidence for increased oral work having an adverse effect on French written production. Furthermore, we have shown that some form of explicit grammar treatment can be beneficial to pupils learning to use written French verbs, and that principled CALL use can help teach problematic grammatical structures to mixed-ability secondary pupils. Most pupils have the potential to derive measurable benefit, in terms of improved verb learning, from the courseware described here, and the great majority could achieve something that may be more highly prized, that is, enhanced metalinguistic ability. We have come full circle from the concerns about language awareness expressed in Chapter 1 to a position where, whatever quantitative measures are used on our pupils, qualitative data permit us to state with some confidence that a verb is no longer 'just a word'.

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Appendices

Appendix A: Final version of 1993 test

SECTION 1 (take about 5 minutes to do this)
Please **read** Part **a** (in English) and Part **b** (in French).
In each one, please underline any **verbs** you can find. That's all!

a. After Bolton Wanderers beat Liverpool, we all thought they were going to go to the Final. Now they've lost, so they will wait till next year for another go. A pity, really, as I would have liked to watch them. The competition is wide open now, anyway, and Bolton helped open it up when they knocked out Liverpool.

b. Salut, Henri ! Tu aimes ma nouvelle chemise? Je la porte parce qu'on ne va pas a l'école aujourd'hui., c'est samedi! Je viendrai te voir plus tard, si tu veux - si on se rencontrait devant la porte, chez toi? Nous pouvons aller en ville pour nous amuser dans les cafés.

SECTION 2 (take about 7 minutes) Please **read** these sentences. For each one, decide if the events are happening in the PAST, PRESENT or FUTURE. Just write down the word **past, present** or **future** next to each sentence. That's all!

1. We live quite near school
2. I'll come back
3. You've eaten all of it
4. She's not playing netball
5. Do you like this sort of soup?
6. They left very early
7. Nous n'aimons pas ces disques
8. Il est allé en Amérique
9. Je finirai à cinq heures
10. J'ai travaillé dans son garage
11. Henri arrive en auto
12 Elle a fini ses devoirs
13. Vous êtes allés à l'école
14. Les Anglais n'aiment pas voyager
15. Vous êtes content?

SECTION 3 (take about 8 minutes) Please look at these sentences. Just **tick** the ones you think are in correct French. But if you see a mistake in any of them, **underline** the mistake and **write in** a correction. Don't rewrite it all!

1. Nous avons visité le musée samedi dernier
2. Il est travaille maintenant
3. Il resté dans sa chambre hier soir
4. Un jour, Paul a bu un litre de vin!
5. Je jouer au cricket chaque été
6. Elle aimes aller aux discos
7. Je commence mes devoirs à 8 heures
8. Sophie reçu une lettre ce matin

SECTION 4 (take about 10 minutes)

Please fill in the blanks in this letter with **ONE French word per blank.**
Use any French word you think makes sense.

Chère Marie,

Merci pour ta gentille lettre. Hier soir j'ai ________ la télévision. Est-ce que tu aimes le football? Moi, j' _______ beaucoup le sport à la télé. Ce soir, je _______ écouter mes disques, mais d'abord je dois ________ mes devoirs.

Samedi dernier, je suis ________ aux magasins et j'ai ________ deux disques. Mon ami Paul ________ resté chez lui, parce qu'il n'________ pas les magasins! Il ________ aidé son pere dans le jardin. ________ - tu beaucoup de devoirs cette année?

Ecris-moi bientôt. Amitiés.
Sharon

SECTION 5 (take about 8 minutes)

Please make up a few words **in French** about yourself and a friend. Using short sentences, write down -

- one thing you do at home in your spare time
- one thing you did on holiday last year
- one thing a friend did on holiday last year
- one thing you will do when you finally leave school

SECTION 6 (take about 12 minutes) **Writing in French**

Please write the French for:-

1. He works in a garage
2. I ate my dinner
3. She is working at home
4. We're going to play cricket
5. I have drunk my wine
6. They will play football
7. He has gone

Appendix B: First version of Section 6 from 1993 test

SECTION 6 (take about 12 minutes) **Writing in French**

1. **Elle va travailler** means "she's going to work"
Now try and write :- "she is working"
2. **Il quitte la maison** means "he leaves home"
Now try and write :- "he's left home"
3. **Nous retournons** means "we are going back"
Now try and write :- "we will go back"
4. **Es-tu allé en ville?** means "did you go to town?"
Now try and write :- "are you are going to town?"
5. **Elle voit ma voiture** means "she sees my car"
Now try and write :- "she has seen my car"
6. **Il aimait le français** means "he liked French"
Now try and write :- "he likes French"
7. **Je n'ai pas regardé le match** means "I didn't watch the match"
Now try and write:- "I'm not watching "

Appendix C: Results of gap-filling test (Section 4)

(N=63)

Present Tenses	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
2. j'aime	55	1	3	0	2	0	0	2
8. il n'aime pas	42	1	5	1	3	5	1	5

(i) correct (ii) aim (iii) aimes (iv) aimons (v) ai/as/a (vi) c'est/est/êtes (vii) non-verbs (viii) blank

	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
3. je vais écouter	14	15	4	9	2	10	9

(i) correct (ii) suis (iii) future (serai, etc) (iv) other 'auxiliary/ modal/ factitive' verbs (aime/fais, etc) (v) wrong verbs/endings (vi) non-verbs (vii) blank

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
10. as-tu	15	5	8	7	18	10

(i) correct (ii) avez (iii) est-ce que (iv) other incorrect verbs/ endings (v) non-verbs (vi) blank

Auxiliaries	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
7. Paul est resté	10	17	5	9	5	7	10

(i) correct (ii) a (iii) other verbs (iv) il (v) other noun or pronoun (vi) other non-verbs (vii) blank

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
9. il a aidé	9	16	22	2	7	7

(i) correct (ii) est (iii) modal, factitive, auxiliary (travaille, aime, préfère, arrive, fait, faut, fais, faire, pouvez, peux, y a, été, sont) (iv) reflexive pronoun - s' (v) non-verbs (vi) blank

Past Participles	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
1. j'ai regardé	23	15	18	1	2	1	0	3	0
6. j'ai acheté	23	11	6	0	0	3	7	9	4

(i) correct (ii) -er (iii) -e (iv) -ez (v) no ending (vi) wrong verbs/ endings (vii) other infinitives (viii) non-verbs (ix) blank

	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
5. je suis allé(e)	27	12	2	3	2	7	9	1

(i) correct (ii) -er (iii) other past participles (iv) 1st-person present (v) other verbs (vi) other infinitives (vii) non-verbs (viii) blank

Infinitive	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
4. je dois faire	13	10	1	9	2	1	17	10

(i) correct (ii) fait/fini/travaillé (past participles) (iii) finirai (1st-person future) (iv) 1st/3rd person in -e (v) other 1st-person present (vi) other 3rd-person present (vii) non-verbs (viii) blank

Appendix D: Result of free composition test (Section 5)

Variations in answers (N=63)

Q.1 Present tense, first-person singular

je + -e	19
je + -es	1
je + -er	12
je + -é	7
je + -er verb stem	1
je + non -er verb	1
je + non -er infinitive	3
j'ai + -er	7
j'ai + -é	1
j'ai + -e	6
j'ai + -er verb stem	2
-er infinitive alone	2
nonsense	1

Model answers are je regarde la télé & je vais en France. Acceptable answers are in bold.

Q.2. Perfect tense, first-person singular

j'ai + -é	6
j'ai + -er	2
j'ai + non -er inf	3
j'ai allé	1
j'ai + -e	1
j'ai + noun	1
j'ai -	1
je suis + -é	2
je suis alle	1
je me suis + -é	2
je me suis + -er	1
je + -é	7
je + -er	11
je + -e	3
je + non -er pp	3
je + non -er inf	1
je + -ons	1
je + irreg pres	3
je fairé	1
je + noun	3
je vais aller	3
-er infin alone	3
fairé	1
tu + -e	1
noun	1

Model answers are j'ai travaillé & je suis allé(e) en France. Acceptable answers are in bold.

Q.3 Perfect tense, third-person singular (NB 'il' represents 'il' and 'elle')

il a + -é	9
il a + -e	1
il a + non -er infin	2
il a + non -er pp	1
il est + -é	2
il est + -é (wrong)	1
il est + -er	1
il est + -e	1
il est + noun	1
il + -é	8
il + non -er pp	1
il + -er	5
il + -ez	2
il + -e	7
il + noun	3
-er infin alone	2
noun/pron alone	8
je + -er	1
je + -e	1
je + irreg	1
je + noun	1
tu + -er	2
tu + irreg pp	1
ils + -ons	1

(il + -é includes il ' allé where Pupil 9 inserted an apostrophe because of 'vowel clash'). Model answers are elle a joué au tennis & il est allé en vacances. Acceptable answers are in bold.

Q.4 Future tense, first-person singular

je + -erai	8
je + non -er -ai	5
je + non -er -a	1
je + -e	4
je + -er	3
je + -é	3
je + non -er infinitive	1
je + irregular present	1
je + mixed verb	3
je + noun	2
je vais + -er infin	1
je vais + noun	1
je voudrais + verb error	6
j'ai + -é	1
j'ai + -er	2
j'ai + -e	2
j'ai + non -er pp	1
j'ai + noun	2
je suis allé	1
je suis + -er infin	2
je suis + non -er infin	1
-er infinitive alone	3
-e alone	1
noun	4
je ne sais pas	1
blank	3

Model answers are je travaillerai & je vais voyager. Acceptable answers are in bold.

Appendix E: Results of translation test (Section 6)

Variation in Answers (N=63)

Q.1 he works

il travaille	35
il travaillé	10
il travailler	4
il travail	1
il est travaille	1
ils + -e	1
je + -e	1
j'ai + -e	1
aller	1
no verb	7
blank	1

Model answer is il travaille. Acceptable answer is in bold.

Q.2 I ate

j'ai mangé	17
j'ai manger	2
j'ai mangér	1
j'ai mange	1
j'aim	1
j'ai + noun	2
je mangé	11
je manger	7
je mange	14
no verb	5
blank	2

Model answer is j'ai mangé. Acceptable answer is in bold.

Q.3 she is working

elle travaille	22
elle travail	1
elle travaillé	5
elle est travaille	13
elle es travaille	1
elle est travail	1
elle est travailler	2
elle est travaillé	1
elle a travaille	3
elle a travailler	1
elle a travaillé	1
elle travaillerai	1
elle + illegible	2
je + -e	1
aller	1
no verb	3
blank	4

Model answer is elle travaille. Acceptable answer is in bold.

Q.4 we're going to play

nous allons jouer	6
nous allons joue	2
nous allons joué	1
nous allerai jouer	1
nous avons joue	2
nous avons jouer	11
nous avons joué	1
nous avons à jouer	1
nous avons allons jouer	1
nous avons jouerons	1
nous irons jouer	1
nous sommes jouer	1
nous sommes allons jouer	1
nous sommes alle jouer	1
nous sommes aller jouer	1
nous sommes allé jouer	1
nous sans allez jouons	1
nous sommes jouerait	1
nous jouons	2
nous jouerai	1
nous jouer	4
nous joue	2
jouer	2
nous avons + no verb	2
je + -er	8
je + no verb	1
je + non -er verb	1
tu + er	1
vous + er	1
ils jouont	1
blank	2

(Pupil 36 changed nous avons joué to nous allons joué in the test)
Model answers are nous allons jouer & nous jouerons. Acceptable answers are in bold.

Q.5 I have drunk

j'ai bu	26
j'ai fini	1
j'ai boire	3
j'ai a bu	2
j'ai boira/ons	2
j'ai + -e	1
j'ai + wrong infinitive	1
j'ai + noun/adj/English	8
je bu	4
je boire	1
je + -er	1
je + fini	1
je + noun	5
bu	1
tu a + noun	1
no verb	1
blank	4

(P28 changed j'ai boire to j'ai bu). Model answer is j'ai bu. Acceptable answers are in bold.

Q.6 they will play

ils jouerent	2
ils jouerai	6
ils jouaient	1
ils jouai	1
ils jouent	2
ils joue	1
ils jouer	1
ils jouons	1
ils vont jouer	1
ils sont joué	1
ils ont jouer	5
ils ont joue(s)	3
ils ont aller jouer	1
ils on jouerai	1
ils avons jouer	1
ils pouvons joue	1
c'est jouer	1
jouer	5
joue	1
vous jouer	6
vous avez joué	2
vous joue	1
vous jouez	1
vous avez jouer	1
nous jouons	1
nous jouer	1
nous jouér	1
nous avons jouer	1
nous avon	1
je jouer	2
je joueu	1
je vais au aller	1
je au jouer	1
il est jouer	2
il joue	1
il allé jouer	1
tu as jouer	1
blank	1

(Pupil 56 changed from ils joueraient to nous allons jouer in the test)
Model answers are ils joueront & ils vont jouer. Acceptable answer is in bold.

Q.7 he has gone

il est allé	4
il été allé	1
il est parti	3
il est partir	3
il est depart	2
il est retourné	1
il est -	1
il est + illegible	3
il a(s) allé	2
il a allons	1
il a partir	1
il a parti	3
il a part	1
il a departé	1
il a departer	1
il a depart	1
il a + no verb	2
il a -	1
il on allé	1
il y a departes	1
il allerai	1
il aller	1
il allez	1
il alle	1
il irai	1
il pars	1
il depart	1
departai	1
ils departer	1
no verb	11
blank	9

Model answer is il est allé. Acceptable answers are in bold.

Appendix F: List of software discussed in Chapter 7

ADI French (Europress)
Clef (Camsoft)
ELFE - Elementary French Exercises (Conduit)
French Verbs (Locheesoft)
French Verbs (Longman/AVP)
French Verb Practice (L'Ensouleiado)
Grammairex (La Ferme)
Henri Béret plays Cricket - Irregular Verbs and Tense Recognition (AVP)
Hypergrammaire (La Ferme)
Le verbe (AVP)
Logifrench I Imparfait-Passé Composé (Wida Software)
Logifrench II Future and Conditional (Wida Software)
Passé Composé (Visa Software)
Passé Composé / Imparfait (Visa Software)
Present Tense (Visa Software)
Tense French (Sulis)
Verbapuces (Didascalia)
Verb Tutors with Sound (Hyperglot)

Appendix G: Program pre- and posttests

PRETEST

All these French sentences have a verb with the ending missing.
Please try to write in the correct ending.(The English for each sentence is in brackets)
Just do as many as you can in 5 minutes.

1. Hier soir, j'ai regard..... la télé. (Last night I watched TV)
2. J'aim..... le sport. (I like sport)
3. Vous travaill..... pendant les vacances? (Do you work in the holidays?)
4. Est-ce que tu jou..... au tennis? (Do you play tennis?)
5. Elle va aid..... sa mère. (She's going to help her mother)
6. Elle port..... des lunettes de soleil. (She wears shades)
7. Je voudrais écout..... ton CD de Oasis. (I'd like to listen to your Oasis CD)
8. Il a mang..... mon Snickers. (He's eaten my Snickers)
9. Paul a pay..... 25 francs. (Paul paid 25 francs)
10. Je vais achet..... un tas de vêtements. (I'm going to buy a load of clothes)
11. J'ai vid..... cette bouteille de bière ! (I've emptied that bottle of beer !)
12. Je pass..... une semaine à Blackpool. (I'm spending a week in Blackpool)
13. Ils vont quitt..... l'école en juillet. (They are going to leave school in July)
14. Vous habit..... près de chez moi, n'est-ce pas? (You live near me, don't you?)
15. Tu tourn..... à gauche dans deux minutes. (You turn left in two minutes)
16. J'ai gagn..... à la Loterie Nationale! (I've won on the National Lottery!)
17. Il march..... bien. (It works OK)
18. Nous n'aimons pas voyag..... en autobus. (We don't like to travel by bus)
19. Sophie a sonn..... trois fois. (Sophie rang three times)
20. Voulez-vous termin..... maintenant ? (Do you want to finish now ?)

POSTTEST

1. Vous regard..... trop de télé ! (You watch too much TV !)
2. Elle a travaill..... dans un restaurant (She worked in a restaurant)
3. Tu aim..... le dernier CD de Blur ? (Do you like Blur's latest CD ?)
4. Robert aid..... son oncle dans le garage. (Robert helps his uncle in the garage)
5. Je port..... mon survêtement Adidas. (I'm wearing my Adidas tracksuit)
6. Nous allons cherch..... son auto. (We're going to look for his car)
7. Tu vas port..... une cravate ? (Are you going to wear a tie?)
8. J'ai pass..... l'été chez ma petite amie. (I spent the summer at my girlfriend's)
9. Ils vont pay..... mille francs. (They are going to pay a thousand francs)
10. Cantona a marqu..... un but extraordinaire (Cantona scored an amazing goal)
11. Tu march..... trop vîte pour moi. (You walk too quickly for me)
12. Il voudrait rest..... la nuit. (He'd like to stay the night)
13. Vous termin..... maintenant. (You are finishing now).
14. Marie va gagn..... cette partie. (Marie is going to win this game)
15. Ils ont tourn..... à droite. (They turned right)
16. Il voyag..... en Ecosse. (He is travelling to Scotland)
17. Marc a envoy..... de l'argent. (Mark sent some money)
18. Je mang..... beaucoup de frites. (I eat a lot of chips)
19. United vont jou..... samedi prochain. (United are going to play next Saturday)
20. J'ai laiss..... mon vélo dans le parc. (I've left my bike in the park)

Appendix H: Interview Questionnaire

1. What did you learn from the program?
2. Did the program help you do the written test?
3. What were your feelings about the program style
4. What did you particularly like about the program?
5. What did you particularly dislike about the program?
6. What did you think of the 'Help' facility?
7. What did you think of the use of the verb sound recordings?
8. Did you like using the mouse, or would you have preferred typing your answers?
9. Was a program length of ten tasks appropriate?
10. Was a choice of five verbs appropriate?
11. Did you like working in a pair?

Appendix I: Tabular results from pre- and posttests

These results appear on the next four pages (pp. 341-344).

LOWER GROUP PRETEST

Pupil	Prog	-er used	er ✓ /6	-é used	é ✓ /6	-e used	e ✓ /4	-ez used	ez ✓ /2	-es used	-es ✓ /2	TOTAL /20	Sex
1a	DQ	4	3	1	0	10	3	2	0	0	0	6	m
1b	DQ	14	5	0	0	6	3	0	0	0	0	8	m
2a	HM	9	3	0	0	10	2	0	0	0	0	5	f
2b	HM	4	2	0	0	10	4	2	0	0	0	6	m
3a	VE	3	1	0	0	6	2	2	0	2	0	3	f
3b	VE	0	0	2	1	15	3	0	0	0	0	4	f
4a	DQ	9	4	2	0	7	2	0	0	0	0	6	f
4b	DQ	6	3	0	0	9	3	1	0	0	0	6	f
5a	HM	7	2	4	1	9	3	0	0	0	0	6	m
5b	HM	0	0	1	0	14	4	0	0	5	1	5	m
6a	VE	3	0	3	0	6	3	4	0	3	0	3	m
6b	VE	1	0	0	0	9	4	0	0	8	2	6	m
7a	DQ	3	0	0	0	15	2	0	0	2	0	2	f
7b	DQ	12	4	0	0	8	3	0	0	0	0	7	f
8a	HM	2	1	0	0	15	4	2	0	0	0	5	f
8b	HM	1	0	1	0	15	3	1	0	0	0	3	f
9a	VE	3	2	7	2	3	1	2	0	0	0	5	f
9b	VE	1	0	0	0	13	4	0	0	5	0	4	f
TOT		82	30	21	4	180	53	16	0	25	3	90	
MEAN		4.5	1.6	1.1	0.2	10	2.9	0.8	0	1.3	0.1	5	

Abbreviations

Verb endings are -er -é -e -ez -es. "used" = no. of times used in test.. ✓ = no. of times used correctly. **/x** = maximum possible score
Pupils are in 9 pairs, each pair consisting of pupil **a** and pupil **b**.
DQ = Dragonquest 'cognitive' program. **HM** = Hangman game program. **VE** = Verb-Ends tutorial program

LOWER GROUP **POST**TEST

Pupil	**Prog**	-er used	**er ✓ /6**	-é used	**é ✓ /6**	-e used	**e ✓ /4**	-ez used	**ez ✓ /2**	-es used	**-es ✓ /2**	**TOTAL /20**
1a	**DQ**	2	**0**	7	**5**	4	**1**	5	**2**	1	**1**	**9**
1b	**DQ**	6	**5**	1	**0**	4	**1**	9	**0**	0	**0**	**6**
2a	**HM**	7	**6**	2	**1**	6	**3**	2	**2**	1	**0**	**12**
2b	**HM**	7	**4**	1	**0**	10	**2**	2	**2**	0	**0**	**8**
3a	**VE**	4	**0**	2	**0**	5	**2**	1	**0**	3	**0**	**2**
3b	**VE**	1	**0**	3	**1**	11	**4**	2	**0**	0	**0**	**5**
4a	**DQ**	5	**4**	5	**1**	4	**0**	3	**0**	0	**0**	**5**
4b	**DQ**	8	**4**	0	**0**	9	**2**	0	**0**	2	**1**	**7**
5a	**HM**	7	**5**	3	**0**	5	**2**	0	**0**	1	**0**	**7**
5b	**HM**	0	**0**	2	**1**	4	**2**	5	**0**	8	**0**	**3**
6a	**VE**	1	**1**	5	**1**	9	**3**	2	**2**	1	**0**	**7**
6b	**VE**	0	**0**	2	**1**	11	**3**	0	**0**	5	**0**	**4**
7a	**DQ**	6	**5**	0	**0**	7	**1**	4	**0**	3	**0**	**6**
7b	**DQ**	8	**6**	1	**0**	7	**1**	4	**1**	0	**0**	**8**
8a	**HM**	0	**0**	1	**0**	9	**2**	7	**1**	0	**0**	**3**
8b	**HM**	2	**1**	0	**0**	8	**3**	1	**1**	1	**1**	**6**
9a	**VE**	6	**4**	2	**2**	5	**4**	4	**1**	3	**1**	**12**
9b	**VE**	0	**0**	3	**2**	11	**4**	2	**1**	4	**0**	**7**
TOT		70	**45**	40	**15**	129	**40**	53	**13**	33	**4**	**117**
MEAN		3.8	**2.5**	2.2	**0.8**	7.1	**2.2**	2.9	**0.7**	1.8	**0.2**	**6.5**

Abbreviations

Verb endings are -er -é -e -ez -es. "used" = no. of times used in test.. ✓ = no. of times used correctly. **/x** = maximum possible score
Pupils are in 9 pairs, each pair consisting of pupil **a** and pupil **b**.
DQ = Dragonquest 'cognitive' program. **HM** = Hangman game program. **VE** = Verb-Ends tutorial program

HIGHER GROUP PRETEST

Pupil	**Prog**	-er used	**er ✓ /6**	-é used	**é ✓ /6**	-e used	**e ✓ /4**	-ez used	**ez ✓ /2**	-es used	**-es ✓ /2**	**TOTAL /20**	Sex
10a	**DQ**	6	**3**	3	**3**	4	**3**	3	**2**	0	**0**	**11**	f
10b	**DQ**	5	**2**	0	**0**	5	**1**	2	**0**	3	**0**	**3**	f
11a	**HM**	7	**5**	1	**1**	12	**4**	0	**0**	0	**0**	**10**	f
11b	**HM**	9	**5**	2	**0**	3	**1**	3	**0**	1	**0**	**6**	f
12a	**VE**	5	**1**	4	**3**	9	**3**	0	**0**	2	**1**	**8**	f
12b	**VE**	7	**2**	0	**0**	9	**3**	2	**0**	2	**0**	**5**	f
13a	**DQ**	5	**5**	2	**2**	7	**4**	3	**2**	0	**0**	**13**	f
13b	**DQ**	7	**6**	5	**3**	3	**1**	2	**1**	1	**0**	**11**	f
14a	**HM**	4	**2**	12	**3**	0	**0**	1	**0**	0	**0**	**5**	m
14b	**HM**	8	**1**	0	**0**	9	**4**	3	**0**	0	**0**	**5**	m
15a	**VE**	0	**0**	1	**1**	10	**4**	3	**2**	2	**2**	**9**	m
15b	**VE**	4	**0**	0	**0**	4	**0**	0	**0**	1	**0**	**0**	m
16a	**DQ**	2	**0**	5	**5**	8	**4**	3	**2**	0	**0**	**11**	m
16b	**DQ**	0	**0**	0	**0**	17	**3**	1	**0**	0	**0**	**3**	f
17a	**HM**	6	**0**	0	**0**	0	**0**	0	**0**	0	**0**	**0**	m
17b	**HM**	5	**1**	0	**0**	10	**4**	3	**2**	0	**0**	**7**	f
18a	**VE**	10	**2**	5	**1**	1	**1**	0	**0**	0	**0**	**4**	f
18b	**VE**	5	**3**	2	**0**	7	**3**	0	**0**	1	**0**	**6**	f
TOT		95	**38**	42	**22**	118	**43**	29	**11**	13	**3**	**117**	
MEAN		5.2	**2.1**	2.3	**1.2**	6.5	**2.3**	1.6	**0.6**	0.7	**0.1**	**6.5**	

Abbreviations

Verb endings are -er -é -e -ez -es. "used" = no. of times used in test.. ✓ = no. of times used correctly. **/x** = maximum possible score
Pupils are in 9 pairs, each pair consisting of pupil **a** and pupil **b**.
DQ = Dragonquest 'cognitive' program. **HM** = Hangman game program. **VE** = Verb-Ends tutorial program

HIGHER GROUP **POST**TEST

Pupil	Prog	-er used	er ✓ /6	-é used	é ✓ /6	-e used	e ✓ /4	-ez used	ez ✓ /2	-es used	-es ✓ /2	TOTAL /20
10a	DQ	2	2	6	6	9	4	2	2	1	0	14
10b	DQ	2	1	2	1	4	2	4	2	6	0	6
11a	HM	5	5	5	5	6	3	2	2	2	1	16
11b	HM	6	1	2	0	9	0	2	0	0	0	1
12a	VE	2	1	5	5	6	3	3	0	4	1	10
12b	VE	8	2	1	0	7	2	2	0	2	1	5
13a	DQ	3	3	5	5	4	4	2	2	2	2	16
13b	DQ	6	5	6	5	5	3	0	0	1	1	14
14a	HM	4	4	8	1	4	0	4	1	0	0	6
14b	HM	6	1	4	0	6	1	2	2	2	1	5
15a	VE	5	5	6	6	5	4	2	2	2	2	19
15b	VE	6	3	3	0	4	2	2	0	0	0	5
16a	DQ	4	4	6	6	6	4	2	2	1	1	17
16b	DQ	1	1	0	0	9	1	1	0	6	1	3
17a	HM	8	1	4	0	2	1	2	2	2	1	5
17b	HM	5	5	6	5	5	4	2	2	2	1	17
18a	VE	6	3	2	0	5	1	4	0	0	0	4
18b	VE	7	2	0	0	10	3	2	2	1	0	7
TOT		86	49	71	45	106	42	40	21	24	13	170
MEAN		4.7	2.7	3.9	2.5	5.8	2.3	2.2	1.1	1.3	0.7	9.4

Abbreviations

Verb endings are -er -é -e -ez -es. "used" = no. of times used in test.. ✓ = no. of times used correctly. **/x** = maximum possible score
Pupils are in 9 pairs, each pair consisting of pupil **a** and pupil **b**.
DQ = Dragonquest 'cognitive' program. **HM** = Hangman game program. **VE** = Verb-Ends tutorial program

Appendix J: Observational Data

The data from the pupil pairs have been analysed and edited in the same way as Pairs 7ab and 15ab in the Case Studies in Chapter 9.

1ab: Dragonquest

(pointing while sound plays)	early engagement
1. [pousser]	output
(-ez) (x)	input, incorrect
(-e) (x)	input, incorrect
2. [frappé]	output
(-é) (✓)	input, correct
3. [marche]	output
this 'un	RE
(-er) (x)	input, incorrect
(-e) (✓)	input, correct
4. [écouté]	output
(pointing to answers)	
(-e) (x)	input, incorrect
(-ez) (x)	input, incorrect
5. [prépares]	output
(muttering about tu [?])	
(-ez) (x)	input, incorrect
(pointing)	
(-er) (x)	input, incorrect
6. [trouver]	output
it's the past tense	EE, identification, inaccurate
it's the future is that	EE, identification
the past	EE, identification, inaccurate
(-es) (x)	input, incorrect
it's the past, it's the past	EE, identification, inaccurate
it's the future, it's that one there, that's the past, there	EE, identification
(-e) (x)	input, incorrect
7. (talking over)	early engagement
[monte]	output
(pointing)	
(-ez) (x)	input, incorrect
(-é) (x)	input, incorrect
8. [sonné]	output
(-é) (✓)	input, correct
9. (talk over, pointing at once)	early engagement
[brûlez]	output
(-ez) (✓)	input, correct
10. (pointing animatedly, talking over)	early engagement
[libérer]	output
that one	RE
(-e) (x)	input, incorrect
it's that one, we've gotta get it	RE
(-es) (x)	input, incorrect

2ab: Hangman

1 [gagner]	output
that one	RE
(-ez) (x)	input, incorrect
I think it could be that one or that one but...	RE
(-er) (✓)	input, correct

2. [trouvé]	output
don't know again, that	RE
(-e) (x)	input, incorrect
it's not that	RE
yeah it's not that one and it's not that one, it's one of these three	RE
whichever?	RE
that one	RE
(-er) (x)	input, incorrect
could be that one	RE
(-es) (x)	input, incorrect
(laughs) that	RE
(-é) (✓)	input, correct

3. (talking over)	early engagement
[écoute]	output
one of them	RE
try that	RE
(-ez) (x)	input, incorrect
that one, could be	RE
(-er) (x)	input, incorrect
be the one with just the -e on	EE, awareness
I dunno, could be... the -es one	EE, awareness
(-é) (x)	input, incorrect
(-es) (x)	input, incorrect

4. (talking over)	early engagement
[acheté]	output
is the -e for the past, or which one was it?	EE, rule articulation, query
try that	RE
(-ez) (x)	input, incorrect
can't remember which one it *was*	frustration
(-e) (x)	input, incorrect
try that one	RE
(-er) (x)	input, incorrect
that one	RE
it's either -es or...	EE, awareness
(-es) (x)	input, incorrect

5. (talking over)	early engagement
[préfères]	output
-e accent is for the past, so it's one of these two	EE, rule articulation
-es is to do something I think, isn't it?	EE, rule articulation, inaccurate
one of these two I think, can't remember which one	RE
-er or -e	EE, awareness
yeah, try -er	EE, awareness
(-er) (x)	input, incorrect
that one	RE
no that's a vous	EE, identification
yeah try that	RE
(-es) (✓)	input, correct

6. [jouer]	output
-er I think	EE, awareness
(-er) (✓)	input, correct
7. [travaille]	output
-er to do I think, I can't remember	EE, rule articulation
(-er) (x)	input, incorrect
yeah try that one	RE
(-e) (✓)	input, correct
8. [quitté]	output
yeah, try that	RE
(-ez) (x)	input, incorrect
-ez is after vous, not that one	EE, rule articulation
which one was it that was in the past?	EE, attempted identification
that one	RE
(-er) (x)	input, incorrect
it's not -er, it's not the -e	EE, awareness
(-es) (x)	input, incorrect
it's not that or that, it's one of these two	RE
let's have that	RE
(-e) (x)	input, incorrect
9. (talking over)	early engagement
[marchez]	output
that one	RE
(-ez) (✓)	input, correct
10. (talking over)	early engagement
[porter]	output
it's not -er	EE, awareness
it's that one, that goes after elle	EE, rule articulation
that's the -e isn't it?	EE, awareness
can't remember... -er?	EE, awareness
yeah try that one	RE
(-er) (✓)	input, correct

3ab: Verb-Ends

1. (talking over)	early engagement
[jouer]	output
this one	RE
(-é) (x)	input, incorrect
oh! try it again	RE
(-er) (✓)	input, correct
2. [travaillé]	output
that one	RE
(-e) (x)	input, incorrect
you choose this time	avoiding responsibility
(-es) (x)	input, incorrect
3. [écoute]	output
écout[´]	EE, awareness
that one, no that one	RE
(-er) (x)	input, incorrect
I thought it was that one at first ... with the -r on	EE, awareness
try that one, which one do you want?	RE
(-es) (x)	input, incorrect

4. [acheté]	output
try that one	RE
(-e) (x)	input, incorrect
which one...? it's not [?] is it? try that one	RE
(-ez) (x)	input, incorrect

5. (talking over sound, much pointing)	early engagement
[préfères]	output
(-e) (x)	input, incorrect
can't have a [?] on the end	EE, awareness
[Soundbite]	output
no, that one	RE
try that one	RE
(-es) (✓)	input, correct

6. [gagner]	output
try that one	RE
(-es) (x)	input, incorrect
had that one, what about that one, gagner	EE, awareness
(-er) (✓)	input, correct

7. [trouve]	output
shall we try that one? (much pointing)	RE
(-ez) (x)	input, incorrect
you're picking the next one (not reading feedback)	RE, avoiding responsibility
which one, which one?	RE
(-es) (x)	input, incorrect

8. [quitté]	output
shall we do that one?	RE
(-é) (✓)	input, correct

9. "you walk"	Q from translation
[marchez]	output
wont be that one because... [?]	RE
that one	RE
(-ez) (✓)	input, correct

10. [porter]	output
I think that one	RE
(-e) (x)	input, incorrect
[Soundbite]	output
(-er) (✓)	input, correct

4ab: Dragonquest

1. [pousser]	output
(pointing as soon as words appeared)	early engagement
Help?	recognising need for Help
(Help -ez)	first search for clues
mmm, "-ez ... present"	Q from Help
(Help -é, -er)	more browsing for clues
have, no, "I'm going to", -er I think	Q from Help, EE, awareness
(-er) (✓)	input, correct

2. [frappé]	output
(talking over, pointing at once)	early engagement
-e, -er, what's happened in the past	EE, rule articulation, inaccurate
(-er) (x)	input, incorrect
oh dear ... it'll be -e...	EE, awareness
Help	recognising need for Help
(Help -é)	good discrimination
that one	RE
OK.. that one, frappé	EE, awareness
(-é) (✓)	input, correct

3. [marche]	output
what do you think?	query
(Help -es, -ez, -er, -é, -e)	browsing for clues
think it'll be that one..	RE
(-é) (x)	input, incorrect
not that one, it'll be that one, won't it?	RE
will it?	
I don't know, just try one, I don't care, it'll be wrong, which one do you want? .. that one or that one...	RE
it's up to you. Just go for that Help again	recognising need for Help
(Help -er)	repeating search for clues
it's -er isn't it, to do something	EE, rule articulation
I'm going to, that's future, I don't know,	EE, identification
which one did you want?	
top one, go for that one as well	RE
(Help -e)	repeating search for clues
in't that one... "the phone rings"	Q from Help
just go back onto OK	
I think it's that one	RE
(-e) (✓)	input, correct

4. I think it's écout[´].. oh god which one?	EE, awareness
[écouté]	output
go Help	recognising need for Help
(Help -ez, -er, -é, -e, -es)	browsing for clues
if it's I present, it'll be that	EE, identification
no it'll be that	RE
no, be this one, no that one, that I reckon	RE
(-er) (x)	input, incorrect
I don't know, you try it	avoiding responsibility
(-é) (✓)	input, correct
why didn't you say?	communication problems
I did	

5. [prépares]	output
(Help -ez, -er, -e, -é, -es)	browsing for clues
yeah, I think it'll be that	RE
no, you want the future don't you?	EE, identification
that one or that one	RE
that one with -er	EE, awareness
no, I think it's -es	EE, awareness
(-es) (✓)	input, correct

6. [trouver]	output
"to find", future	Q from translation, EE, identification
(Help -e)	first search for clues
-e, that one, present	EE, identification
(-e) (x)	input, incorrect
(Help -es)	further search for clues
what's the other one, -es to.. try that one,	EE, awareness
don't matter, to do	EE, identification
(-es) (x)	input, incorrect

7. no, present isn't it?	EE, identification
[monte]	output
(pointing) want Help?	recognising need for Help
(Help -é, -er, -ez, -es, -e)	browsing for clues
present, that one, no (laugh) isn't it, climbing stairs?	EE, identification
present, not past	EE, identification
not that one, -es, or...	EE, awareness
(-es) (x)	input, incorrect
no, either that or that	RE
that one	RE
it's not that one	RE
press the -e one	EE, awareness
(-e) (✓)	input, correct

8. "I rang", it's	Q from translation
[sonné]	output
(Help -er, -ez, -es, -é)	browsing for clues
(long pause) "I've", yes	EE, identification
(-é) (✓)	input, correct

9. "you are burning"	Q from translation
[brûlez]	output
(Help -ez)	discriminating
it'll be.. that one, the one you are, future	EE, identification
no present won't it?	EE, identification
(-ez) (✓)	input, correct

10. to do	EE, identification
[libérer]	output
(Help -e)	first search for clues
it's that one	RE
no	
(Help -é)	further search for clues
no	
(Help -er)	further search for clues
that's it., -er	EE, awareness
(-er) (✓)	input, correct

5ab: Hangman

1. [gagner]	output
(Help, not used, returned to task)	failure to use Help
this one	RE
(-é) (x)	input, incorrect
it's "already happened"	Q from feedback
try that one	RE
(-er) (✓)	input, correct

2. [trouvé]	output
is it that one, -er, e apostrophe	EE, awareness
let's try this	RE
(-é) (✓)	input, correct

3. (talking over)	early engagement
[écoute]	output
let's get help and look at endings	recognising need for Help
(Help -ez)	first search for clues
she is doing it	EE, identification
yeah that one	RE
(-ez) (x)	input, incorrect
go back to Help	recognising need for Help
try that	RE
(Help -e)	return to Help
"now in the present"	Q from Help
(Help -er)	further browsing
no, not that one	RE
yeah, try that, just -e	EE, awareness
(-e) (✓)	input, correct

4. [acheté]	output
already happened	EE, identification
[Soundbite]	output
try it yeah, she's already bought it	EE, identification
(Help -er)	first search for clues
no, try -ez	EE, awareness
(Help -ez)	further search
no, happening now	EE, identification
(Help -es, -é)	widening search
yeah -e apostrophe	EE, awareness
(-é) (✓)	input, correct

5. [préfères]	output
go Help	recognising need for Help
(Help -es -ez -er)	wide range of inflections
yeah that's it, try that	RE
(-er) (x)	input, incorrect
[Soundbite]	output
try that one (pointing to -e)	RE
(Help -e, -é, -er, -ez, -es)	full range of inflections
try that one	RE
(-e) (x)	input, incorrect
I think it's that	RE
(-é) (x)	input, incorrect
[Soundbite]	output
that or that- we've tried that	RE
get Help	recognising need for Help
try 'em all	blanket search strategy
(Help -e, -er, -ez, -es, -é)	full range of inflections
in the present	EE, identification
just put what you want, not bothered	defeatist
"-es... "	Q from Help
(-ez) (x)	input, incorrect

6. (talking over)	early engagement
[jouer]	output
that one or that one!	RE
I think it's that	RE
(-e) (x)	input, incorrect
(Help -e, -é, -er, -ez, -es)	full range of inflections
going to play, it's gonna happen, in the future, think it's the -er, yeah, -er I think, that one there	EE, rule articulation
(-er) (✓)	input, correct

7. "I work"	Q from translation
[travaille]	output
when you.. work.. think it's that one	RE
try it if you want, not sure	RE
(-e) (✓)	input, correct

8. already happened	EE, identification
[quitté]	output
[Soundbite]	output
"left", go Help and see what's already happened,	Q from translation
I can't remember which one it is	recognising need for Help
(Help -e, -é, -er, -ez, -es)	full range of inflections
no.. -e apostrophe in the past, yeah, think it's that	EE, rule articulation
(-é) (✓)	input, correct

9. [marchez]	output
go to Help again	recognising need for Help
(Help -e, -é, -er, -ez)	wide range of inflections
walk, now, innit, it's -ez.. could be -es	EE, rule articulation
(-ez) (✓)	input, correct

10. (talking over)	early engagement
[porter]	output
future, yeah try that	EE, identification
(-er) (✓)	input, correct

6ab: Verb-Ends

1..[jouer]	output
-er	EE, awareness
that un	RE
this one?	RE
-es?	EE, awareness
(-es) (x)	input, incorrect
[Soundbite]	output
I know it isn't... this?	RE
(-é) (x)	input, incorrect

2. [travaillé]	output
(-e) (x)	input, incorrect
"an action"	Q from feedback
-ez	EE, awareness
(Help -ez, -er)	first search for clues
it's not that one, that could be it	RE
-e, no, -es	EE, awareness
it's either this one or that one	RE
(-er) (x)	input, incorrect

3. [écoute]	output
it's that	RE
(-e) (✓)	input, correct

4. An -er?	EE, awareness
[acheté]	output
it's that one, trust me (pointing to -er)	RE
(-er) (x)	input, incorrect
oh, I could have had it, it's only two it could be	RE
that one at the far end	RE
[Soundbite]	output
that's definitely it	RE
oh, I don't know, go through that again	further help from sound needed
[Soundbite]	output
can't be .. -ez	EE, awareness
gotta be that one	RE
(-é) (✓)	input, correct

5. It's one of them two	RE
[préfères]	output
it's that one, no it's the other one	RE
(-é) (x)	input, incorrect
oh aye, 'cos it's got the two accents	EE, awareness
[Soundbite]	output
we've just had that one, no it's not that one	RE
(pointing to -é and -er)	
(-er) (x)	input, incorrect

6. [gagner]	output
(Help -er)	good discrimination
it's that one (pointing to -er)	RE
just try this one	RE
(-er) (✓)	input, correct

7. An -e	EE, awareness
[trouve]	output
it's got to be one of them two	RE
I'd go for that one	RE
try with an accent	EE, awareness
(-é) (x)	input, incorrect
(-e) (✓)	input, correct
je is -e, tu is -es...	EE, rule articulation, starting PC
have to learn it off by heart	

8. [quitté]	output
one of them two	RE
ends in an -e, think it's that	EE, awareness
(-é) (✓)	input, correct

9. Vous, so it's got to ... it's got to have -ez	EE, rule articulation
[marchez]	output
one of them two	RE
(-ez) (✓)	input, correct

10. You wore.. you wear... to wear	rehearsal of English verb
[porter]	output
-e, -e with accent	EE, awareness
(-e) (x)	input, incorrect
no we did that first time and it was this wasn't it?	RE
it was wrong way round, sure it was porté	EE, awareness
(-é) (x)	input, incorrect

8ab: Hangman

1.(pointing before all instructions on screen)	early engagement
[gagner]	output
(-é) (x)	*input, incorrect*
(pause)	*thoughtful*
that one	RE
go on, any one	guesswork
[Soundbite]	output
that one	RE
that one	RE
(-ez) (x)	input, incorrect
try it, no that one	RE
OK, probably wrong	defeatist
(-e) (x)	input, incorrect
we've had that one, we've had that one,	RE
we've had that one, is it one of them two?	RE
that one, I'd say	RE
that's plural, try that, that's definitely plural	EE, inaccurate identification
(pointing to -es)	
(-er) (✓)	input, correct

2.[trouvé]	output
(pointing while sound plays)	
either that one or that one I think	RE
try this one	RE
it's up to you, I don't mind	avoiding responsibility
press it, I bet that's wrong	RE, defeatist
(-ez) (x)	input, incorrect
"happening now", what was that last one,	Q from feedback
'I'm going to do something', it's 'going to do'	rehearsing verb, EE, identification
it's already done	EE, identification
yeah, so which one, I can't remember what it was	RE
is it this one?	RE
it's that one	RE
try it	RE
(-er) (x)	input, incorrect
"I'm going to win" that's what it was last time	Q from feedback
we've two tries left, it's not that one,	RE
it's not that one, shall we go for that one?	RE, guesswork
[Soundbite]	output
that one?	RE
that one, yeah	RE
(-e) (x)	input, incorrect
"now in the present" not that, not that, not that	Q from feedback, RE
-es	EE, awareness
(-é) (✓)	input, correct
"things which have already happened"	Q from feedback
been in the present	

3. [écoute]	output
(long pause)	
it's that one, or that one	RE
definitely that one, is it, that one?	RE
um, yeah! no, yeah!	
elle écout[-], elle écout[-]	EE, awareness
elle écout[-], that one	EE, awareness
(-e) (✓)	input, correct

4. you've "bought"	Q from translation
[acheté]	output
what's that one?	RE
something he's bought, is *done*	EE, identification
try that one	RE
(8a guessing, 8b trying to work it out),	at cross-purposes
probably wrong actually	defeatist
(-er) (x)	input, incorrect
not that, not that, he's, he's, it must be that	RE
masculine, isn't it?	EE, inaccurate identification
mmmm, plural	EE, inaccurate identification
-es is it?	EE, awareness
yeah probably wrong, well we're pressing it anyway	defeatist, guesswork
(-es) (x)	input, incorrect
oh! (reading feedback with care)	
not that, not that, not that, it won't be that,	RE
it's feminine though isn't it?	EE, inaccurate identification
that one	RE
(-ez) (x)	input, incorrect
that one, was it?	RE
(-e) (x)	input, incorrect
which one haven't we done?	
we've done 'em all!	

5. [préfères]	output
that?	RE
just guess	guesswork
(-es) (✓)	input, correct

6.jou[´]	EE, awareness
[jouer]	output
(pause)	
(-er) (✓)	input, correct

7. (talking over)	
[travaille]	output
this one or that one? (indicating -e and -ez)	RE
"I, I..." oh God	Q from translation
it's this one!	RE
I'd say that one, if you wanna go for this one,	RE
I say either this one or this one	RE
that one, that one, that one?	RE
(-e) (✓)	input, correct

8. [quitté]	output
that one	RE
because he's done it, hasn't he?	EE, identification
(-e) (x)	input, correct
it's probably wrong	defeatist
that one?	RE
(-er) (x)	output, incorrect
if you agree, it's that one, isn't it?	RE
we've just done that one	RE
yeah, we did that and that	RE
no, we did *that* and *that*	RE
so is it this one?	RE
I'd say that one	RE
this one? maybe that	RE, guesswork
(-ez) (x)	input,, incorrect
maybe that one or that one	RE
something's already done, it won't be that one	EE, identification
this one then	RE
no, it probably won't be that one, knowing my luck	RE
this one	RE
no, I think it's this one, but if you want that, go on	RE
(-é) (✓)	input, correct
9. [marchez]	output
that's something that's already happened	EE, identification
it's something that's happened, in the present,	EE, identification
or is it that one or that one?	RE
(point at -*é* and -er)	
it's something you *do*, you *do*	EE, identification
yeah yeah, this one then, you agree?	RE
(-e) (x)	input, incorrect
it's that other one	RE
the one you said it wasn't!	RE
I don't know, another one	RE
that one or that one (points to -ez and é)	RE
or this one	RE
or that one	RE
"you walk"	Q
I'm doing this one, it's probably wrong	RE, defeatist
(-ez) (✓)	input, correct

10. [porter]	output
"she's going to do"	Q from translation
that one	RE
no, that's something they've already done	EE, rule articulation
that's *she* wears, that's wears isn't it?	EE, rule articulation
that's something that's happening now	EE, rule articulation, jointly PC
(points to -e)	
it's either that or that	RE
no it's not, we've said that one before	RE
and it's something that's happening now	EE, identification
it's either that or that, it must be that	RE
that one	RE
not that one I don't think	RE
try that	RE
(-e) (x)	input, incorrect
(sigh) "present"	Q from feedback
that's what you said, so why didn't you go for it?	
it's not that, not that	RE
(unison) *that*!	RE
probably not, but...	defeatist
(-é) (x)	input, incorrect
we haven't done right well, have we?	
(-er) (✓)	input, correct

9ab: Verb-Ends

1. [jouer]	output
(pointing, discussing, choosing)	
put that one in I think	RE
(-e) (x)	input, incorrect
[Soundbite]	output
either that one or that one, you choose	RE
(-er) (✓)	input, correct

2. [travaillé]	output
(quick choice)	
(-er) (x)	input, incorrect
try that one	RE
I wouldn't, I don't think that one's right,	RE
'cos that was on the other one, -er	EE, awareness
I think it as one of these with just the -e wasn't it?	EE, awareness
(-e) (x)	input, incorrect
(hasty feedback reading)	

3. [écoute]	output
that one	RE
no I don't think it's an -es is it?	EE, awareness
that -er one? dunno	EE, awareness
which one?	
don't know, which was the one we tried in the first place that was wrong?	RE
it said something about it's used with elle or il, I'm sure it said that. See what Help does	EE, identification
(Help -er)	
we want help with the -er one, it's that one	EE, awareness
(-er) (x)	input, incorrect
we've just done that one, it's got too many accents	EE, awareness
oh put that then	RE
(-é) (x)	input, incorrect
(read feedback carefully)	

4. bought's a doing one though isn't it?	EE, identification
[acheté]	output
that's the one we just did (reads verbs off screen)	RE
I don't know, you guess	
(-er) (x)	input, incorrect
I thought it would be. '-er endings to do something',	EE, rule articulation
it must be, um... did you try that one?	RE
that'll be wrong as well	
(-e) (x)	input, incorrect
(no real reading of feedback)	
Help, try Help	recognising need for Help
that'll be the one with -er	EE, awareness
no we tried that didn't we?... oh dear	RE

5. [préfères]	output
Help! see what that one means, the second one	immediate call for Help, RE
(Help -é)	first, limited use of Help
no, "something that has happened"	Q from Help
well that's not right then	RE
so it's not that one, that one	RE
that's a je, we haven't had that one, have we,	EE, identification
it might be that one or that one	RE
what's -er mean?	EE, awareness
don't know, try the top, -es, tu, that'll be wrong	EE, rule articulation
(-es) (✓)	input, correct

6. "I'm going to", it's a doing	Q from translation, EE, identification
[gagner]	output
try that one (quick choice)	RE
(-é) (x)	input, incorrect
I thought that was the doing one, or is that -er?	EE, rule articulation
Shall we try -er then?	EE, awareness
(-er) (✓)	input, correct
I knew it was either -e or -er	EE, awareness

7. [trouve]	output
Help, see what -ez is	EE, awareness
(Help -ez)	limited use of Help
not that one because that's the now, you are doing	EE, rule articulation
so it's not that one, it's not -ez, it might be just the -e	EE, awareness
(-e) (✓)	input, correct
that's the now, the -e, just the -e's the now	EE, rule articulation

8. [quitté]	output
(talking over) it's in the past, that was	EE, identification
that one (pointing to -ez) no go to Help	RE, recognising need for Help
(Help -ez)	limited search for clues
was it -ez. I think it was -ez, or was that now?	EE, rule articulation
yeah that was now	EE, rule articulation
it could be that one or that one, try -es	RE, EE, awareness
(Help -es)	further search for clues
no	
(Help -er)	further search for clues
(Help -é)	systematic search
yeah (laugh)	
(-é) (✓)	input, correct
(laugh) after a while we managed!	

9. "You walk too fast"	Q
that's now, that's happening	EE, rule articulation
I'm sure that might've been -ez	EE, rule articulation
no, wasn't it just the -e?	EE, rule articulation
press that, see what the options are	recognition of need for Help
[marchez]	output
just see what -e with the accent.....	EE, awareness
(Help -é)	first search for clues
something that's happened	EE, identification
in the present, isn't it, you walk....	EE, identification
(Help -er, -es, -ez)	wider search for clues
"to do something..." -ez! yes its....	Q from Help, EE, awareness
you are winning, you win,	
now in the present, it's vous	EE, rule articulation
(-ez) (✓)	input, correct
we'll go through all the Help!	appreciation of value of Help

10. [porter]	output
(talking over) that's in the future now,	EE, identification
the tu one was -e with the...	EE, rule articulation
no, the tu one was the last one on the Help thing	RE
-es was it? it was -es I'm sure it was	EE, awareness
(Help -es)	first search for clues
you try that then	RE
I'm not trying it, I'm not risking it	caution shown
(going back to task)	
just checking what the question was	confirmation sought
it's in the future, so we can't have it, go again	EE, identification
try just -e	EE, awareness
(Help -e)	continuing search
present, in the present	EE, identification
(Help -é)	systematic search
past... -er it must be	EE, awareness
(Help -er)	systematic search
yeah, yep, yep	
(-er) (✓)	input, correct

10ab: Dragonquest

1. "I'm going to push"	Q from translation
[pousser]	output
that one or that one	RE
Help?	considering Help
(-e) (x)	input, incorrect
oh no! It must be that -er	EE, awareness
could be, why not?	guesswork
(-er) (✓)	input, correct

2. "Knock", "look at endings"	Q from translation and instructions
[frappé]	output
it's frappé isn't it? It's that one,	EE, awareness
you know what I mean, the past tense	EE, identification
(-é) (✓)	input, correct

3. [marche]	output
it's not that one, not that one	RE
should we go for Help?	recognising need for Help
(Help -e)	first search, discriminating
That one after je... le... that's right cos it was that one last time	EE, identification
(-e) (✓)	input, correct
4. it's the -e acute, yeah	EE, awareness
[écouté]	output
I have...	EE, identification
(-é) (✓)	input, correct
5. (reading screen)	
[prépares]	output
-er	EE, awareness
(-er) (x)	input, incorrect
never mind, we'll go to Help	recognising need for Help
(read feedback) "to do something"	Q from feedback
(Help -e)	first search
that one, yeah	RE
(Help -er)	further search
and that one	RE
(Help -é)	systematic search
not that one. we did that one	RE
(Help -ez)	systematic search
can't, that's vous	EE, identification
(Help -es)	systematic search
yeah, it's right! you can put that as a plural	EE, identification
that one	RE
(-es) (✓)	input, correct
6. "I'm going to find the castle" that's in the	Q from translation
future isn't it?	EE, identification
[trouver]	output
-er	EE, awareness
(-er) (✓)	input, correct
7. "I'm climbing the stairs", it's present isn't it?	Q from translation, EE, identification
[monte]	output
that one	RE
(-e) (✓)	input, correct
"now in the present"	Q from feedback
8. that's past	EE, identification
yes it's got -e acute	EE, rule articulation
[sonné]	output
(é) (✓)	input, correct
9. he's just burnt it! that one	RE
oh no, because it's vous!	EE, identification
[brûlez]	output
that one	RE
with the -z on the end	EE, awareness
(-ez) (✓)	input, correct

10. "I'm going to free the dragon"	Q from translation
-er	EE, awareness
[libérer]	output
think it's that do you?	RE
(-er) (✓)	input, correct

11ab: Hangman

1. [gagner]	output
that's the verb, that's -ez	EE, awareness
that's for vous	EE, rule articulation
I think it's -er	EE, awareness
(-er) (✓)	input, correct
2. [trouvé]	output
(pause) -e	EE, awareness
(-e) (x)	input, incorrect
oh no! eek! it's not that one	RE
it's not that one	RE
(-é) (✓)	input, correct
3. (pointing, talking over)	early engagement
[écoute]	output
not that one, not that one	RE
that or that, what do you think?	RE
(-e) (✓)	input, correct
4. [acheté]	output
(pause) past tense isn't it?	EE, identification
it's not that one, so is it that one then? -e acute	EE, awareness
this one	RE
(-é) (✓)	input, correct
5. [préfères]	output
(pause, much concentration on screen)	engagement
present	EE, identification
is it -es?	EE, awareness
it's now	EE, identification
(-es) (✓)	input, correct
6. -er	EE, awareness
[jouer]	output
(-er) (✓)	input, correct
7. [travaille]	output
-er[?]	EE, awareness
that one, yeah	RE
(-e) (✓)	input, correct
8. [quitté]	output
-ez[?]	EE, awareness
you sure it's -ez[?]	EE, awareness
past tense	EE, identification
(-é) (✓)	input, correct
9. present tense	EE, identification
[marchez]	output
marchez	EE, awareness
(-ez) (✓)	input, correct

10. -er	EE, awareness
[porter]	output
it's going to be the future, isn't it, so it's -er	EE, rule articulation
(-er) (✓)	input, correct

12ab: Verb-Ends

1. (talking over)	early engagement
[jouer]	output
that one	RE
(-er) (✓)	input, correct

2. [travaillé]	output
(pause, muttering, pointing)	engagement
(-er) (x)	input, incorrect
(pause)	thought
(-e) (x)	input, incorrect

3. [écoute]	output
that one	RE
present tense	EE, identification
(-e) (✓)	input, correct

4. (intense looking at screen)	engagement
[acheté]	output
that one	RE
no that's in the past isn't it?	EE, identification
that one	RE
that one isn't it?	RE
(-e) (x)	input, incorrect
(feedback read quickly)	
(-é) (✓)	input, correct

5. (pointing while sound playing)	early engagement
[préfères]	output
(-e) (x)	input, incorrect
(long pause)	thoughtful
(-er) (x)	input, incorrect
(pointing at screen)	

6. [gagner]	output
that's the past	EE, identification
it's not that one because that one's 'tu', so it's that one	EE, rule articulation, RE
(-er) (✓)	input, correct

7. [trouve]	output
(quick pointing) -e?	EE, awareness
(-er) (x)	input, incorrect
that one or that one	RE
(-e) (✓)	input, correct

8. (very quiet talking over)	early engagement
[quitté]	output
(12b pointing to -e, 12a to -é)	silent debate
(-é) (✓)	input, correct

9. [marchez]	output
(pointing to "walk")	awareness of meaning
(-es) (x)	input, incorrect
(-e) (x)	input, incorrect

10. [porter]	output
that one, it's that one	RE
that one	RE
(-er) (✓)	input, correct

13ab: Dragonquest

1. they're different endings	EE, awareness
"there's a verb missing from these French endings"	reading instructions
"je vais", um, "to push"	Q from translation
yeah, I think it's that one, what do you think?	RE
[pousser]	output
I think that one, don't you?	RE
"to push"	Q from translation
press that one, no this one	RE
(-er) (✓)	input, correct
2. "I've knocked at the door"	Q from translation
[frappé]	output
I think it's that one	RE
what was that, "I have knocked"?	Q from translation
was it "I have knocked at the door"?	Q from translation
(-é) (✓)	input, correct
3. [marche]	output
that one?	RE
yeah, *no, that* one, *works* (points to -es)	EE, inaccurate identification
do you not think it's that one there?	RE
I think it's that, oh no	RE
(-es) (x)	input, incorrect
wrong oh	genuine disappointment
"the -es ending is used after tu"	Q from feedback
I think it's that one here	RE
this one here?	RE
it's this one isn't it? shall we try it?	RE
(-ez) (x)	input, incorrect
[in unison] wrong	
4. "I have listened to the music"	Q from translation
oh I know that one, écouté	EE, awareness
that one	RE
[écouté]	output
why is it écouté, I never know why	EE, awareness
this one?	RE
that one, I'm pretty sure	RE
(-é) (✓)	input, correct
5. "ask the white rabbit to make you one",	Q from instructions
are you making a brew?	rehearsing verb form
you are making a drink	rehearsing verb form
are you making a drink?	rehearsing verb form
umm after tu it's...	EE, attempted rule articulation
[préfères]	output
is it, after tu?	EE, attempted rule articulation
(-es) (✓)	input, correct
it's quite helpful in the way that it shows you what endings do	approval of feedback

6. "I'm going to find", to find, it's going	Q from translation
to be trouver, -er, trouver	EE, rule articulation
[trouver]	output
trouver	EE, awareness
-er	EE, awareness
do [to?] something should be gagne [?]	EE, identification?
I think it's to something	EE, identification
(-er) (✓)	input, correct
7. [monte]	output
I think it's monte	EE, awareness
it said it in the first bit	recall of rule
it's after je, e, i, l	EE, rule articulation
after tu it's -es isn't it? Is it je	
did they say, did it say je, e, i, l?	EE, rule articulation
(-e) (✓)	input, correct
yeah! (read feedback attentively)	
8. "Before you go in you've got to show	
what you've just done", that's, um, the past tense	Q instructions, EE, rulearticulation
yeah, "I have rung"	rehearsing verb
[sonné]	output
(pointing)	
yeah it's sonné, the one with the accent on the end	EE, awareness
(-é) (✓)	input, correct
"é is for things which have already happened"	Q from feedback
9. (laugh, pointing over)	
'Hey, that's a cake, tell the dragon what he's doing	
before it's too late'	Q from instructions
[in unison] 'you are burning ze cake'	humorous rehearsal of verb
um is it that one	RE
[brûlez]	output
I think so, do you think so	confirmation sought
(-ez) (✓)	input, correct
10. "This is it"	Q from instructions
"I'm going to free"	Q from translation
[libérer]	output
that's the tu, that's the past, that's the to do something,	
that's the vous and that's your [in unison] present	PC
put present	EE, identification
and he and she, so what are we going to do,	EE, identification
this one here?	RE
(-er) (✓)	input, correct

14ab: Hangman

1. [gagner]	output
(Help -ez -er)	apparent discrimination
it's 'going to'.. it's future isn't it?	EE, identification
wrong, that's it then	RE
try -ez, no that's not it, try that	EE, awareness
I think it's probably -er	EE, awareness
(-er) (✓)	input, correct
that wasn't too difficult.	confident

2.[trouvé]	output
that's the present isn't it?	EE,identification,inaccurate
(quick choice)	
(-e) (x)	input, incorrect
"the -e ending is used..." Help	Q from feedback
no we won't do that, we'll try that. I reckon that one	Help not sought, RE
(-é) (✓)	input, correct

3. [écoute]	output
(pointing while sound playing)	
that was present wasn't it, écout[-], écout[-],	EE,identification
might be that one	RE
no that one	RE
(-er) (x)	input, incorrect
did *you* try that one?	RE
(-e) (✓)	input, correct
we'll have to remember that,	
because that was the past	EE,identification

4. [acheté]	output
not that, play again	RE
[Soundbite]	output
one of these two	RE
present though isn't it?	EE,identification
this one	RE
we tried that last time	RE
it's 'bought', it's past, so it's not that, it's not that,	EE,identification
it's not that, it's one of those two	RE
(-es) (x)	input, incorrect
it's *got* to be that one	RE
(-é) (✓)	input, correct

5. that's present so I think..	EE,identification
[préfères]	output
tu préfère I think it is	EE, awareness
(-e) (x)	input, incorrect
it's not that one then!	RE
[Soundbite]	output
I think Help might be...	recognising need for Help
(Help -er, -é)	limited browsing
either	RE
no that's future	EE,identification
I agree. try -ez	EE, awareness
(Help -ez, -es)	more systematic browsing
we've done that, we know it's not that	RE
what was the sentence. do you like, do you prefer?	checking tense
that or that	RE
what was it, was it vous? Let's have a look if it's	
-es or -ez. If it's vous it's -ez. No it's not, it's -es	EE, rule articulation
(-es) (✓)	input, correct
I wonder why it worked	
because it was after tu in the present,	EE, rule articulation
if it was the future it would have been -ez.	EE, rule articulation

6. he is going, that's the future tense	EE,identification
[jouer]	output
try -er first	EE, awareness, needing Help
(Help -er)	very discriminating
(-er) (✓)	input, correct

7. |travaille|	output
(talking over)	
present	EE, identification
I hope so. it's that one there or that one there	RE
(-er) (x)	input, incorrect
not that one! Help	RE, recognising need for Help
(Help -e)	very discriminating
(-e) (✓)	input, correct

8. |quitté|	output
(Help -ez, -es, -er, -é)	wide search for clues
past, so it's that one or that one. Present action so it's not that one, endings think actions,	EE, identification
has happened, that's it. It's all muddled up, it's the wrong way round	EE, identification
(-er) (x)	input, incorrect
it's never been -er going down there!	EE, awareness
it's the one with the accent on it	EE, awareness
(-é) (✓)	input, correct

9. |marchez|	output
present	EE, identification
"you walk"	Q from translation
that one	RE
that one	RE
no, it's that one	RE
is it, why's that?	
that's now -es, is it, the past is that one,	EE, rule articulation
so press that one	RE
(-ez) (✓)	input, correct

10 |porter|	output
that'll be the future... "she is going", which is the one	EE, identification
we didn't try, that one without the thingie	EE, awareness
no I think it's that or that, but I don't know which	RE
(-e) (x)	input, incorrect
not that one! Try Help or -er	needing Help, EE, awareness
(Help -er)	checking inflection already discussed
yep, to do something. I'll just have a look for the others first, make sure we don't have to go into Help do we?	EE, identification
(help -e, -é, -ez, -es)	double checking
happen is now, happened is the past, going to, now that's the same as that one	EE, identification, rehearsing tenses
except that's about a person, he she or I	EE, identification
those two are the endings	EE, awareness
that one, -er	EE, awareness
(-er) (✓)	input, correct

16ab: Dragonquest

1. "I'm going to push, je vais"	Q from translation
"I'm going to push"	Q from translation
not that, not that	RE
|pousser|	output
|Soundbite|	output
-ez	EE, awareness
"I'm going to"	Q from translation
(-er) (✓)	input, correct

2. "knocked at the door"	Q from translation
[frappé]	output
it's this one here	RE
the second frappé because it's perfect	EE, identification
(-é) (✓)	input, correct
3. [marche]	output
it's the last one (referring to -e)	RE
not sure, go to Help, it might help	recognising need for Help
this one, cos I'm not sure what that -es one is	EE, awareness
(Help -es)	first limited search for clues
"what's happening now, in the present",	Q from Help
happening now	rehearsing rule
(Help -ez)	first search for clues
that's vous, that's you, that's you plural	EE, identification
(Help -er)	further search for clues
not that 'un	RE
(Help -é)	systematic search for clues
that's past, perfect	EE, identification
(Help -e)	systematic search for clues
"the phone rings"	Q from translation
do we think it's -e acute?	EE, identification
(-é) (x)	input, incorrect
I think it's that one (pointing at -er)	RE
are you just guessing?	
it's probably just the one with the -e ending	EE, awareness
(-e) (✓)	input, correct
4. [écouté]	output
(-é) (✓)	input, correct
5. "Tu"	Q from task sentence
[prépares]	output
it's -es	EE, identification
(-es) (✓)	input, correct
6. "I'm going to find the castle"	Q from translation
(pointing at -er)	
[trouver]	output
(-er) (✓)	input, correct
7. that's just present	EE, identification
[monte]	output
this one	RE
(-e) (✓)	input, correct
8. "show what you've just done. I rang at the door"	Q from translation
[sonné]	output
this one	RE
yeah, it's the past	EE, identification
(-é) (✓)	input, correct

9. "you are burning"	Q from translation
this one 'ere	RE
[brûlez]	output
(-es) (x)	input, incorrect
wrong! (surprised)	genuine surprise
I knew it wasn't that one because that was the past	EE, identification
is it?	
in't that the past?	EE, identification
you are burning, that's happening now	EE, identification
that's past, that's future, that's I, that's you, that's you plural. We'd better go for that one then, there's more than one dragon	PC
(-ez) (✓)	input, correct
I told you it wasn't that one, that was the past	EE, identification
was it?	
aye it was, that was the past	EE, identification

10. "to free"	Q from translation
[libérer]	output
that one	RE
(-e) (x)	input, incorrect
oh well, it doesn't matter, that one ?	RE
that one?	RE
(-er) (✓)	input, correct

17ab: Hangman

1. [gagner]	output
-ez	EE, awareness
(-ez) (x)	input, incorrect
(muttering) is it?	query
(-e) (x)	input, incorrect
(pause) must be -er	EE, awareness
(-er) (✓)	input, correct

2. [trouvé]	output
(long pause)	thoughtful
that one	RE
that one I think	RE
(-e) (x)	input, incorrect
(pause) not that one	RE
(-é) (✓)	input, correct

3. [écoute]	output
(pause) that one or that one, but..	RE
that one or that one	RE
(-é) (x)	input, incorrect
it's probably...	
(-e) (✓)	input, correct

4. [acheté]	output
that one	RE
(-e) (x)	input, incorrect
-er	EE, awareness
(-er) (x)	input, incorrect
(long pause)	thoughtful
(Help)	Help page, not yet consulted
it's not -ez, that achet[´]	EE, awareness
it's that one	RE
il	EE, identification
press on that one	RE
(Help -e)	first search for clues
we don't want that one, must be -er	EE, awareness
that one, try -er	EE, awareness
(Help -er)	further search
that one	RE
(Help -é)	systematic search
yeah, that one	RE
(-é) (✓)	input, correct
5. [préfères]	output
it's that one, -re	EE, awareness
(-e) (x)	input, incorrect
(pause, muttering)	thoughtful
(-er) (x)	input, incorrect
it's that one in't it, 'cos that one's plural	EE, identification
(-es) (✓)	input, correct
6. [jouer]	output
(muttering)	
(-er) (✓)	input, correct
7. [travaille]	output
that one	RE
(-e) (✓)	input, correct
8. [quitté]	output
(pointing at -é, muttering about 'past')	EE, identification
(-é) (✓)	input, correct
9. [marchez]	output
that one	RE
(-ez) (✓)	input, correct
10. [porter]	output
(grunting)	
(-er) (✓)	input, correct

18ab: Verb-Ends

1. [jouer]	output
that	RE
(-er) (✓)	input, correct
(sigh of relief, reading feedback carefully)	

2. [travaillé]	
(both pointing at -er while sound played)	
(-er) (x)	input, incorrect
(sigh, whispers of 'working')	EE, identification
(fingers crossed)	
(-e) (x)	input, incorrect
3. [écoute]	output
(pointing while sound played)	
not that, not that	RE
(whispering 'écout...')	EE, awareness
what tense is that?	EE, attempted identification
we should go for this one	RE
go on then, it'll be wrong, won't it?	defeatist
(-es) (x)	input, incorrect
try the other one	RE
try Help	recognising need for Help
Help?	
(Help screen, not used)	failure to use Help
(return to task)	
il l, "she's listening to my tape"	Q from translation
(-e) (✓)	input, correct
(whispering) "after elle"	Q from feedback
4. [acheté]	output
(pointing, murmuring while sound played, pause)	engagement
(-e) (x)	input, incorrect
"il and elle"	Q from feedback
"il ... on the end"	Q from feedback
unless it's plural	EE, identification, perhaps inappropriate
no it's not	
-e acute	EE, awareness
-e, l, achet[']	EE, awareness
we've done that	RE
try -e acute	EE, awareness
go to Help and see what it says	recognising need for Help
(Help -é)	checking inflection already discussed
it's happened in the past, yeah try that	EE, rule articulation
-e acute	EE, awareness
(-é) (✓)	input correct
5. [préfères]	output
which one after tu?	EE, attempted rule articulation
try Help	recognising need for Help
go to Help and try -er then	EE, awareness
(Help -er)	checking inflection already discussed
no, because that's 'going to', -er	EE, rule articulation
(Help -ez)	systematic checking
vous, no	EE, identification
(Help -es)	systematic checking
yeah, that's it, -es	EE, awareness
(-es) (✓)	input, correct

6. future, innit?	EE, identification
-er?	EE, awareness
no, because ... [indistinct] .. was -ez	EE, awareness
[gagner]	output
(laugh as they can't remember)	
try -e acute	EE, awareness
go on then (resigned)	
(Help -é)	checking inflection already discussed
no, that's past, we want present, try -e	EE, identification
(Help -e)	checking inflection already discussed
now what? future?	EE, identification
(help -er)	checking inflection already discussed
-er	EE, awareness
yes, "I am going to.. "	Q from Help
-er	EE, awareness
(-er) (✓)	input, correct

7. [trouve]	output
shall we have a look at Help and see what...?	recognising need for Help
(Help -e)	discriminating use of Help
yes, that right?	
(-e) (✓)	input, correct

8. (pointing at once)	
[quitté]	output
-er?	EE, awareness
yes, I think so	
(Help -er)	checking inflection already discussed
no, yeah, but it's 'to'	EE, identification
(help -é)	systematic checking
it's in the past	EE, identification
past, yeah that's it	EE, identification
-e acute	EE, awareness
it's happened in the past	EE, identification
because he has left	EE
yeah, it's -e acute	EE, rule articulation, jointly
(-é) (✓)	input, correct
(sigh of relief)	

9. (talking over sound and before)	early engagement
vous, that the vous, -ez	EE, rule articulation
[marchez]	output
yeah, shall we just try it?	confidence
(-ez (✓)	input, correct

10. (talking over)	early engagement
[porter]	output
(Help -e)	systematic checking
that was if he had left, that's past, this is present	EE, identification
just "is"	EE, identification
(Help -er)	systematic checking
right, this is "going to", so...	Q from Help
that's future that you need, because she's going to ..	EE, rule articulation
yeah, "I am going to"..	Q from translation
-er	EE, awareness
(-er) (✓)	input, correct