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**Demythologising skimming:
the operationalisation, teaching and practice of
skimming in a second language, with special reference
to the IELTS test.**

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Abstract

Despite its prominence, especially in academic reading, skimming is much under researched with very few research papers devoted to it, of which only two are L2-related. Such research as there is suggests that skimming is most likely to be effective when the text is predictable, familiar and simple (in terms of content, structure, language or any combination of these). This study considers skimming within an L2 context (specifically, skimming for the IELTS test). In particular, it investigates the specific characteristics of skimming. In addition, it considers the relationship between skim reading texts with familiar and unfamiliar content. The pedagogy-focused enquiry consists of an analysis of the way 14 textbooks cover skimming and a further analysis of 92 questionnaire responses from IELTS teachers. The learner-focused enquiry analyses 16 verbal protocols, collected from participants who had read texts with familiar and unfamiliar content.

The textbooks examined implied that skimming is extremely useful for IELTS candidates, though there was no unanimity about the speed of skimming or its operationalisation. Similarly, the teachers surveyed almost unanimously endorsed the value of skimming for test-takers but varied greatly in their methods of teaching and even in their understanding of the extent to which it can be taught. Analysis of the verbal protocols revealed a number of strategies that were used by skim readers, a comparison with Anderson's (1991) list of strategies for normal reading indicating the particular emphasis of skim readers on time-saving and gist-yielding strategies. Comparison of quantitative data showed no major differences in scores between skimming texts of familiar and unfamiliar content, although the participants' perception of difference, with the text with unfamiliar content being perceived as far more difficult, was acute. It was concluded that there is a continuum from normal reading to skimming: thus skimming is a variant of normal reading and not a separate process from it.

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Chapter One

Reading and Skimming

1.1 Introduction

I teach EFL to students preparing to take the IELTS examination. This test, according to the IELTS website (29/12/08), “measures ability to communicate in English across all four language skills – listening, reading, writing and speaking – for people who intend to study or work where English is the language of communication.” The test is used by academic institutions when deciding whether an applicant’s level of English is sufficiently high and is also required by some countries for immigration purposes. It consists of four parts, referred to as listening, reading, writing and speaking. It is a test of academic English: the reading texts, for example, are never narratives but articles from quality newspapers and journals.

In the reading section of this test, candidates are given three lengthy texts, with a total of between 2000 and 2750 words in all (IELTS Handbook 2005), to read and answer questions on, all within one hour. It is expected that they will read quickly, perhaps skimming the texts either to get the gist before answering the questions, or to find specific information. Thus, Jakeman and McDowell (1999, p.33) write: “If you [the student] are asked to find a particular piece of information in an IELTS passage, you will need to skim through the text fairly quickly, scanning for clues as to where the information might be found.” However, I have come to question whether it is possible for most of my students to skim read in this way: intuitively, I feel that they struggle with this, despite the help that I give them. Misgivings about skimming within the EFL context are also expressed by Buckmaster (2005) who, in a TEFL journal, the *Modern English Teacher*, derides the use of skimming, finding it impractical and unhelpful for EFL students. However, when I contacted him to discover the basis of this view, he replied:

I'm afraid that I didn't use any formal research to base my article on - just personal reflection on how I read and noting that it didn't seem to help my students in any significant way. It just doesn't seem right. (Buckmaster 2005b)

In fact, intuition (“It just doesn't seem right”) is appealed to on both sides of the argument, without supporting research evidence of any sort. Brumfit and Mitchell (1990, p.3) stated many years ago that “we lack empirical support for much of what is claimed to be ‘known’ about teaching methodology.” They concluded that “too much interpretation and too little empirical study may result in myths being perpetuated without being tested against recent observation and experiment” (ibid., p.5). More specifically in relation to skimming, Carver (1990, p.133) referred to “the paucity of research relevant to investigation of . . . skimming improvement” and this is still the case today. He goes on to suggest that “the reason there is so little published research in this area is because it is difficult, if not impossible, to teach people how to improve their ability to get the gist” (ibid. p.133). It appears that the possible truth of this statement has not been tested, with very little research either to prove or disprove it. Despite this, many EFL books, whether designed to train teachers or for direct classroom use, expect students to practise skimming and, presumably, to improve. It is an example of what Stevick (1990, p.17) describes as “faith”:

we shall use the word ‘faith’ to stand for whatever bases for action we have not subjected to Popperian critical judgment, either because they are simply not the kinds of things that *can* be judged critically, or because we have attempted critical judgment and remained unconvinced of its results, or because we have not got round to examining them in that way, or because we are unwilling to do so.

Stevick lists four reasons why faith might remain the basis for action and it is illuminating to relate these to skimming. The first two are inapplicable: studies *could* be made, for example, comparing the teaching of skimming in several conditions; and it is clear from the literature survey (later in this chapter) that critical judgment has not yet been attempted in any depth. The last two reasons, if applicable, are reprehensible. If “we have not got round to examining them in that way” we should wonder why not, given the fact that textbook writers and teachers (see Chapter 2 and Chapter 3 respectively) so ardently support the teaching and practice of skimming. Furthermore, the only reasons we might be “unwilling” to subject our practice to critical judgment is that we fear we might be found to be wrong,

or that we do not trust empirical findings. In short, empirical research is necessary to test intuitions about skimming.

In addition, empirical research is needed because of the particular importance of skimming in the context of reading for academic purposes. For example, in his resource book, *English for Academic Purposes*, Jordan (1997, p.17) writes: “It is essential for students to be able to skim and to scan texts.” Similarly, Flowerdew and Peacock (2001, p.185), after emphasising the general importance of reading within EAP (“probably the skill needed by the greatest number of EAP students throughout the world”), refer specifically to the need for skimming (p.186). Admittedly, Carver (1990, p.43) argues against devoting research time to skimming and scanning on the basis of their “infrequent usefulness”, suggesting that skimming and scanning together probably occupy less than 10% of total reading time for readers. However, he fails to give any empirical evidence to support this assertion and even if it is true of reading in general, a special case can be made for research into skimming within the context of reading for academic purposes, where it is often seen as crucial to study success.

1.2 Reading

The following sections (1.2, 1.3 and 1.4) summarise the research that has been carried out into reading and skimming and consider what further research might be done. An attempt is made to relate research findings to skimming in EFL, although much of the research into reading, and almost all of that into skimming itself, has taken place in an L1 context.

1.2.1 The process of reading

It is not easy to define reading. Urquhart and Weir (1998) spend nine pages attempting to do this, culminating in the following definition: “Reading is the process of receiving and interpreting information encoded in language form via the medium of print” (Urquhart and Weir 1998, p.22). This incorporates some of the essential features: reading is a process; it is based on language in printed form; the reader both receives information by decoding

language and also, importantly, interprets the information for his/her own purposes. Other definitions put greater emphasis on the reader's contribution to the process: according to Pritchard (1990, p.275), readers "use their background knowledge, the situational context, and the cues provided by an author to construct an interpretation of the meaning of the text." Prior knowledge, especially being positioned at the beginning of the definition, is given much greater prominence. This emphasis on what the reader brings to the process has been a salient feature of reading research over the last 30 to 40 years (e.g. Goodman 1967; Wilson and Anderson 1986). Moreover, Pritchard's definition, even more than Urquhart and Weir's, suggests the final outcome - the "interpretation of the meaning of the text" – may represent a significant development away from the original intended meaning of the writer, depending on such factors as the reader's prior knowledge and purpose in reading. Nevertheless, in both definitions reading is viewed as an interactive process between reader-based and text-based factors.

A weakness of these definitions is that they suggest that reading is a unitary process: yet reading researchers suggest there are different ways of reading, whether in terms of styles, skills, strategies, processes, etc. As Just and Carpenter write (1980, p.350):

There is no single mode of reading. Reading varies as a function of who is reading, what they are reading, and why they are reading it.

Urquhart and Weir (1998, p.101) themselves later write about five different "types" of reading: reading carefully at the local level; reading carefully at the global level; skimming; search reading; and scanning. Similarly, Carver holds the view that there is not just one reading process but five: scanning, skimming, rauding, learning and memorising (Carver 1990, p.14). Grabe and Stoller (2002) conceptualise seven reading types through their purpose:

1. Reading to search for simple information
2. Reading to skim quickly
3. Reading to learn from texts

4. Reading to integrate information
5. Reading to write (or search for information needed for writing)
6. Reading to critique texts
7. Reading for general comprehension

The three lists are obviously different to some extent but the message is the same: we read in many different ways. Notably, all three present skimming as one of these ways.

1.2.2 Reading Models

1.2.2.1 An overview

There has been much interest in the generation of reading models over the past 40 years. This is an extremely complex area and any attempts to summarise the field here are in danger of resembling gross caricatures. The recent history of reading models is often presented in the following terms (e.g. Hudson 2007). First, the “bottom-up” approach is given (e.g. Gough 1972). This view assumes that a reader constructs meaning from the text proceeding from letters and words to sentences, building the meaning in a linear fashion. Processes such as lexical access and syntactic parsing are involved. In the usual presentation of the history of reading models, this is followed by the “top-down” approach (e.g. Goodman 1967; Smith 1971), which emphasises the contribution of the reader to the reading process, particularly in terms of background knowledge. Using this knowledge, the reader forms hypotheses about the likely content, which are then confirmed/modified as the reader works through the text. Inferencing is thought to play an important role in top-down processing. The third phase in the standard history of reading models is the “interactive” view of reading, which sees the earlier models as too simplistic and suggests that reading is a combination of the features of both bottom-up and top-down processing.

In fact the whole idea of constructing a reading model is fraught with difficulty. In the first place, it will of necessity be a theoretical model and difficult to verify empirically since reading is a silent, internal process, unavailable for direct scrutiny. Some claim to have experimental evidence for their views but these are always questionable. For example, Just

and Carpenter (1980) base their theory on eye movement data: but they still have to make huge assumptions such as the eye-mind assumption – that the eye remains fixated on a word as long as the word is being processed. A second problem with understanding these models is that the descriptions given above are extreme simplifications of the field in which there are many variants of each type of theory. For example, while Gough (1972) and LaBerge and Samuels (1974) both present bottom-up approaches, the former emphasises phoneme-grapheme correspondence and a view of reconstructing an existing message based on information processing, while the latter focuses on automaticity in reading skills. Thirdly, the terminology is not very helpful. If bottom-up processing means beginning with the smallest text unit and building up from there, it would be reasonable to expect top-down processing to be the opposite, i.e. starting with the whole text. However, it does not seem possible for a reader to think in terms of the whole text and then individual paragraphs, etc. A more enlightening characterisation of these two approaches might therefore be to present them in terms of text-driven and reader-driven processes (Urquhart and Weir 1998). The text-driven reader processes the text guided by what s/he understands to be the writer's intentions whereas in reader-driven processing the reader approaches the text with his/her own agenda, which relates to background knowledge and perhaps also to the purpose of the reader. Reading might well be an interaction of these two types of processing, depending on the readers' background knowledge, purpose and preconceived ideas regarding the text.

At this point in our understanding of the reading process, it seems clear that the extreme versions of top-down and bottom-up models are not viable. In fact, there has been a movement back towards an emphasis on some aspects of bottom-up processing as the process of reading has been studied and understood better. Goodman's (1988) extreme top-down view of reading as hypothesising, sampling and confirming information using background knowledge has been found to be inaccurate. Eye movement research (Just and Carpenter 1980) has shown that all readers normally fixate most content words (over 80% in Just and Carpenter's study) and about 40% of function words such as articles and prepositions. Moreover, good readers do not guess what will appear next in a text and in fact make less use of context than poor readers (Underwood et al. 1989). The speed at

which much reading takes place is explained, not by guessing and sampling, but by the concept of automaticity – that through many hours of reading, lexical access becomes automatic, leaving the reader with greater resources to deal with other aspects of reading, particularly comprehension (Pressley 1998).

Thus many reading researchers favour the interactive view (e.g. Carrell, Devine and Eskey 1988). However, this again is by no means clear and easy to grasp. Researchers write about “interaction” but there are many ways in which all these interactions could take place. Hudson (2007) finds there are three major foci for interaction. The first emphasis is on the interaction between the various elements that make up the reading process. This in itself falls into various types. One type deals particularly with the automaticity of processing (e.g. McClelland and Rumelhart 1981); another with the interaction of reading strategies (e.g. Stanovich’s interactive-compensatory model – 1980); a further type concerns the interaction of different types of processing, occurring in parallel (e.g. Taylor and Taylor 1983). The second emphasis identified by Hudson is on the interaction between the reader’s background knowledge interpretations and the writer’s intentions in producing the text. For Smith (1994), there is no one-to-one correspondence between the surface structure of language and meaning. What is important in reading in this view is sampling the text, making predictions about the meaning and then evaluating these through subsequent reading. The third orientation to reading that Hudson lists assumes the necessity of taking into account the social context of reading (e.g. Street 1993). In this view, it is necessary to consider literacy within the context of its personal, social and political roles. Moreover, it is important to take into account literacy practices which vary from culture to culture.

Although reading is evidently an interactive process, this interaction works on several different levels and it would be difficult to construct an all-embracing model, particularly since the interactions probably operate slightly differently depending on a number of factors which include the reader’s aims (e.g. for general understanding or for a specific purpose), involvement in the text (active or passive), the level of difficulty the reader encounters, the familiarity of the topic and text type, and affective factors such as

motivation, interest and alertness. Though each model draws on previous ones, it cannot be said to replace them because each one describes a slightly different aspect of reading. Thus, “each model provides unique information about the reading process not found in the other models” (Samuels and Kamil 1988, p.34) and is helpful in deepening our understanding of the reading process.

As is clear from the above discussion, this study is located within the tradition of reading as information processing, focusing on the individual reader (Grabe and Stoller 2002). This is not to deny the importance of other views of reading such as that represented by the new literacy approach with its emphasis on social context (e.g. Street 1993). In this view, cognition cannot be separated from its social and cultural context. It is not possible to examine literacy per se but only in the context of a literacy event and the social, personal, and political roles played in this event. Moreover, literacy practices are based on social assumptions that have been internalised. There are many social conceptions such as whether one reads suspiciously and critically, and the genres one selects. In this perspective, what Street (1993) refers to as the ‘autonomous’ model of literacy is rejected. Street elaborates on the meaning of this phrase: texts are de-contextualised as if they had independent meaning; readers are treated as though they can be separated from the society that gives meaning to their uses of literacy; and cognitive skills are also treated autonomously. Evidently, it is extremely useful to understand the impact of social factors upon reading development and the relevance of social contexts in which reading takes place. However, the perspective of the present study is that there are aspects of reading, such as reading speed, that can usefully be isolated and studied within the information processing paradigm. In fact, the issue of context is a complex one: texts studied in class and in exams have not been *de*-contextualised, but *re*-contextualised, a factor that researchers and teachers need to take into account.

1.2.2.2 Schema theory

Grabe and Stoller (2002, p.34) speculate that “skimming a text for the main idea is likely to involve processing that appears to be much more top-down in nature”, but offer no

empirical evidence for this and naturally couch it in hedging. Nevertheless, it might be possible to investigate the use of top-down processes. One much-cited example is schema theory.

There is now much research pointing to the importance of background knowledge in the reading process (e.g. Anderson and Pearson 1988; Long, Johns and Morris 2006; Rapp et al. 2007). Afflerbach (1990) studied the influence of prior knowledge on expert readers' main idea construction strategies. The study examined the influence of prior knowledge in situations where the main idea was not explicit in the text. The participants, anthropology and chemistry students, read from texts belonging to both subject domains. Thus they read some texts for which they had a great deal of prior knowledge and other texts for which they perhaps had very little. Afflerbach found that "subjects with more prior knowledge for a text were more likely to construct the main idea automatically, whereas subjects with less prior knowledge were more likely to use a cognitive strategy (draft-and-revision)" (ibid. p.40). With the latter strategy, the reader stored a main idea about the unfamiliar text and then returned to the text, and revised the statement as and when necessary. The task of constructing a main idea was thus broken down into two more manageable subtasks (ibid. p.40). However, in the case of automatic construction, the process is simply not described by the subjects in their verbal reports. He speculates that readers reading texts from familiar content domains may not have to construct main idea statements at all: they may map the incoming text information onto already existing schemata.

What becomes clear from this research is that, when reading for main idea construction in unfamiliar domains, the cognitive resources of the readers are far more stretched, well illustrated in the following example (Afflerbach 1990, p.43) from a protocol by an anthropology student reading a chemistry text:

the two sentences are very / I think / too compact / in terms of they're trying to get too much information out at one time / and it's kind of overloading the old / senses right now

There is compelling L1 research evidence that reading a familiar text is faster in a study by Klusewitz and Lorch (2000). They refer to eye-tracking studies (for example by Hyona and Niemi 1990) which demonstrate that re-reading is faster than initial reading for two reasons: firstly the fixated content is processed more quickly and secondly less content is fixated. Klusewitz and Lorch (2000) asked their subjects to find information as quickly as possible in extensive reading texts 13 to 14 pages long. They found that with no prior exposure to the text, searchers took an average of 135 seconds to find the target information. However, after reading the text and searching it several times, the search time was reduced to only 29 seconds. They conclude that “this result is consistent with the repeated finding that readers speed up across successive readings of the same text under the same task goals” (Klusewitz and Lorch 2000, p.674).

Thus previous knowledge has a huge impact on reading and the reading process is an interaction between this knowledge and the reader’s processing of the text itself. In research over the past twenty to thirty years, schema theory has been a metaphor used to refer to prior knowledge in comprehension and indeed many studies into the effects of background knowledge have centred on schema theory (examples of L2 studies include Hudson 1982 and Carrell and Eisterhold 1988). In their seminal article, Wilson and Anderson (1986, p.33) offer the following explanation of schema theory:

Schema theory explains how people’s existing knowledge affects comprehension. A schema is an abstract structure of knowledge. It is structured in the sense that it indicates relations among constituent concepts. It is abstract in the sense that one schema has the potential to cover a number of texts that differ in particulars.

In their characterisation of schema theory, the concepts that make up the schema provide slots that can be filled with specific information given in the text. Different people will bring different schemata to the reading of the same text, based on their individual experiences. Still, “the knowledge a reader brings to the text is a potent determiner of how that text will be comprehended” (Wilson and Anderson 1986, p.34). Schema theory is contrasted with the more traditional text-driven view of reading – that it is an accumulation

of the meaning of the words to form clauses and clauses to form sentences etc. According to schema theory, such a view does not adequately account for the way we comprehend text. Thus, “as a person reads, the interpretation of what a segment of a text might mean depends both on analysis of the print and on hypotheses in the person’s mind” (ibid. p.35).

A number of additions have been made to the basic notion of schemata. For example, Carrell (1983) distinguishes between formal and content schemata. Formal schemata give knowledge of the rhetorical structure of texts. In another article, Carrell (1988, p.4) adds “linguistic schemata”, by which she means “the reader’s prior linguistic knowledge.”

While schema theory has a superficial attraction – it seems intuitively right that background knowledge has an impact on reading – it is not easy to quantify its importance precisely. In Clapham’s study of the effect of background knowledge on reading comprehension in the IELTS examination, she concludes that “background knowledge plays a key part in the reading process” (Clapham 1996, p.194). However, she is unable to support schema theorists in their view of how this works since we do not know enough about the cognitive processes of the brain. In relatively simple examples, such as the “Ship’s Christening” (Anderson and Pearson 1984), weddings (Steffensen and Joag-Dev 1984) or funeral rites (Pritchard 1990), schema theory can be applied persuasively, but Clapham (1996, p.194) illustrates the difficulty of applying the theory to complex texts since “it is not just one schema that must be activated but many.” She concludes:

Whatever the factual processes involved in reading comprehension may be, the value of schema theory to applied linguists is that it proposes formal structures for the acquisition and retrieval of knowledge, and thus gives some form to the amorphous notion of background knowledge. (Clapham 1996, p.194)

Thus she comes to a positive conclusion regarding schema theory, despite her admission that it cannot tell us how such schemata are applied in complex situations. A more sceptical view would be that schema theory is simply a way of referring to background knowledge and in fact fails to give such knowledge “form” which might be useful for

research purposes. It can appear to provide a satisfactory explanation in restricted circumstances but, as Urquhart and Weir (1998, p.70-1) point out, “L2 researchers entertain remarkably loose notions of the whole concept” since schemata are rarely described in any detail and are regarded as fluid and constantly developing, thus extremely difficult to study.

More recently, there has been a tendency to be sceptical about the claims of schema theory to the point where Grabe (2009) can say that contemporary reading research overviews (such as Traxler and Gernsbacher 2006) play down the significance of this theory (though this is not true of all overview publications, e.g. Hudson 2007). Nassaji (2007) finds significant difficulties with schema theory’s view of how knowledge is used in comprehension. Firstly, the idea that knowledge exists in pre-existing formats provides a very static and inflexible view of the role of knowledge. Secondly, the emphasis on schema activation, rather than creation, leads ultimately to a vicious circle: schemata are activated by the text but the reader cannot read the text unless the schemata are activated. Thirdly, Nassaji regards the emphasis on top-down processing as excessive since readers do visually process a large percentage of individual words in a text (Just and Carpenter 1980).

Thus the explanatory power of schema theory is doubted by some researchers. Nassaji makes an important distinction between “*background knowledge* and *a theory of that knowledge*” (Nassaji 2007, p.81 – his italics). While it is possible to have doubts about the value of schema theory as a theory of how background knowledge works, it is nevertheless quite legitimate, indeed essential, to regard background knowledge itself as extremely important in the reading process.

1.2.3 L2 reading

Many researchers point out the key differences between L1 and L2 reading (e.g. Grabe and Stoller 2002; Koda 2005; Hudson 2007). Firstly, L2 readers can make use of their earlier experience of reading as they are likely to be already literate in their first language, unlike beginning L1 readers. In the case of L2 readers, there may (or may not) be a transfer of reading skills to the L2 context, which may (or may not) prove helpful. Secondly, L1

readers normally have a well-established knowledge of their language through oral communication whereas L2 readers often do not. The result is that the emphasis is different in each case: the L1 reader is learning to make the link between what is already known orally and the printed word; the L2 reader is still building the linguistic foundations of the L2. Thirdly, in L1 reading it is assumed that only one language is involved whereas in L2 reading at least two languages are involved. Fourthly, there is likely to be a huge cognitive difference between the typical young L1 beginning readers and older, possibly adult L2 readers. Such differences must undoubtedly have an impact on the way the L2 reader reads and make us question the validity of L1 reading models in an L2 context. For example, as Grabe and Stoller point out, the interaction of two languages has a potentially wide-ranging impact, affecting among other things, “word recognition, reading rate, the organization of the lexicon, the speed of syntactic processing, strategies for comprehension” (Grabe and Stoller 2002, p.54).

A key question that has occupied researchers in the field of L2 reading is the exact cause of the difficulties that L2 readers face. As Clapham (1996, p.34) writes: “It is now generally accepted that low level language learners do not read in the same way as native speakers, although it is not known in what way they differ.” The classic question was posed by Alderson (1984): if L2 readers are struggling with their reading, is this a reading problem or a language problem? Despite its apparent simplicity, this question does cut through to the core of this issue. Alderson (1984, p.4) puts forward several hypotheses which spring from his initial question:

1. Poor reading in a foreign language is due to poor reading ability in the first language. Poor first-language readers will read poorly in the foreign language and good first-language readers will read well in the foreign language.
2. Poor reading in a foreign language is due to inadequate knowledge of the target language.

He further suggests two more hypotheses, based more specifically on reading strategies:

- 1a. Poor foreign language reading is due to incorrect strategies for reading that foreign language, strategies that differ from the strategies for reading the native language.

- 2a. Poor foreign language reading is due to reading strategies in the first language not being employed in the foreign language, due to inadequate knowledge of the foreign language. Good first-language readers will read well in the foreign language once they have passed a threshold of foreign language ability.

Taking the view that the problem is primarily linguistic, Yorio (1971, p.108) holds that “the guessing or predicting ability necessary to pick up the correct cues is hindered by the imperfect knowledge of the language.” Similarly, Clarke (1980) has argued that there is some sort of linguistic threshold that students have to reach before they can bring their first language strategies to bear. Without this, even a good reader’s system of reading is “short circuited”, resulting in a reversion to poor reader strategies when confronted with a difficult text. More specifically, a low level L2 learner cannot decode enough of the graphic and lexical symbols to be able to bring top-down processing systems into use. Eskey (1988), while not ignoring the importance of top-down processing, considers that accurate decoding is essential for all readers, and this has to become automatic for L2 readers to read in the same way as native speakers. Other research (e.g. Cziko 1980, McLeod and McLaughlin 1986 and Bossers 1992) has supported the threshold hypothesis though there have been methodological concerns (e.g. Clapham 1996) such as the suitability of miscue analysis (Cziko 1980) for identifying reading processes. Further studies suggest that L2 knowledge accounts for 30% to 40% of L2 reading variance (e.g. Bernhardt and Kamil 1995; Carrell 1991).

Although there is robust evidence of the need for a minimum L2 proficiency, it is very difficult to establish what might constitute such a linguistic threshold. Koda (2005) points to the danger of oversimplification in this complex area, stating that in the research the constructs of reading and L2 proficiency are operationalised unidimensionally: L2 proficiency is often operationalised as knowledge of vocabulary and/or grammar while reading is understood to be an ability to comprehend the main text ideas. Thus there is a need for “more finely grained” analyses to identify the specific L2 linguistics requirements for reading competence, as well as a wider understanding of reading of various types and for various purposes, (including skimming for gist).

On the other hand, there has been some research supporting the notion that the short-circuiting can be overridden by the use of relevant schemata. Hudson (1982) found that schemata-activating training appeared to help lower level learners but had no effect on advanced learners. He concluded that, while advanced learners already had systems for calling up the relevant schemata and so were unaffected by the preparatory tasks, in the case of lower level learners, the short circuiting problem was at least partly overcome by the training.

With regard to reading skills, the metaphor that has been commonly used (e.g. Clarke 1980, Walter 2004, Koda 2005) has been that of “transfer” – i.e. that L2 readers need to transfer the skills they have acquired in their L1 to the L2 context. Coady (1979) held that many reading skills transfer automatically from the L1 to the L2, providing that the language skills were of a sufficiently high level. However, the weaker reader would be prevented from using such skills as inference and prediction because of an inability to decode the language. He states (1979, p.12):

We have only recently come to realize that many students have very poor reading habits to transfer from their first language, and thus, in many cases, we must teach reading skills which should have been learned in first language instruction.

Cummins (1979) similarly favours the notion that the L1 development is the crucial factor, referring to “developmental interdependence”. He contends that the levels of L2 reading competence gained by bilinguals are determined largely by the L1 capability they developed prior to L2 exposure. The view is supported by empirical research that demonstrates a high correlation between L1 and L2 reading abilities among school-aged English learners (e.g. Cummins 1979). In addition, investigations concerning age differences in L2 achievement show a positive correlation between learners’ ages and their L2 proficiency (e.g. Skutnabb-Kangass and Toukoma 1976) – older students who have greater L1 literacy experience develop L2 reading competence more quickly. However, methodological issues cast doubt on the validity of some of this research. Much of it is

purely correlational. A further complicating factor arises in that we need to take into account the relationship between the languages across which transfer is expected to occur. As Hudson writes, differences in areas such as morphology and orthography may actually require different strategies and transfer may be counter-productive. Indeed, low second language proficiency readers may rely excessively on first language reading strategies. A further compounding factor is that learners in higher education may be engaged in distinct genre types and reading tasks that they have not encountered in their first languages so no transfer will be possible. Nevertheless, there have been further studies suggesting that once readers become more advanced, first language ability becomes increasingly important since there is a strong relationship between L1 and L2 reading for higher level learners (e.g. Perkins, Brutton, and Pohlman 1989; Carson et al. 1990).

More recently, Walter (2007) has challenged the notion of transfer, preferring to speak of access to a skill that already exists but is non-linguistic. This is based on the view that comprehension is a general cognitive skill, which works in the same way regardless of mode, e.g. reading a book, hearing a talk or looking at picture stories. In this view, the skill of comprehending texts is not linguistic: though it does develop with L1 reading, it is nevertheless independent of it. Thus, when reading in an L2, the reader needs to access this already established, amodal comprehension skill.

In summary, it appears that both L2 linguistic ability and comprehension skills (whether carried over from the L1 or accessed from an amodal comprehension skill) are at work in L2 reading. The exact nature and degree of these influences is still unknown but in any case is likely to vary from learner to learner. What does seem clear is that at the lower level, the L2 reader's effort and attention are so devoted to lexical access and decoding of basic propositions that the working memory's resources are drained so that higher level processing cannot take place. A level of automaticity is required, though what that level is cannot be determined and may vary with individual and reading task.

1.3 Skimming

1.3.1 Skimming Defined

There are three key elements to the definition of skimming: purpose, selectivity and speed. Firstly, it may be defined in terms of its purpose. Urquhart and Weir (1998, p.102) offer the following definition of skimming: “Reading for gist. The reader asks: what is this text as a whole about.” They continue by saying that the aim is “quickly to establish discourse topic and main ideas” (ibid. p.123). Carver (1992a, p.85) also suggests readers may skim “when they only need an overview.” Similarly, Masson refers to “occasions a reader is interested in obtaining . . . the gist of a story in a short time without carefully reading each sentence” (Masson 1982, p.400).

The word “gist” is widely used in relation to skimming, though attempts to define what it means are rare. For Kintsch, it is synonymous with the macrostructure of a text. Thus he contends that “for comprehension and memory, the gist of a text – expressed formally by the macrostructure – is usually what matters most” (Kintsch 1998, p.67). The macrostructure consists of the combined macropropositions which are derived from the text by applying certain summarisation rules. However, it can be argued (e.g. Koda 2005) that this model does not adequately account for the fact that different readers can produce different interpretations of the same text. With this in mind, Koda suggests that gist might be defined as a reader’s summary of what s/he considers to be the main information that the writer wants to convey.

Apart from gist extraction, other purposes for skimming are cited in the literature. For example, Urquhart and Weir (1998, p.213) include the use of skimming “to decide the relevance of texts to established needs”. The reader may skim to decide whether a text is worth reading in detail, or to work out which parts of a text merit careful study. In this case, the main aim is not “to learn about the topic” but rather “to learn about the texts” (Reader and Payne 2007, p.269). The need for such reading has increased enormously with the development of the World Wide Web. Payne (n.d.) points out how for students the problem has moved from the difficulty of finding relevant information in the past to the availability of more relevant texts than anyone can study in the time available. Thus “in an

information-rich and time-limited environment rational readers will attempt to glean as much information from a document in as short a time as possible” (Duggan and Payne 2006, p.731).

Apart from by purpose, skimming can be defined by a number of essential characteristics. One key characteristic is that it is selective – parts of the text are unread or at least little attention is paid to them. There is much agreement about this: skimming “requires selective processing” (Masson 1982, p.400-1), with the reader “looking at fewer words” (Just and Carpenter 1987, p.434) and frequently “skipping” (Carver 1990, p.131). Indeed, Grabe and Stoller (2002, p.13) highlight the role of sampling in their brief definition of skimming, which, they say, is “sampling segments of the text for a general understanding.”

Finally any definition of skimming must include the notion that it is fast reading: reading for gist at normal reading speed does not constitute skimming. Carver describes it as the second fastest reading process, slower only than scanning (Carver 1990); Masson describes skimming as a “rapid reading technique” (Masson 1982); and this idea is supported by Just and Carpenter (1987). In fact there is unanimity that skimming is fast reading: it is considerably faster than normal reading. However, it proves to be very difficult to define *how much* faster skimming is than normal reading. It has to be admitted that this is a serious weakness in the definition since we have no objective means of deciding where fast reading becomes skimming. Thus the judgment as to whether a person is actually skimming in a given situation is subjective.

Nevertheless, we are now in a position to put forward a tentative definition of skimming: skimming may be defined as the fast, selective reading of a text for gist and other purposes.

1.3.2 The relationship between skimming and “normal” reading

Having considered reading models (1.2.2) and the definition of skimming (1.3.1), the question arises as to how reading research relates to skimming. What quickly becomes apparent when studying the literature is that very little is known about skimming.

Importantly, there is no empirically-derived model of how it works. Many of the models of reading devised so far by psychologists, based on experimental data, have been concerned only with careful reading and not with skimming (Urquhart and Weir 1998). As an example, Rayner and Pollatsek (1989) state that for most of their account of the reading process they were focusing on the skilled, adult reader, reading textbook-type material. Such models may tell us little about how skilled readers manage other types of reading such as skimming.

A key issue is whether skimming is simply a variant of “normal” reading or something so different that an alternative model is required. On the one hand, Just and Carpenter (1980), while conceding that a reader who skims a passage for the main point reads differently from someone who is trying to memorise the passage, nevertheless claim that all of these variations can be accommodated within their theoretical framework. Conversely, Carver (1990, p.13) claims that “skimming and learning from prose involve different types of reading processes.” He maintains that there are different reading rates depending on the reader’s purpose and that the process is different in each case: thus, it is misleading to talk about “*the* reading process” as if there is only one. Carver (1990) claims that there are five quite distinct basic reading processes: scanning, skimming, rauding, learning and memorising, each with its own goals. Thus, research results concerning one of the processes will not necessarily generalise to another (Carver 1990). Moreover, although good readers typically read at a constant rate, they change process, or “gear”, according to their purpose. In Carver’s analysis of reading types, skimming lies between scanning and rauding in terms of speed.

Several aspects of Carver’s work are relevant to this study of skimming, including the concept of “normal reading” or “rauding” as he refers to it. It is of significance since skimming is often compared with normal reading. In fact, this type of reading is referred to in various ways in the literature. Urquhart and Weir (1998) use the term “normal reading” but also “careful reading”, possibly borrowed from Rayner and Pollatsek (1989) who use the latter term to refer to the detailed reading of textbooks. Urquhart and Weir (1998) also associate careful reading with the reading of textbooks and give some of its characteristics:

it is non-selective; text-driven (the reader accepting the writer’s organisation and understanding of what is important); and based on building up the macrostructure using the majority of information in the text. Thus they link careful reading with a particular process and purpose in reading. However, they give no indication of the basis for these assertions about careful reading and it is unclear whether their basis is empirical research or simply intuition. On the other hand, Just and Carpenter (1987) introduce the term “normal readers” (e.g. p.425) in order to make comparisons with skimmers and speed readers, but again no explanation is given, as if such a phrase is unproblematic. In this case, the purpose of the term is to indicate a particular *speed* of reading which is assumed to be fairly constant.

Table 1.1: Reading speeds for normal reading

Source of Information	Normal Reading Speed (wpm)
Laycock (1955) – figure for “flexible readers”	231
Masson (1982)	232
Carver (1990, p.14)	300
Dyson and Haselgrove (2000, p.215)	244
Just and Carpenter (1987, p.433)	240
Muter and Maurutto (1991)	211
*Fraser (2007)	182.5

*This is the only study in which the figures are for L2 reading

The researchers into skimming discussed later in this chapter all accept the concept of normal reading and cite mean speeds for their participants, given in Table 1.1 above. The mean of the six scores in the table for L1 readers (i.e. excluding Fraser 2007) is 243 wpm. This accords well with other researchers (e.g. Pressley 1998; Grabe and Stoller 2002) who suggest a normal reading rate of around four words per second, or 240 wpm. It thus appears that reading speeds are fairly consistent and that it is possible to refer to “normal reading”, though it need not be the same for each person and may vary according to factors such as reading material and reader’s exact aim.

If normal reading does exist, then the question to consider is how it is distinguished from skimming. Carver appears to be the only researcher who presents some kind of systematic

way of distinguishing between normal reading and skimming. According to Carver, normal reading, or rauding as he calls it, operates at a speed of around 300 wpm if the content of the text is not too difficult for the reader. On the other hand, skimming operates at a speed of around 450 wpm. Thus, in Carver's paradigm, if a participant is asked to skim read a text, but only reaches a reading speed of 300 wpm, then it is the rauding process and not the skimming process that is engaged. In this view, a reader invokes the reading process that they see fit for their purpose. Consequently, even though the reader is asked to skim read, the difficulty of the text, or in some cases the nature of the task (e.g. memorise the main points and the details) may trigger a shift in gear downwards. Based on this, if Carver's perspective is accepted, the dividing line between normal reading and skimming is clearly delineated and easily applied to specific cases. In his major study (Carver 1990), he surveys a large number of reading research papers, re-interpreting them through the prism of his own perspective which, he concludes, is re-affirmed. However, it might be pointed out that there is a cyclical element to his argument. If a putative skimmer reads at a rate more akin to rauding, Carver will say that s/he has changed reading processes from skimming to rauding. However, it is very difficult to see how his argument could be falsified. One would need to prove that the participant was not rauding but was in fact skimming: that would be extremely difficult to do since there is no clear way of distinguishing between the two empirically. Some researchers accept his system: Fraser (2007), for example, working with L2 participants, concludes that, since for the skimming task their reading speeds were considerably less than 450 wpm, there were therefore not skimming (Fraser 2009). Carver's system is consistent within its own parameters but is extremely rigid and inflexible.

Thus, the relationship between reading models based on normal reading and skimming is a further complicating factor and difficult to resolve given the lack of research into skimming.

1.3.3 Skimming Operationalised

In theory, there are at least two possibilities regarding the operationalisation of skimming. One is that skimming proceeds with evenly spaced saccades - the jumps between eye fixations – with the spaces being greater and/or the fixations shorter than in normal reading. Alternatively, it may be that skimmers spend longer on certain parts of the text, in fact reading them at more or less normal reading speed, but then skip sections deemed to be less useful.

Urquhart and Weir (1998, p.213) appear to support the latter view, suggesting that readers go through the text, looking for anything that might give clues as to the main ideas of the text without having to read it through word by word. Examples include reading titles and subtitles, identifying key discourse markers, and glancing at any non-verbal material. Van Dijk (1977, p.79) supports the idea of discourse markers helping the reader, citing as examples “The crucial point is . . .” and “And then the most important thing happened . . . etc.”

Within the text itself, Urquhart and Weir (1998) mention certain locations which are likely to have gist-related material, such as the introductory and concluding paragraphs. In his research into skimming, Payne (n.d.) noticed that participants spent a disproportionate amount of time on the first pages of documents. This could have been simply because the first pages yielded the most valuable information. To investigate this, he split each document in half and yet presented it as if it was a separate document. In this case, participants allocated extra time to false first pages just as they had to real first pages, suggesting that skim readers tend to allocate additional time to certain parts of the text that they expect to yield gist-relevant information. (An alternative explanation that Payne fails to mention is that the reader reads more slowly at the beginning of a text until topic, style, etc. become established in his/her mind.)

Other possible loci of gist-related material are first and last sentences of paragraphs (Urquhart and Weir 1998). However, the first sentences will not always yield gist-rich information: as Wilson and Anderson (1986, p.45) write, “Regrettably, too many texts do

not have optimal structures.” Braddock (1974) examined adult expository reading materials (for example, essays from periodicals such as *The Atlantic* and *The New Yorker*) and found that only 30% of all paragraphs had a simple topic sentence. On examining the location of these sentences, he found that only 13% of all the paragraphs he studied opened with a topic sentence. He concludes: “it is abundantly clear that students should not be told that professional writers usually begin their paragraphs with topic sentences” (ibid. 1974, p.301). Similarly, Baumann and Serra (1984) examined main ideas in children’s social studies textbooks and found that, of the 294 paragraphs that were examined, only 80 paragraphs, or 27%, had simple main ideas stated at the beginning of the paragraph (ibid. p.34).

However, Smith (2008) has challenged the findings of Braddock (1974) and of Baumann and Serra (1984). His basic premise is that the unit of the paragraph is unsuitable for gauging the presence of topic sentences. Frequently in the texts they used, paragraphs are very short and form part of a larger unit, referred to by Smith as a “discourse block”, which may consist of two or three paragraphs with one topic sentence for the whole block. In his study of 25 articles from *The American Heritage* and *American History Illustrated*, he found that 95% of all discourse block units contained an explicit topic idea and in approximately two thirds of instances those ideas were at the beginning of the discourse block. Smith’s insights are useful in giving a more complete picture of how topic sentences operate. Their use will also depend on the genre of the writing. Popken (1991), for example, found they were less frequently used in technical writing.

Though Smith (2008) contradicts the findings of the earlier researchers, particularly in his insistence on the significance of discourse blocks, it can nevertheless be concluded that simply relying on reading the first sentence of each paragraph in the manner prescribed by many EFL textbooks (see Chapter 2) is quite inadequate as an effective operationalisation of skimming.

In conclusion, though there may be differences in opinion about exactly *what* should be sampled in order to derive the gist, there is largely agreement that readers do sample parts

of the text fairly carefully and skip other parts. Grabe and Stoller (2002, p.13) summarise it this way:

It involves, in essence, a combination of strategies for guessing where important information might be in the text, and then using basic reading comprehension skills on those segments of the text until a general idea is formed.

1.3.4 Skimming as a skill/strategy

Much of the literature is unclear about the difference between strategies and skills. For example, Alexander and Jetton (2000, p.295-6) write that “the same procedures . . . can fit under both the skill and strategy categories. The appropriate label rests on whether the reader consciously evokes the procedure or is simply functioning in a typical, automatic way.” Similarly, Paris et al. (1996, p.611) state that “skills are applied to text consciously” while “strategies are actions selected deliberately”. They even go so far as to say that “an emerging skill can become a strategy when it is used intentionally” and thus “strategies are skills under consideration” (Paris et al. 1996, p.611). On the other hand, Grabe and Stoller (2002, p.15) disagree with this conscious/unconscious distinction, saying that, for example, strategies such as skipping unknown words may become relatively automatic in fluent readers. Therefore, “the distinction between skills and strategies is not entirely clear” (ibid.). Similarly Richards et al. (1985, p.274) include in their definition of strategies “those conscious or unconscious processes which language learners make use of in learning and using a language.”

Nevertheless, the distinction is clearly important for pedagogical purposes – the methods for teaching and acquiring skills and strategies may well be very different (Koda 2005). This distinction may be significant for research too: one of the main methods of investigating strategies/skills is verbal protocols – the oral reports of the subjects. Applying this distinction, strategies can be investigated in this way because, being “conscious and deliberate, they are open to inspection” (Paris et al. 1996, p.611). Conversely, if skills operate automatically, without the conscious attention of the readers,

then it follows that they may not be able to give reports about their behaviour with regard to the use of skills. Thus, in terms of methodology, researchers might be restricted to investigating skill outcomes rather than processes.

Urquhart and Weir (1998) attempt to make some distinctions between the two for the purpose of clarity by proposing several distinguishing features but unfortunately fail to achieve lucidity. Firstly, Urquhart and Weir claim that “strategies are reader-oriented, skills are text-oriented” (Urquhart and Weir 1998, p.96). When they apply this distinction to Munby’s list of skills (from Munby 1978), they find that not all of them are text-oriented. They take this as an indication that “Munby’s list of ‘skills’ does, in fact, include a number of ‘strategies’ such as scanning and skimming” (Urquhart and Weir 1998, p.97). Of course, it is possible that Munby’s list needs to be refined. But it is also possible that the distinction that Urquhart and Weir make is an artificial one.

The second distinction Urquhart and Weir make is between consciously-deployed strategies, and skills that are used unconsciously. Some problems with this distinction have already been pointed out, and Urquhart and Weir themselves are aware of certain problems here. For example, is re-reading a skill or strategy? It tends to appear on lists of both: for example, on Munby’s 1978 list of skills and on the strategy lists of Olshavsky (1977) and Sarig (1989). Regressions reported in eye movement research could be regarded as re-reading but it might be very difficult to tell whether these were being done consciously or unconsciously. Still Urquhart and Weir conclude, somewhat lamely, “the criterion of ‘conscious’ v ‘automatic’ seems a good one to us” (ibid. p.98). In the light of criticisms they themselves make, in addition to the ones given above, the argument for this distinction is unconvincing.

The third distinguishing feature put forward by Urquhart and Weir is that “strategies, unlike skills, represent a response to a problem, e.g. failure to understand a word etc.” (ibid. p.98). Here again they realise that there are difficulties. First of all, we have to understand what constitutes a ‘problem’. They interpret it in the widest sense as used by Olshavsky (1977) and say “a problem may be anything in the task environment which stands between the

organism and its goal” (ibid. p.98). What then can be said of fluent skilled readers who may rarely encounter ‘problems’ during reading? Urquhart and Weir’s distinction appears to imply that such readers, when not meeting any difficulties, will have no use for strategies, a rather unlikely conclusion and not one supported by researchers in the field who make distinctions between the strategy use of good and poor readers (e.g. Anderson 1991).

Koda (2005, p.211) has a different approach. Firstly, she prefers to use *intention* rather than *activation* as the key criterion. With this as the basis, she states that “reading actions . . . can be interpreted as strategies when executed intentionally” while skills relate to “what readers actually do to achieve their intended actions.” In other words, it depends on whether we are referring to the reader’s intention (i.e. strategy use) or to what the reader actually does (i.e. skill use). As an example of how this separation might help to analyse complex procedures in reading, she cites lexical inference. Technically, she maintains, it is neither a skill nor a strategy. If the reader has the intention of defining an unknown word rather than skipping it, this would be a strategic action. Nevertheless, in addition to the intention, auxiliary skills such as word segmentation would also be needed. She concludes by referring to the advantage of this view: “By dissecting skills and strategies, we may gain a far better opportunity to understand how reader-oriented behaviors facilitate comprehension” (ibid. p.211).

Koda’s distinction can usefully be applied to skimming. A reader, faced with a text, may have the intention of skim reading it for a variety of reasons, such as lack of time. Thus skimming might be the strategy adopted. However, a sub-set of skills is needed to execute this, such as well-developed inferencing skills to compensate for the words which are skipped. Such a distinction is potentially very useful for research into skimming. Firstly, we can conclude that, as with lexical inferencing in Koda’s own example, we do not need to try to make a decision as whether it should be classified as a skill or a strategy; it can be both. It depends on whether we are referring to the reader’s intention to use skimming (skimming as a strategy) or to what the reader actually does (skimming as a skill). Secondly, this distinction enables us to discuss the two aspects of skimming in a more

principled manner. Skimming as a skill can be researched in a different way from skimming as a strategy. The former could be researched by analysing the sub-skills that are used such as inferencing. Since this may well be done consciously, the process is likely to be available for reporting orally. Strategy research would investigate the intentions of readers and why skimming is the chosen strategy in particular situations. In addition, it would explore the strategic decisions made during skimming. Such information should be available for collection, for example through verbal protocols, since it is based on conscious decisions of the skim reader.

1.3.5 Strategy research

It was pointed out at the beginning of the previous section that researchers have produced conflicting definitions of strategies. Nevertheless, there do seem to be three core elements in these definitions: strategies are deliberate, goal/problem-oriented, and reader initiated and controlled (Koda 2005). Paris et al. (1996) outline several problems in strategy research, in addition to that of definition. Firstly, they claim that it is difficult to differentiate between specifically reading strategies and other types of processing such as thinking strategies. Secondly, it is difficult to demarcate one strategy from another as they commonly occur in sequences. Indeed should we view them as general tactics or analyse their multiple components?

Reading strategies have been identified and classified in a number of different ways, depending on the particular viewpoint of the researcher. Some classifications distinguish between cognitive and metacognitive strategies. Chamot and O'Malley (1994), for example, find three function-based groups of strategies; cognitive (used for accomplishing a specific cognitive task during reading such as inference or word-part analysis); metacognitive (used for regulating cognitive processing as in comprehension monitoring and repairs); and social and affective (used for collaborating with others during reading, such as seeking outside help). Other classifications differentiate between local and global processing. One example of this type is Anderson (1991) whose five categories include

paraphrasing (which helps with local information processing, e.g. through word-part analysis) and establishing text coherence (which helps with global text processing).

Such classifications have been instrumental in making distinctions between the strategy use of good and poor readers. It appears that experienced L1 readers use global strategies to a greater extent than local strategies, whereas weaker readers rely more heavily on local strategies (e.g. Myers and Paris 1978; Paris and Jacobs 1984). Beyond this, it is still difficult to make generalisations as to which particular strategies, or sets of strategies, enable reading to be effective. Koda (2005), using the commonly reported strategy of skipping words as an example, points out that we have no way of knowing why the reader used this strategy or whether it is an indication of reader confidence and competence – for example, knowing that particular words do not convey key information for the reader’s purpose – or reader incompetence – e.g., an inability to deal with unknown words. In fact, what is of importance is not the particular strategies used but competence in implementing and monitoring their use (Anderson 1991). Similarly, Paris et al. (1996, p.611) write: “Strategic readers are not characterized by the volume of tactics that they use but rather by the selection of appropriate strategies that fit the particular text, purpose and occasion.”

1.3.6 Skimming, scanning and search reading

Characteristic of the widespread imprecise understanding of skimming, many researchers and writers on reading fail to distinguish adequately between skimming and other forms of reading. Firstly, skimming and scanning are frequently confused. Scanning is defined by Urquhart and Weir (1998, p.103) as “reading selectively, to achieve very specific goals, e.g. finding the number in a directory, finding the capital city of Bavaria.” However, they refer to the IRA dictionary of reading terms (Harris and Hodges 1981) where examples of scanning include “to scan an article for the general idea, scan a directory for a telephone number.” According to the definition of skimming given earlier, reading quickly for the general idea is an example of skimming, not scanning.

It could be argued that searching for a particular detail may require skimming rather than scanning: while pure scanning requires only lexical access (e.g. “find the word ‘America’”), skimming is needed if semantic encoding is also involved (e.g. “find the country which . . .”). In the second case a little more than simply looking for a word is required. However, the semantic processing could well be minimal and a better term for such reading is “search reading” (Pugh 1978, p.53), which Pugh uses for situations in which “the reader is attempting to locate information on a topic when he [*sic*] is not certain of the precise form in which the information will appear.” He discusses the relationship between search reading and skimming and scanning, illustrated in Table 1.2 below, with the shaded areas highlighting the overlapping features.

Table 1.2: Comparison of skimming, search reading and scanning

	Skimming	Search Reading	Scanning
Purpose	Reading for gist	Reading to locate information of unknown visual form	Reading to locate specific information such as names, numbers, acronyms
Operationalisation	Fast reading, but paying closer attention to certain parts	Fast reading, but paying closer attention to certain parts	Fast searching to find visual match
Text Coverage	All	As much as is necessary	As much as is necessary

Search reading resembles scanning in function: in both the reader is looking for specific information. However, it differs from scanning in operationalisation in that, in the case of search reading, the reader does not know what visual form the information will take and so needs to take longer and pay closer attention to the text, at times even noting the way the author structures the subject matter. The operationalisation of skimming is to some extent similar, in that certain parts of the text will be examined more closely. However, the purpose is very different, in that the reader is no longer seeking predetermined information.

It may be that in practice there is a continuum between the two extremes of skimming and scanning, with search reading forming a bridge between the two. The less the reader knows

about the text itself and the information sought, the more closely the reading will resemble skimming.

As well as the imprecision in the understanding of skimming and scanning, further confusion surrounds the relationship between skimming and speed reading. Some reading researchers, such as Rayner and Pollatsek (1989), regard them as the same process: in their view, speed readers are intelligent individuals who already know a great deal about the topic of the text and so are able to successfully skim the material at rapid rates while accepting the reduced comprehension level. Regarding speed reading courses, they claim that what is in fact being taught is a method of skimming. Carver (1990, p.419) arrives at a similar conclusion at the end of a whole chapter devoted to speed reading: "If speed reading advocates would concede that what they are teaching is a type of skimming process . . . then there would not be any controversy about its merits." He explains what he means by this in similar terms to Rayner and Pollatsek (1989), claiming that speed readers, like skimmers, only sample the text and have to accept a loss of comprehension. Further support for this view comes from Just and Carpenter (1987) who made a detailed comparison of skimming and speed reading in their study, concluding that there were comparable losses in comprehension in the two groups of readers (see 1.4.3).

1.3.7 Inference-making

The ability to make inferences is crucial to success in skimming. As Just and Carpenter (1987, p.448) state: "Acquiring speed-reading skill consists of learning to infer connections between those segments of the text that happen to have been sampled." Because some of the text is skipped, much more must be inferred than is the case in normal reading.

Inference has been defined in several different ways: for example, "information that is activated during reading yet not explicitly stated in the text" (van den Broek 1994, p.556); "text based arguments and propositions that were not explicitly mentioned in the passage" (Singer 1994, p.480); and "any piece of information that is not explicitly stated in the text" (McKoon and Ratcliff 1992, p.440). The key features are that it is information not

explicitly stated in the text and the reader has to fill in the gap in order to make the inference. This broad definition covers both bridging inferences (in which the reader/listener automatically links propositional information despite the lack of explicit cues) and elaborative inferences (generated as a result of the reader's deliberate intention to expand on explicit textual information).

Despite its importance in reading, there have been relatively few experimental studies providing explicit training in inferencing. In fact it is not easy to separate it from other processing skills and strategies. Grabe (2009, p.214) concludes that it is better considered as “an overarching form of metacognitive processing” which engages many specific strategies, depending on a wide range of factors. Some of these factors are listed by Koda (2005), such as the physical proximity of the concepts to be linked, text structure, and the thematic status of individual text ideas, as well as reader characteristics (e.g. working memory and background knowledge). It is these very factors that determine whether skim readers can make the necessary inferences. Successful inference-making can be time consuming (Singer 1994) but when skimming, the amount of time available for making inferences is substantially reduced. Thus it might be expected that the inference-making ability would be impaired during skimming. Indeed, in relation to speed, Just and Carpenter (1987, p.253) say that generally “if a reader is . . . reading very quickly, then very few inferences will be drawn.”

From this discussion of inference-making it becomes apparent that: firstly, by its very nature, skimming will require an exceptional amount of inference-making; and secondly, again by its very nature, skimming makes inference-making more difficult than in normal reading. This in turn points to the importance for inference-making, and thus for skimming, of the various factors mentioned above, including topic familiarity.

1.3.8 Working Memory

The relationship between working memory and the reading process has assumed greater importance in recent years, with many new studies investigating the connection. Koda

(2005, p.203) writes that “the significance of working memory in reading is firmly established.” However, although there is widespread support for the importance of working memory within reading, its precise role is still open to debate.

A wide-ranging definition of working memory is given by Baddeley and Logie (1999, p.28):

it comprises those functional components of cognition that allow humans to comprehend and mentally represent their immediate environment, to retain information about their immediate environment, to retain information about their immediate past experience, to support the acquisition of new knowledge, to solve problems, and to formulate, relate, and act on current goals.

Thus working memory relates to the retention and processing of information immediately required, i.e. it is a “combination of a processing system and a storage system” (Walter 2004, p.318).

In their seminal paper, Daneman and Carpenter (1980) appeared to show that different levels of reading comprehension were due to differences in working memory capacity. In particular, they commented on “the trade-off between its processing and storage functions (ibid. p.450), claiming that “the more efficient processes of the good reader could be functionally equivalent to a larger storage capacity” (ibid. p.451). To test their ideas, they devised the reading span test: subjects were given sentences to read and were then required to recall the final word of each sentence. Sentences were divided into sets and the number of sentences in each set was increased so that the burden imposed on the memory’s storage function also increased. The reading span was calculated as the maximum number of sentences on which the subject could perform the task perfectly. In theory, those who used less processing capacity in understanding the sentences should be able to produce more sentence final words. They found significant differences between subjects’ working memory capacity and that these differences correlated with their performances in standard comprehension tests.

Gathercole and Baddeley (1993) point out the underlying principles of this research into working memory. Firstly, language comprehension involves both processing and storage. The lexical items need to be recognised and interpreted (processing) but intermediate representations that result from such processing also need to be stored for further processing later. Secondly, “a common pool of limited-capacity resources serves both kinds of activity” (ibid. p.222) so that there will be a trade-off between processing and storage whenever the reader’s resources are stretched. Thirdly, there are important individual differences in how well working memory functions which Daneman and Carpenter attribute to the efficiency with which those resources are deployed rather than variations in the total capacity.

Further studies appear to have given support for the concept of working memory with limited dual capacity. A recent example is Walter who found that “a higher verbal WM (ability to process and store complex information simultaneously) corresponds to being better at reading comprehension” (Walter 2004, p.331).

However, Daneman and Carpenter’s work has not gone unchallenged. Baddeley and Logie (1999) question the interpretation of the working memory measure. They suggest that the measure involves not only on-line processing and control but also short-term verbal memory. They claim that these two different cognitive demands are handled by separate components of working memory, namely the central executive and the phonological loop. In their own research they found that storage tasks had little impact on capacity, and conclude that there is minimal support for the view that processing and storage demands are competing for a single resource. A further concern is that the positive correlations between the working memory measure and reading comprehension tasks could result from the influence on both of a third, as yet unidentified, variable such as general intelligence (Gathercole and Baddeley 1993).

The underlying problem is the dependence of the working memory research into reading on correlations between working memory capacity and a reading comprehension measure. Firstly, as Koda comments (2005), the functions of working memory and general

underlying reading ability have been insufficiently differentiated so a measure of working memory might equally well be a measure of underlying reading ability. Thus if a subject has a low score on the working memory index and also a low score in a general comprehension test, we cannot tell whether this is because of the restricted capacity of working memory or simply poor underlying reading skills. Secondly, correlational data can suggest a link but they cannot provide a robust test of a causal relationship (Gathercole and Baddeley 1993).

Nevertheless, from the research it seems highly likely that working memory has a critical role in skimming. For example, if there is indeed a trade-off within working memory between processing and storage, the increased reading speed required for skimming, coupled with the need for greater inference-making, will put extra strain on the processing resources of the reader's working memory and may mean that the storage function of working memory operates less well.

1.4 Research into skimming

1.4.1 Introduction

Perhaps the most striking feature of skimming research is the paucity of it, especially in L2, a point on which researchers agree (e.g. Muter and Maurutto 1991; Payne n.d.). Some of the work done is associated with investigations into speed reading (Carver 1990, Just and Carpenter 1987). As well as this, there has been a minor revival of interest in connection with skimming using a computer (Muter and Maurutto 1991, Dyson and Haselgrove 2000). More recently, attention has been focused on rapid information gathering from multiple sources (e.g. Duggen and Payne 2006). All this research was carried out with native English speakers as participants. There appear to be only two published skimming studies using participants reading in an L2: Shin 2000 and Fraser 2007.

1.4.2 Early Research

Carver, in his thorough review of research literature on reading (1990), refers to some very early research which incorporated skimming, including Laycock's 1955 study. This involved two groups of college students – flexible readers (N = 37) and inflexible readers (N = 35) selected from a much larger group of 492 on the basis of their ability to speed up their reading when asked to do so. The two groups were asked to read in two goal conditions: “Normal” which approximated to normal reading (“read in order to answer simple questions afterwards”) and “Advanced” which approximated to skimming (“read as fast as possible without missing important points”). The speeds obtained for the two groups of readers are given in Table 1.3 below.

Table 1.3: Comparison of reading speeds for flexible and inflexible readers (based on data from Laycock 1955)

	“Normal” (normal reading) wpm	“Advanced” (skimming) wpm	Percentage Increase
“Flexible” readers	356	533	50
“Inflexible” readers	322	428	33

The speeds given for the participants are relatively high. However, it should be borne in mind that the readings were very short (the first card had only 98 words) and are described by Laycock as being easy to read. In terms of useful data for comparison with other research findings, the figures for the original diagnostic exercise (to make an initial distinction between flexible and inflexible readers) are more meaningful in that the texts were not quite as easy and they were roughly 2300 words in length. Figures for this part of the research are given in Table 1.4 below.

Table 1.4: Comparison of reading speeds for the diagnostic test (based on data from Laycock 1955)

	“Normal” (normal reading) wpm	“Advanced” (skimming) wpm	Percentage Increase
“Flexible” readers	231	420	82
“Inflexible” readers	219	255	16

Laycock studied eye movement during the reading: the key findings are given in Table 1.5 below.

Table 1.5: Eye movement data for flexible and inflexible readers (based on data from Laycock 1955)

	Flexible Group	Inflexible Group
Decrease in mean number of fixations	24%	17%
Decrease in mean duration of fixation	10%	4%
Decrease in mean number of regressions	33%	34%

The data in Table 1.5 highlight some of the key elements of skimming research, especially based on eye movement, such as the number and length of fixations. However, the mean on its own yields limited information. For example, fixations might be unevenly spread through the text, a feature which does not show up in this data.

This research, though restricted in scope, is nevertheless valuable in opening up some of the types of data that become available by means of eye movement research. It also gives some speeds for normal reading and skimming, which can be compared with data from other research (see 4.2.5).

A paper by Maxwell (1972) promotes the use of skimming for academic purposes. It discusses negative attitudes towards skimming, particularly the assumption of some students that it is always necessary to read every word in a text. Such students see reading as a means of gaining factual information from texts in order to achieve high grades and are afraid of overlooking key points when skimming. Maxwell asserts that such attitudes can be deeply engrained and difficult to change. She addresses what she refers to as six myths concerning skimming, the last of which is “If I skim, my comprehension will inevitably drop.” As part of this positive presentation of skimming as a necessary reading skill for students, she cites her own research in which students took an extended reading course, resulting in marked improvement. However, this extremely rare evidence of the efficacy of skimming training is undermined by the small sample size which she herself deems to be

“not high enough to be statistically significant” (Maxwell 1972, p.56). Unfortunately, there has been no further research to bear out her optimism about the effectiveness of skimming training as this has not been further investigated by researchers. Moreover, her assertion that skimming does not necessarily bring about a fall in comprehension runs directly against the findings of many of the skimming studies discussed later (in this and the following sections).

One of the most rigorous research projects to investigate skimming directly was carried out by Masson (1982). He addresses the following questions:

1. Can skim readers differentiate in the same way as “normal readers” between sentences that contribute to the macrostructure and those that do not?
2. Do skim readers vary the amount of time they spend on different propositions in a text depending on whether or not they contribute to the macrostructure?

In the first experiment, college students were given report-style narratives from *Reader's Digest* and newspaper stories. Half the students were asked to “read at the rate they would use to read a story for full comprehension” and the others were to “read at the rate they would use to comprehend the gist” (ibid., p.402) The mean reading speed for the “normal readers” was 232 wpm compared with 382 for the skimmers. After the reading they were all given a test based on three types of questions: gist, detail and inference. The results showed that when subjects increased their reading speed to obtain the gist only, scores on all types of questions suffered approximately equally. It appears that skimming resulted in skipping certain parts of the text somewhat indiscriminately, so that what was missed might be detail or might be part of the macrostructure.

The second experiment was similar to the first except that this time the subjects were deliberately “paced” – a tone was sounded when it was time to turn the page. Subjects were randomly divided into three groups and paced at different speeds; the average reading rates for each group were 225, 375, and 600 wpm. The comprehension results were similar to those in the first experiment: ideas which had been rated as belonging to the gist were

overlooked by the skim readers. Masson suggests the reason is that “reading-time constraints seem to force readers to sample only certain portions of a text while completely missing other, potentially important information” (ibid. p.415). He believes the reason for these omissions is that in most stories, there is no way of judging the importance of a text sample without reading at least part of it.

The clear inference is that the subjects were unable to distinguish between gist-related material and detail when reading. Masson speculates that they may have been using sampling strategies such as reading the first sentence of each paragraph. However, he continues: “Information contributing to the gist of certain types of passage can be lodged in very inconspicuous locations which readers using common types of skimming strategies would fail to explore” (ibid. p.412).

The results that Masson obtains give rise to some intriguing questions about skimming and how it operates (or at least, how it was operating in the case of his subjects). Unfortunately, no information is given about the subjects’ previous experience of reading and skimming or whether they had had training in skimming or, indeed, speed reading. It is possible that the results would have been significantly different if he had used subjects who had been systematically trained in skimming techniques. In addition, we are given no specific information about the skimming techniques used by Masson’s subjects. He hypothesises that, for example, they may have read the first sentence of each paragraph but does not appear to have detailed information of their exact practices. A further consideration is the reading material used, i.e. narratives. This raises questions about the accessibility of the macrostructure in such texts. It may be that the gist is more clearly signposted in an academic text and that skim readers would therefore find it easier to obtain the macrostructure from such texts. Payne (n.d.) also makes the point that the texts were relatively short - some of them only 400 words - and so salience had to be detected at the sentence level, rather than the paragraph or section levels.

A further interesting aspect of Masson’s study is the questionnaire he gave to each participant. The 330 subjects who took part claimed that an average of nearly one third of

their reading time was spent skimming. They reported that when skimming a story they would intuitively notice important information and read it but skip over unimportant details. However, the study shows that this was not in fact how skimming took place. This discrepancy demonstrates the importance of carrying out empirical research in this area rather than relying on participants' intuition.

1.4.3 Research into skimming and speed reading

Figure 1.1: The number and position of fixations, all of which were forward fixations, moving from left to right (based on Just and Carpenter 1987, p.434)

Normal Reader

1	2	3	4	5	6	7	8	9
Colter understood enough of what they said to realize that some of								
	10	11	12	13	14	15	16	17
them were proposing to set him up as a shooting target. Others were								
	18	19	20	21	22	23	24	25
arguing for a more lingering death by tomahawk. Colter waited.								

Skimmer

1	2			3	4			
Colter understood enough of what they said to realize that some of								
							5	6
them were proposing to set him up as a shooting target. Others were								
	7	8	9		10			11
arguing for a more lingering death by tomahawk. Colter waited.								

A detailed study of eye movement during speed reading and skimming was carried out by Just, Carpenter and Masson (1982 – reported in Just and Carpenter 1987), using texts presented on a video screen. They studied three groups: untrained readers reading normally (normal readers), untrained readers skim reading (skimmers), and trained speed readers (rapid readers). The subjects read two kinds of texts: relatively easy texts from Readers’ Digest on familiar topics and texts from Scientific American on more technical and less familiar topics. All the texts were long – 1,500-2,000 words. The study focused on two passages: one from each source. Eye movements were recorded, revealing the skipping patterns of skimmers. A sample is given above in Figure 1.1.

Just, Carpenter and Masson (1982) found that skimmers fixate rather fewer words than normal readers, that the average gaze duration is considerably shorter and that skimmers tend to skip words more frequently (see Table 1.6 below).

Table 1.6: Comparison between skimming and normal reading (from Just and Carpenter 1987, p.433)

	Normal Readers	Skim Readers
Reading Speed	240 wpm	600 wpm
Percentage of words fixated	64%	40%
Average gaze duration	330 milliseconds	221 milliseconds
Number of adjacent word fixations per 100 words	36	15

Sometimes the skimmers skip over large portions (more than 20 words) although at other times the text is sampled more densely (ibid. p.436), a pattern that can be observed in Figure 1.1. It might be thought that skimmers have some particular skill that allows them to target significant words. However, Just, Carpenter and Masson (1982) found that they randomly fixate the text. In order to investigate this, the researchers first divided the words in the texts into content words and function words. When words of all lengths are taken into consideration both normal readers and skimmers tend to fixate more content words than function words. However, there is a clear possibility that word length is a major factor here – that on average content words tend to be longer and thus the word length is a clue to its importance for the reader. Consequently, the researchers compared fixation times for three-letter content words and three-letter function words. In this case, skimmers showed

no predisposition to fixate more content words than function words. Thus it appears that skimmers have no particular ability to target significant words for the next fixation. Nevertheless, a pattern of reading emerges from this data to suggest that skimming is quite distinct from normal reading with regard to text sampling.

Further comparisons with normal readers and speed readers reveal more details of what happens during skimming. Firstly, Just, Carpenter and Masson (1982) counted the number of successively fixated words. In the case of normal readers (reading what they refer to as the “Colter” text) they fixated adjacent words 36% of the time, whereas the corresponding figure for skimmers was only 15%. So there is much evidence of skipping but of greater interest is evidence of the *pattern* of skipping, or what Just, Carpenter and Masson (1982) refer to as “scanning patterns”. Speed readers were found to scan the text fairly uniformly, whereas skimmers “sometimes skipped over large portions of text (more than 20 words) while sampling other portions more densely” (p.436) (See Figure 1.1). This non-uniform scanning pattern is discernible also when the proportion of words fixated per sentence are considered. Both normal readers and speed readers were consistent in their fixation patterns, with the former fixating a far higher proportion of words than the latter. However, in the case of skim readers, the proportion varied erratically and inconsistently. The clear message that emerges from this data is that skim readers sample part of the text in detail but then skip relatively lengthy sections. Such data are invaluable for discovering the pattern of skim reading. However, they have a major limitation: they cannot tell us *why* the skim reader followed such a pattern, providing evidence of a reading pattern but not an explanation for it.

In terms of comprehension, regardless of question type and text type, the normal readers did better than the two other types. They consistently gave 30 to 40% more correct responses, indicating that there does seem to be a trade-off between speed and comprehension. Thus, this research appears to support Masson’s 1982 study in the sense that, in terms of text sampling, skimmers are unable to distinguish perceptually between what is “macro-relevant” and what is not, and thus the value of skimming for gist is once again called into question. In addition, the notion of familiarity (with the text or subject

matter) is put forward as a precondition for successful skimming: the researchers suggest that the required inference making can only be effected in such circumstances.

1.4.4 Skimming from computers vs. from books

Further research into skimming appears in two studies comparing reading from a computer screen with reading from printed sources. Muter and Maurutto (1991) included skimming in their study because of its increasing importance as people sift through the huge amounts of information available on computers. As well as a reading task, they included a skimming task, in which subjects were asked to proceed at a rate three to four times faster than their 'normal' rate. The participants' aim was to grasp just the gist. After reading, they were given a comprehension test consisting of ten short-answer questions.

Table 1.7 below gives the results of the skimming aspect of the experiment, compared with normal reading, showing marked differences in the results between the book and CRT conditions.

Table 1.7: Comparison of results based on skimming and normal reading (from Muter and Maurutto 1991)

Process	Source	Speed (words/min)	Comprehension (out of ten)
Reading:	CRT	199	5.22
	Book	211	4.72
Skimming:	CRT	501	2.81
	Book	851	2.11

All 12 subjects in the study skimmed more slowly (on average 41%) from the CRT than from the book. However, their comprehension was better, with nine of the twelve subjects answering more questions correctly, providing further evidence of a speed-comprehension trade-off. Comparing skimming with normal reading, again there is evidence of this trade-off. The overall average skimming speed was 676 wpm, 3.3 times as fast as the overall average for the reading condition (205 wpm). However, on average only half as many questions were answered correctly.

However, the lack of detail in this study undermines confidence in its findings, particularly with regard to comprehension statistics. In fact, it is never self-evident what “comprehension” means in any given context (for a more detailed discussion, see 4.2.11) and details need to be given for there to be confidence in the results of such tests. In the case of Muter and Maurutto’s research, we do not know what the researchers understood by “comprehension” and how it was operationalised in this case. No details are given of the questions used – how they were devised, whether they concerned gist or detail, and if they concerned gist, how an understanding of the gist had been derived in the first place. Nevertheless, despite misgivings about certain aspects of this study, the overall results are largely in line with earlier findings: skimming, compared with normal reading, results in significant loss of comprehension (however comprehension is defined).

Dyson and Haselgrove (2000) also investigated the effects of reading speed and reading patterns when subjects are reading text from a screen, rather than paper. In the main study, participants were asked to read an initial document at their normal reading speed. They were then told to aim to read the next document at twice the rate. Those who failed to do this were given further attempts and only those who succeeded in speeding up sufficiently (set at 70% faster than normal speed) proceeded to the next stage of the study. 24 volunteers were finally recruited. Each read several documents (taken from the *National Geographic*) on screen and then answered nine multiple choice questions without referring back to the document. The questions were of several types, including ones based on the title, the main idea and incidental details, followed by recognition questions. The method they used to derive the macrostructure on which the gist questions were based was similar to that used by Masson (1982), consisting of breaking the texts down into idea units and rating these for salience. The mean reading rate under normal conditions was 244 wpm and at the faster rate, 460 wpm (comparable with Carver’s rate of 300 for “rauding” and 450 wpm for skimming - 1990, p.14).

The researchers found an overall decline in the level of comprehension among the faster readers, compared with those reading at normal speed. However the type of information that was retained is similar and at both speeds, details were less well recalled than more

general information. The writers go on to say that the impact of this reduced level of performance among faster readers will depend on the reader's purpose. Nevertheless, if a comprehensive overview is required, these results suggest that there are "likely to be some gaps" (ibid. p.219), a significant finding, since the purpose of skimming is so often said to be to derive the gist (Masson 1982; Carver 1992a; Urquhart and Weir 1998).

1.4.5 Research into rapid information gathering from the computer

The dramatic increase in the availability of information through electronic means has stimulated recent interest in skimming research. Duggan and Payne (2006) investigated ways in which readers deal with huge amounts of information rapidly. One aspect of this is the concept of "adaptive skim-reading" by which they mean "preferential allocation of attention to the most valuable parts of a text" (Payne n.d, p.1) Duggan and Payne acknowledge that Masson's participants found this to be impossible (Masson 1982) but speculate that by using texts that are more "skimmable" (i.e. longer, front-loaded for content and with meaningful, informative headings), adaptive skimming would be possible. They made two further changes to Masson's method: they increased the length of the texts - Masson's texts ranged from 400 words to 1000 words whereas Duggan and Payne's were over 3000 words long; secondly, while Masson presented participants with complete texts and varied the amount of time available to read them, Duggan and Payne varied the amount of text presented to participants and held the amount of time constant. Using texts from *Scientific American* that conformed to their guidelines, they compared three groups of readers: unpaced readers; skimmers reading to a time limit; and a third group of readers who could access only the first (or second) half of the text and had to read those pages in linear order. They tested recognition memory for important, unimportant and inferrable sentences, the relative importance of which was earlier rated by 20 undergraduates. Duggan and Payne predicted that skimmers would do better at remembering important sentences than would readers allocated the same amount of time but forced to read an arbitrary half of the text in linear order. Participants had to gauge the importance of sentences which contained information either directly or inferentially from the texts.

Their study confirms the finding of Masson that recognition of important, unimportant and inferrable information declines equally when readers are required to skim rather than read text normally, with “no evidence that people were able to effectively focus on more important information when reading under time pressure” (Duggan and Payne 2006, p.734). Another finding was that readers who skimmed a text were more likely to respond “true” to incorrect inference statements than readers who read the text normally. Thus, skimming appeared to make readers more likely to over-interpret complicated information as consistent with the text. Masson had a similar pattern of results for the inference statements in his data (Masson 1982, Table 3, p. 407). Overall, these results present a fairly negative view of skim reading: skim readers are likely to obtain less gist information than normal readers as they fail to focus particularly on gist-rich material. Secondly, they tend to make more inferences, whether justifiable from the text or not. Once again, Masson’s claim is supported that successful skimmers are successful inference-makers.

As a result of this negative finding (from Payne’s perspective), he and his colleagues went on to develop a different way of regarding skimming based on information foraging theory. This draws on optimal foraging theory (Stephens and Krebs, 1986) which proposes that foraging animals alter their behaviour so as to maximize efficiency while foraging. Pirolli and Card (1999) related this theory to the handling of information, claiming that human behavior when faced with information-rich situations can be interpreted in terms of “information foraging”. Thus, human information seekers change their behaviour in an attempt to maximise their rate of information gain. Payne extends the use of this theory from Pirolli and Card’s focus on large databases and the Internet to “browsing/skimming behaviours” (Payne n.d., p.2) in contexts where texts are smaller and all are of relevance (Reader and Payne 2007, p.265). The key shift here is from regarding the purpose of skimming as deriving gist, with its concomitant need for inferring meaning to save reading time, to regarding its purpose as being to “assess the value (information gain) of passages of text” (Payne n.d., p.4).

Within this framework, Payne next distinguishes between “exploring a patch (judging its energy yield, and other properties) and exploiting a patch (feeding in it)” (Payne n.d., p.4).

In the exploration phase, the reader judges the value of a text. In the exploitation phase, s/he studies the text to learn from it. Sampling strategies might be used in the exploration and evaluation phase. However, a second group of strategies, which he terms “satisficing strategies” (after Simon 1956) provides a means of integrating exploration and exploitation in that the value of a text is monitored as it is read and thus “exploration is integrated into the reading process” (Reader and Payne 2007, p.269). If the reader judges the quality to be above a certain threshold, s/he will continue to read: but if it falls below this threshold, she will abandon the current “patch” (i.e. piece of text) for another potentially more fruitful section/text.

In time-limited tests which utilised several texts, Payne found that in general satisficing (characterised by paying long first visits to texts) was more commonly used than sampling (characterised by short visits to all the texts followed by a longer stay in a chosen text). Thus, Payne concludes that “skimming might arise from the recursive rejection of patches (pages, paragraphs, sections) of text, followed by a leap to the start of the next patch” (Reader and Payne 2007, p.294)

Payne’s work is symptomatic of the renewed importance of skimming in this Internet age when vast amounts of information are readily accessible. It also points to the need for more research into skimming to understand it better. Initially Payne’s work confirms the findings of other researchers since Masson: what Payne calls “adaptive” skim reading does not really work. However, Payne then goes on to re-characterise skimming, ultimately concluding that “satisficing” is the most appropriate metaphor for what actually happens during skimming. His research suggests that under time pressure, readers will not typically read quickly for gist and then re-read in more detail: instead, they will attempt to “explore” and “exploit” the text simultaneously, moving onto more profitable text when necessary.

1.4.6 EFL-based skimming research

If there is a general lack of research into skimming, this lack is even more striking in an L2 context with apparently only two relevant studies - Shin (2002) and Fraser (2007).

Shin (2002) looked at the effects of subskills and text types on Korean EFL reading scores. He reports on the relative effects of four subskills (inference, skimming, scanning and coherence) on the reading of three text types (narrative, expository and argumentative), concluding that varying the text types and subskills in reading tests appears to have a strong beneficial effect on the reliability of test scores.

Unfortunately, Shin's research does not shed any light on the skimming process. Firstly, Shin does not specify the length of texts used but in the example text given there are only 80 words. If this is typical of the texts used, then some of the problems associated with skim reading will have been circumvented. With shorter texts there is far less possibility that working memory may become overloaded as the reader has to retain earlier information while simultaneously processing new material (See section 1.3.8 for a discussion of working memory). In addition, following the structure of a short text is relatively easy compared with a longer one.

Secondly, lack of detail regarding the test Shin sets makes it difficult to be sure what skills he really tested. Skimming is by definition quick reading, so if the test conditions do not enforce quick reading, there is no way of knowing whether the subjects actually skimmed the texts or read them at their normal rate. In Shin's study, the only information he provides is that "the reading test was administered for 110 minutes under standard conditions" (Shin 2002, p.116). However, since this was a test of four reading skills altogether, it is impossible to discover whether strict time limits for the skimming questions were in operation, and were observed, by the subjects. (Attempts to contact the researcher have failed and so it has not been possible to clarify these important details.)

The aim of Fraser's (2007) study is to compare first and second language reading rates. It is based heavily on Carver's analysis of reading processes, the five tasks following Carver's five processes: scanning, skimming, rauding, learning and memorising. There were two groups of participants: L1 Mandarin speakers studying at a university in Canada (the Canada group); and L1 Mandarin speakers studying at a university in China (the China

group). For the skimming task, participants were given three question prompts (e.g, “What year was the Cherokee alphabet accepted by the General Council?” – Fraser 2008 – personal communication) in response to which they had to read and find specific information in a text (such as a date or a name). Fraser distinguishes the skimming task from the scanning one by saying that, following Carver 1990, “participants not only had to visually identify a specific word or words but identify them within the appropriate phrase or clause context” (Fraser 2008 - personal communication). Thus, whereas for scanning only lexical access was required, the skimming task involved both lexical access and semantic encoding, again following Carver. The participants were asked to read the passage once only and their performance was measured by the accuracy of their answers to the prompts.

The element of this research which is of particular interest to the current study is the comparison of reading speeds. The rates for L1 reading are higher in every case than those for L2. Another interesting point is that the range of rates is much greater for L1 than for L2. One possible inference is that L2 readers are less able to be flexible in their reading speeds than L1 readers - a point made earlier by Laycock (1955) in relation to flexible and inflexible readers in general.

Unfortunately, despite its intrinsic interest, this study gives little insight into skim reading for gist in an L2, apart from the clear evidence of the difference in speed of skimming between L1 and L2 reading. One concern with this study in terms of skimming is again the shortness of texts (around 350 words). Secondly, the skimming task was not really gist-related and in fact appears to be closer to a scanning task. Though Fraser claims that semantic encoding is required, it may have been minimal given the question types: in the example I have cited above (“What year was the Cherokee alphabet accepted by the General Council?”), the search for a date, i.e. scanning, may have been as important as the semantic aspect, i.e. reading quickly to check the date’s significance. Search reading (discussed in 1.3.6) would be a more appropriate term for the process required in this case. Also, it is interesting to notice that the mean speed for skimming (223.22) is only 22% higher than that for reading (182.75), exemplifying Fraser’s observation that the range of rates is narrower for L2 reading. Since these are averages, clearly some participants will

have been reading faster and some slower. This calls into question whether all the participants were actually skimming, a point Fraser herself concedes (Fraser 2009 - personal communication). However, without a clear way of deciding which speed or range of speeds constitutes rauding and which constitutes skimming, this issue is difficult to resolve.

In summary, both Shin and Fraser are of limited value for this investigation into skim reading research, partly because the scope of their research was wider than just skimming and also due to methodological concerns. It appears that no thorough, methodologically sound research into skimming in an L2 has been carried out.

1.4.7 Conclusions from the skimming studies

The following conclusions can be drawn from the studies so far considered. When skimming for gist:

- Skim reading is considerably faster than normal reading, though the literature does not specify by how much.
- Skim readers skip some of the text in order to complete the reading quickly. It is presumed that they make decisions about the likelihood of gist-related material being present (e.g. Masson 1982), though it is not clear how they do this.
- Skim readers perform less well than normal readers in tests of comprehension and retention. Thus there appears to be a trade-off between speed and comprehension (though great care needs to be taken to be clear about what is meant by “comprehension” in each situation – see 4.2.11).
- Skim readers are not particularly selective in the material that they read. It may be gist but could just as well be detail that is sampled. They may intend to be selective, and even claim to be able to locate key information intuitively (Masson 1982), but research reveals that they are often unsuccessful in this.

- Skim readers appear to need to infer meaning from what is sampled to “fill the gaps” left by what is skipped. This point, put forward by Masson (1982), is speculative: it is presumed that if skim readers are skipping text, they “must” be making compensatory inferences.
- It follows that skimming is most likely to be effective when inferences are relatively easy to make, i.e. when the material is predictable, familiar and simple (in terms of content, structure, language or any combination of these). It also follows that material which is difficult, unfamiliar and/or unpredictable will be difficult to skim read.

The final point is highly significant in relation to the use of skimming in EFL. For example, in the IELTS examination, for many students the texts will be difficult *and* unfamiliar *and* unpredictable, thus greatly diminishing their chances of successfully skimming the material. A further conclusion that must not be overlooked is that most of the published research in skimming is with L1 readers, which has considerable limitations in relation to understanding L2 skim readers and hence, there is a clear need for more research into L2 skimming.

As for the actual process of skimming, there is a difference of opinion as to how it operates. One view is that skimming sometimes, and/or for some readers, is simply a combination of careful reading and scanning, with readers reading certain parts carefully and in the same way as in normal reading, but then skipping longer sections in the manner of scanning: “Skimmers seem adventitiously to sample parts of a story and read those sampled parts in a manner similar to the normal reading process” (Masson 1982, p.415). Masson reaches this conclusion on the basis that subjects in his experiments, when skim reading, often overlooked significant “gist” information, sampling the texts “adventitiously”. Elsewhere (Masson 1985), he explains how he comes to this understanding of skimming. If readers are to process texts more quickly than usual, they have two basic choices: firstly, they could read all the text but spend less time on each part of the text; the alternative is to sample the text, spending longer on sections likely to prove helpful. He suggests that the reader would

reject the first method since, in this situation, s/he would not be able to spend long enough on individual words to be sure about their identity and role in the text. Thus, Masson concludes that the reader skips parts of the text, spending enough time on other sections to be reasonably sure of understanding them, though recognising there is a trade-off between speed and comprehension. Thus, effective skimming will depend on the accurate selection of parts of the text which yield most benefit in terms of the purpose of the reader. The problem as Masson sees it is that “there are few guides to use in perceptual selection of gist-relevant passage segments” (Masson 1985, p.203). Important information is not always located in the first sentence of the paragraph and so it is often impossible to tell if a word or section is important unless the reader actually reads it.

Despite the problems of skimming by sampling, there is further support from other researchers that this is the method that is used. Carver suggests that when skimming for gist, the reader might process every word quickly until deciding to skip to a more promising sentence or to switch to normal reading (“rauding”) for sections deemed to be very important (Carver 1990, p.132). Grabe and Stoller further support this characterisation of skimming: “It involves, in essence, a combination of strategies for guessing where important information might be in the text, and then using basic reading comprehension skills on those segments of the text until a general idea is formed” (Grabe and Stoller 2002, p.13).

Eye movement data initially appears to contradict this view of skimming. Just and Carpenter (1987) claim that what is sampled is read much faster than in normal reading (hence the data showing shorter average gaze duration). Moreover, they found that rapid readers have very few long gazes and many more short ones than normal readers. However, it must be borne in mind that these are only *mean* figures and so may mask the precise details of what is happening. It was shown (in 1.4.3) that eye movement data gives important evidence of skim readers scanning the text erratically and frequently skipping text. All the evidence points to skimming consisting of sections of text being more thoroughly sampled while others are skipped, i.e. the very same pattern described by Masson (1982) and Carver (1990). Having said that, even empirically-based studies have

severe limitations, especially in relation to reader intentions. For example, Just and Carpenter are able to tell us that skimmers may skip 20 words or more and give precise factual details of this phenomenon. What they cannot tell us is *why* the readers did this. One may posit a wide range of possible reasons: there may have been some signal in the text which suggested that these words could be skipped; it may simply have been boredom with the textual content. Once again we are reduced to speculation which can be clarified only by further research.

1.5 The research questions

The following overall conclusions follow from this survey of research into skimming:

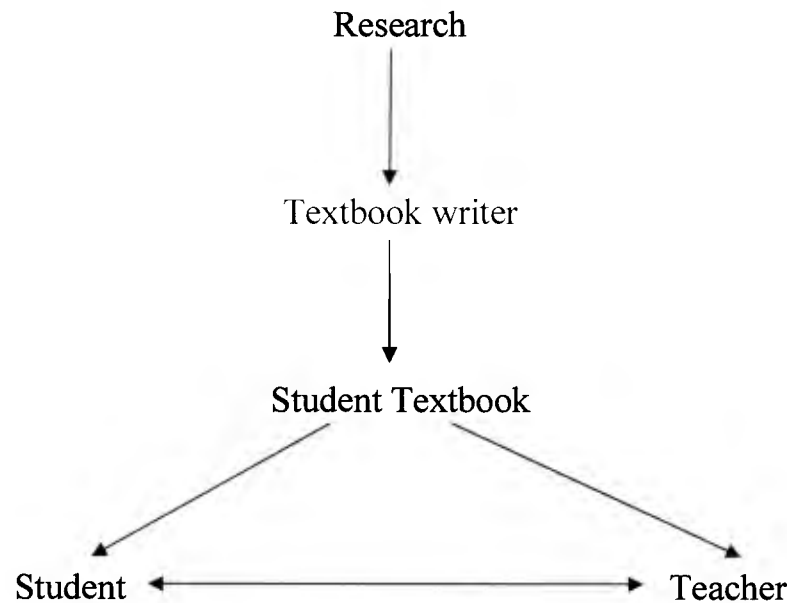
1. There is very little research into skimming in L1 reading, and a consequent vagueness about how it operates. In particular, there is uncertainty as to whether it is simply a variant of normal reading or whether it should be regarded as a different process altogether.
2. The situation is even worse in the EFL context, since so little research has been done.
3. Much of the little research that there is casts doubt on the effectiveness of skimming for the main purpose it is usually deemed to have, i.e. obtaining the gist of a text. Isolating key information while sampling a text is problematic and the result appears to be that there a trade-off between speed and comprehension.

There is therefore scope for a great deal more research into this area, both to enhance our general understanding of skimming – how it operates; under what circumstances it is most effective; how it combines with other reading skills etc. – and to indicate how students might be encouraged to develop it and use it within EFL.

Many factors affect the teaching curriculum and teaching methods, summarised diagrammatically by Borg (2003, p.82). Figure 1.2 below greatly simplifies Borg and

represents possible ways in which there could be interaction between some of the different elements contributing to the students' learning how to skim.

Figure 1.2: Elements contributing to the students' learning how to skim



Applied to skimming, the research already reviewed in this chapter might be expected to influence textbook writers. The textbooks they produce might, in turn, affect the way teachers teach skimming and the way learners learn to skim. The aim of this research could therefore be said to be an investigation into how research findings such as those discussed earlier influence textbooks and how these subsequently affect teachers and students. Thus for this study data from all three sources in the “skimming triangle” in Figure 1.2 above – textbooks, teachers and students – were collected.

The particular issues to be investigated centred around three foci, detailed below.

Focus One – the nature of skimming:

What does skimming consist of?

How fast does reading need to be in order to be called skimming?

What is the range of activities that is encompassed within the concept of skimming?

The questions in Focus One relate to skimming itself and are an attempt to understand more fully what skimming actually is and what happens during skimming, i.e. what its distinguishing features are for, as Aebersold and Field (1997, p.76) rightly point out, “there is some question about exactly what readers do when they skim.” As part of this, in what way is it different from other types of reading? Is skimming a combination of other reading processes – e.g. scanning and normal reading – or something else? Furthermore, what strategic actions take place during skimming? For example, if readers sample the text, how is this sampling operationalised?

The word “skimming” is frequently used in reading literature and in teaching literature but without clarity or consistency. For example, it is referred to as a “process” (Carver 1990), a “type” of reading (Urquhart and Weir 1998), a “skill” (Munby 1978) and a “strategy” (e.g. Anderson 1991). Which is actually applicable? Answers to these questions were sought in each of the three data sources (detailed in 1.6), but particularly the student reports of their own skimming which, it was hoped, would flesh out the understanding of skimming derived from the existing research reviewed earlier.

Focus Two – attitudes to skimming

How valuable is skimming regarded as being?

Are attitudes of writers, teachers and students the same or do they differ?

Is it useful to teach students of EFL how to skim read?

These questions arose from my own teaching. Having questioned the relevance and value of skimming in my own teaching, I wondered if other teachers shared my reservations. I was interested in tapping into a wide range of views, suspecting there might be striking differences of opinion, particularly with regard to the usefulness of skimming. Again, it was expected that each data source would yield relevant insights.

Focus Three – factors affecting skimming success

Which factors have greatest impact on the success of skimming?

Can any of these be investigated directly?

This focus considers reasons why some students might be more successful than others in their use of skimming. Obviously it could relate to their general L1 reading skills, or perhaps to their general knowledge of English, particularly lexis. Given the importance of background knowledge for facilitating inference-making, it seems likely that such knowledge would have a very important impact in enabling a reader to skim quickly. From the evidence we have from L1 reading, the literature fairly consistently states (see section 1.4) that skimming tends to be effective only if the conditions are favourable for inference-making. However, it is difficult to investigate inference-making directly using a lengthy text. Many of the studies are concerned with investigating inferences made in tightly constrained circumstances, such as several consecutive sentences. For example, Singer and O’Connell (2003) comment in a relatively recent paper that a distinguishing feature of their paper is that they examined longer texts than they had previously examined - even so the mean length of texts was only 9.25 sentences. An additional problem would be that the researcher would want to investigate not only how the skim reader negotiated inference making implicit in the text itself but also those inferences that became necessary to make because of the selective nature of skimming. However, the latter type of inference would be potentially unique to each skimmer depending on which parts of the text were sampled. On the other hand, familiarity with the text topic is likely to have a significant effect on skimming effectiveness/inference-making and could be manipulated as a variable to discover its impact.

1.6 An outline of the study

The following four chapters cover the research itself. Given the research questions listed above, there are two distinct strands to this study: an enquiry into the teaching of skimming in EFL, i.e. a pedagogy-focused enquiry; and an enquiry into what students actually do when they claim to skim, i.e. a learner-focused enquiry. Both enquiries focus specifically

on reading for the IELTS test, for two reasons. Firstly, IELTS is said to require the ability to skim in order to complete the reading component successfully (Jakeman and McDowell 1999). Secondly, the participants for the verbal protocols were students in the college where I teach, an example of an opportunity sample. Since they were all preparing to take IELTS it made sense to base other elements of this research on IELTS in order to be able to build a broad picture.

The aim of the pedagogy-focused enquiry was to gain insights into how skimming is taught within EFL contexts, in particular for IELTS. This enquiry is concentrated on two aspects: teaching methodology and teacher attitudes.

To gain an understanding of the teaching methodology of skimming (Chapter 2) and thus to investigate the ways in which theories about skimming are implemented in coursebooks designed for practical use, I surveyed 13 students' textbooks which revealed how skimming is expected to be taught through this medium. The following aspects are covered:

1. The importance accorded to skimming.
2. The purposes given for skimming.
3. The relationship between skimming and reading level.
4. The link between skimming and other reading skills such as prediction and preview.
5. The training that is given in skimming.
6. The information that is given regarding skimming speeds.

The analysis is based on Littlejohn's (1998) framework for analysing textbooks, which consists of three fundamental questions. The first question, "What is there?", is the most objective of the three and relates to the basic facts about the materials, such as date of publication, format, etc. Secondly, "What is required of the user?" includes what the learner is expected to do, giving details of the tasks set for the learner. The third question - "What is implied?" - addresses the underlying aims and philosophy of the materials writer. It also considers the demands made upon the learner that are implied but not directly stated.

To investigate teacher methodology and attitudes to skimming (Chapter 3), a questionnaire was devised and administered, addressing the following issues:

1. How widespread is the teaching of skimming in EFL?
2. At what levels is it taught?
3. How useful do the teachers perceive it to be for their students?
4. To what extent do they think it can be taught?
5. Do they attempt to teach their students to skim? If so, how?
6. How useful do they themselves find skimming in their own reading? [If they do find it useful, does this lead to an expectation that their students will also find it useful?]

92 responses to this questionnaire were obtained and these are analysed in Chapter 3.

The learner-focused enquiry took the form of verbal protocols obtained from 16 participants following the skim reading of two texts. The details of this are given in Chapter 4 (methodology) and Chapter 5 (data analysis). I worked with 16 students from the college where I teach, spending up to an hour with each one individually. Participants were asked to skim read two contrasting texts and answer questions orally on how they had carried out this task. Two types of data were derived from the meetings with participants: data from the skimming itself (e.g. reading speeds) and data from the interviews that followed the reading. Each type is analysed in Chapter 5 and conclusions are drawn.

Analysis of the three data sources fills in some of the gaps left in skimming research regarding the process itself – e.g. how it operates and its relationship with normal reading – and attitudes towards it, revealing significant differences between the teacher's view of skimming and that of the students. These conclusions are set out in Chapter 6.

Chapter Two

Skimming: what the textbooks say

2.1. Methodology

Textbooks are immensely significant in shaping teachers' thinking regarding language learning. Littlejohn (1998, p.190) points out that published coursebooks are "the most powerful device" in "spreading new ideas and shaping practice".

This textbook survey is limited to IELTS books to link it with the rest of the research. The teachers who responded to the questionnaire (see chapter 3) teach IELTS and the students who participated in the verbal protocols (see chapters 4 and 5) were studying for this exam. Moreover, textbooks preparing students for IELTS tend to have frequent exercises on skimming. This is because, given the heavy reading load in this exam (with three texts totalling in excess of 2,500 words), skimming is generally regarded as an essential examination skill and described as "vital" (Capel 2007) and "essential" (O'Connell 2007). Similarly, Jakeman (personal communication 2009) writes in answer to a question on the importance of skimming for IELTS:

The IELTS reading test is one of 'speed reading' and cannot be completed in the time allowed if candidates are not able to read quickly and select key information, while avoiding unnecessary/duplicate reading.

The thirteen textbooks covered in this survey reflect the range of books available for teaching and preparing for the IELTS examination at the time of the survey. With the exception of *High Impact* (Bourne 2004), they were all used by teachers responding to the questionnaire (see 3.2.2). Details are given below in Table 2.1.

Table 2.1: Coursebooks included in this survey

Coursebook	Author(s)	Year	Publisher
Achieve IELTS	Harrison, L. and Cushen, C.	2005	Marshall Cavendish
Focus on IELTS*	O'Connell, S.	2002	Longman
Focus on Academic Skills for IELTS	Terry, M. and Wilson, J.	2004	Longman
High Impact IELTS	Bourne, P.	2004	Longman
IELTS Express – Intermediate	Hallows, R., Lisboa, M. and Unwin, M.	2006	Thomson
IELTS Foundation	Roberts R., Gakonga, J. and Preshous, A.	2004	Macmillan
IELTS Masterclass*	Haines, S. and May P.	2006	OUP
Insight into IELTS	Jakeman, V. and McDowell, C.	1999	CUP
Instant IELTS	Brook-Hart, K.G.	2004	CUP
Objective IELTS - Intermediate	Black, M. and Sharp, W.	2006	CUP
Objective IELTS - Advanced	Black, M. and Capel, A.	2006	CUP
On Course for IELTS	Conway, D. and Shirreffs, B.	2003	OUP
Step up to IELTS*	Jakeman, V. and McDowell, C.	2004	CUP

* These books have teachers' books as well as the students' books. References in this chapter are to the students' book unless specifically stated (TB = teacher's book).

These thirteen IELTS preparation books are published by seven publishing houses and were written by different authors except in the case of *Insight into IELTS* and *Step up to IELTS*, both written by Jakeman and McDowell. In fact there are at least two other books currently in print by these authors (*IELTS Practice Tests Plus* and *Action Plan for IELTS*). Since it is likely that the same principles and techniques regarding skimming will be employed in all their publications, and to avoid giving too much weight to their approach, I decided to restrict the survey to just two of their publications, chosen for their contrasting approaches. *Insight into IELTS* is skill-based, while *Step up to IELTS* is theme-based. A further decision had to be made concerning textbooks available at both intermediate and advanced levels. While I included *IELTS Express* only at Intermediate level (both the Intermediate and Advanced books are by the same authors), I decided to include *Objective IELTS* at both levels because although each book has two authors, only one worked on both books.

Two other important decisions were made regarding the choice of books for inclusion. There has been a plethora of new IELTS textbooks published in recent years which have tended to replace older, often less well produced books emanating from the early years of IELTS. I thus took a decision to limit the survey to books published since 1999. In fact, this correlates strongly with the books that teachers say they use according to the teachers' survey (details in 3.2.2). The second preliminary decision was to follow Terry (2003, p.67) in her general survey of IELTS preparation materials by limiting the survey to those books which aim to train the students for the exam, as opposed to those which provide only test practice.

In addition to information from the books themselves, I was able to interview four of the authors: Sue O'Connell (*Focus on IELTS*), Caroline Cushen (*Achieve IELTS*) and Vanessa Jakeman (*Insight into IELTS*) by email and Annette Capel (*Objective IELTS – Advanced*) face-to-face. Relevant extracts from these interviews are included in the analysis.

Two contrasting methods of organisation were possible for this survey of textbooks: book by book (e.g. Terry 2003) or a topic-based approach (e.g. Rivas 1999, Koprowski 2005 and Nitta and Gardner 2005). The latter was chosen as it allowed each aspect of skimming to be compared directly. Moreover, the purpose in writing, unlike Terry's, is not to recommend a certain book or books but to make comparisons between the different treatments of skimming.

With regard to methodology, the following analysis is based on Littlejohn (1998). He states that his analytical method is to be applied to assessing "tasks as workplans" rather than "tasks in process" or "tasks as outcomes" (ibid p.191). In other words, it relates to the plans and materials that are offered to teachers to use, as opposed to the way teachers might actually use them or the learning that may result from their use. Moreover, the focus is on the materials as a "pedagogic device" (ibid. p.192) rather than any other aspects such as how gender is represented. Littlejohn's method (ibid. p.195) entails the use of three basic questions: 'What is there?'; 'What is required of users?'; and 'What is implied?'. These are crucial questions and underpin my analysis. However, since Littlejohn's analysis is applied to complete textbooks, many aspects are irrelevant to this analysis of how skimming is dealt with. For example, Littlejohn's

level 2 encompasses the co-operative nature of the learning process – turn-taking, working in pairs/groups – which did not apply to the skimming reading exercises. I have therefore taken only the outer shell of Littlejohn’s analysis and adapted it to my purpose. I have summarised below my interpretation of these three questions in relation to the current analysis.

The first question, “What is there?”, is the most objective of the three and relates to the basic facts about the materials, such as date of publication, format etc. Secondly, under “What is required of the user?” I include what the learner is expected to do, giving details of the tasks set for the learner. The third question - “What is implied?” - addresses the underlying aims and philosophy of the materials writer. It also considers the demands made upon the learner that are implied but not directly stated, such as reading speeds.

The analysis which follows is divided into these levels. In level one, I introduce the textbooks, classifying them, indicating how much attention each gives to skimming and also the extent to which they use skimming metalanguage. In the second level, the textbook skimming exercises are analysed to discover what the students are expected to do. As for the third level, I analyse the operationalisation of skimming and its purposes. I also consider the relationship between skimming and scanning in these books.

2.2. Level One - What is there?

2.2.1 Classification of textbooks

Each of the books covered in this survey contains a number of reading texts. Every text was included in this survey: only by considering every text could, for example, the patterns of skimming speeds suggested by writers be discerned.

A general classification of the textbooks is given in Table 2.2 below. They can be categorised according to the intended level of the student users: in the case of some of the books, the level of students for whom the book was written is directly stated. For example, *Achieve IELTS* (Harrison and Cushen 2005) is aimed at a relatively low initial level (IELTS 4.5). Secondly, they can be divided into those which are written for classroom use, for self-access or for both. Thirdly, some of the books have a separate

teacher's book, which may give extra information regarding the skimming exercises such as timings. Fourthly, there are two main ways in which the material is arranged in these textbooks: either in thematic units, with practice in each skill in each unit, or in skill-based units with each unit practising a different skill. Finally, some of the books are specifically designed to prepare students for IELTS Academic (the more demanding version of the exam, usually required for university entrance), some for the IELTS General Training (set at a lower level and required for certain diploma courses) and others for both.

Table 2.2: Classification of the textbooks

Name of Book	Intended level of students	Class use, self-access or both?	Separate Teacher's Book?	Theme or Skill	Academic / General Training
Achieve IELTS	designed to take students from IELTS level 4.5 to 6.0	class use	yes	theme	academic
Focus on IELTS	N/G	class use	yes	theme	academic
Focus on Academic Skills for IELTS	N/G	both	no	theme	academic
High Impact IELTS	“for students looking for a relatively high IELTS result” (TB preface)	class use	yes	theme	academic
IELTS Express – Intermediate	“for candidates at IELTS bands 4-5.5” (book cover)	class use	yes	theme	both
IELTS Foundation	For those with IELTS band of 4-5.5	class use	yes	theme	academic
IELTS Masterclass	“for students who require IELTS for academic or professional purposes”	class use	yes	theme	academic
Insight into IELTS	“targeted at students of approximately band six level” (p.5)	both	no	skill	both
Instant IELTS	intermediate (bands 4-6) and advanced (6-8). Separate teachers' notes for different levels.	class use - photocopiable	teacher's notes in main book - not for students	skill	both
Objective IELTS - Intermediate	for students aiming for 5.5 / 6.0	class use	yes	theme	both
Objective IELTS - Advanced	for students' aiming for 6.5 / 7.0	class use	yes	theme	both
On Course for IELTS	IELTS band 5 and above	class use	yes	theme	academic
Step up to IELTS	for class “requiring a Band 5 to Band 6 in the Test” – TB p.4	class use	yes	theme	both

As part of “What is there?”, for the purposes of this analysis, it is important to focus more specifically on how skimming is covered in the textbooks.

2.2.2. The degree of emphasis on skimming

In Table 2.3, given below, there is an attempt to quantify the importance given to skimming by the coursebook writers. Table 2.3 indicates that, in the textbooks included in this survey, skimming is regarded as an essential aspect of reading, as can be seen from the large percentage of readings which incorporate skimming tasks. In nine out of the fourteen books, over 50% of the readings include skimming exercises, testimony to the significance accorded to skimming by the writers.

Table 2.3: The importance given to skimming in each textbook

Name of Book	Total Number of Readings*	Texts which include Skimming**	
		Number	Percentage
Achieve IELTS	11	5	45%
Focus on IELTS	14	14	100%
Focus on Academic Skills for IELTS	10	8	80%
High Impact IELTS	21 (plus short texts and full test)	5	24%
IELTS Express – Intermediate	4 (plus short texts and full test)	1	25%
IELTS Foundation	16	6	37.5%
IELTS Masterclass	14	8	57%
Insight into IELTS	16	7	44%
	13 (A + GT)	4 (A + GT)	31% (A + GT)
	3 (GT)	3 (GT)	100% (GT)
Instant IELTS	12 (total number)	7 (total number)	58% (total percentage)
	6 (A)***	5 (A)	83% (A)
	6 (GT)****	2 (GT)	33% (GT)
Objective IELTS - Intermediate	25	18	72%
Objective IELTS - Advanced	32	31	97%
On Course for IELTS	23	12	52%
Step up to IELTS	15	6	40%
	4 (A)	1 (A)	25% (A)
	3 (GT)	0 (GT)	0% (GT)
	8 (both)	5 (both)	62.5% (both)

* A “reading” refers to a text and all accompanying exercises

** Some books use the word skimming while others just say, for example, “read quickly”.

*** A = academic

**** GT = general training

A clear example of a textbook which emphasises skimming is *Focus on IELTS* (O’Connell 2002), in which all of the 14 reading sections have skimming tasks. A further clear example of this emphasis is the *Objective IELTS* series. Interspersed between the themed units are examination practice sections, referred to as “test folders”.

Each time a new reading exercise type is introduced, the following instruction appears: “Skim the whole passage before you start working on any of the tasks.” Moreover, there are constant reminders to skim read, particularly in the *Advanced* course teachers’ book.

The use of the term “skimming” varies from book to book as Table 2.4 below shows. There is usually some reference to skimming in the introduction to the student’s book and/or the teacher’s book. However, it is sometimes difficult to be absolutely sure that an exercise is designed to practise skimming since some writers appear to avoid using the actual word “skimming” or do not use it consistently (see section 2.4.3 for a more detailed discussion on the confusion with scanning). Many books (e.g. *On Course for IELTS* - Conway and Shirreffs 2003) use the precise term – “skimming” – as well as other phrases such as “read the text quickly” as can be seen from Table 2.4.

Table 2.4: References to the term “skimming” in the textbooks

Name of Book	The word ‘skimming’ always used	Alternative wording always used	Alternative wording used in first part of book only	Mixture of wording: no discernible pattern
Achieve IELTS			✓	
Focus on IELTS				✓
Focus on Academic Skills for IELTS			✓	
High Impact IELTS	✓			
IELTS Express – Intermediate	✓			
IELTS Foundation				✓
IELTS Masterclass		✓		
Insight into IELTS	✓			
Instant IELTS	✓			
Objective IELTS - Intermediate				✓
Objective IELTS - Advanced				✓
On Course for IELTS				✓
Step up to IELTS				✓

The use of metalanguage is rather perplexing in some cases, appearing to alternate randomly with phrases such as “read quickly”, as can be seen from column five in Table 2.4. *Objective IELTS Advanced* (Black and Capel 2003) is a case in point. In an

interview with co-writer Annette Capel (2007), it became clear that the two authors, who each had responsibility for different chapters, had used different terminology.

On the subject of metalanguage, O'Connell (personal communication 2007) writes that "now that I check, I find that I have taken various different approaches in different books." She continues:

In *Focus on IELTS* . . . I find I omitted the terms "skimming" and "scanning" and paraphrased instead. In *Focus on IELTS Foundation* (lower level) there is a section called "Introducing Reading Skills" in Unit 1 with an explicit focus on "skimming" and "scanning" with detailed definitions and practice.

It seems quite inconsistent to use the precise terms in a lower level book (*IELTS Foundation*) and not in a higher level one (*Focus on IELTS*). There is a similar inconsistency in *Insight into IELTS* (Jakeman and McDowell 1999): "we didn't follow a pattern of usage and often simply used 'read'" (Jakeman personal communication 2009).

On Course for IELTS (Conway and Shirreffs 2003) provides a further example of the inconsistent use of terminology. The first exercise consists of reading quickly through the text and answering a question about the general mood (positive or negative), a skimming purpose suggested by Grellet (1981). However, the word skimming is not used at this point. Nevertheless, in the next set of reading exercises (*On Course for IELTS* - Conway and Shirreffs 2003, p.10), students are specifically instructed to skim the texts quickly, with once again a question about mood. Thus the exact same skimming exercise may be given with or without explicit reference to this skill.

Another important difference between the books lies in the distribution of skimming exercises. Several patterns became apparent in this survey. In some books the skimming exercises are distributed throughout the book. *Focus on IELTS* (O'Connell 2002) is the clearest example of this type. In other cases, skimming exercises occur only in certain units of the book. The writers introduce skimming at a particular point but then rarely refer to it again: *High Impact IELTS* (Bourne 2004) is an example of this type, with references to skimming occurring only in units 1 and 8. In *On Course for*

IELTS (Conway and Shirreffs 2003), skimming exercises occur in 12 out of the first 16 reading exercises but then not at all in the last 7.

It is not clear why this difference occurs. It seems likely that, while some writers assume that teachers and students will continue to make use of skimming without specific instructions to do so, others feel it is necessary to keep giving reminders to practise it. Certainly it seems unlikely that students will develop their skimming technique to a high level of competence if they practise it only as required in textbooks such as *High Impact* (Bourne 2004).

A logical and systematic approach is followed in *Focus on Academic Skills* (Terry and Wilson 2004). With regard to skimming, the book falls into three phases:

1. In units A-E, some reading exercises encourage quick reading for gist but without any specific reference to skimming. The phrase used to describe the activity at this stage is “forming a general picture”.
2. In units F-G, the term “skimming” is introduced: its function is briefly explained, some indication of how it can be operationalised is given and time limits are suggested.
3. Finally in units H-J, skimming exercises continue to be given, and the word “skimming” is used, but without specific details concerning timing and operationalisation. Presumably the authors feel that enough help has already been given in these areas.

In summary, skimming is presented as an important acquisition for the IELTS test-taker. Nevertheless, there is wide variation in the number of skimming exercises given, the terminology used and the amount of explanation given.

2.3. Level Two - ‘What is required of users?’

2.3.1 Pre-skimming

2.3.1.1 Introduction

In reading pedagogy, the process of reading is frequently divided into three aspects. For example, in her survey of reading in ELT coursebooks, Rivas (1999, p.16, following Williams 1984) mentions “the three-phase approach” to teaching reading: the pre-, while- and post-reading phases. This pattern is widely used in these textbooks.

According to Jakeman (personal communication 2009), the purpose of pre-reading exercises in IELTS preparation is to train students to notice such features as discourse structure so that in the test itself, though they will have little time to devote to pre-reading, they may “almost on a subconscious level” notice such features.

Table 2.5: Types of pre-skimming material in the textbooks

Book	Exercise to activate prior knowledge / raise topic consciousness	Prediction exercise based on pictures, text sampling etc.	Test-taking advice
Achieve IELTS	✓	✓	
Focus on IELTS	✓	✓	
Focus on Academic Skills for IELTS	✓	✓	
High Impact IELTS			✓
IELTS Express – Intermediate	✓	✓	
IELTS Foundation	✓	✓	
IELTS Masterclass	✓	✓	
Insight into IELTS			
Instant IELTS	✓		
Objective IELTS - Intermediate	✓	✓	✓
Objective IELTS - Advanced	✓	✓	✓
On Course for IELTS	✓	✓	
Step up to IELTS	✓	✓	

Skimming is usually regarded as a pre-reading activity (Grellet 1981), though it is debatable whether this is appropriate since it does involve at least a partial processing of the text. Nevertheless, it is clearly not the main reading of the text but preparation for it and so in that sense can be accepted within the framework of what Tudor (1989, p.326) refers to as a “weaker and more general definition of pre-reading.” Skimming forms a

major element in the pre-reading exercises as will be demonstrated but there are also pre-skimming exercises: their type and distribution are shown in Table 2.5 above.

2.3.1.2 Activating prior knowledge / Consciousness-raising

The exercises of this type vary according to the topic of the text. A discussion topic might be prefaced by a discussion on that issue; a factual text might be preceded by an exploration of relevant background knowledge. *Instant IELTS* (Brook-Hart 2004) uses a particularly wide range of stimulus materials for prior knowledge activation and consciousness-raising, including listening to a talk on the same topic as the text (*Instant IELTS* - Brook-Hart 2004, p.41), a discussion based on three charts related to the topic (ibid. p.45), and lists of factors whose relevance to the topic has to be assessed by students (ibid. p.49). The following is a typical exercise based on a factual text (from *Step up to IELTS* - Jakeman and McDowell 2004 p.24):

Discuss what you already know about the Mekong River.

- Where is it?
- Which countries does it flow through?

In one discussion-based pre-skimming exercise, a text about computers in schools is prefaced by a discussion regarding the benefits and drawbacks of using computers in education (*On Course for IELTS* - Conway and Shirreffs 2003, p.10). This activity “is intended to draw out learners’ background knowledge and opinions before reading” (*On Course for IELTS* - Conway and Shirreffs 2003, teacher’s book p.6). No rationale is given for this at this point but in the introduction, the writers say “preparing to read makes actual reading easier” (*On Course for IELTS* - Conway and Shirreffs 2003, teacher’s book p.v): however, there is no explanation of how this is so. In fact, it could be argued that the point of these pre-reading exercises is to make the reading material more predictable (by activating or even building schemata – Carrell 1988), familiar (by introducing key ideas) and simple – the pre-conditions for successful skimming according to the research (see 1.4.7).

Such exercises may well result in interesting classes which involve students and encourage them to take an interest in the reading texts. One criticism might be that they do not relate very directly to the examination situation, where such pre-reading support is unavailable. Capel (personal communication 2007) attempts to justify the use of pre-reading exercises by saying they are useful classroom activities and that “test-taking

strategies are different from being in the classroom.” Thus in *Objective IELTS* (Black and Capel 2006), a distinction is made between readings for classwork and discussion, and “test folders” which provide more direct examination practice. Pre-reading exercises are provided for the former but not for the latter.

2.3.1.3 Prediction

Some textbook exercises encourage students to predict text content. Actually it is logical that prediction and skimming are linked in pre-reading exercises since they could be said that they serve a similar purpose – to help the reader gain an overall idea of the text as quickly as possible. Indeed the rationale given in *Achieve IELTS* (Harrison and Cushen 2005) for prediction is to help students “to understand the theme and topic more quickly” – the same purpose which is often given for skimming (e.g. “skim the text so that you have a general idea of what it’s about” - *Focus on IELTS* - O’Connell 2002, p.74). The following operationalisation of predicting is given in *Achieve IELTS* (Harrison and Cushen 2005 - TB p.57): students should “begin to use the resources from the passage, like the *title, headings* or any *diagrams* and *pictures* included” (my italics). What is striking here is that the operationalisation of predicting overlaps to a considerable degree with the operationalisation of skimming (see 2.4.2). This raises the question as to whether the activities mentioned here (such as reading the title) belong to predicting or skimming or both, which in turn opens up the wider question of the nature of skimming (discussed more fully in 6.2).

With regard to actual prediction exercises used, a very straightforward one occurs in *Focus on IELTS* (O’Connell 2002, p.26). Students are asked to read the title and subheading, and then answer the question: “What do you think the passage will be about?” Several books use short quizzes: the students guess the answers and then check them in the text. For example, *Focus on IELTS* uses factual quiz questions on the topic of water: students then check the answers to these questions in the text (p.74).

2.3.1.4 Test-taking advice

In a book such as *High Impact IELTS*, which is extremely exam-orientated, pre-reading exercises are not so much preparation for reading the particular text which follows, as preparation for skim reading any text within the context of the exam. Skimming is

given prominence in this book, being dealt with on the first page of unit 1. The students are advised: “Before you start answering questions, quickly skim the whole text, getting some idea of what it is talking about.” (*High Impact IELTS* - Bourne 2004, p.1). There follows a table completion exercise which gives some advice on how skimming might be operationalised (discussed in section 2.4.2). Similar advice is given in the “test folders” in the *Objective IELTS* series.

Several books give quite detailed explanations prior to skimming exercises. This is particularly true of *Insight into IELTS* (Jakeman and McDowell 1999), in which each skimming exercise is prefaced by an explanation of how skimming can be used to answer particular types of exam questions.

2.3.2 Purposes of Skimming

As can be seen in Table 2.6 below, students are required to skim read in these textbooks for various purposes.

Table 2.6: Different purposes for skimming exercises in the textbooks

Name of Book	Skimming for gist	Skimming to answer exam questions	Skimming for other purposes
Focus on IELTS	✓	✓	✓
Focus on Academic Skills for IELTS	✓	✓	✓
IELTS Foundation	✓	✓	✓
Insight into IELTS	✓	✓	✓
On Course for IELTS	✓	✓	✓
Achieve IELTS		✓	✓
High Impact IELTS	✓	✓	
IELTS Express – Intermediate	✓		✓
IELTS Masterclass	✓		✓
Instant IELTS	✓		✓
Objective IELTS - Intermediate	✓		✓
Objective IELTS - Advanced	✓		✓
Step up to IELTS	✓		✓

Many of the textbooks contain skimming exercises designed to encourage the students to work out the gist of the text. For example, for the text “Hurry Sickness” (*Focus on IELTS* - O’Connell 2002, p.41), students are instructed to read through the article quickly and decide from the four options given which best describes the overall topic. In *Step up to IELTS* (Jakeman and McDowell 2004, p.98), another variant of the gist exercise is given in which students are asked to “draw a simple flow diagram to show the main points in the writer’s argument.” However, in general the instructions are quite simple: “skim the text so that you have a general idea of what it’s about” (*Focus on IELTS* - O’Connell 2002, p.74).

The assumption seems to be that it is necessary to gain the gist of a text before attempting questions based on it. Thus in *Step up to IELTS* (Jakeman and McDowell 2004, p.70), students are specifically told:

IELTS reading passages are long (about 900 words). In order to answer the questions you first need to have a good understanding of the overall content.

Similarly, *Focus on IELTS* (O’Connell 2002, p.57) tells the students that, in the light of the amount of text to be covered within a short time in the reading exam, they should “form a general picture of the content and how it is organised”.

However, a number of the books go beyond the use of skimming for gist and suggest that it can be used to tackle certain types of examination questions. Four question types are linked with skimming and these occur in the seven books shown in Table 2.7 below. The first two types, matching headings and choosing the best summary, are clearly associated with the global meaning of the text. The last two, short answer questions and information matching, require the student to find specific information in the text and so could be regarded as requiring scanning as well as – or instead of – skimming. (The relationship between these two skills is discussed in section 2.4.3.)

Table 2.7: Question types where skimming is used

Name of Book	Matching headings with paragraphs or sections	Choose best summary (or title) for whole text	Short answer questions	Information matching (e.g. matching information with paragraph)
Focus on IELTS		✓	✓	✓
High Impact IELTS	✓	✓		
IELTS Foundation	✓			✓
Insight into IELTS			✓	✓
Achieve IELTS	✓			
Focus on Academic Skills for IELTS		✓		
On Course for IELTS	✓			

Surprisingly, there is no consistent link between exercise type and use of skimming in the textbooks. For example, in the case of matching headings with paragraphs, all the books have this type of exercise but only four out of 13 specifically advocate the use of skimming for this question type. Indeed, in *Objective IELTS - Intermediate* (Black and Sharp 2006, p.50), when giving practice for the matching headings exercise, students are instructed to skim the text first, *before* attempting the exercise – they are not asked to use skimming as a way of actually doing the exercise. Thus there appears to be a difference of opinion over whether this particular type of exercise can be carried out by skimming. Alternatively, the author may assume that skimming has already been internalised, rendering any further admonitions to skim redundant. Be that as it may, there is a lack of consistency in the books over the instruction to skim read for IELTS-type exercises.

Most of the books contain other skimming purposes which are neither conventional gist (such as “skim the text so that you have a general idea of what it’s about” – *Focus on IELTS* - O’Connell 2002, p.74) nor directly related to exam questions. These additional purposes are shown in Table 2.8.

Table 2.8: Additional purposes for skimming in the textbooks

Purpose	AI	FI	FAS	HI	IE	IF	IM	IIa	IIb	OII	OIA	OCI	SUI	Total
Check predictions	1	2			1	2	2		1	1	5	3		18
Identify writer's opinion/attitude							1		1		1	4	1	8
Discover text organisation			2				2	1	1				1	7
Find specified information	3	1	1							1				6
Identify text type e.g. magazine		1						1		1			2	5
Relate text to pictures, symbols etc.	1				1					1				3
Identify likely readership								1					1	2
Identify writer's mood												1		1
Relate writer's opinion to one's own											1			1
Separate facts and arguments								1						1
Draw a diagram													1	1
Total no. of skimming tasks in each book	5	14	8	N/A	2	5	8	7	7	18	31	12	6	

AE = Achieve IELTS	HI = High Impact IELTS	IM = IELTS Masterclass	OII = Objective IELTS – Intermediate	SUI = Step up to IELTS
FI = Focus on IELTS	IE = IELTS Express – Intermediate	IIa = Insight into IELTS	OIA = Objective IELTS – Advanced	
FAS = Focus on Academic Skills for IELTS	IF = IELTS Foundation	IIb = Instant IELTS	OCI = On Course for IELTS	

According to Table 2.8, the most common among these additional purposes is asking students to check the predictions they made before skimming. Such exercises take a variety of forms. One example is finding out what the text says about a topic after having discussed it in class (*Instant IELTS* - Brook-Hart 2004, p.37; *On Course for IELTS* - Conway and Shirreffs 2003, p.109 and 114). In another prediction exercise in *Instant IELTS* (Brook-Hart 2004, p.54), students skim “to see how many of your questions [made up beforehand] are answered in the leaflet.” In *Achieve IELTS* (Harrison and Cushen 2005, p.52) students are asked to arrange pictures in order and then they read to check this predicted order.

All the other exercises are related to global aspects of a text and could generally be described, as in *Insight into IELTS* (Jakeman and McDowell 1999, p.29), as helping students to “orientate yourself to the text.” One example can be found in *Focus on IELTS* (O’Connell 2002, p. 9) where the students are asked the genre-related question: “What kind of writing is it?” *On Course for IELTS* (Conway and Shirreffs 2003) has exercises in which students have to skim to work out the attitude of the author to the subject of the texts. For example, in one exercise (*ibid.* p.10), students are given three texts about computers in education and told to skim them quickly to decide what attitude the writers have to this subject – positive, negative or neutral.

The use of skimming to ascertain the structure of a text (suggested in Grellet 1981) is found in *Focus on IELTS* (O’Connell 2002, p.26) where, in an exercise based on the text “Location is everything”, students are asked to look through the text and decide how it is organised: geographically, chronologically etc. Further examples are identifying which paragraphs concentrate on scientific progress and which deal with people’s opinions (*Instant IELTS* (Brook-Hart 2004, p.41), and drawing “a simple flow diagram to show the main points in the writer’s argument” (*Step up to IELTS* (Jakeman and McDowell 2004, p.98).

IELTS Masterclass (Haines and May 2006) places a particular emphasis on text organisation as a purpose for skimming. The teachers’ book (p.28) elaborates on “the importance of recognising structure within IELTS passages” which can “provide a useful map for finding the location of answers.” In the textbook itself, several skimming-related exercises are devoted to structure recognition: for example, for one

text, students are to “quickly read the text” in order to “divide it into three sections” (*IELTS Masterclass* - Haines and May 2006 p.154). In fact, students are told that “in most cases you should read the passage quickly first to get an idea of how it is organised” (p.34). Unfortunately they are not told *which* cases, or how to decide if it will be useful to skim for this purpose.

The most important point about all these tasks is neatly summarised by O’Connell (2007): “appropriate tasks are crucial - ones that can really be answered on the basis of skimming” (author’s emphasis). An example of an inappropriate task is in *Insight in IELTS* (Jakeman and McDowell 1999, p.49). The text concerns two conflicting pieces of research into the way penguins react to the encroachment of humans. The task is to separate facts and arguments. This difficult exercise, which would seem to require fairly detailed reading, is inappropriate for skimming.

2.4. Level Three - What is implied?’

2.4.1 Implied Skimming Speeds

2.4.1.1 Introduction

Since skimming is by definition fast, it is logical that student should be encouraged to skim quickly through texts. One way of doing this is to set time limits. O’Connell (personal communication 2007) claims that “the only way to practise skimming . . . is to create a genuine need for it in terms of task and time limit.”

Table 2.9 indicates the variety of practice in relation to timings. 4 out of the 14 books give no timings at all. Of those that do have timings, most indicate these timings in the students’ book (8 out of 10) while two have the timings only in the teacher’s book.

Table 2.9: Indications of skimming speeds in coursebooks

Name of Book	Number of Skimming (or equivalent) Exercises	Number of Skimming Exercises giving Timings	Percentage of Skimming Exercises giving Timings	Timings given in students' book (SB), or teacher's book (TB)
Achieve IELTS	5	0	0%	N/A
Focus on IELTS	14	8	57%	TB - 8
Focus on Academic Skills for IELTS	8	3	37.5%	SB
High Impact IELTS	5	4	80%	SB
IELTS Express – Intermediate	2	1	50%	SB
IELTS Foundation	5	3	60%	TB
IELTS Masterclass	8	0	0%	N/A
Insight into IELTS	7 (total number) 4 (A + GT) 3 (GT)	0 (total number) 0 (A + GT) 0 (GT)	0%	N/A
Instant IELTS	7 (total number) 5 (A) 2 (GT)	7 (total number) 5 (A) 2 (GT)	100%	TB (Timings given in teacher's notes)
Objective IELTS - Intermediate	18	2	11%	1 in SB: 1 in TB
Objective IELTS - Advanced	31	1	3%	SB
On Course for IELTS	12	9	75%	TB – 6 SB - 3
Step up to IELTS	6	5	83%	SB - 5

As can be seen from Table 2.9 above, the practice of setting a time limit varies, even among those books which do use time limits. In some books, limits are rarely used, whereas in others they are nearly always used.

In some cases the timing is very approximate. For example, in two of the eight cases in *Focus on IELTS* (O'Connell 2002) no specific time limit is given but teachers are told to “set a time limit of just a few minutes” (TB p.23) or “set a tight time limit” (TB p.55). Similarly, in *IELTS Foundation* (Roberts et al. 2004) one speed instruction says “give the students a strict time limit” – without indicating what that might be (p.20 in TB).

When timings are indicated, the intended skimming speed can be calculated by dividing the total number of words in the text by the time allocated. As can be seen from Table

2.10 below, there are wide variations in these intended skimming speeds, both within each book, and between books.

Table 2.10: Range of expected skimming speeds in coursebooks

Name of Book	Lowest Expected Skimming Speed in wpm	Highest Expected Skimming Speed in wpm	Ratio of highest speed to lowest
Achieve IELTS	N/A	N/A	N/A
Focus on IELTS	173	751	4.3
Focus on Academic Skills for IELTS	373	1120	3
High Impact IELTS	161	538	3.3
IELTS Express	300	336	1.1
IELTS Foundation	104	148	1.4
IELTS Masterclass	N/A	N/A	N/A
Insight into IELTS	N/A	N/A	N/A
Instant IELTS	123	283	2.3
Objective IELTS - Intermediate	255	298	1.2
Objective IELTS - Advanced	243*	243	N/A
On Course for IELTS	90	270	3
Step up to IELTS	83	972	11.7

*Only one reading has a time indicated in this book.

As can be seen from Table 2.10, there is enormous between-book variation. For example, the highest speed in *On Course for IELTS* (Conway and Shirreffs 2003) is 270 wpm whereas the lowest speed in *Focus on Academic Skills for IELTS* (Terry and Wilson 2004) is 373. In addition to between-book variation, the within-book speeds also vary greatly. In the most extreme case – *Step up to IELTS* (Jakeman and McDowell 2004) – the fastest expected speed is 11.7 times faster than the lowest.

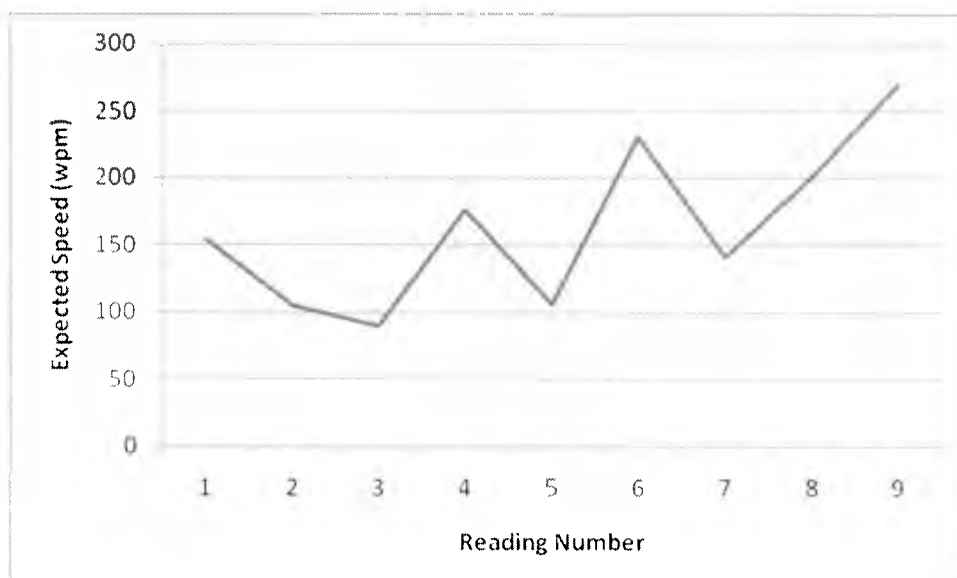
The rates resulting from the recommended timings in textbooks can be juxtaposed with skimming rates given in the literature on skimming, detailed in Table 4.6. The skimming rates in Table 4.6 are not always faster than those expected of IELTS students in the textbooks covered, even though they were for native speakers of English (with the exception of Fraser 2007). They clearly do not fall as low as some of the textbooks but neither do they reach quite as high. Like the textbooks, there is a very wide range.

It is impossible to know from the coursebooks themselves how rigorously these timings were worked out by the course writers. It is tempting to attribute at least some of this variation to non-pedagogical reasons. They may have been intended to give a merely notional suggestion of what constitutes “quick”. It could even be that the course writers simply did not think carefully enough about the timings and their speed implications. However, possible pedagogical motives can be suggested and investigated in relation to the speeds given to find out if they apply.

2.4.1.2 Increasing the speeds through the book

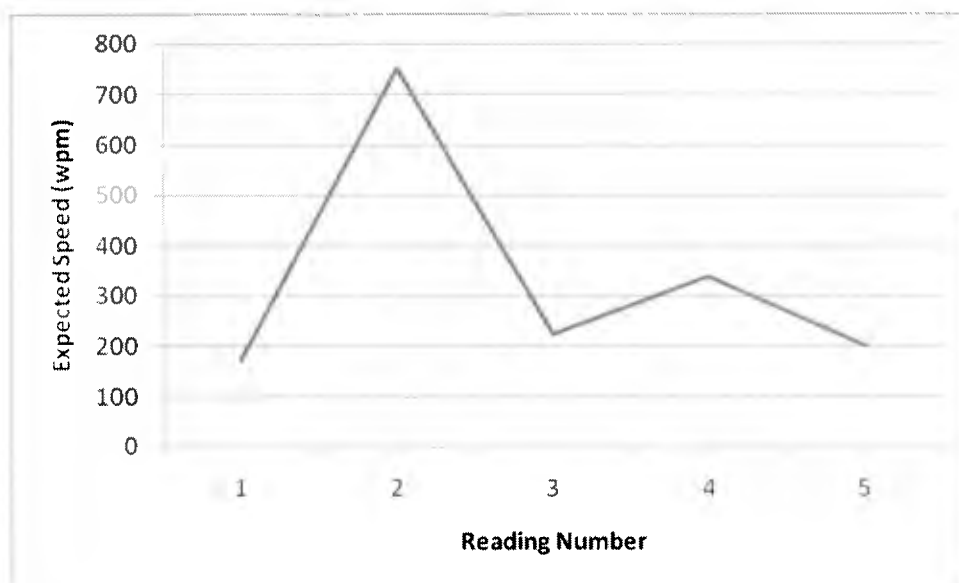
One obvious reason for speed variation could be that they increase steadily throughout the book, based on the assumption that the students are improving their skimming technique and thus are able to go faster. If this is a motivation, it is not applied with any great consistency. For example, in *On Course for IELTS* (Conway and Shirreffs 2003), a general upward trend is discernible, though with considerable variations along the way (see figure 2.1). The data also raise questions: for example, why are the second and third speeds rather slower than the first?

Figure 2.1: Expected skimming speeds for readings in *On Course for IELTS* (Conway and Shirreffs 2003)



It is even harder to discern a pattern based on student progress in *Focus on IELTS* (O’Connell 2002): the fastest speed is given to the second text and the second slowest to the last text (see Figure 2.2).

Figure 2.2: Expected skimming speeds for readings in Focus on IELTS



In personal correspondence on the subject of timings, Sue O’Connell writes:

I based the timings on my own time reading the text fairly carefully, then added some, with typical performances of my own class of middling students very much in mind. The amount added varied from text to text - there was no formula. I took the difficulty of the text and the position in the book (i.e. course) into account to some extent, but not the accompanying task. (O’Connell 2008)

Her comments imply a rule-of-thumb approach with the result that it is difficult for others to apply any clear rationale to the resulting timings and their sequence in the book, particularly since the relative difficulty of the task was not considered.

2.4.1.3 Variation according to text and exercise set.

Another possible reason for variation, in addition to position within the course, is the relative difficulty of the text itself and/or the skimming exercises based on it. It could be that the more difficult the text and/or exercises, the lower the expected skimming speed. With regard to exercises, some are fairly simple with just a single point to focus upon (e.g. choosing a statement that best sums up the writer’s opinion - *On Course for IELTS* - Conway and Shirreffs 2003, p.56) and hence a relatively high skimming rate is suggested – 231 wpm – the second highest in the book. Others require more detailed

responses from the student (e.g. checking a list of statements with the text - *On Course for IELTS* - Conway and Shirreffs 2003, p.34) with a consequent reduction in the expected skimming speed (106 wpm). Similarly, in *Step up to IELTS* (Jakeman and McDowell 2004), an exercise with a very low expected speed (only 83 wpm) is given, presumably since the exercise is rather demanding – students are asked to “draw a simple flow diagram to show the main points in the writer’s argument” (p.98).

On the other hand, some skimming exercises appear to have implausibly fast intended skimming speeds coupled with demanding exercises. In *Step up to IELTS* (Jakeman and McDowell 2004, p.65) a text of 486 words is to be skim read in 30 seconds (giving a skimming speed of 972 wpm). Moreover, according to the teacher’s book, the teacher should see whether, during this first reading, students can “isolate some of the arguments and explain how the writer has developed these.” The teacher should then “ask them to provide examples” (TB p.39). It thus becomes clear that, although exercise type may affect some of the set timings, this principle is not followed consistently in all the coursebooks for all exercises.

2.4.1.4 Variation according to level of students

Another source of variation may be according to the level of the students. This is clearly in the minds of some writers since they give alternative speeds for stronger and weaker readers.

An initial line of investigation here is to consider the levels of students for which the books were written, in the expectation that those books written specially for lower levels would have lower speeds and vice versa. For this purpose, it is necessary to know the intended level of students and the expected skimming speeds. Unfortunately, the data are incomplete: some books give no indication of intended level of students while others do not give any timings. Eight books have both levels and timings. Three of them are intended for low level students – *IELTS Foundation* (Roberts et al. 2004), *On Course for IELTS* (Conway and Shirreffs 2003) and *Step up to IELTS* (Jakeman and McDowell 2004) - and one is for high level students (*High Impact* – Bourne 2004). These books are arranged in order of level in Table 2.11 below.

Table 2.11: Selected comparison of intended levels of books with intended skimming speeds

Name of Book	Intended level of students	Range of Intended Skimming Speeds
IELTS Express Intermediate	“for candidates at IELTS bands 4-5.5” (book cover)	300-336
IELTS Foundation	Aimed at those with IELTS band of 4-5.5	104-148
Step up to IELTS	“with the lower-level IELTS class in mind (intermediate to upper-intermediate students requiring a Band 5 to Band 6 in the Test” – TB p.4	83-972
On Course for IELTS	IELTS band 5 and above	35-400 (overall range) 35-200 (lower level) 106-400 (higher level)
Objective IELTS - Intermediate	designed for students aiming for 5.5 / 6.0	255-298
Instant IELTS	Intermediate to advanced	123-283 (overall range) 123-160 (Intermediate) 178-283 (Advanced)
Objective IELTS - Advanced	designed for students’ aiming for 6.5 / 7.0	243
High Impact IELTS	“for students looking for a relatively high IELTS result” (TB preface)	161-538

The picture presented in Table 2.11 is somewhat confusing, with relatively high speeds being indicated sometimes for low level textbooks (*IELTS Express – Intermediate* – Hallows et al. 2006) and *Step up to IELTS* (Jakeman and McDowell 2004) and relatively low speeds for high level textbooks (e.g. speeds of below 200 wpm in *High Impact* - Bourne 2004 - and *Instant IELTS* - Brook-Hart 2004).

It could also be significant that two of the books without any intended skimming speeds – *Achieve IELTS* (Harrison and Cushen 2005) and *Insight into IELTS* (Jakeman and McDowell 1999) – are both for low level students. Perhaps the writers do not think setting time limits would be appropriate for readers at this stage.

One way in which some of the books vary the speeds according to student levels is by giving alternative speeds for different levels of students. This is done in two books: for

every text in *Instant IELTS* (Brook-Hart 2004) but only for two readings in *On Course for IELTS* (Conway and Shirreffs 2003).

A completely different approach is taken in the *Objective IELTS* series. The authors suggest that, given the demands of the test, students may need to increase their readings speeds, stating that, by the end of the course, students should be able to read at a speed of 300 wpm. (No indication of the provenance of this figure is given.) In the light of this, students are advised to time themselves and work out their reading speed, keeping a record to monitor their progress. In this way, a completely individualised approach to developing skim reading is promulgated. Time limits are very rarely given in these two books as students are expected to read at their own speeds and record the results. Approximate word counts are given for every text to facilitate the process.

Potentially this method of practising skimming could be very motivating for students, encouraging a sense of achievement. An increase in speed could be one indication of progress in skimming. The books provide few other indications since there is no attempt in any of them to test skimming.

However, in my interview with Annette Capel (2007), it transpired that she did not view the 300 wpm reading as skimming but speed reading in order to “read rapidly”, the figure being based on a speed reading book she had encountered some years previously. This is not made clear in the book and indeed it may be that her co-author does regard it as aimed at skimming since he uses the term “skimming” for the corresponding exercises in the units for which he is responsible.

2.4.2 The operationalisation of skimming in the textbooks

Table 2.12 below reveals which of the textbooks give any indication as to how skimming is to be operationalised.

Table 2.12: The operationalisation of skimming in coursebooks

Book	Operationalisation Instructions Given	
	Yes	No
Achieve IELTS		x
Focus on IELTS	✓	
Focus on Academic Skills for IELTS	✓	
High Impact IELTS	✓	
IELTS Express	✓	
IELTS Foundation	✓	
IELTS Masterclass		x
Insight into IELTS	✓	
Instant IELTS		x
Objective IELTS - Intermediate	✓	
Objective IELTS - Advanced	✓	
On Course for IELTS		x
Step up to IELTS	✓	

4 out of the 13 books give students no indication as to how skimming is to be operationalised: in other words, students are given the instruction to skim with no guidance as to how this is to be done. One example is *Instant IELTS* (Brook-Hart 2004). In the instructions for students prefacing a skimming exercise (p.29), the author writes: “You should read [the text] to get the general impression of what it is saying, but you should not try to understand everything.” Standing on its own without further elaboration, this advice could be rather difficult for students to follow, without any help regarding what needs to be understood and what does not. The teacher’s notes for this exercise are similarly unhelpful.

Skimming involves reading the passage quickly to get a *general idea* of what it is about, but without working out the meanings of individual words or sentences as there may not be a question about them. (*Instant IELTS* - Brook-Hart 2004, p.32, author’s italics)

The instruction is illogical. If a reader does not work out the meanings of words and sentences, no sense can be made of the text. Obviously some decoding of words and sentences is necessary but the author gives no indication how to ascertain which ones. The reason for this lack of guidance is difficult to understand: it would be interesting to know whether it is an oversight or deliberate policy. Capel (personal communication 2007) defends the lack of detail regarding operationalisation in *Objective IELTS - Advanced* (Black and Capel 2003) by stating that she expected that the students would have encountered skimming practice before and so do not need to be told again. It may

be that other coursebook writers believe that all teachers need to do is give students practice in reading more quickly (and perhaps set time limits) and as a result skimming will naturally occur.

Those books which make specific suggestions regarding operationalisation contain a number of ideas summarised in Table 2.13 and ranked according to frequency.

Table 2.13: Methods of operationalising skimming given 1 coursebooks

Technique	Focus on IELTS	Focus on Academic Skills for IELTS	High Impact IELTS	IELTS Express	IELTS Foundation	Insight into IELTS	Objective IELTS – Intermediate	Objective IELTS - Advanced	Step up to IELTS
Read the first sentence of each paragraph	✓	✓	✓	✓	✓		✓		✓
Read title and sub-headings	✓	✓	✓			✓	✓		✓
Study illustrations, e.g. pictures, tables	✓		✓			✓			
Highlight certain words e.g. proper nouns	✓	✓	✓						
Don't worry about unknown words				✓			✓		
Read the first paragraph	✓	✓							
Read the last sentence of each paragraph		✓	✓						
Be guided by linking phrases							✓		
Highlight the main ideas						✓			
Process words in groups								✓	
Read the last paragraph		✓							
Think of questions raised by headings and illustrations							✓		

It is worth considering in more detail exactly how the writers envisage the operationalisation of skimming. It is sometimes presented in contrast with detailed reading. Thus the teachers' book for *Focus on IELTS* (O'Connell 2002, p.30) suggests for one exercise that "it's particularly important to reinforce the reading skills of skimming and scanning and *to avoid lengthy intensive reading*" (my italics). The same page discusses skimming in terms of "sampling a text" (ibid. p.30). Further details of what is meant by this are given in the students' book (p.72).

Skimming involves selective reading of the most important parts of a text, in order to find out how the text is organised and get a general idea of what it is about. The main information is likely to be contained in the title and any subheading; the introduction and conclusion; the first and last sentences of any other paragraphs.

No strong claim is made as to where the key information may be found, but "likely" places are listed. In fact, the technique of reading the first paragraph and the first sentence of each of the remaining paragraphs has already been presented in the students' book (p.57). The key point here is that O'Connell's method of operationalisation clearly involves skipping large portions of the text.

A question which follows from this method of sampling is whether the limited reading that does take place is to be done more quickly than in normal reading. It could be that what she envisages is reading the supposedly gist-laden sections of the text at normal speed, while skipping the rest. In this case, the extra speed gained by skimming as opposed to normal reading is not by physically moving more quickly across the words being read but omitting large chunks of text.

O'Connell is by no means alone in advocating text sampling. Indeed, as can be seen from Table 2.16, the injunction to read the first sentence of each paragraph is the most popular among the ways of operationalising skimming. However, not all coursebook writers agree with this strategy. For example, Capel (personal communication 2007) expressed the view that this was "dangerous" since "academic texts don't work like that." Similarly, Jakeman (personal communication 2009) did not advocate sampling as "in the real world, texts are often not written in a prescriptive way." Some research has

been carried out into the occurrence of main ideas in paragraphs (see 1.3.3) with at least one researcher concluding that “students should not be told that professional writers usually begin their paragraphs with topic sentences” (Braddock 1974, p.301). This research strongly suggests that if skimming is operationalised in the way that O’Connell and others suggest, it is unlikely to be successful.

2.4.3 The relationship between skimming and scanning

The understanding of the terms “skimming” and “scanning” varies from textbook to textbook, creating such a confusing picture that it becomes difficult to know what the difference is between the two. In practice all the following relationships are found in the textbooks.

1. Skimming and scanning are completely different skills with different purposes and methods of operationalisation. In brief, we skim for gist and scan for detail. Since this is the most common way of differentiating between the two, I will refer to it as the “standard approach” and indeed it was the most common in the textbooks, being found in 7 out of the 13. (Examples: *Focus on Academic Skills for IELTS*; *High Impact IELTS*; *IELTS Express – Intermediate*; *Instant IELTS*; *Objective IELTS - Intermediate and Advanced*; *On Course for IELTS*).
2. The meanings given above in point 1 are reversed, i.e. we skim for detail and scan for gist. (Examples: *Achieve IELTS*; *IELTS Foundation*)
3. The terms skimming and scanning appear virtually interchangeable and no clear distinction is made between them regarding purpose. (Example: *Step Up to IELTS*).
4. Skimming and scanning are viewed as different skills which can profitably be used in combination. Thus the same exercise might require both skills, in which case students are asked to “skim and scan” the text (*Focus on IELTS*; *Insight into IELTS*).

When analysing the textbooks, I took the standard approach as the “norm”. For example if, according to this criterion, an exercise looked like a skimming exercise but was referred to as scanning, I would make a note of this point but regard it as skimming.

In practice, although many of the books introduce the metalanguage at some point, they often simply instruct students to “read quickly” in the exercises.

Each of the four relationships is explored separately below. While the standard approach is certainly the most common, there are instances of each of the others in these textbooks.

Most of the books use the standard way of distinguishing skimming from scanning. For example, in *High Impact* (Bourne 2004), on the first page of the book, the very first exercise concerns skimming and scanning. Though they are mentioned together, both appearing in the section heading, they are treated separately. With regard to skimming, students are given the following advice:

Before you start answering questions, quickly skim the whole text, getting some idea of what it is talking about. You should use the title to help you. You should take one or two minutes to do this. (*High Impact* p.1)

When scanning is introduced (p.4) it is in a separate part of this section on reading skills and the following explanation clearly distinguishes it from skimming:

One way of answering specific information questions is to scan: run your finger or pen quickly across the text until you find the answer (ibid. p.4).

The questions that follow are classic scanning questions, e.g. finding the number of times a colour is mentioned. Thus in this book, skimming and scanning are distinguished as shown in Table 2.14.

Table 2.14: Skimming and scanning differentiated in *High Impact*

Skill	Purpose	Method of Operationalisation
Skimming	“getting some idea of what it [the text] is talking about” (High Impact p.1)	“quickly skim the whole text . . . You should use the title to help you” (High Impact p.1)
Scanning	“answering specific information questions” (High Impact p.4)	“run your finger or pen quickly across the text until you find the answer” (High Impact p.4)

This distinction between skimming and scanning is also found in *Instant IELTS* (Brook-Hart 2004), represented in Table 2.15 below.

Table 2.15: Skimming and scanning differentiated in *Instant IELTS*

Skill	Purpose	Method of Operationalisation
Skimming	“to get a <i>general idea</i> of what it is about”	“reading the passage quickly . . . without working out the meanings of individual words or sentences
Scanning	“to locate <i>specific information</i> ”	[no information given]

Although much of the EFL literature clearly distinguishes between skimming and scanning as set out in the previous section, there are writers who reverse the meanings of these two skills. In *Achieve IELTS* (Harrison and Cushen 2005), in the teacher’s book (p.50), it says:

“IELTS frequently tests the student’s ability to read for general understanding or *scanning* [their italics].

The function accorded to scanning here is exactly the same as that accorded to skimming elsewhere in the literature. The reason is unclear though in correspondence with one of the co-authors it was described as “almost certainly a mistake” (Cushen – personal communication 2008).

IELTS Foundation (Roberts et al. 2004) also reverses the traditional meanings of skimming and scanning. In a section headed “Scanning” (p.78), there are two exercises:

- a. List three positive aspects and three negative aspects of globalisation.
- b. Match paragraphs with headings.

Certainly these are not scanning but skimming exercises according to the standard definitions.

On the other hand, elsewhere in *IELTS Foundation* (Roberts et al. 2004), students are sometimes asked to skim in a context where scanning would be seen as more appropriate according to the traditional view. Thus locating certain numbers in a text to find out what they refer to is presented as a skimming exercise (p.82).

On the other hand, in *Step up to IELTS* (Jakeman and McDowell 2004), the terms appear to be interchangeable. Students are told:

You can **scan** a text to get an idea of the topic or to locate a particular section. You do this by noticing the heading, pictures and general layout. For example, you scan a newspaper to find an article you want. Once you have found it, you can **skim** an article to get an idea of what it is about. (Step up to IELTS - Jakeman and McDowell 2004 p.10 – author’s emphasis)

It is unclear how the instruction to “**scan** a text to get an idea of the topic” is to be distinguished from the instruction to “**skim** an article to get an idea of what it is about.”

Finally, in some books, students are advised to use skimming and scanning in combination in order to complete certain exercises. In *Focus on IELTS* (O’Connell 2002), this association of the two skills can be seen as early as the introduction to the teacher’s book, where examples of skills that are practised in this book are given, including “skimming/scanning” (*Focus on IELTS* - O’Connell 2002 - TB, p.5). Other skills are listed separately but these two are combined as shown. Thus in one reading exercise the students are asked to “use skimming skills to find the relevant section and then scan the text to find the information you need” (*Focus on IELTS* - O’Connell 2002 - student’s book p.138).

In fact it seems that O’Connell’s understanding of the terms skimming and scanning conforms broadly to that of other writers who clearly differentiate between them, following the standard distinction. In an earlier exercise, she tells students to “skim the text so that you have a general idea of what it’s about” (ibid. p.74). Then, once students have read the first question to answer, they are to “scan the text to find the section which contains relevant information, and locate the answer” (ibid. p.74). Thus there is a conception of skimming and scanning which clearly separates their functions and yet connects them very closely in operation. It is possible that this position, although initially perhaps a little confusing to the students, is the most realistic and practical. The classic distinction between skimming and scanning is very easy to make when the scanning exercise consists of looking for something visually conspicuous such as a number or the name of an organization given as an acronym (e.g. WWF). However,

searching to find an explanation, in a situation where the reader does not know which words may be used, cannot be done using the scanning method detailed in High Impact (Bourne 2004, p.4): “run your finger or pen quickly across the text until you find the answer.” For such an exercise, some reading for gist may be necessary in order to search for information.

The instructions for students in *Insight into IELTS* (Jakeman and McDowell 1999) appear to be based on a similar understanding of the relationship between skimming and scanning. Students are told:

If you are asked to find a particular detail or piece of information in an IELTS passage, you will need to *skim* through the text fairly quickly, *scanning* for clues as to where the information might be found. (Jakeman and McDowell 1999, p.33 – the authors’ italics.)

It seems from these instructions that skimming and scanning happen simultaneously but can be distinguished in that skimming is a more general read through, while scanning involves looking more specifically for particular information. However, no clear explanation of this distinction is given.

In personal correspondence, Jakeman (2009) wrote that “: scanning for a description of something in a text may involve skimming as well.” What seems to be implied is that while scanning, skimming may take place, presumably because the exact form of the word or phrase being scanned is unknown and hence semantic encoding might be required as well as lexical access. However, a more precise term for such reading is “search reading” (Pugh 1978, p.53) and it is this reading process that is needed for many IELTS-type questions (See 1.3.6 for a more detailed discussion of search reading and its relationship with skimming and scanning.)

2.5. Summary

It has become apparent in this study of textbooks that a rather confusing picture of skimming is presented to students. Areas of confusion, which apply both within-book and between books, include:

- The purpose of skimming
- The speed at which skimming takes place
- The operationalisation of skimming (and in particular whether students need advice on how to operationalise skimming or not)
- The relationship between skimming and scanning

Despite this lack of coherence, the implication given is that it is an essential and accessible skill for students and that they can be trained to do it successfully.

Finally, the skimming training given can be related to the key findings in relation to skimming which emerged from the literature review (1.4.7).

Table 2.16: Research findings and textbook training

	Finding from Empirical Research	Incorporation of Finding in IELTS Coursebooks
1	Skimming is fast.	Students are frequently instructed to read quickly. Some textbooks set time limits to encourage faster reading.
2	Skim readers skip some of the text in order complete the reading quickly.	Students are encouraged in some books to “sample” the text (e.g. Focus on IELTS - O’Connell 2002, p.30)
3	Skim readers perform less well than normal readers in tests of comprehension and retention.	N/A
4	Skim readers are not particularly selective in the material that they read.	In some books students are instructed on how to locate the most gist-rich parts of a text for sampling.
5	Skim readers appear to need to infer meaning from what is sampled to “fill the gaps” left by what is skipped.	No direct comment, but textbooks encourage the activation of relevant schemata and these would facilitate inference-making.
6	Skimming works best when texts are predictable, familiar and simple.	The purpose of the pre-reading exercises is to help with this: “preparing to read makes actual reading easier” (On Course for IELTS, TB p.v)

Table 2.16 above shows that research findings are implemented in some of the textbooks. However, the textbooks could be said to be at odds with the research in their generally positive presentation of skimming and, in particular, the lack of any reference to the speed/comprehension trade-off, despite its recurring importance in skimming

research (Masson 1982; Just and Carpenter 1987; Muter and Maurutto 1991; Dyson and Haselgrove 2000; Duggan and Payne 2006) and also in the continuing use in some textbooks of sampling techniques (see 2.4.2; Table 2.13) which are likely to mislead such as the first sentence of each paragraph (Braddock 1974; Baumann and Serra 1984; Smith 2008).

Chapter 3

Skimming: what the teachers say

3.1. Methodological issues

3.1.1 The Purpose of the questionnaire

The questionnaire investigated teacher attitudes to skimming and views on how/whether it should be taught. A student perspective was available through the verbal protocols and that of textbook writers through the analysis of IELTS textbooks. Teachers mediate between the two, using textbooks to teach students. The issues addressed in the questionnaire were:

1. How widespread is the teaching of skimming in IELTS preparation classes?
2. How useful do the teachers perceive it to be for their students?
3. How do teachers teach skimming?
4. How useful are textbooks?
5. To what extent do they think skimming can be taught? What factors affect their students' success?
6. How useful do the teachers themselves find skimming in their own reading?

My main aim was to discover whether the teachers thought skimming should be taught, and if so, by what methods. I also hoped to gain insight into the relationship between a teacher's personal attitude towards skimming and classroom practice. In addition, I was interested to gather data on how a large number of literate adults themselves used skimming.

3.1.2 Questionnaire design

The emphasis in the analysis is on the range of answers given, to access the richness of teachers' attitudes and practices in this area. Thus, a relatively high percentage of open-ended questions (32%) was used so that teachers had scope to give detailed answers. Bell (1999) writes that questionnaires can provide factual

information but are less effective in uncovering reasons. While the aim was to collect facts, such as details of textbook usage, by judicious use of open-ended questions, it was hoped that reasons might also be accessed.

One consideration was the arrangement of closed and open-ended questions. There were three main possibilities:

- Open-ended questions first: closed questions towards the end (sometimes referred to as the funnel approach, e.g. Bowling and Ebrahim 2005).
- Closed questions first: open-ended questions towards the end (Cohen, Mannion and Morrison 2005, p.257).
- The two question types mixed throughout the questionnaire.

I used the second approach, hoping that teachers would be drawn into the questionnaire initially by answering questions that require less effort.

The questionnaire (see Appendix 1) consists of 19 questions. The first six are demographic. The next two are about the respondents' experience of teaching IELTS. The remaining 11 all concern skimming. Respondents were asked detailed questions about how they teach skimming. They were also asked about their personal use of skimming. The final two questions (18 and 19) were very open ended, asking for any additional comments about the respondents' experience and teaching of skimming. The questionnaire was accompanied by a covering letter (see Appendix 1) explaining its purpose.

There are several constraints that operated as I devised the questionnaire. Firstly, I had to strike a balance between the inclusion of questions that required thought and time to answer, and the need to ensure that the questionnaire was not so difficult and time-consuming that teachers lost patience with it. In addition, my own attitude towards skimming had to be concealed when constructing the questions so that respondents would not be able to detect an underlying bias. Finally, I had to avoid wording the questions in such a way that respondents were likely to give answers based on social

desirability (Phillips and Clancy 1972) – for example, to please me or to bolster their ego. In this case, if they had not given any real thought to the teaching of skimming, but read this questionnaire and thought that perhaps the implication is that they should have, they may have given responses that suggested that their attitude towards skimming is more positive than is actually the case. In the light of this, I tried to present the possibility of the teachers not teaching skimming as a valid alternative, both in the covering letter and the questionnaire itself.

Another crucial issue was sample size. It is a generally-held maxim that the more responses, the richer the data (e.g. Cohen et al. 2005). However, the issue of the adequacy of sample size is related to the kind of analysis being carried out as well as the size and characteristics of the total population. I was not undertaking a detailed inferential statistical analysis so huge numbers of responses were not required for that purpose. Nevertheless, as I hoped to draw conclusions which had relevance beyond the immediate sample, for example, regarding teacher attitudes to skimming, it was clearly important to have an adequate sample size to draw such conclusions.

The questionnaire was piloted using the other members of the EFL department (four in all) in the college where I teach. This was a very small pilot and on reflection I might have avoided one or two problems if it had been larger (for example, with question 17 – see 3.4.1). On the other hand, it proved so difficult to elicit responses to the questionnaire that a large pilot would have seemed profligate.

The questionnaire underwent several revisions before I arrived at the final form. There were numerous issues involved:

- How many demographic questions to include and how to present them.
- Whether to leave questions open-ended or to give a series of options from which to choose. In fact, I used a mixture of the two, basing my decision on factors such as the likelihood of useful data emerging and the constraint of length of time necessary to complete the survey. For example, in the case of the question about qualifications (question 5), I changed this from being open (“What

academic qualifications do you have?") to a list of three types of qualifications, thereby clarifying it.

- Deciding on the options. Questions with options were modified to cover as many possible situations as possible so that teachers felt that at least one fitted their circumstances. For example, in the question about the value of skimming training in textbooks (question 13), the option "don't use textbooks" was added.
- Making the wording of the question clear. For instance, the question about the use of textbooks (question 8) was altered to make teaching, rather than testing, the focus.

3.1.3 Data Collection

Between May 2006 and May 2007 I collected a total of 92 responses. These were numbered in order of arrival and will be referred to as R1, R2 etc. Ideally, I would have had a complete list of IELTS teachers from which to make a random sample, in the certain knowledge that anybody I contacted would respond. In reality there is no such list of teachers: it is not possible even to ascertain how many IELTS teachers there were potentially available to complete the questionnaire. Neither was there any guarantee that somebody who was contacted will respond.

Three main methods of contacting prospective respondents were used. Firstly there were personal contacts. Secondly, I made contact with potential respondents through professional contacts. For example, in 2006 I became an IELTS examiner and received three responses from other examiners. Roughly one third of the responses came through these two sources.

The remaining two thirds all came through hits using Google as a result of entering "IELTS" as the search word. The internet search gave access to institutions which provide IELTS preparation classes. I sent an initial email to an administrator asking for the email address of the director of studies or equivalent. In many cases I received no response to this email and so was unable to proceed. If I was given the details of the

director of studies and s/he showed a willingness to co-operate by circulating the questionnaire within the relevant department, I either sent as many hard copies of the questionnaire as were requested, or emailed the questionnaire as an attachment. I coded paper copies to enable me to calculate the level of feedback and compare question responses from the same institution. In a limited number of cases I sent out reminders when there was no initial response. However, these never yielded further questionnaire responses.

In a situation such as this, response rate has little meaning. Response operated at several different levels. First of all there is the response rate of institutions. In all, I contacted 172 institutions, of which 42 asked for questionnaire(s) to be sent. Of these 42 institutions, 30 provided at least one response. The total number of hard copies I sent stands at 119, of which 56 were returned. In addition, seven copies were sent as attachments. It is impossible for me to find out how many teachers were either given print-outs from those attachments or were sent the attachment itself. A total of ten teachers responded by returning the questionnaire as an attachment.

3.1.4 Factors affecting the quantity and quality of responses

Several factors affected the quantity and quality of the responses. One factor appears to have been whether the potential respondents are themselves engaged in research. One respondent wrote: "I am about to write my dissertation too so I know that getting feedback returned quickly helps to lessen the stress level."

Another important factor affecting the quality of response is that the answers to open-ended questions were usually given in note form, obviously having been filled in quickly. The occasional lack of detail and clarity gives rise to questions regarding the intended meaning of the respondent that cannot be answered.

Another factor, which may be far more significant, is the attitude of the teacher to skimming. Some teachers may have decided not to respond because they were not interested in skimming and/or they felt they had little to say on the subject. Possibly they do very little in class to help their students with this and so preferred not to respond. The reason for suggesting this factor is that the number of responses in which

the value of skimming was doubted was conspicuously small (see 4.4.2.2). I would have welcomed negative responses as I made clear in the covering letter for the questionnaire (see Appendix 1) but few were forthcoming.

Furthermore, among those who did respond, there are hints of apology from some of those who make negative comments about the value of skimming. For example, R5 writes: "If truth be told I don't skim read very much." The phrase "if truth be told" is often used when the statement that follows is thought likely to be unpalatable to the hearer/reader. Similarly, R60 writes about teaching skimming: "To be honest, it's not something I attach much importance to." The phrase "to be honest" functions in the same way as "if truth be told" and again introduces an element of apology, perhaps indicating the way the questionnaire was viewed: as the work of someone convinced of the value and importance of skimming for IELTS.

Thus it is possible that some respondents, seeing the questionnaire and assuming that I thought skimming was extremely important and wanted to hear responses that valued skimming, decided not to respond. This could be an example of what Brown and Dowling refer to as "unintentional bias" in that there may be "a connection between the reasons for non-response and the topic of the research" (Brown and Dowling 1998, p.68). Of course, there is no way of knowing whether, or to what extent, this occurred. It could be said that the questionnaire was constructed in such a way that an impression that I valued skimming highly was inevitable: all the questions, apart from the demographic ones, focussed on skimming itself. One way of circumventing this would have been to widen the range of questions, thus disguising the true purpose of the questionnaire. For example, there could have been questions on other aspects of reading such as scanning. The problem with this approach would have been that I would either have had to extend the questionnaire considerably (and risk reducing the response rate) or ask fewer questions about skimming (rendering each response less informative).

The response rates for individual questions were generally very high: over 95% in all except three questions. Exceptions include question 14 which was to be answered only by those who answered question 10 in the negative and only seven respondents did this. Questions 18 and 19 were open-ended questions giving the respondents an opportunity

to make additional comments if they wished to do so, yielding relatively high response levels of 61% and 32% respectively.

In the analysis of the data that follows, I have not dealt with each question one by one, but based the structure on related themes since only in this way would all that the respondents wrote on these themes be brought together. For the analysis of teaching methods (4.3.4-4.3.8), responses were coded according to categories such as speed, time limits etc. These were then allocated to broader categories (such as sampling techniques) which are used in the discussion of the teachers' responses that follows. The coding process itself was quite straightforward as the categories emerged readily from the data and are self-explanatory.

3.1.5 Respondent Profile

The questionnaire yielded information about the respondents, summarised below (see Appendix Two for further details).

- Sex - Two thirds of them were female and only a third male.
- Age - Most of the respondents belong to the central age brackets, 41-50 having the largest percentage with just over a third of all respondents.
- First language - Only one respondent out of the 92 did not have English as the first language.
- Years of EFL teaching experience - The largest groups, with a combined figure of over half the respondents, fall into the 5-10 and 11-15 years categories (26.1% and 25.0% respectively).
- Qualifications - It is clear that the teachers who responded to the survey were in general highly qualified. Just under 90% had an undergraduate qualification and more than 90% had some type of EFL teaching qualification, e.g. CELTA. In addition, roughly two-thirds of respondents had a postgraduate qualification, e.g. MA. Thus it was exceptional for a respondent not to have a higher degree.

- Teaching institutions - Most of the teachers work in universities (almost 36%) or language schools (just over 41%).
- Years of IELTS teaching experience - Nearly two-thirds of respondents (62%) had only one to five years' experience of preparing students for IELTS. In fact seven respondents had only one year of experience. In general these findings indicate that some of the teachers had rather limited experience of teaching for IELTS.

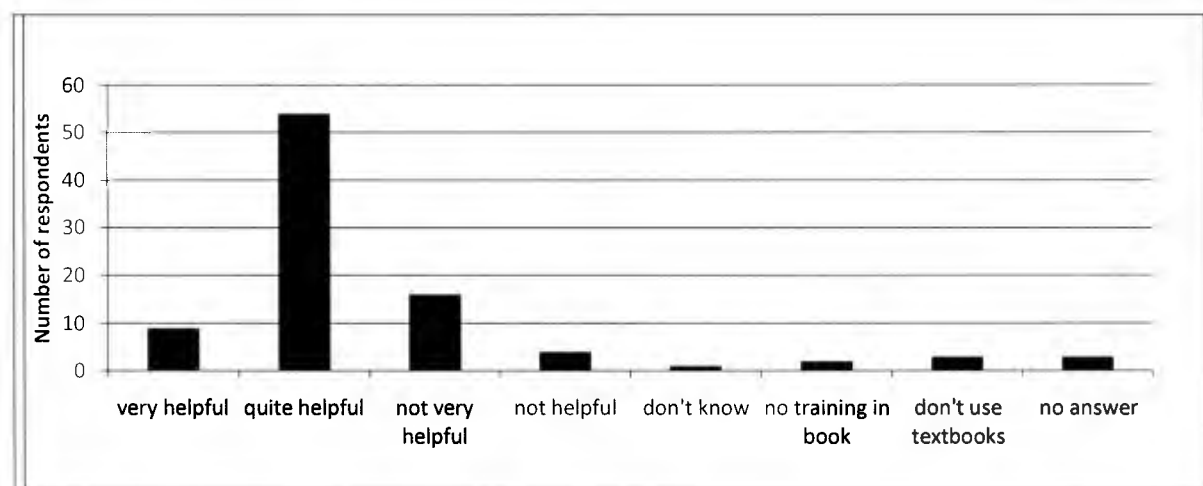
In summary, the respondents tended to be very experienced and highly qualified, though with rather less direct experience of teaching for IELTS.

3.2. Textbooks

3.2.1 Helpfulness of Textbooks

Respondents were asked how helpful they found the skimming training given in textbooks. The data is given in Figure 3.1.

Figure 3.1: The helpfulness of textbooks



More than two-thirds of respondents thought IELTS textbooks were either very helpful (9.8%) or quite helpful (58.7%) for teaching skimming.

3.2.2 Textbooks used by respondents

Respondents were asked which IELTS textbooks they use regularly for teaching. They were asked to give up to three titles and in fact most respondents wrote down three

books. Some entries were books of practice tests and these were not included in statistics. (In fact, the question had specifically asked teachers not to include such books.) The data is shown in Table 3.1 below.

Table 3.1: Textbooks used by respondents for IELTS preparation classes

Textbook	No of respondents using the textbook	Percentage of respondents using the textbook
*Focus on IELTS	58	63%
*Insight into IELTS	30	33%
*IELTS Foundation	15	16%
*Focus on Academic Skills for IELTS	9	10%
*High Impact IELTS	8	9%
*IELTS Express (Intermediate or Advanced)	8	9%
Prepare for IELTS	8	9%
202 Useful Ideas for IELTS	6	7%
*Step Up to IELTS	5	5%
*IELTS Masterclass	4	4%
IELTS Preparation and Practice	4	4%
IELTS Testbuilder	4	4%
*Instant IELTS	4	4%
*Objective IELTS (Intermediate or Advanced)	4	4%
*On Course for IELTS	4	4%
Passport to IELTS	4	4%
*Achieve IELTS	3	3%
Check your vocabulary for IELTS	2	2%
IELTS On Track	2	2%
IELTS to Success	2	2%
A book for IELTS	1	1%
Academic Writing for IELTS	1	1%
Action Plan for IELTS	1	1%
Inside IELTS	1	1%

In Table 3.1, all the books with asterisks were included in the textbook survey in Chapter 2. (*High Impact IELTS* is the only book included in Chapter 2 and not listed in Table 3.1 above. Possibly its high level and direct exam focus made it less attractive.)

Focus on IELTS stands out as by far the most popular textbook, with 63% of respondents using this book. *Insight into IELTS* was also popular, with 33% of respondents. Only two further books had percentages into double figures: *IELTS Foundation* (16%) and *Focus on Academic Skills for IELTS* (10%). The remaining 20 books all had levels below 10%. Overall, the figures suggest that there is a very small

number of “core” books which many teachers use, and then quite a long list of other books used only by a few teachers.

3.3. Teaching Skimming

3.3.1 Skimming Training - Levels

Respondents were asked if they provided training in skimming. Almost every respondent said they did give training, with only one exception. The next question asked for details about the levels at which skimming training was given. The results are shown in Table 3.2 below.

Table 3.2: Levels at which skimming training is given

Level	Percentage of teachers teaching skimming to students at this level
Beginner	21.7
Lower Intermediate	51.1
Intermediate	80.4
Upper Intermediate	80.4
Advanced	67.4

Unfortunately, this question proved to be ambiguous. There are two reasons why a teacher might have put that s/he did not teach skimming to, for example, beginners. It could be because that teacher did not actually teach students at this level. Alternatively, the teacher may have taught beginner classes but not included skimming in the teaching as it was felt to be inappropriate. Regrettably, the question did not make provision for this distinction.

Nevertheless, some useful conclusions can be gleaned from these data. For example, although it is sometimes said (e.g. Harvey 2005) that skimming is a skill suitable only for students at the higher levels, more than one fifth of respondents teach skimming to beginners, rising to more than half to lower intermediate students. R15 wrote (in response to question 18), “If students are young and/or have little reading experience in their L1 they may not have much experience of skimming so need explicit training.”

The fall in the percentage for advanced students is also of interest. Of course it could be that many teachers do not teach students at this level. But it is also possible that this drop results from the opinion of some teachers that at this level, skimming should be happening automatically and so does not need to be taught. For example, R71 states (actually in response to question 14) that “after some time at higher levels most students start to do it naturally – so training becomes redundant.”

3.3.2 Preparation for teaching skimming

Interestingly, although the respondents were not asked directly about this, 13 respondents (14%) included some details of how they prepare their students to learn how to skim. They clearly believe that the purpose and process of skimming will not be apparent to students but needs to be explained in detail. R67 wrote the following:

Students have commented that they have been TOLD about skimming and told to read for the main idea etc, but never really understood the purpose of it.

Four respondents say they explain the reasons for skimming to their students. For example, R23 writes: “Discuss the reasons why it’s essential – convince them to try.” The implication is that not all students will be immediately persuaded of the benefits of skimming. R17 also lays heavy emphasis on the need to make students aware of the purpose of skimming: “Explanation of why and how and reminder each time they practise with a text in class or exam paper once a week.” The problem, as a number of responses to question 18 make clear, is that many students continue to read texts in detail even when instructed to read quickly for gist. Thus R26 writes about the importance of “clarifying the purpose is to find answers to the q – not understand everything” so as to increase “efficiency and effectiveness of reading.” Finally, R44 bluntly explains the necessity of skimming in the examination context: “I tell them they have to do it for IELTS or they will not be able to finish in time.”

Other respondents introduce skimming by explaining what it consists of. R15 refers to “raising awareness of the concept, using their finger to track down the page.” This is presumably based on the presupposition that students will have little awareness of

skimming prior to this lesson. Likewise, R90 starts by asking the question: “What is skimming?”

Three other respondents try to relate skimming to other aspects of the students’ experience of reading. They see skimming as more than simply an examination technique but also a useful reading process for study, or indeed for life. R53 tries to “make students aware that they use this skill in own language and should be a transfer of skill” while R62 encourages students to find “examples of skim reading in everyday life.”

To summarise, a number of respondents feel the need to explain and justify skimming with their students. Some of them do this by relating skimming directly to the examination while others try to help students to make connections between skimming and other reading experiences.

3.3.3 Guidance about how to skim

The amount of direct guidance on skimming varies greatly from teacher to teacher. For example, in response to question 18, R80 confessed:

I don’t really know how to ‘teach’ skimming in the sense of giving advice or breaking down the subskills – I don’t really know what to say to people who tell me they don’t know how to do it, other than ‘practise’.

On the other hand, several other respondents felt much more guidance was needed. R89 wrote:

Like many teachers (I think) I struggled for years trying to explain the mechanics of skimming / how to skim. Telling them to read a passage in 1-3 minutes didn’t seem to be (and wasn’t) enough direction.

Similarly, R44 writes: “I used to just give students the text and tell them they have to read it in like a minute, this never really worked as students would only get partly

through the text.” He has changed tactics and now encourages students to read the first sentence of each paragraph.

Direct guidance about how to skim may involve a practical demonstration (respondents 4 and 34). Alternatively, there may be an explanation of how to skim (R9). In the case of R17, this is given “each time they practise.” R45 is much more explicit about the explanation, which is given as a short question and answer session:

Elicit whether it’s necessary to understand every word in text (No).

Ask students what they’ll do with words they don’t know (guess from context of sentence, paragraph, text).

Ask students how they’re going to read (elicit: skim read, read for gist – general idea).

Ask students what that means (look for key words, main ideas).

For another four respondents, part of this explanation involves discussion of how to direct eye movements. Two respondents, 15 and 43, suggest using a finger to track down the page. R43 specifies that this should be down the middle of the page. Similarly, R46 encourages students to “read down the page, not along, like washing the page with your eyes.” She also suggests using a ruler “if it helps.” In contrast, R67 uses computers for the purpose of directing the students’ gaze. Although these respondents give interesting information about teaching techniques, it is not clear from any of the descriptions exactly what they expect their students to focus their gaze upon. For example, running the finger down the middle of the page may be used to control the speed of reading, with the eyes skimming along the lines of text but trying to keep up with the finger. Whether or not this is what is meant is not clear.

In short, it is noteworthy that a wide variety of approaches are used to combat some students’ reluctance to skim read.

3.3.4 Pre-skimming Activities

There were relatively few references to tasks set prior to skimming the text, such as content prediction: perhaps respondents felt this was outside the remit of the

questionnaire. R19's students predict the content of text from any headings and sub-headings. They are then asked to skim read the text to check their predictions. R36 uses a similar activity but restricts skimming time to one minute. R5 sets reading targets "having first established outline of text." No indication is given as to how the outline is worked out.

Two other respondents refer to "pre-reading" exercises. From this phrase it is not clear whether these are synonymous with skimming, or a prelude to it. However, from the context it seems most likely such exercises are regarded as operationalisations of skimming. For example, R39 refers to:

Prereading techniques – looking at headings and sub-headings.
Reading first line of each paragraph – guess the topic – highlight key words/phrases."

Thus, it appears that the pre-reading techniques referred to are in fact sampling techniques common to skim reading and recommended by many respondents (see section 3.3.6).

3.3.5 Fast Reading

High speed is regarded as a quintessential feature of skimming (Masson 1982; Carver 1992a; Urquhart and Weir 1998). Exactly half of the respondents (46 out of 92) made some reference to reading quickly. There were three types of reference, as can be seen from Table 3.3. (Note that some respondents used more than one of the phrases.)

Table 3.3: Faster reading techniques used

Technique to be used	Number of references
"set a time limit"	38
"speed reading"	6
"read quickly"	5
Total	49

3.3.5.1 Time Limit

There were frequent references to setting a time limit (38 respondents - 41%). 11 respondents actually put some specific time limits that are used, shown in Table 3.4 below.

Table 3.4: Specific time limits and skimming purpose

Time Limit	Purpose	Respondent
30 seconds	“I give out short paragraphs and ask students to read in limited time.”	25
	“After focusing on the concept of ‘topic sentences’ in academic writing, I would put that to receptive use by getting students to read the first sentences (only) in a text and giving them only 30 secs to do so, then get them to summarise.”	79
1 minute	“to check prediction” (the prediction being based on reading the title only)	36
	[Not Given]	8
2 minutes	“To learn to read for specific information”	21
	“Asking them to read the text quickly and summarise briefly.”	50
3 minutes	“to find out specific information in a text -- i.e. what it’s about / what the outcome is / does it deal with facts or opinions”	16
	“To read a text and then summarise it.”	21
	“Set 3 mins on clock and get them to read article.”	60
	“Identifying main ideas of paragraphs – underlining topic sentence – in 3 mins or similar.”	69
	“Read first/last paragraphs and first line of other paragraphs.”	89

Actual time limits used clearly vary, though three minutes is the most popular one, being used by five out of the eleven. Why three minutes should be chosen, or any of the other timings, is unclear. It is a timing favoured in some of the textbooks (e.g. *On Course for IELTS* - Conway and Shirreffs 2003 - uses this timing several times). Given the severe time constraints of the test, it may also be that it is regarded as the maximum time that can be allocated to deriving the gist of the text before starting to answer questions in the IELTS test.

Differences of opinion over suitable time limits are of interest since they indirectly reflect the respondents’ understanding of what skimming constitutes. In 30 seconds,

only a very superficial understanding of the text can be expected. Nevertheless, R79 expects students to read first sentences of paragraphs and then be in a position to summarise the text in this short time. On the other hand, in three minutes, far more of the text can be sampled. This difference of opinion also underlies the following comment in reply to a question 18:

There is currently a debate at our place of work as to the degree of skimming appropriate before reading IELTS questions. I say 10 seconds (i.e. hardly anything) some say 1-2 minutes, for a fairly good understanding. (R41)

Obviously in as little as 10 seconds, sampling is minimal. Indeed, there is time to do little more than read the title and perhaps any sub-headings and look at any non-verbal material. This only serves to raise the question as to what constitutes skimming.

14 respondents simply referred to timing the reading: for example, R32 wrote “set time limits” and gave no further details. However, other respondents linked timed reading with the achievement of specific tasks. The tasks they set are shown in Table 3.5 below, the most popular being to find answers to gist-related questions (10 respondents).

Table 3.5: Tasks linked with timed reading

Task linked with timing	Total number of Respondents
Finding answers to questions	10
Find the gist	5
Reading and summarising	3
Focus on only first (and last) sentences	3
Focus on topic sentences	2
Identifying text type	1
Read first/last paragraph	1
Read and discuss what is remembered	1

3.3.5.2 Reading Quickly / Speed Reading

There were five references to “reading quickly”, often associated with deriving the gist. For example, R2 uses “exercises in quickly identifying the subject of the text, or the

paragraphs” and R83 asks students to “read through text quickly for general picture of content”. In two cases these comments are accompanied by injunctions “not to read or stop on every word” (R86 – also R83). In addition, both these respondents say that they set a time limit.

Furthermore, six respondents refer to “speed reading”. For example, R7 says, “We ask students to find key words / if necessary elicit possible parallel expression, and use speed reading to find answers.” None of these respondents explains exactly what is meant by speed reading or its relationship with skimming: the implication is that they are using it as a parallel expression, though it is possible that they are envisaging a different process.

3.3.6 Sampling

In all, 17 respondents (18%) referred to sampling techniques. Table 3.6 below shows which respondents used which techniques.

Table 3.6: Sampling techniques taught by respondents

Respondent	40	47	56	84	89	6	33	13	32	37	39	38	44	50	61	79	83	Total
Sampling Technique																		
Beginning of each paragraph	✓	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	13
Title / headings	✓	✓	✓	✓			✓				✓						✓	7
Beginning of text	✓		✓	✓	✓	✓	✓	✓										7
End of text	✓			✓	✓	✓	✓	✓										6
Ending of each paragraph	✓	✓			✓				✓	✓								5
Non-verbal	✓	✓	✓	✓														4
Total no. used /6	6	4	4	4	4	3	3	2	2	2	2	1	1	1	1	1	1	

The last row of Table 3.6 above indicates how many sampling techniques were mentioned by each respondent. Out of the 17 respondents who used these techniques, six mentioned using only one technique. On the other hand, one respondent mentioned all six. Once again this may reflect the wide range in the understanding of what constitutes skimming.

Each of these sampling techniques will be considered in turn.

- **The beginning of each paragraph**

There were 13 references (14%) to reading the beginning of each paragraph, the most common sampling technique mentioned. Interestingly, 5 of the respondents who used only one sampling technique used this one. Not all of them referred to reading the first sentence of the paragraph, though this was the most common wording as can be seen in Table 3.7.

Table 3.7: References to reading the beginning of each paragraph

Reference to reading the beginning of the paragraph	Number of Respondents
Read the first sentence of each paragraph	8
Read the first line of each paragraph	4
Read the beginning of each paragraph	1

R44 saw this technique as an antidote to unnecessarily detailed reading, as well as a way of operationalising skimming:

I don't tell them just to skim or the tendency will be just to read slowly from start to finish. By looking at the first sentences of each paragraph students are often able to gain a good understanding of the structure of the text.

- **Title (as part of more general sampling)**

Seven respondents referred to reading the title as a sampling technique. Of these, two also mentioned reading sub-headings (R39 and R40) and two referred to reading "headings". It is perhaps surprising that there were so few references to reading the heading, given its emphasis in teaching manuals (e.g. Grellet 1981) and textbooks - it was mentioned in six of the textbooks surveyed in Chapter 2 and discussed in that

chapter in the context of operationalising skimming (2.4.2). It is possible that other respondents took it for granted that students would do this.

- **The beginning of the text**

The beginning was a popular part of the text for sampling: seven respondents referred to this. Of these seven, four mentioned reading “the introduction” while the other three referred to the “first paragraph”. Clearly it is expected that writers will use their opening sentences to give their readers gist information.

- **The end of the text**

Five respondents mentioned reading the closing part of the text, of whom two referred to it as “the last paragraph” (R6 and R40) and three as “the conclusion” (R13, R33 and R84). Of course it is possible for the conclusion to be given elsewhere in a text such as the penultimate paragraph. If respondents envisaged this possibility, they did not make it clear how the students are expected to know where the conclusion is given. The same comment may apply to introductions. The introduction of the theme proper may occur in the second or third paragraph, not the first.

Thus with the techniques of studying introductions and conclusions there are two main ways teachers may refer to these: by specifying the particular paragraph where these are expected to occur or by telling students to read the introduction and conclusion.

Whichever phrasing is used, it is obvious that students will read the first and last paragraphs. The advantage for the student is that such instructions about which paragraph to read are clear and unambiguous. The disadvantage is that the writer may confound expectations, for example by putting the conclusion in the penultimate paragraph.

- **The ending of each paragraph**

Five respondents mentioned reading the ending of each paragraph. Four of these were injunctions to read the last sentence of each paragraph; R37 referred to reading “ends of paragraphs”.

R79 has a specific technique for teaching sampling, used in the early stages of teaching skimming:

Give students a doctored text, comprising an article (e.g. New Scientist) showing only the first and last paragraphs, and the first sentence of each other paragraph. This ‘obliges’ them to read only those parts of the text likely to contain the key contents, hence the value/feasibility of skimming.

In this way, students are forced to employ the sampling techniques espoused by many teachers as part of their initial training.

- **Non-verbal information (e.g. illustrations)**

Four respondents referred to studying non-verbal information as part of the initial sampling of the text. Such information is referred to as “pictures” (R40), “illustrations” (R47 and R84), and “graphics” (R56).

A comment given in response to Question 18 is of relevance here:

I used to tell students also that pictures and paragraph headings are also important but I know that they are not really, writers sometimes use puns, irony, try-to-be-clever (but not really) titles which would confuse students rather than help. Pictures as well give extremely limited content. (R44)

R44 draws attention to the cultural and linguistic content which constitutes a barrier to comprehension. In reality, it is likely that much will depend on the type of texts used. What R44 says of techniques used in headings, such as puns, is true of many newspapers and magazine articles, where “headlines are not just a summary but part of news rhetoric whose function is to attract the reader” (Bell 1993, p.189). Such techniques are less common in academic writing. However, many of the texts selected for use for the IELTS reading test are not from strictly academic sources but from just those sources likely to be laden with cultural content.

Thus a fairly wide range of sampling techniques are suggested. However, it is interesting that the percentage of teachers suggesting these is relatively low (18%) and that, of these, six mention only one technique.

3.3.7 Other Techniques for Locating Gist

Many respondents who advocate sampling techniques also support the use of topic sentences and key words, appearing to imply that this is also a sampling technique. I would argue that it is not: the aim of sampling techniques is to tell skim readers *where to look* for gist information (i.e. perceptual processing) whereas the aim of techniques such as searching for topic sentences and key words is to tell skim readers *what to look for* (i.e. conceptual processing).

R33 perhaps reflects this confusion, stating that she encourages students to “read title, intro, topic sentences and conclusion and any topic words/synonyms that ‘jump out of the page’”. The point here is that some of these elements are usually in known locations in a text – the title, introduction and conclusion: conversely, topic words and sentences could in theory be anywhere in the text and would need to be sought out by the skim reader. This would entail reading much more than just the key words and topic sentences. Nevertheless, the list above given by R33 mixes the two. Similarly, R84 gives the following assorted list:

1. Topic sentences
2. Introductions/conclusions
3. Key names/dates/figures
4. Title/illustrations/headings

This list also shows confusion between location of information (2 and 4) and type of information (1 and 3).

3.3.7.1. Topic Sentences

13 respondents referred to “topic sentences” and the need for students to locate these. This raises the question as to what a topic sentence is or at least how it is being understood by respondents. Unfortunately none of them goes into detail about what

they think that phrase implies and many simply say they get students to “identify topic sentences”. However, it is possible to gain some insight into the intended meaning by studying the context in which the phrase is used. It appears to be regarded at least by some of the respondents as a particular feature of academic writing. R79 refers to “focusing on the concept of ‘topic sentences’ in academic writing”. Furthermore, it seems that in some cases at least, the implication is that each paragraph contains a topic sentence which is of value for gist extraction. R66 refers to “identifying main ideas of paragraphs – underlining topic sentence.” This implies that the main ideas of each paragraph will be expressed in the topic sentence. Similarly, R65 writes: “Get the gist of the paragraph by understanding the topic sentence.”

It may well be that some respondents regard the introductory (and concluding) sentences as topic sentences. For example, R33 encourages students to “read title, intro, topic sentences and conclusion”: this list includes most of the sections of text commonly used for sampling except first and last sentences of paragraphs. It could be that R33 considers first and last sentences to be potential topic sentences. Significantly, those who mention topic sentences do not also mention first and last sentences. Further evidence that the phrase “topic sentence” is synonymous with “first sentence of a paragraph” comes from R79:

“After focusing on the concept of ‘topic sentences’ in academic writing, I would put that to receptive use by getting students to read the first sentences (only) in a text . . .”

Perhaps underlying the use of the more general term is the recognition that the “topic sentence” may not be the first or last sentence but could be any sentence. Of course there is also the possibility, not referred to in any of the responses, that there may be no topic sentence at all (Braddock 1974; Smith 2008).

In relation to topic sentences, there is an interesting comment from R25, made in response to Question 18:

Reading topic sentences helps but does not cover the whole skill – there is often a need to cover two or three sentences rather than just one.

As with the location of the introduction and conclusion (see 3.3.6), strict rules about what to read seem to break down when students are faced with the way ideas are actually organised in real texts.

3.3.7.2. Key words

14 respondents (15%) referred to asking their students to find “key words”. This often went along with finding “topic sentences”. Five respondents encourage students to find both. For example, R65 writes: “Underline key words. Get the gist of the paragraph by understanding the topic sentence.”

On the face of it, asking students to “read key words” or, as R33 comments, read “any topic words/synonyms that ‘jump out of the page’” seems an impractical task. A word will not usually jump out of the page unless the reader has read it in the first place (unless it has certain visual characteristics such as large size etc.) and so a student will have to read many words that are not “key” in order to identify those that are. As Masson (1985, p.203) states, “it is probably rarely possible to tell if a word is important until it and its context have been read.” Thus, it seems inappropriate to ask students to “read key words” and, in fact, most respondents who referred to key words used verbs other than “read” (see Table 3.8 below).

Table 3.8: Verbs preceding the phrase “key words”

Phrase Used	No. of Respondents
“find key words”	2
“look for key words”	2
“underline key words” / “highlight any key details”	2
“read . . . topic words	1
“identify key words”	1
“highlight key words”	1
“search for key words”	1
“notice . . . key words”	1
No verb given	3

Only very few respondents give any indication of what types of words these “key words” may be. Of course they may be different types of words in different types of texts. However, that does not remove the problem for the student of identifying the key

words but in fact increases the difficulty. R66 refers to “key details (especially many examples of one thing, e.g. names of people, countries)” and R84 refers to “key names/dates/figures.” These two respondents suggest that key words may well be words carrying factual information: presumably they may be proper nouns, for example. Similarly, R37, though he does not use the phrase “key words”, encourages students to “underline proper nouns and numbers.” In fact, words carrying such information are readily isolated perceptually having upper case first letters or, in the case of dates, being numbers rather than words.

3.3.8 Reading for Gist/Summary

A total of 29 out of the 92 respondents (32%) referred to the purpose of their students’ skimming as reading for the main ideas. Interestingly, no other purposes for skimming were given. In comparison, the respondents gave a number of other purposes for their own skimming and indeed skimming for gist was not the most common (see section 4.4.1). However, it must be remembered that their comments were made in relation to their teaching which is exam-oriented.

The aim of skimming for main ideas was expressed in several different ways as Table 3.9 below makes clear.

Table 3.9: Skimming purposes

Stated Purpose	Total number of Respondents
Reading for <u>gist</u>	11
Reading to summarise	9
Other phrasing e.g. “identify the subject of the text”	9

- **Gist**

11 respondents actually used the word “gist” when referring to the aim of skimming. Some gave details of how the students are expected to discover the gist. For example, R65 tells the students: “Get the gist of the paragraph by understanding the topic sentence.” Six respondents set questions (also referred to as “tasks” – R19 – and “exercises” – R76) which, if answered correctly, would reveal the gist in the teacher’s

view. R86 gets students to read the text within a time limit and then asks for “feedback on the general idea.” However, in addition, she uses this “as a mechanism to ‘organise’/‘locate’ information.” In other words, the skimming is seen as helpful not simply for deriving the main ideas of the text but also for understanding how the text is structured.

Other ways of eliciting feedback from students on their search for the gist include getting the students to discuss the gist with their neighbour and then making a “mind map on board of class suggestions” (R35). Similarly, R45 writes: “Ask students to compare their comprehension of text with each other, then give class feedback.”

- **Summarise**

Nine respondents require their students to summarise texts. Five simply state that they ask students produce a summary, without giving any indication of its nature. However, in the case of R15, it is an oral summary. On the other hand, R25 states that, having given students a very limited time to read a short paragraph, “I then tell them to turn over the paper and write a summary sentence on the back to check comprehension.” R44 also requests a written summary but without specifying the length. R47 asks for a one-sentence summary which may be in written or oral form. These instructions give an interesting insight into how these teachers operationalise “summarising”. It can be given in oral or written form and can be as short as one sentence.

- **Other phrasing**

In addition to references to skimming for gist and summarising the text, there were a number of other phrases, nine in all, used to refer to a similar process. Three of the phrases incorporate the word “general”: “general understanding”, “general picture” and “general idea”. Two others involve “identifying” the gist, referred to as “the subject” and “main ideas”. Two respondents do not actually use the word “gist” or an equivalent but specify questions they would ask so that the gist can be determined. R7 writes: “ask students to find short answers to questions such as who / where/ when / how long.” Similarly R16 says: “Give them a time limit (e.g. 3 mins) to find out specific information in a text – i.e. what it’s about / what the outcome is / does it deal with facts or opinions.” The final two do not contain the idea of gist directly but rather describe

an activity which, if carried out successfully, would result in the gist being derived. R29 asks students to choose an article and “explain it to a partner” while R32 gets students to read a text and then “turn over paper – recount what they remember.”

- **Read for structure/text type**

There were relatively few references to reading for recognising structure or text type – 9/92 respondents referred to this or 10%. These varied in their focus as can be seen from Table 3.10 below.

Table 3.10: Skim reading for text structure

Structure-related Reference	Number of References
General reference to structure recognition	5
References to teaching specific text types	3
Reference to teaching discourse markers which signpost structure	2

Firstly, some were aimed at discerning the general structure of the text. Thus, for example, R22 refers to the “analysis of discourse structure, so that they become more aware of how ideas are organized and presented.” R28 encourages students to understand “the ‘geography’ of text”. R71 sets tasks which require an overall understanding of the text: he may ask students to give it a title, assess the genre, state the author’s opinion, or discern the structure more generally. Secondly, other respondents attempt to teach their students to recognise specific text structures: R10 uses the technique of “familiarising them with certain text types”; R53 will “discuss type of passage e.g. prob/solution etc.”; and R12 does some “work on genre”. Finally, two respondents refer to the need to train students to recognise signals in the text which help to work out the structure so that they “look for appropriate signposting” (R81).

3.3.9 Factors affecting skimming success

Respondents were given a list of six factors, with a seventh option of “other”, which might be thought to affect skimming ability. They were asked to select up to three main factors. Table 3.11 below summarises their responses to this question.

Table 3.11: Factors affecting skimming success

Factor	Percentage of Respondents Choosing This Factor
General language ability	78.3
The amount of skimming practice	65.2
The quality of training in skimming	33.7
Prior knowledge of topic	32.6
General interest in reading	31.5
Specific interest in the particular text they are reading	21.7
Other	24

Two factors clearly stand out in Table 3.11: general language ability and the amount of skimming practice. Prior knowledge was selected by fewer than one third of respondents, despite its acknowledged importance for skimming (as outlined in Chapter 1). The affective factor, interest, was also thought to be less significant.

The importance of language ability is further supported by four responses to the open-ended question 18. Skimming “requires fairly good reading skills to start with” (R25) because it is “a higher order skill” and thus “impossible to teach unless the language ability is already there” (R70). In R84’s view, students’ “level of success depends on their knowledge of grammar and vocabulary.” In addition, R35 states: “The lower the level of ability, the less likely the students are to be able to skim successfully.” However, there is a difference of opinion here, in that some respondents do teach skimming at the lower levels (see 3.3.1), something that R84 appears to be considering: “I believe I could start teaching skimming in my lower ability classes.”

In addition to the list of 6 factors, respondents were given the opportunity to add another factor not mentioned in the list. In fact, 22 respondents (24%) did so. These are listed in Table 3.12 below.

Table 3.12: Other factors affecting skimming success

Other factors affecting skimming success	Total number of respondents
Affective factors	8
Effects of L1 skimming ability	5
Experience of reading	2
“General study and exam skills”	1
“Previous style of teaching received”	1
“Awareness of reading as a skill based activity and the importance of practising those skills”	1
“Intelligence level”	1
“Their learning style”	1
“General awareness of text/sentence structure”	1
Vocabulary	1

The affective factors referred to in Table 3.12 above can be broken down as shown in Table 3.13 below.

Table 3.13: Affective factors affecting skimming success

Affective factors affecting skimming success	Total number of respondents
Confidence	5
Motivation	1
Frame of mind	1
Interest in text	1

In terms of confidence, two of the three who referred to this (R58 and R62) expanded on what they meant by “confidence” by relating it to the “willingness to accept that 100% understanding of text is not essential” (R62). Other affective factors included “motivation to pass exam [as opposed to a ‘general reading skill’]” (R54); “their frame of mind e.g. tiredness, unfocused, worried, distracted by external problems” (R45); and “interest in the info to be found” (R68).

Among the other factors, five respondents referred to the effects of L1 skimming. Two mentioned skimming ability in the L1; two referred to practice/training in the L1; and R8 wrote about “L1 transferable skills and whether they have been transferred”.

3.3.10 Difficulties of teaching skimming

In answer to question 18, five respondents wrote about the difficulties of teaching skimming. R25 compares it with scanning, claiming that it is rather more difficult to teach than scanning “as it requires fairly good reading skills to start with.” The difficulty that R48 refers to is that “students tend to require quite a lot of awareness-raising of skimming skills and techniques.” A further difficulty is that it may be “very difficult to perceive how well students are doing in a class situation - I suspect many of them (at lower levels) are scanning and the result is quite hit and miss” (R81).

One other difficulty that was much discussed (17 references - 18% of respondents) is students wanting to read and understand every word, even though the teachers do not regard this as a desirable aim. These comments suggest that the teachers’ perception of the problem is that the students have an unhelpful mindset coupled with a lack of confidence. R50 writes: “They find it hard to cope with the small degree of uncertainty that may result from not reading everything in detail.” R1 states that “it’s quite a difficult skill to teach as students become preoccupied with trying to understand each word despite the time set.” There is an “over-dependence on [the] dictionary” (R19). R7 finds this to be particularly true of “Arabic students” who will “spend ages poring over one unknown word” while R35 refers to “older students” who “doggedly” continue this practice. R16 suggests a reason for the pre-occupation with word meanings: “They are more interested in the meaning of words. Then alone does the text make sense to them.” A further reason is given by R45: “students . . . feel they lose control if they don’t read every word.” This loss of control through not reading/understanding every word is also referred to by R82: “Students find skimming difficult because they lose confidence when they don’t understand a word. They are not always content with understanding 80% of the text.” One reason for this may be that, as R65 suggests, “Most students think that everything is important.”

In order to overcome this reluctance to skim and concern about the meaning of every word, R8 makes the students do timed readings or “some kind of race” to encourage them to skim. In the view of R19, “by developing skimming skills at an early stage it can build confidence in students’ reading abilities.” R23 suggests this lack of confidence can be overcome only by an improvement in their general knowledge of English: “The greater the students’ grasp of English, the more readily they accept the

idea of skimming”. R34 finds students are much more open to the idea of skimming if they are taught “the tricks of the trade”: this “gives them confidence in class and they don’t rely on reading to know every word.”

Another potential solution is highlighted by R30, who also has some interesting insights into the psychology of students:

Predicting content is usually pleasantly revealing to the students – they know about the subjects already (although they think they don’t) – esp. Asian students who generally don’t openly acknowledge their own expertise/knowledge and don’t ‘take responsibility’ for this knowledge. As a result they will naturally dutifully plough through every word and ‘obediently’ find the answers (esp. in textbooks) because ‘that’s what you do’ - basically obey. Many students also feel (I think) this is learning. (You can award yourselves brownie points for getting the answers right rather than the intangible improvement of a skill.)

This comment refers to the importance of prior knowledge, suggesting that students often know more about the subject matter of the reading than they expect or readily admit. However, the reason for this is a particular perception of what is required of them in the learning environment. The students believe that reading text implies word by word processing, the mind being conceived as a tabula rasa. There is also reference to a learning culture that values “right answers” above skill development.

Other solutions range from an appeal to the imagination (“I tell them to imagine that they are being chased through the forest by a pack of carnivorous animals - they have to get through and out!” - R47) to a more mechanical approach to skimming (“moving them onto chunks and phrases strategy, without so much reliance on the safety net of a dictionary” – R62)

In short, many respondents regard skimming as somewhat problematic to teach, requiring special measures to persuade students to attempt it. It is noteworthy that teachers commented in detail on this problem, being prompted only by a very general question. They obviously felt very strongly about this and are at odds with at least some of their students on this issue. The issue for teachers is how to persuade students to

skim read quickly. The issue for students is how to understand the words. As a result, the teachers find their students reluctant to engage in the process of skimming. To combat this, they go to great lengths to encourage their students to read faster and abandon word-by-word reading.

However, the teachers pay scant attention to the problem that, according to several respondents (e.g. R16, R38, R45 and R81), is uppermost in the minds of their students – unknown lexis. Indeed, it may even be that they underestimate this problem. R50 refers to the “small degree of uncertainty that may result from not reading everything in detail.” But for some students, the degree of uncertainty that follows from skimming may present an insurmountable obstacle, so impeded is overall comprehension. The preoccupation of the students, unknown lexis, yielded only two comments regarding teaching strategy in the questionnaire responses. R13 asks students to ignore unknown words; R83 suggests students should “guess where necessary” which presumably implies that where not deemed necessary, such words can be skipped. Unknown words were apparently a major concern of some of the students but hardly gain a mention by teachers, even though they themselves say it is difficult to get students away from word-by-word reading.

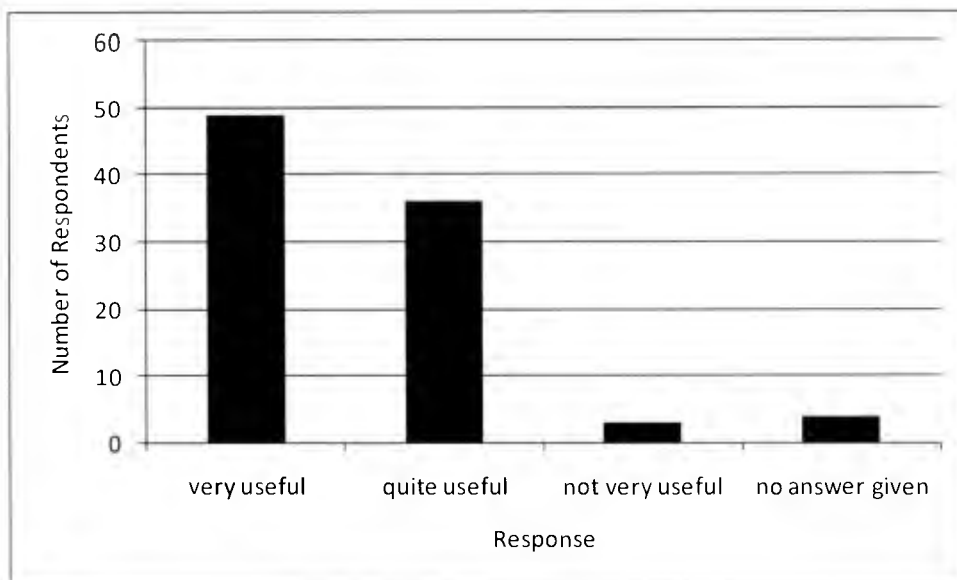
3.4. The Usefulness of Skimming

Several questions yielded data regarding the respondents’ assessment of the value of skimming.

3.4.1 Usefulness of skimming to respondents

Respondents were asked how useful they found skimming in their own reading. Results are given in Figure 3.2 below. Clearly the respondents had a very positive attitude towards skimming on the whole. 85 out of the 92 who replied to this question chose “very useful” or “quite useful”.

Figure 3.2: Usefulness of skimming to respondents



In addition, question 17 asked: “In what situations do you personally skim read? For what purpose(s)?” With regard to the situations in which respondents skim, there were 236 “mentions” (with a mean of 2.5 per respondent). There were 284 mentions of purpose (with a mean of 3.1 per respondent)

Unfortunately, the wording of the second part of this question, regarding the respondents’ purpose in skimming, turned out to be ambiguous. The point of this question was to find out why the respondent chose skimming, as opposed to normal reading for example, in this situation. Many respondents simply gave a reason for reading (for example, reading a newspaper to find out “what is going on in the world” – R46), rather than a specific reason for skimming. These responses are referred to in the analysis as “Question misinterpreted”. Out of 284 mentions for the purpose question, 32 were misinterpretations (11%).

Table 3.14 below presents an analysis of the situations in which the respondents skim read.

Table 3.14: Situations in which the respondents skim read

Reading Material	Number of Mentions
Reading newspapers	70
Academic reading	32
Notes, memos etc	28
Film reviews, book blurbs, TV listings, etc.	23
Magazines	14
Websites	14
Choosing teaching materials	13
Instructions, recipes etc.	10
Students' writing	9
Lesson preparation	9
emails	7
Reading novels	5
Anything	2

It can be seen that reading newspapers was by far the most common situation in which the respondents skim read. However, there is a wide range of materials that is skimmed, some related to work or study, some information-based, and some reading for pleasure.

The reasons why the respondents skim read are summarised in Table 3.15 below, in the following way: four purposes stood out as being the most common and these are given in the table; infrequently mentioned purposes are classified as “other”.

Interestingly, the most commonly mentioned purpose is not for gist as might be expected (though this response was also very popular) but to carry out an assessment of the material. However, these purposes are not mutually exclusive. It might be more accurate to say that in some cases the reader derives the gist of the text in order to assess its usefulness. The type of assessment the respondents were referring to depended on the nature of the material. Newspaper articles were assessed to find out whether they were worth reading in greater detail (24 mentions); student essays were assessed, for example, to see whether they had answered the question (five mentions); and academic reading was assessed for relevance (11 mentions). Many respondents also mentioned “time saving” as a key purpose. This was predictable given that skimming is by definition quick reading. In addition, there were quite a few mentions of the purpose of searching for specific information. While skimming may have been involved here, it is also possible that there is confusion with scanning.

Table 3.15: Summary of skimming purpose mentions

	Assessment of interest, value etc.	Gist	Save time	Find specific information	Other	Question Misinterpreted
Newspapers	24	20	11	7	5	8
Magazines	8	3	1			1
Students' essays	5	4				
Film review, book blurb, TV listings etc.		17			3	3
Novels				1	3	
Emails		4	4		2	
Memos, minutes etc.	1	14	3		10	1
Academic reading	11	9		4	5	3
Lesson preparation: texts and instructions		3	4		1	3
Teaching materials e.g. prior to purchase	6	3				3
Websites	6	2	4		1	3
Instructions. Recipes etc.				5		5
Reading anything	2					
Other			2	2	2	2
Total	93	79	29	19	32	32

Total number of mentions = 284

There were 12 further, more detailed comments on the usefulness of skimming for respondents in response to questions 18 and 19. Of these 12 comments, seven were very positive about skimming while five were, at least to some degree, negative.

Among the positive comments, some were very general: "Skimming is something I do all the time" (R14); "I do a lot of it" (R75); "The older I get the more I skim. I must learn to slow down" (R27). Four respondents referred to specific situations in which

they had found skimming beneficial. For example, two mentioned its time-saving value during their MA courses: “In doing an MA in EAP part-time, my ‘skimming’ skills really came into their own; otherwise no way would I have completed the course” (R13).

Among the comments which displayed a less positive attitude towards skimming, the most negative was R18’s: “I am not really convinced that skimming actually exists and is in any way distinct from scanning for important information.” It is possible that what underlies it is a misunderstanding of the skimming process though it is difficult to tell from such a brief comment. One respondent referred to her lack of ability in this area – “I’m not very good at it - always been a slow reader” (R60) – and another to its infrequent use – “If truth be told I don’t skim read very much” (R5). It is very interesting to compare these responses with the same respondents’ other answers in the questionnaire related to teaching. It might be expected that these three respondents would all view skimming as less than vital to success in IELTS. However, in response to the question regarding the importance of skimming for exam success, on a scale of 1-5, with 1 meaning “absolutely necessary” and 5 meaning “not necessary at all”, R18 (predictably) chose 4, R60 (less predictably) chose 2, and R5 (surprisingly) chose 1.

Finally two respondents wrote about particular circumstances in which skimming causes difficulties. According to R47, “Sometimes one may lose track” resulting not in “a conscious knowledge of general meaning” but “a blur”. In addition, R35 found that skimming “can be frustrating if you are really interested in a detailed read but for whatever reason are pressured to skim read.”

3.4.2 The usefulness of skimming for students

3.4.2.1 The general usefulness of skimming

In response to questions 18/19, there were 14 comments on the general usefulness of skimming. Typical of this viewpoint is R14:

This is a skill that all literate people need, not just those taking an exam. . . we should be concentrating our efforts on demonstrating the applicability of general skills to all areas of life.

Likewise, R61 is convinced of its value for all people in all situations:

I believe it is relevant for all levels and all classes...not quite sure how we would actually approach a text if we didn't, at some point, skim something in it...

Skimming is regarded as “an important general reading skill” (R2) which “plays a very important role in reading in general whether in a test context or while reading authentic material in real life” (R9), enabling readers to “to deal with large quantities of textual information” (R17). R25 regards it as “undervalued”.

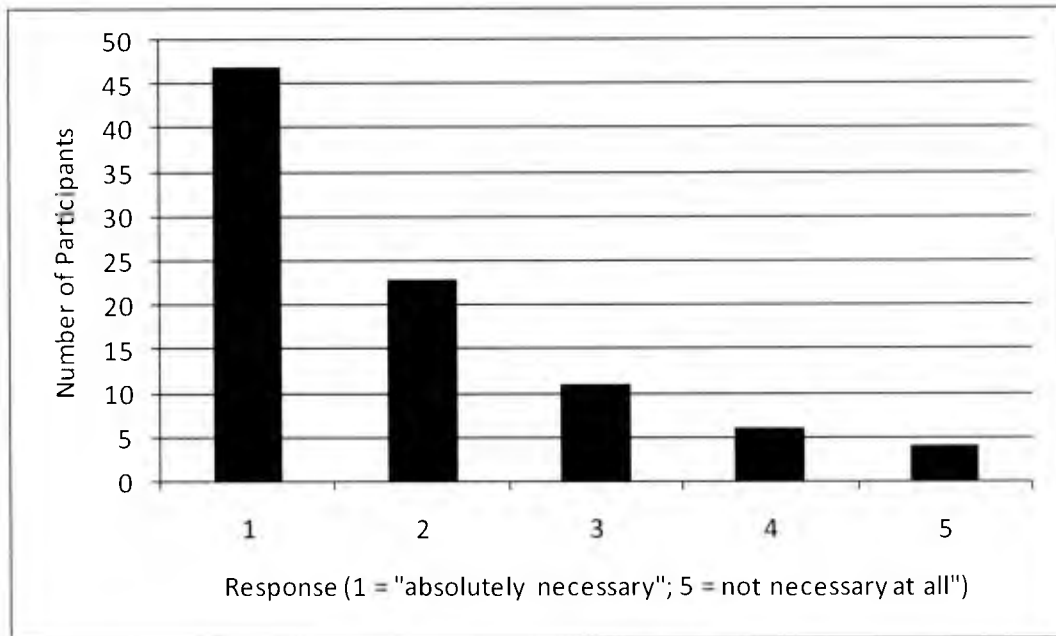
Three of the comments relate specifically to study at a higher level, claiming that the large amounts of reading set against time constraints make skimming an essential reading process. R61 thinks it is especially valuable “in HE where volume of reading can be intimidating.” R37 believes “it could be argued that skimming is a necessary skill for anyone embarking on a postgraduate course where a great deal of reading may be required.” According to R44, “If they practise and are good at it then they will have a better chance of survival when it comes to choosing which academic articles to read at uni.”

Three particular reasons why skimming is useful are given. It saves time (R71); it can make forbidding academic texts “appear less daunting and can speed up the process of reading, while maintaining understanding” (R39); and it “enables students to select what is truly relevant for them” (R81).

3.4.2.2 The usefulness of skimming for IELTS candidates

Respondents were asked about the value of skimming for IELTS. They responded using a scale of 1 (“absolutely necessary”) to 5 (“not necessary at all”). Their responses are summarised below in Figure 3.3.

Figure 3.3: Respondents' assessment of the usefulness of skimming for IELTS



The overwhelming majority regard skimming as useful, with just over half the respondents indicating that it is absolutely necessary for candidates taking IELTS. Only a small minority of just over 4% opted for “not necessary at all”.

A further 16 positive comments on the value of skimming for IELTS were made in response to questions 18 and 19. Eight respondents saw the main value of skimming as a means of saving time. For example, R15 states: “Because of the time constraints in the IELTS exam, ability to skim read is essential.” Similarly, R43 believes that “if students don’t have some background in skimming they will not get through enough material in the time allocated.” R66 expresses the time benefit in the following way: “If a student can locate the information they need to understand quickly, they have more time to actually understand it.”

Three respondents commented on the value of knowing the gist before tackling specific examination questions. This is a surprisingly low number given that this is a generally accepted purpose of skimming. R17 states: “I think it’s vital for English learners to have some basic idea of what they’re going to read about before they start.” She also encourages students to skim the questions. R31 thinks the value of students’ skimming for gist initially is that they “feel more confident answering questions.”

3.4.2.3 Negative comments on skimming

Among the comments which were less positive about the value of skimming for IELTS, two are related to the types of questions in the examination. These respondents felt that skimming had little direct relevance for answering IELTS questions. For example, R58 was generally positive about teaching students to skim “although I don’t think there is a question that requires students to have an overall understanding of the texts in IELTS.” Similarly, R65 wrote:

Specifically in the case of IELTS, the questioning pattern doesn’t really encourage skimming. The answers are often in areas that may not seem to be that important. This is specially so in the case of Academic IELTS.

Two respondents said that skimming was over-emphasised. R91 wrote: “Sometimes I think there is too much focus on skimming: students want to read and understand the whole article.” This is another reference (see 4.3.10) to the tension some teachers appear to sense between what they feel might be beneficial for their students and the preferences of the students themselves.

One further reason stated for having a negative attitude to skimming is that some students may not find it helpful:

I find that there are students for whom skimming will not make a difference. (Their performance remains constant, whether they skim or not.) It does not hold true for everybody but I belong myself to such students. (R90)

There are at least two important elements in this response. Firstly, this respondent sees the usefulness of different reading techniques as being a personal matter. Some may find a certain technique useful while others may not. Secondly, his attitude towards the value for students mirrors his personal attitude to skimming. (He actually states in answer to another question that he finds skimming “not very useful” personally.) It could be argued that since he does not find skimming especially useful, it is natural that skimming will have a lower priority in his teaching.

Two comments made in response to the question about how respondents teach skimming (question 12) are also relevant here. R48 makes comments that tend to play down the significance of skimming:

I tend not to focus on it ad nauseam. It's hard work and good for specific purposes. At other times I switch to other kinds of training. In other words, skimming is good for some purposes but not the be-all-and-end-all of my IELTS teaching.

Skimming is seen as being useful but only in limited circumstances and thus should not be a dominant aspect of teaching reading skills. R51 further reduces the significance of skimming: "if they don't really absorb this skill it's not that important / crucial."

Question 14 was directed to respondents who had indicated that they did not train their students to skim read. There were seven responses to this question. The instruction prefacing this question asked respondents to answer this question only if they had given a negative answer to question 10 ("Do you give your students any training in skim reading?"). In fact only one of the seven respondents who answered question 14 replied negatively to question 10. This was R70 who wrote: "Don't know how to teach it but give practice by asking them to identify topics – fast." This answer suggests that even she does in fact give skimming training.

Several respondents used this question as an opportunity to make a comment on the relative usefulness of skimming compared with other reading skills. R7 cites a colleague who says that skimming is "virtually useless" if students do not know the relevant vocabulary in the questions. R38 makes a similar comment as an aside for question 13 regarding the usefulness of skimming training in textbooks. Though he finds skimming exercises "quite useful", he says "you'd have to ask the students who are probably more hung up on vocabulary – and they might have a point." Thus both comments suggest that, at least as far as some of the students are concerned, learning vocabulary should be given priority over skimming practice.

R88, along with R2 and R11, regards scanning rather than skimming as "the essential skill" for IELTS as he thinks there is insufficient time to skim the text. R62 comments

that students report obtaining answers without resorting to skimming, again questioning its usefulness.

Finally there are two comments which appear to contradict each other. R77 says she does not spend much time on skimming, adding, presumably by way of explanation, “it’s a high level skill.” On the other hand, R71 states that “after some time at higher levels most students start to do it naturally – so training becomes redundant.” These two comments highlight two issues that run through the questionnaire responses more generally: firstly, the level at which it is appropriate to give skimming practice and secondly, whether it is really necessary to give detailed practice beyond simply requiring students to read very quickly.

Thus while most of the teachers thought that skimming training was extremely valuable for IELTS candidates, there were a few who disagreed, partly because of the nature of IELTS questions and partly because of the perceived needs of the students.

3.5. Conclusion

The overwhelming majority of respondents value skimming as an important reading process and train their students to skim as an essential part of IELTS preparation. There was only a very small minority of dissenting voices. Some of these regarded skimming as over-emphasised and felt that teaching vocabulary (R38) and/or scanning (respondents 2, 11 and 88) was much more important.

Given the extremely positive attitude to skimming it is surprising that there were only two comments on respondents’ success in skimming training. R59 felt that “generally with a little training students are able to do it quite well.” In addition, R45, in response to question 19, wrote: “I think frequent practice of skimming has made my students more confident readers.” The dearth of accounts of success may reflect the view that this is a difficult skill to teach and/or that teachers may be unsure about how to measure success in this skill so that “the result is quite hit and miss” (R81).

Though there was near unanimity regarding the value of skimming, the teachers' methods vary enormously and raise interesting issues (discussed below) regarding the nature of the skimming process and the way it should be taught.

What is skimming?

The techniques for training students raise fundamental questions about the nature of skimming. For example, according to the respondents, the time taken to skim read a text can range from 10 seconds to three minutes (see 3.3.5.1). The sampling of the text also varies enormously, ranging from the use of only one sampling technique to as many as six (see 3.3.6). Of course, the timings and sampling techniques are based on how long the teacher thinks IELTS candidates can realistically spend on an initial skimming of the text. Yet underlying these disparate operationalisations of skimming are more fundamental questions concerning its nature: What is skimming? How detailed is it? What is the range of activities that can be encompassed by the umbrella term of skimming? In particular, how fast does reading need to be to constitute skimming? Again the lack of an answer to this question (1.3.2) results in a lack of clarity in the operationalisation of skimming.

What is “gist”?

A further element is the nature of the gist that is to be extracted. The respondents' comments about the kind of summary they expect their students to create gives insight into how they operationalise “gist”. This ranges from one sentence (R25) to, for example, a mind map (R35). So for some teachers “gist” means the one main idea, while for others, it refers to a collection of ideas. For R86 it also includes an understanding of text structure.

For which levels is skimming appropriate?

There is a recurring difference of opinion in the data between the large proportion of respondents who teach skimming to the lower ability levels (21.7% to beginners and 51.1% to lower intermediate students), presumably being in agreement with R61 that skimming is “relevant for all levels and all classes”, and the very small number of others who comment that it is a “high level skill” (R77) and only appropriate for more advanced students, being “a higher order skill” and thus “impossible to teach unless the language ability is already there” (R70).

To what extent is this a “new” skill for students?

Some teachers regard the students’ skimming in English as transference of an L1 skill. In fact, R8 regards this as the crucial factor in skimming success. Nevertheless, it is clear from other responses that many teachers see themselves as initiating a new skill: hence the need to explain it and persuade students to attempt it (more details given in 3.3.2).

How much help should be given?

An extremely wide range of approaches was evident regarding the amount of detailed help given to students. Some teachers believe it necessary to spell out in detail the way that skimming should be operationalised (see 3.3.3 for further details). Others merely instruct students to “read quickly”, assuming they learn for themselves relevant sampling techniques. Two questions arise from this disparity. Firstly, there is the question of whether it is really possible to give a detailed description of how to skim that will be universally applicable. As Masson says: “Information contributing to the gist of certain types of passage can be lodged in very inconspicuous locations which readers using common types of skimming strategies would fail to explore” (Masson 1982, p.412). The second question concerns the desirability or pedagogical usefulness of such a description. Underlying this choice is the belief of the teacher who has to decide whether skimming can/should be reduced to a formula or whether it is necessary and pedagogically more desirable to point the students in the right direction and then trust them to act with wisdom and intelligence.

How much practice is needed?

Almost two thirds of respondents (65.2%) indicated that “the amount of skimming practice” is one of the crucial factors affecting skimming success. As R45 claims: “repeated practice is essential.” Conversely, R51 plays down the need for repeated classroom practice: “This is a skill that is developed naturally – like through using the Internet.” In addition, R71 thought it was not necessary to practise with high level students as it occurred naturally.

How “realistic” should the practice be?

Some teachers give their students a great deal of help as they practise skimming to derive the gist. For example, they may give a set of questions to answer (e.g. R16).

Others simply require the students to extract the main points with no further guidance (e.g. R80). Underlying this dichotomy may be the tension between ensuring that the students know what to do, and giving tasks that relate to real life, or indeed to the exam itself, where no such help is available.

Should the teaching be directed towards exams, academic study or life skills?

The issue here is whether respondents regard skimming as simply an examination necessity or a skill which is of relevance to their students' wider academic studies, or indeed a "life skill" – "a skill that all literate people need" (R14). This tension is exemplified in the comments about how the respondents encourage their students to accept the importance of skimming. For example, R62's students are asked to find "examples of skim reading in everyday life" while in contrast R44 tells his students "they have to do it for IELTS or they will not be able to finish in time."

How much metalanguage (if any) should be used?

The fact that some teachers chose to use general words (e.g. "read quickly") in the questionnaire to describe what they do with their students in class, and did not use metalanguage, strongly suggests that, as Paran (2002) found in his study, they avoid the more technical terms in class. Whether or not this is always done consciously is unknown: it nevertheless represents another key difference in approach.

Do teachers confuse skimming and scanning?

As many as 13 respondents (14%) included activities that practised scanning rather than skimming, providing further evidence of the confusion between these two types of reading. There are four references (respondents 8, 21, 49 and 82) to "finding specific information", a highly typical scanning task. Similarly, it is stated that students are asked to "find the bit about . ." (R30) or to locate key words/information (respondents 36, 51, 55, 64, 68, 75 and 78) such as dates, numbers and people's names (respondents 21, 66 and 82).

Pedagogical idealism or practical expediency?

There was a discernible tension in some responses between what is pedagogically desirable and what is actually practicable: between what the teachers would like to instil in students and the students' own preferences. Nowhere is this tension more clearly

perceptible than in the struggle between the teachers who would like to get students skim reading (and not reading word by word), and students who want to know what all the words mean. R91 appears to resolve this by allowing the students to “read and understand the whole article.” However, for many other respondents, the challenge is to wean students off this approach, whatever they may feel.

Effects of teachers’ personal preferences on the curriculum

Another interesting issue is the effect of teachers’ personal preferences on what they decide to teach their students. More specifically, if a teacher does not find skimming useful personally and/or is not confident in using skimming, does that mean s/he should not teach it to students? In fact, just as teachers’ self-perceptions of their knowledge of grammar can motivate pedagogical decisions (Borg 2001), there is evidence that a small number of respondents find skimming neither personally useful nor useful for their students and so do not teach it. For example, R90 claims that neither he nor some of his students find skimming helpful. On the one hand, it could be said that students are being disadvantaged by the teachers’ own preferences. Alternatively, it could be claimed that if a teacher is not convinced of the benefits of a certain technique, s/he would be an unconvincing teacher of it. In the data there are examples of both extremes: R18 is “not really convinced that skimming actually exists” and does not regard it as useful for succeeding in IELTS while R5 does not skim read very much personally, but still regards skimming as “absolutely necessary” for IELTS.

In conclusion, the vast majority of the teachers surveyed agreed with textbook writers about the importance accorded to skimming, even though they had widely differing teaching practices. In the next chapter, the practices and attitudes of a group of students will be discussed, to compare with those already presented.

Chapter Four

Verbal Protocols Methodology

4.1. The Theory behind Verbal Protocols

In the previous two chapters, the treatment of skimming in textbooks and by IELTS teachers was investigated. To complete this inquiry into the “skimming triangle” (Figure 1.2), the main purpose of the verbal protocols was to find out as much as possible about what the participants do when they skim read. Working in this highly atheoretical field, the aim was to construct a description of skim reading based on authentic data, as opposed to one based on speculation. One reason for choosing to use verbal protocols is that they can give insights into mental processes which are otherwise inaccessible to the researcher. Secondly, operating within this paradigm does seem to be desirable, offering the possibility of far richer data than that based on quantitative methods alone.

The verbal protocol is a verbalisation of what the participants are thinking, resulting in a “stream of consciousness disclosure of thought processes while information is being attended to” (Cohen 1983, cited in Rankin 1988, p.119). Verbal protocols have been used to investigate a wide range of mental processes. For example, Pressley and Afflerbach (1995, p.1) mention physics problem solving (Simon and Simon 1978), and student cognitions during instruction (Peterson, Swing, Braverman and Buss 1982). The technique has been widely used in research into reading (e.g. Olshavsky 1977; Block 1986; Cavalcanti 1987).

Ericsson and Simon (1987) set out the theoretical framework. Information is stored in the mind in several memories, which have different capacities and accessing characteristics. In particular, a distinction can be made between what they refer to as short-term memory, which has limited capacity and/or duration and long-term memory with a very large capacity and much longer duration. For an understanding of the theoretical underpinning of verbal protocols, the next step in their theory is crucial:

“Within the framework of this information processing model, it is assumed that information *recently acquired* (attended to or heeded) by the central processor is kept in STM, and is *directly accessible* for further processing

(e.g. for producing verbal reports), whereas information from LTM must be retrieved (transferred to STM) before it can be reported” (ibid. p.25 – my italics)

It is only the recent information that a researcher in this field is trying to access, as only this is “directly accessible”. Information from LTM is of much less interest since, because it has to be transferred from LTM to STM to be vocalised, it is susceptible to unwitting contamination by the participant who may introduce other memories than those directly related to the recently completed task.

Advocates of verbal protocols claim their greatest benefit is in giving insights into mental processes unobtainable by any other means (Gass and Mackey 2000; Pressley and Afflerbach 1995). They give descriptions of cognitive processes that otherwise could be investigated only indirectly (Afflerbach and Johnston 1984). By means of verbal protocols, it is claimed that the researcher is able to trace the intermediate steps of thought processes (Ericsson and Simon 1987). In this way, detailed descriptions of task-induced reading behaviours can be obtained: “Properly used, verbal protocol analysis can tell us what readers do, as well as why they do it” (Koda 2005, p.216). In addition to these benefits, Pressley and Afflerbach (1995) suggest they can sometimes provide access to the reasoning processes that underlie cognition response and decision making. Furthermore, they can give information about affective processes of reading such as how a reader reacts when s/he likes or dislikes a text and the effects this has on the reading process.

However, it should not be thought that verbal protocols give the researcher direct access to thought processes. It is not the thought process itself that is accessed but a verbalisation of that process: the thought process is mediated through the words of the participant. Therefore, as Green (1998, p.4) writes, “The verbal protocol serves as a source of data for the researcher to infer cognitive processes and attended information.” This extremely important point has implications for the researcher and how verbal protocols are to be interpreted. Despite this, Koda (2005) claims that there has been a growing tendency to treat verbal protocols as behavioural data without any empirical verification so that it is impossible to know how closely the reported actions coincide with the actual actions of the participants. In view of this, it becomes clear that the

question the researcher must ask in relation to any statement made by a participant is not – “What direct insight does this give me into this participant’s thought processes?” – but rather – “What must have happened within this participant’s thought processes to have given rise to this statement?”

Several categorisations of verbal reports appear in the literature (e.g. Cohen 1987, Cavalcanti 1987). Table 4.1 below summarises the dimensions involved.

Table 4.1: Types of introspection (based on Gass and Mackey 2000, p.14)

Time Frame	Distance from event (A continuum)
Form	Oral / Written / Both
Task Type	Think-aloud / Talk- aloud / Retrospection
Support	None ← → Full (A continuum)

There are several important parameters, the first of which is the distinction between talk-aloud and think-aloud. Though there is some confusion in the literature over these terms, in general it seems that in the case of “talk-aloud” the participants simply vocalise silent speech: what they are saying is the content of their inner speech and so there should be minimal interference with the thought processes themselves. On the other hand, “think-aloud” requires the conversion of heeded information into a verbalisable form (Ericsson and Simon 1987) – for example, it may have been held in the memory visually. Ericsson and Simon found that additional time was needed in this case since thoughts had to be heeded and then verbalised. Clearly “think-aloud” may result in alterations to the cognitive processes and is therefore less suited to a study of these processes.

Another area of variation is the amount of support given to the participant. One aspect of this concerns whether or not the verbalisations are mediated. Green refers to “non-mediated verbalisations” – for which prompts are kept to a minimum and are as non-intrusive as possible, such as “keep talking” – and “mediated verbalisations” (Green 1998, p.6). For the latter, the participant may be asked questions about the task such as “Why did you do that?” In this case, verbalisation follows mediating processes such as requests for explanation, clarification, etc.

A crucial distinction is between concurrent reporting, which happens while the task is being carried out, and retrospective reports which are made after completing the task. For the purposes of researching skimming, there were certain foreseeable difficulties with using concurrent reporting. Firstly, in the literature on verbal protocols, the importance of reducing interference with the normal process – in this case, skim reading – is emphasised. A basic tenet of Ericsson and Simon (1987, p.35) is that the method “should provide optimal information about the thought sequence with minimal interference.” The problem with skimming is that it is by definition a quick process and therefore time taken verbalising thoughts will slow down the reader and indeed substantially alter the very process of skimming. The second difficulty also relates to the speed of skimming. As the skim-reader is attempting to work through the text as quickly as possible, much of the processing may be automatic and not susceptible to verbalisation.

Retrospective reporting has its advantages. The reader is freed from some of the “cognitive load” (Afflerbach and Johnston 1984, p.311) that is required in concurrent reporting. In addition, there is minimal interference with the skimming itself. Concurrent procedures tend to be more intrusive, with participants being asked to verbalise while reading. Thus verbal protocols can be invalidated by reactivity, i.e. situations in which the primary process is altered as a result of verbalisation (Russo et al. 1989; Stratman and Hamp-Lyons 1994). Russo et al. (1989) found evidence of reactivity in two of the four tasks that their participants carried out. Moreover, they discovered it was extremely difficult to gauge a priori whether or not a task would be affected in this way. In fact, it is highly likely that, in some cases of concurrent reporting, reactivity occurs. Cavalcanti (1987) used “pause protocols”, encouraging participants to think aloud whenever they paused. However, she herself admits these pauses may become over-extended and participants may over-elaborate their problems (ibid. p.246). As an alternative, the reading may be interrupted at certain points to allow participants to verbalise their thoughts. For example, Olshavsky (1977) required her participants to think aloud “after reading each clause of a short story” (ibid. p.661). A red dot was placed after each clause as a reminder. Block (1986) used a similar method. This is likely to yield plenty of data since there are so many reminders to the

participants to talk. However, reading may well become rather artificial since readers would not normally pause with such frequency or for so long.

There is undoubtedly a dilemma here that lies at the heart of verbal reporting, as indicated in Table 4.2 below.

Table 4.2: Comparison of concurrent and retrospective reporting

	Advantages	Disadvantages
Concurrent reporting	Closeness of reporting to processing. Likelihood of interference due to reconstruction and outside influence reduced.	Intrusive measures to ensure online reporting which interfere with processing. Possibility of reactivity.
Retrospective reporting	Processing itself remains relatively unaffected. Participant able to reflect on processes free of cognitive burden of paying attention to task.	Gap between reporting and processing, resulting in likelihood of interference due to reconstruction and outside influence.

Thus, in terms of authenticity of processing, there are clear benefits in allowing participants to skim the whole text before being required to talk about their experience of reading it. Moreover, allowing participants to read a lengthy text prior to reporting is not unprecedented: Wade et al.'s (1990) participants read a whole chapter before reporting. Of course, there were still elements of artificiality in my procedure: it is impossible to design research that totally eradicates this. Participants were asked to skim a text: it may be that they would not normally read such a text at all, or that if they did, they would not normally skim read it. They may have felt under pressure to skim quickly after I had explained to them the focus of my research and because they knew they were being timed. Thus the option of whether or not to skim the text was not really open to them. Nevertheless, within the context of skimming, they were free to use a range of strategies which were "reader-initiated/controlled" (Koda 2005, p.205). Overall, this research design was only minimally intrusive.

It has to be said that retrospective reports are by no means trouble-free. In an important article detailing criticisms of retrospective reporting, and documenting numerous studies to support their negative view of retrospective reporting, Nisbett and Wilson

(1977) claimed that people are incapable of reporting their responses to stimuli accurately: they have a conscious awareness only of the *products* of mental processes, not the processes themselves. Moreover, they maintain that when people report the effects of stimuli, rather than base their answers on their memories of cognitive processes, they may draw on their own implicit, a priori theories about the causal connections between stimulus and response.

Similarly, Seliger (1983) questioned the internal reality of learners' reports, defining introspections as "conscious verbalizations of *what we think we know*" (1983, p.183 – author's italics). According to this view, we cannot actually access the process itself – only the product of that process. The problems can be posed as follows: when data are obtained by means of retrospection, what is the status of those data? Can they be taken to reflect the actual cognitive processes or are they subject to contamination? And if they have been contaminated to some extent, how can we distinguish between those that have and those that have not?

The contamination that could occur has been referred to as "non-veridicality" – the lack of correspondence between the protocol and the underlying processes (Russo et al. 1989). This includes "errors of omission" and "errors of commission" (Russo et al. 1989, p.760). In fact, they claim to have evidence of both types in their data of retrospective protocols. However, their evidence of forgetting and of "fabrication" is questionable for several reasons. Firstly, their method of obtaining the protocols deliberately included instructions likely to produce fabrication ("explain why . . .") in order to highlight the problem of using such forms of questioning. Secondly, the concurrent method is used as the benchmark against which the retrospective protocols are measured, so that, as they themselves state, conclusions "cannot be definitive" (ibid., p.765). Considering the two types of error, forgetting cannot necessarily be regarded as undermining the whole methodology. As Ericsson and Simon (1980, p.242) state, incompleteness of information "does not invalidate the information that is present." However, fabrications are serious since they enter the data as if they were veridical.

In their attempt to deal with the criticisms of Nisbett and Wilson (1977), Ericsson and Simon (1993) find that many of the studies that Nisbett and Wilson report have serious

methodological inadequacies: what is more, they do not appear to have discriminated between those that were conducted well and those that were not. Yet, as Ericsson and Simon (1993, p.27) suggest, “The accuracy of verbal reports depends on the procedures used to elicit them and the relation between the requested information and the actual sequence of heeded information.” As far as “procedures” are concerned, there should not be a significant time lag between the task and the reporting of the task, as was the case with a number of the studies cited by Nisbett and Wilson (1977). In addition, the “requested information” should be factual and accessible, rather than speculative and inaccessible. Thus, asking participants “why” questions may indeed be particularly problematic since they are being requested to give details that go beyond heeded information in short-term memory. The problem is exacerbated by the natural human desire to make sense of observed phenomena, whether or not such explanations can be justified (Gass and Mackey 2000). This is likely to result in additional inferential processing which has no obvious relation to a particular observed cognitive process (Ericsson and Simon 1987). Thus there is a need to distinguish between simply reporting one’s thoughts and giving reasons for those thoughts.

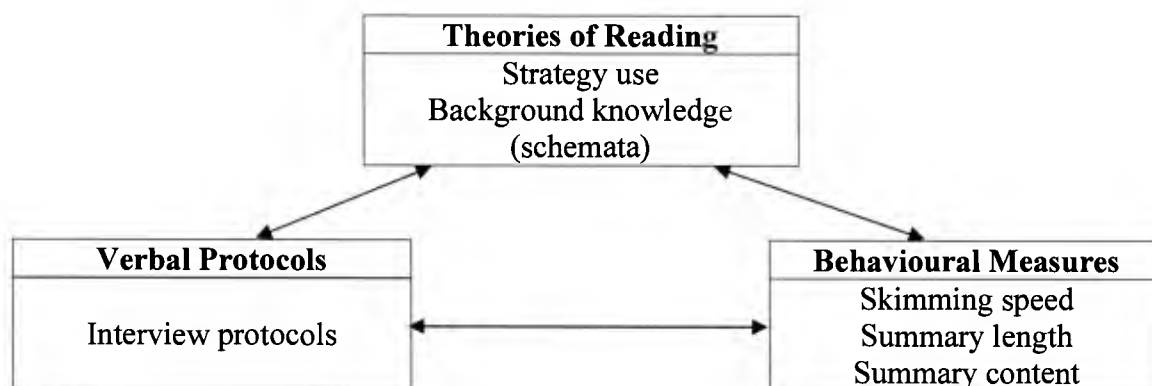
Gass and Mackey (2000) make a similar attempt to deal with some of Seliger’s criticisms by reference to his citation of several studies in which the methodology was used inappropriately (e.g. with an excessively long time lag between performance and data collection). One positive effect the criticisms have had is that researchers using verbal protocols have re-examined their theoretical stance and become more rigorous about procedures used. For example, these criticisms have drawn attention to the need, emphasised strongly by other researchers (White 1980, Ericsson and Simon 1987, Greene and Higgins 1994), for retrospective reports to be given immediately after task completion while much of the information is still in STM.

Even under ideal conditions for recall, there are two possible difficulties mentioned by Ericsson and Simon (1987). Firstly, there is the possibility of interference from other similar memories. For example, the participant may have completed similar tasks and may be remembering these and not only the recently completed one. A second problem is to detach whatever was heeded at the time of the task under scrutiny from information acquired either before or after that has become associated with it. They give an example of a picture which reminds someone of an old friend: it may be tempting to use stored

information about what the friend looks like to describe the person in the picture. To counter this, Ericsson and Simon believe that “it is possible to distinguish such inferred information from the remembered information by showing that such inferences would not be part of the possible sequences of thought” (ibid. p.41). They claim that this can be done by analysing the verbal reports to ensure that instructions to participants have been adhered to and by doing this they no longer need to simply rely on the subjects themselves. This is a very bold claim and in practice may prove difficult to implement.

Greene and Higgins (1994, p.122) state: “Perhaps the key question to ask . . . is not whether retrospective reports are reliable or valid, but rather, how can researchers collect and analyze this kind of data in a responsible way?” One of their suggestions is to use converging methods (ibid. p.127). Magliano and Graesser (1993) extend this suggestion by devising what they call the three-pronged method, a means of coordinating verbal protocols, theoretical standpoints and measures of actual behaviour. In the case of their research (into inference generation), the theories provide a means of predicting inference types, verbal protocols are used to uncover potential inferences and the measures provide empirical evidence of online inference generation. This approach has been adapted to the present research, as illustrated in Figure 4.1 below, which is a modification of Magliano and Graesser’s own diagram (1993, p.208).

Figure 4.1: Three-pronged method for studying skimming



In Chapter 1, it was suggested that strategic decisions could be investigated as these are generally made consciously (1.3.4), and that top-down methods, such as the use of background knowledge (schemata), might be of greater importance in skimming than in

normal reading (1.2.2.2). The use of background knowledge can be investigated in the verbal protocols, with the behavioural measures being used where possible to provide empirical evidence (4.2.10; 4.2.11).

4.2. Method of data collection

4.2.1 Overview of research design

16 participants – 9 Chinese and 7 Vietnamese – were invited to individual sessions lasting 45-60 minutes. Once they had signed the consent form (Appendix 5), they were asked to read two texts at normal reading speed. All the readings were from IELTS practice tests and participants were asked to give an oral summary after each reading. Reading speeds were calculated and the average speed of these two was taken to be their normal reading speed. A speed of 50% faster was then calculated and participants were asked to skim read at this speed or faster. If they failed to reach this speed, they could be invited to try another text. If they achieved this increased speed, the next stage was to read and discuss two texts specially chosen for this purpose: “The Motor Car” (TMC) and “Moles happy as homes go underground” (UH). TMC was expected to be the easier of the two, partly because as part of the research design the participants had previously been exposed to the content of this text in a note-taking lesson, though they had not actually seen it. UH was expected to be much harder, because the content and style were thought likely to be unfamiliar and problematic. After reading each text, and giving an oral summary, participants were asked specially prepared questions. Their responses to these questions were recorded and later transcribed, ready for analysis.

4.2.2 Piloting

During the first phase of piloting, attempts were made to use concurrent reporting. Unsure whether it was possible for skimming, I was reluctant to ask participants to try it and so I (four attempts) and my supervisor (one attempt) tried it out. In practice, it proved almost impossible to produce concurrent talk-aloud reports while skimming: there were either long silences during which unvocalised processing took place, or vocalised reports that obviously disrupted the skim reading. The following extract from my notes at the time reveals the problems involved.

I found it was taking an extra effort to put my thoughts into words and again there was a tension between reading and speaking. Vocalising certainly slowed the whole the process. I am fairly sure it affected the reading process in other ways too. I probably paid attention to parts of the text that I would have skipped. At times I was reading the next bit of the text (fairly slowly) while vocalising the last bit. There was another tension - how much to vocalise? Broken phrases seemed to me to be adequate to capture the information but when speaking out loud it felt as if a rather more complete record of my thoughts was required.

The difficulties were much reduced when I used a French text but that was because the reading was so much slower and hardly constituted skimming.

Next I used pause protocols (Cavalcanti 1987), experimenting with the length of time between pauses: from 30 seconds to one minute. Again the methodology proved highly intrusive, disrupting the skimming. Hence, retrospective reporting became the chosen methodology, with participants completing the reading of the whole text first before verbalising their thought processes. In each case, the participant's normal reading speed was established using two texts and then asking them to skim read at a speed at least 50% faster. The skim reading was followed by a series of interview questions to uncover as much of possible about the skimming. The interview was recorded and transcribed.

Firstly, two family members were interviewed to establish the procedure. In this case only one text was used. Next, two friends participated, skim reading highly contrasting texts, one of which was much easier than the other. In the final stage, verbal protocols were collected from six student participants, using and developing the framework already established. Questions to be asked were added and modified so that the most general question was asked first (e.g. "Is there anything you can tell me about the way you were reading?") and more specific questions came later. The wording of questions was modified to increase effectiveness. For example, the question "Did you go back at all?" was lengthened to make the meaning clearer and altered so that a simple, uninformative yes/no answer would be not be possible, resulting in the following

question: “Sometimes when we read we move along and then we need to go back a little bit – to what extent did you do that in this passage?”

One modification trialled and ultimately rejected was arranging the paragraphs on separate sheets so that when participants switched from one paragraph to the next it was obvious, making it possible to time the reading of each paragraph separately. The advantage of this technique was that variations in speeds between paragraphs could then be recorded. However, this was rejected in the end because of its possibly intrusive effect on the skim reading. For example, regressions might be artificially reduced because of the need to go back at least one page and possibly several.

Table 4.3 below gives details of reading and skimming speeds for the six student participants.

Table 4.3: Skimming speeds of pilot participants

Partici- pants	Nationality	Normal Reading Speed	Minimum Expected Skimming Speed (wpm)	Actual Skimming Speed (wpm) Text One	Actual Skimming Speed (wpm) Text Two
A	Vietnamese	190	285	236	N/A
B	Taiwanese	100	150	142	104
C	Chinese	213	320	200	177
D	Chinese	160	240	226	177
E	Malaysian	252	378	277	N/A
F	Chinese	126	189	102	N/A

It is striking that none of these participants managed to achieve the minimum expected skimming speed. One reason for this may have been the difference in difficulty between the preparatory texts, which had restricted vocabularies, and the IELTS texts on which the protocol collection was based. It thus was decided to use IELTS texts for all the readings in the final data collection. Nonetheless, results from these six pilot participants give convincing support for making 50% the rate of increase that should be expected from normal reading to skimming and no higher, even though Table 4.6 shows most of the skimming research involved higher increases.

Participant C made the comment that skimming was inappropriate for the IELTS text he was given to skim (Underground Homes) and he failed to maintain even his normal reading speed, despite comments that suggest he was attempting to read quickly. Nevertheless, this text was retained for the verbal protocol collection as it is an example of an IELTS text which, as the textbooks and teachers make clear, candidates are expected to skim read before attempting to answer text questions.

4.2.3 Texts for verbal protocols

The choice of texts for the verbal protocols was extremely important since the texts themselves could potentially have an enormous influence on the data produced. All the reading texts used were from UCLES IELTS publications and some of them have been used in IELTS tests. In all, six texts were prepared (see Appendix 3): four for the preparatory stages of the session and two for actual protocol collection. The length of each of the first four was reduced from their original 700-800 words to just over 500 words. This was done to save time (to ensure the whole process of protocol collection did not become excessively lengthy or demanding) and because above a minimum of 500 words, there was ample opportunity for the participants to follow the ideas and structures of the texts. No other adjustment was made to the wording of the texts.

Table 4.4: Text lengths in the work of various researchers

Researcher(s)	Approximate Number of Words in Texts
Duggen and Payne (2006)	3000+
Muter and Maurutto (1991)	2400*
Laycock (1955)	2300
Just, Carpenter and Masson (1987)	1500-2000
Dyson and Haselgrove (2000)	1000
Masson (1982)	1000 (in narrative texts) 400 (in newspaper stories)
Texts for the verbal protocols	***TMC- 678 ****UH- 852
Fraser (2007)	350
Shin (2002)	80**

* This is an estimate based on information given in Muter and Maurutto's article.

** This is an estimate based on the sample text provided by Shin.

***TMC = "The Motor Car" (from "Cambridge Practice Tests for IELTS – Book Two" – p.66-7)

****UH = "Moles happy as homes go underground" ("Cambridge Practice Tests for IELTS – Book One" – p.64-5)

A comparison of the lengths of texts used in the skimming studies (see Table 4.4 above) reveals the extremely wide variation, ranging from just 80 words to as many as 3000. The two texts upon which the interviewing was based, TMC and UH, are at the lower end of the spectrum, according to Table 4.4. Nevertheless, they are considerably longer than texts used by the only other two L2 researchers. The question of optimum length for skimming research is difficult with no obvious way to resolve it, though clearly the texts should be sufficiently long to place considerable demands on working memory and also to allow sampling methods to be utilised.

Although in the original texts, a variety of fonts and sizes was used, their presentation was standardised: Times New Roman, font size 12, with spaces between paragraphs. In fact, the layout of the text can be a major factor affecting reading efficiency, as Lonsdale et al. (2006) discovered. They found the use of texts with layouts conforming to legibility guidelines, in particular incorporating interlinear spaces and the separation of paragraphs, proved particularly facilitative resulting in reduced task time, higher levels of accuracy and more correct answers per second in the tests they conducted.

The two texts - TMC and UH – were chosen with the expectation that the subject matter of one would be much more familiar to participants than that of the other, following Pritchard (1990), though he did this for rather different reasons. There were clear reasons for expecting the participants to find TMC rather easier than UH, which could be referred to as an “inconsiderate text” (Armbruster 1984, p.214). According to Armbruster, a considerate text has, amongst other characteristics, a familiar structure, clearly signalled, for example, by the use of an introduction which provides an overview, and content in which the significance is clarified. Thus, TMC was expected to be easier to skim, being “familiar” in content, “considerate” and “fairly easy” and thus with more accessible “big ideas” (Pressley et al. 1990, p.247). The content, concerning vehicle pollution, is widely discussed in current affairs and also covered in some of the participants’ A-level courses such as Economics and Physics. The structure of the text is one that was likely to be fairly familiar to students: situation, problem, solution and evaluation. Moreover, this structure is to some extent signposted by the author, who uses phrases such as “one solution that has been put forward is”. Finally, the content of the text in class was covered in a structured note-taking exercise

which drew attention to the structure and gave help where necessary with the vocabulary of the text (See 4.2.8).

Conversely, the text about underground homes (UH) was expected to be more difficult because of unfamiliar content and additional length. It has an opening paragraph which does not introduce the theme or themes of the text but is more story-like, and thus incorporates some of the characteristics of “inconsiderate” text (Armbruster 1984, p.214). Nevertheless, it is by no means untypical of texts given in IELTS tests in terms of length and relative obscurity of content.

Another way of capturing the differences between the two texts is by using Goldman and Rakestraw’s (2000, p.312) categories. According to Goldman and Rakestraw, “readers rely on text-driven and knowledge-driven processing as they attempt to construct meaningful mental representations of what they are reading.” But for each of these two divisions of processing, further sub-divisions can be made into content (the specific words used and their relationships) and organisation (the structuring of the words into sentences etc.). Further sub-divisions could then be added, based on the *type* of content and organisation: In this way, eight conditions are generated, as shown in Table 4.5.

Table 4.5: Classification of different conditions of processing

Text-driven processing of simple content	Text-driven processing of complex content
Text-driven processing of simple organisation	Text-driven processing of complex organisation
Knowledge-driven processing of familiar content	Knowledge-driven processing of unfamiliar content
Knowledge-driven processing of familiar organisation	Knowledge-driven processing of unfamiliar organisation

The experience of reading a text could be represented by selecting from the binary choice on each row of this table. The expectation was that, for the participants when reading TMC, types from the left-hand column would be applicable. In other words, they would find the content and organisation of TMC simple and also familiar (because of prior knowledge and the classroom activity - 4.2.7). On the other hand, my expectation was that the opposite would be true for UH: I expected them to find the content and organisation of UH complex (e.g. in terms of content, difficult vocabulary

and in terms of organisation, with a puzzling first paragraph). In addition they would find the content and organisation unfamiliar (i.e. they would know little about the topic and the structure would not conform to any familiar patterns such as problem-solution).

It was expected that UH would be more difficult in terms of structure when these two texts, UH and TMC, are set in the context of other research into text structure, which suggests that readers who are able to grasp the structure of the text have a clear advantage. Carrell, for example, found that background knowledge of rhetorical organisation can facilitate reading (1984) and content recall for ESL readers and that participants who use the structure of the original passages to organise their written recalls recall significantly more than those who do not (Carrell 1992). It is, however, necessary to be cautious about conclusions drawn from such studies since researchers tend to use highly manipulated texts and so any findings may not be easily generalisable. For example, Davis, Lang and Samuels (1988) found that explicit text-structure instruction was effective only when the text was organised in a format compatible with the instruction.

For her research (1984), Carrell used several discourse types, following Meyer's (1975, 1979) classification of five basic ways of organising expository discourse. Of the two texts that participants in my study were asked to skim and discuss, TMC would certainly be classified as "problem/solution". UH, on the other hand, is less easily categorised but the nearest one is "description". Significantly, Carrell found a major distinction between these two types of discourse in that "problem/solution" is "more highly structured" (Carrell 1984, p.443) whereas description is one of the "least tightly organised" (ibid, p.442). In a problem/solution text, the "problem" and "solution" aspects of the text are related to and dependent upon each other. However, in the case of the description text, although all the aspects relate back to the overall theme – the topic of the text – they do not have the same interdependence as in the problem/solution text. Carrell (1984), following Meyer and Freedle (1984), found recall of discourse was easier with problem/solution structure than with a description. Hence, the differences in the structure of the two texts represent another factor making TMC easier to skim and recall than UH.

4.2.4 The speed of skimming

Another key consideration for the research design was skimming speed. An essential characteristic of skimming is that it is quick (1.3.1). However, this raises the question: how quick does reading need to be to constitute skimming? One way of approaching this is to set skimming in the wider context of other types of reading and find out how it compares with them. For example, skimming could be compared with normal reading (discussed in 1.3.2). Research in this area suggests that normal reading tends to be around 200 to 250 words per minute for people reading in English as their first language. (Note that this range would encompass most of the “normal reading” speeds in Table 4.6 below.) Having established what is meant by normal reading speed in general terms, it is now possible to make some comparisons with skim reading. Table 4.6 below gives speeds for “normal” reading and skimming, based on the work of several researchers.

Table 4.6: Reading speeds for normal reading and skimming

Source of Information	Normal Reading Speed (wpm)	Skimming Speed (wpm)	Percentage Increase
Laycock (1955)	231*	420	86
	219	255	16
Masson (1982)	232	382	65
Carver (1990)	300	450	50
Dyson and Haselgrove (2000)	244	460	89
Just and Carpenter (1987)	240	600	150
Muter and Maurutto (1991)	199 (CRT)	501 (CRT)	199
	211 (book)	851 (book)	322
	205 (overall)	676 (overall)	220
**Fraser (2007)	182.5	223.22	22

* The upper figures are for “flexible” readers and the lower ones “inflexible” readers.

**This is the only study in which the figures are for L2 reading

Unfortunately, from the results shown in this table, it is impossible to establish any sense of “typical speed” for skimming. Firstly, it should be stated that these speeds were manipulated to a greater or lesser degree by the experimenter. For example, in some studies, there was an initial training phase to achieve the rate required by the experimenter (Just and Carpenter 1987; Muter and Maurutto 1991; Dyson and Haselgrove 2000). In the case of Dyson and Haselgrove, participants could take part in the actual experiment only if they increased their speed by 70% of the original. In other words, these speeds do not represent “natural” skimming speeds adopted freely by readers. Secondly, the range of speeds is enormous. Many factors such as the type of

subjects and the nature and length of the texts need to be taken into account. Given these problems, it is impossible to suggest “typical” skimming speeds (despite Carver’s claim that 450 wpm represents a natural speed for skimming).

Nonetheless, what would be helpful for research into skimming is a “baseline” speed (or speed range) for normal reading and then a speed for skimming which is appreciably faster so that they can be adequately distinguished. An alternative approach is to consider an individual subject’s skimming speed in relation to their normal reading speed. Thus, as far as speed is concerned, a subject could be deemed to be skimming provided that their speed exceeds their normal reading speed by a certain percentage. The problem then is to determine the percentage increase that can be considered “normal”. Table 4.6 provides the percentage increases achieved by the subjects in the various experiments. However, the increases are wide-ranging and in any case participants were required to achieve these rises by the researchers. Thus there is no information about what the percentage increase is outside manipulated contexts.

In pilot interviews, I tried using a 50% level of increase (like Carver, but lower than other L1-based researchers) and found that a number of the participants were not able to achieve even this relatively low level. Consequently, the skimming speed was set at 50% faster than normal reading speed as a minimum aim for participants, though they were not restricted from going much faster and indeed some of them did so.

4.2.5 Collecting the verbal protocols – some important considerations

In order to collect the data from the participants, I prepared a number of questions which the participants answered immediately following the skim reading in what could accurately be described as interviews. For these, several key considerations were taken into account. Firstly, interviewees were conceived as “conversational partners” (Rubin and Rubin 2005, p.14), emphasising the active role of the interviewee in shaping the discussion and in guiding what paths the research should take. Additionally, the term suggests a congenial and cooperative experience, as both interviewer and interviewee work together to achieve a shared understanding (ibid. p.14). In contrast, Gass and Mackey (2000, p.60) suggest that the interviewer should be a “warm body” rather than a conversational partner because providing too much feedback may alter the nature of the

participants' recall comments. In practice it was necessary to be much more than a "warm body" in order to stimulate and engage the participants. Rubin and Rubin's description of working together towards a shared understanding accurately describes the interviews that took place.

The fact that I was their teacher had its advantages: teaching staff are known for asking questions, so the role justifies the investigative nature of interviewing (Rubin and Rubin 2005). On the other hand, teachers evaluate students and judge what they do not know, and in that way can be viewed as threatening. Moreover, students from some cultural backgrounds may feel under pressure to submit to the teacher's authority which might affect their responses to questions. In this case, the students may have felt the need to give the "right" answers to questions, as opposed to the available answers as heeded information after the reading. They may have recalled something said during reading lessons and felt they should respect that, regardless of its usefulness to them.

This sociological aspect of interviewing is emphasised by Block, who refers to the need to consider "how the interviewee constructs the interviewer" (Block 2000, p.758). For example, for the purpose of the interview, did they see me primarily as a teacher or a researcher? What effect did their construction of me have on their responses? In addition, Block (1995, p.44) suggests, following insights from discursive psychology, that the participants' discourse "is not so much a window on their mind as it is a window on how they choose to construct themselves in a conversation." Consequently, according to Block, it is not always possible to take comments at their face value but necessary to consider the different "voices" adopted by participants at different points in the interview. In the case of the current study, one such voice might be characterised as "the voice of competence" – exemplified by comments suggesting the participant had a clear and effective method and often prefaced by the words "I usually". From my viewpoint as researcher, such comments were of little value, being very general and giving little or no information about the participant's actual interaction with the texts they had just read.

Block's comments suggest that interview data are further removed from the direct thought processes of participants than might first be expected and beg the question: what can the researcher do to address these factors? His conclusion is somewhat

negative: “there is precious little that the researcher can do beyond being aware that the constraints are likely to be at work” (Block 1995, p.46). In my research, the interviews were firmly based on very recently read texts, enabling me, at least to some extent, to circumvent the participants’ potential defensiveness or tendency to give stock or expected answers. I was able to direct participants away from generalised answers to being specific about their reading of the texts themselves, focusing on what Flanagan (1954) refers to as “critical incidents”.

Another key limitation was that I do not speak any of the native languages of my students and so the interviews had to be conducted in English, meaning that they could not express their ideas as well as would have been the case in their first languages. In the case of L2 reporting, Cohen (1996, p.13) speculates that “there may be a second-language threshold below which attempts to provide verbal report in the target language are counterproductive.” In an attempt to counteract this potential problem, Students were selected with well-developed speaking skills: a threshold level was set at IELTS 6.0. According to published IELTS marking criteria (source – IELTS website), at this level the candidate “is willing to speak at length” and “has a wide enough vocabulary to discuss topics at length and made the meaning clear in spite of inappropriacies.” However, a level 5.0 candidate will make errors which “may cause comprehension problems”.

Even so, reporting in an L2 was likely to restrict responses to a certain extent. Gass and Mackey point out (2000, p.97) that reporting in an L2 introduces extra problems to the data collection in that, as well as the usual concern about whether the verbalised thoughts truly reflect the thought processes, the interviewer has to assume that the students understand the questions, and to interpret what they say despite their linguistic limitations. In addition, the participants’ responses may be briefer. In their study involving groups of students responding in their first and second languages, Mackey, Gass and McDonough (2000) found significant differences in the number of words per recall comment: 26 as opposed to only 16 (cited in Gass and Mackey 2000, p.98).

In fact, there were difficulties sometimes when conducting the interviews. Trying to delve more deeply to uncover exactly what the participants wanted to say, I felt tempted to supply vocabulary that I thought was lacking but was aware of the danger of

supplying ideas in the process. An example of this problem is given below from P4's protocol:

P4: It's quite a special passage.

I: What do you mean by special?

P4: Means I've never seen the kind of thing before – underground house.

I: Specialised – is that what you mean? Not general.

P4: Yes, not general.

4.2.6 Interview Questions for Verbal Protocols

A list of interview questions was compiled after carrying out full pilot interviews (see 4.2.2) in which the questions were tested out and during which useful new questions emerged. The list is given below in Table 4.7.

In the construction of the list of questions, the first issue concerned how many questions to use: Rubin and Rubin (2005) have found that if there are too many questions, there is a temptation to rush through them, resulting in superficial answers. In addition, the precise wording of the questions required special consideration. Firstly, Rubin and Rubin suggest the use of double-barrelled questions as used in question 5 (“Was there anything that made it difficult or easy for you to skim this passage?”) and question 7 (“When you were reading, what speeded you up and what slowed you down?”). Secondly, questions that encourage or allow yes/no answers (ibid. p.158) should be avoided. Thus the question - “Was the text interesting?” – was transformed into: “How interesting did you find the passage?” Finally, main questions using the word “why” should be avoided. Rubin and Rubin suggest it is rather abstract and can cause people difficulties, preferring to “ask about their experiences and responses and from what they hear work out the reasons why” (ibid. p.158). Ericsson and Simon (1987, p.45) also outline difficulties caused by asking for reasons: they require deeper processing and thus go beyond “heeded information” derived from the task itself and reasons can readily be generated by “helpful” participants. They recommend the use of a general instruction such as “report everything you can remember about your thoughts during the last problem” (ibid. p.41). In fact my first question to participants – “Is there anything

you can tell me about the way you were reading?” – was similarly general and frequently elicited the most useful data. Moreover, I learned to be more persistent in my use of this question by following up a participant’s initial response with “Is there anything *else* you can tell me about the way you were reading?” In terms of mediation (see section 4.1), this first question is designed to prompt a “non-mediated verbalisation”, though the later questions involve a greater degree of mediation.

Table 4.7: Interview Questions

1.	Could you tell me what the passage was about?
2.	Is there anything you can tell me about the way you were reading?
3.	Which bits did you pay most attention to?
4.	Sometimes when we read we move along and then we need to go back a little bit – to what extent did you do that in this passage?
5.	Was there anything that made it difficult or easy for you to skim this text?
6.	Do you have any other comments on how you read?
7.	What helped you to go faster or made you go slower?
8.	To what extent was the topic familiar?
9.	How interesting did you find the passage?
10.	How easy was it to follow the passage? [How clear was the structure?]
11.	It is sometimes difficult to concentrate hard all the way through a reading passage. Did you find it difficult or easy to concentrate as you read this passage? [Which bits of the passage did you find difficult to concentrate on?]
12.	[How did this text compare with the last one you read?]
13.	Do you often skim read? [In English? In your own language?]
14.	In what situations?

In addition to these questions, probes were used during the interviews to draw out the participants and encourage them to extend their responses. The use of probes is again fraught with difficulty. Tierney, Bridge and Cera (1979) used the following guidelines: “1) questions used only information already supplied by the subject . . . and 2) questions were not stated in such a way that they might lead the subjects beyond their own understandings.” The first of these guidelines is relatively easy to implement: the interviewer should be aware of whether s/he is introducing new information. However, the second is more problematic: the interviewer is trying to discover the boundaries of the participants’ “own understandings” but obviously does not necessarily know where they lie. Nevertheless, it is an issue that the interviewer has to be conscious of and try to negotiate with care.

Another issue was whether or not to use a list of strategies as a checklist for participants. There is research to suggest that this practice can lead to very misleading results. Allan (1995, p.133) concluded from his research that “self-report checklists exercise an instrument effect on users’ behaviour and thus can invalidate the data collected.” Given the nature of verbal protocols and the danger of misremembering experience, it was crucial to reduce the possibility of making outside suggestions to participants. Moreover, a list would increase the possibility that participants would respond based on their *general* reading experience, rather than their behaviour while reading the particular text being discussed. It was preferable to run the risk of not including skills that had been used, as opposed to including ones that had not been used (i.e. “errors of omission” rather than “errors of commission” - Russo et al. 1989, p.760). As stated earlier (4.1), fabrications are much more serious since they enter the data as if they were veridical. Another objection to the use of a list is that, even if it suggests which strategies have been used, it does not give any indication of the importance of these strategies for the participants. By paying attention only to those strategies specifically mentioned by participants, I would be focusing on what they felt had been important to them during skimming.

In the light of these comments, it must be said that the data collected should not be viewed as a complete record of all the strategies that the participants used. Only those strategies mentioned by participants in response to the particular questions put to them are included. Moreover, some responses were sparser than others, perhaps suggesting that these participants used more strategies than they voiced. Nevertheless, Pritchard’s (1990, p.281) comment on his research is applicable to the current research: “it does represent an exhaustive list of the cognitive operations the subjects in this study reported undertaking.”

4.2.7 The Sample

From the students preparing for IELTS at Cambridge Tutors College, 16 offered to participate in the study. Table 4.8 below provides their details.

Table 4.8: Details of participants

Participant	Nationality	Age	Sex	Reading Level	Speaking Level	Time Studying English (years)	Time in Britain (months)
P1	Vietnamese	18	female	7.0	6.0	6	4
P2	Vietnamese	17	male	5.0	6.0	6	4
P3	Chinese	17	female	6.5	6.0	6	7
P4	Chinese	18	male	5.0	7.0	6	42
P5	Vietnamese	18	female	8.0	6.5	5	5
P6	Vietnamese	18	male	6.0	6.0	8	5
P7	Vietnamese	18	female	7.0	7.0	7	6
P8	Vietnamese	17	female	7.5	6.0	5	6
P9	Chinese	17	female	7.5	7.0	11	6
P10	Chinese	18	female	6.5	7.0	10	9
P11	Chinese	19	male	5.5	7.0	6	30
P12	Vietnamese	16	male	8.0	7.0	3	4
P13	Chinese	17	male	7.0	7.0	3	7
P14	Chinese	19	male	6.5	6.0	10-12	11
P15	Chinese	18	female	7.5	8.0	5	12
P16	Chinese	17	female	6.0	6.0	4	18

Of the 16 participants, nine were Chinese and seven Vietnamese, with ages ranging from 17 to 19. There were seven male and nine female participants. IELTS reading and speaking scores are given since the participants needed to read and skim texts, and to provide oral reports. Reading levels ranged from IELTS 5.0 – 8.0, and speaking levels from IELTS 6.0 – 8.0. The students had been studying English for from three to twelve years, with a mean of 6.4 years. The length of time they had spent in Britain varied from 5 months to 3.5 years, with a mean length of 11 months.

Using participants from among the students of my college is an example of an opportunity sample in that I had easy access to them. Sufficiently large numbers of Vietnamese and Chinese students were recruited to allow comparisons to be made, bearing in mind the orthographic differences in their own languages. Moreover, there is evidence to suggest that “successful strategy use [in reading] is a function of linguistic/cultural differences” (Abbott 2006, p.656 - also Parry 1996). Thus, in theory, comparison of strategy use between the two groups could have proved enlightening.

Using these students had its own advantages and limitations. The most obvious advantage was availability. Secondly, they represented a fairly wide range of reading ability. Thirdly, the students all had some understanding of what skimming is, they had

almost certainly had some experience of skimming, whether from the internet or under time pressure in exams and had received at least a limited amount of training in courses at the college. Moreover, they had a sense that skimming is potentially useful to them, holding the promise of increased study efficiency and, of course, helping them through the IELTS examination. Conversely, they had no previous experience of the verbal reporting methodology.

4.2.8 Preparation

The research design required that the students were familiar with the content of TMC (See section 4.2.1). For this purpose, I spent about 40 minutes of lesson time with groups of students, studying the contents of TMC as a listening / note-taking exercise. I read the text aloud (actually making it a little more like a talk than a written text but not changing the factual content) while the students filled in a worksheet (Appendix 4). I then read the text a second time. Next the answers were displayed on the board for the students to check them and problems, including vocabulary, were discussed. The worksheets were collected at the end of the exercise “to check their answers” – but actually so that they could not be referred to again without my knowing it. At no point were the students shown the text itself.

This type of exercise is not very different from other class exercises that are used and has a recognisable value as IELTS examination practice and thus there is no reason to think that the students saw this as anything other than a standard classroom exercise.

4.2.9 Procedure for Verbal Protocol Collection

I arranged appointments lasting 45-60 minutes with each participant, following Green’s recommendation (1998, p.43) to restrict sessions to no more than an hour because of potential concentration loss. At the appointment, I explained the procedure and purpose and participants were given the “Instructions and Consent” form (Appendix 5) to read and fill in before starting.

The participants were told that I would ask for a brief summary of each passage they read. I asked for these summaries for every passage (not only the final two on which

they were interviewed). Firstly, this gave me some indication of their level of reading comprehension at normal reading speed. In addition, it helped to ensure that the final readings for the verbal protocols were not suddenly made slower than the other readings because of reactivity (Russo et al. 1989): i.e., the reading for these texts was not “skewed” by a change in the expectations of participants. A further point is that the earlier summaries could be seen as “training” for the later ones. Finally, if participants misunderstood the instruction to summarise, as happened in the case of one participant who began by giving extremely short summaries, this could be corrected before the final two texts.

The first stage was to determine the participant’s normal reading speed. For this, two texts (see Appendix 3 for all texts) were read: “Measuring Organisational Performance” (Cambridge Practice Tests for IELTS – Book Three, p.92-3) and “Obtaining Linguistic Data” (Cambridge Practice Tests for IELTS – Book Four, p.74-75). If the text continued on a second side, I pointed this out and presented it on two separate sheets.

The participants read the two passages and the average reading speed of the two was taken to be their normal reading speed. They read more than one text since conclusions based on only one could be misleading: there are many factors that could influence the reading speed such as familiarity and level of interest (Urquhart and Weir 1998). Ideally, more than two texts would have been used but it was important to consider time constraints and the demands on the participants’ concentration levels. Moreover, if Carver (1983, p.192) is correct in saying that “individuals typically read at a constant rate” provided that there are no comprehension difficulties, there should not have been any great variation in speeds between texts. Once the two texts had been read, and brief summaries recorded, the skimming speed was calculated by taking the average of the two speeds as the normal reading speed and increasing it by 50%.

In the second stage, the participants read another text (“Air Pollution” - Cambridge Practice Tests for IELTS – Book Three, p.84-5) to try to reach their calculated skimming speed. The participants were again asked to summarise the text. A further text, “How much higher?” (Cambridge Practice Tests for IELTS – Book Four, p.88-9), was held in reserve in case the participant failed to reach the calculated skimming speed at the first attempt and was prepared to try again: in fact, this was never used.

The participants then read the two passages: “The Motor Car” (TMC) and “Moles happy as homes go underground” (UH). At this stage the aim was to simulate the experience of skimming texts in the IELTS examination prior to detailed reading and answering questions (as recommended in many IELTS textbooks e.g. *Objective IELTS Advanced* – Black and Capel 2006). Thus these readings were not reduced in length.

Bearing in mind the criticisms of Nisbett and Wilson (1977) and the counter arguments of Ericsson and Simon (1993), I collected the retrospective reports immediately after the skimming took place. In addition, following further advice from Ericsson and Simon, I tried to restrict the questions to those which would tap into heeded information, rather than more speculative questioning which “is likely to lead to additional inferential processing with no obvious relation to a particular observed cognitive process” (Ericsson and Simon 1987, p.46). Nevertheless, I did ask “why” questions sometimes. Guthrie et al. (1991), while clearly aware of the views of Ericsson and Simon since they quote from this source, also asked for reasons as part of the verbal protocol procedure - their instructions to participants were: “Tell what you are doing and why you are doing it” (ibid. p.314). Afflerbach and Pressley (1995) also argue against Ericsson and Simon on this issue, based on claims from metacognitive theory (e.g. Flavell, Miller and Miller 1993) that some subjects are able to give some analysis of their responses, reflecting their greater cognitive awareness. Of paramount importance is being aware as a researcher of the inherent risks as well as possible benefits of one’s actions so that the resulting data can be analysed effectively.

After each reading (i.e. TMC and UH), I asked the interview questions (see Table 4.7). My aim with the questions was to allow participants to say whatever they wanted about their experience of reading the texts, remembering that, in interviews, participants “*construct their unique reality*” (Coolican 1999, p.134 – Coolican’s italics) and thus need to be given scope to express themselves fully and freely so that they can define their world.

As soon as possible after the interview, usually within 24 hours so that the data was still fresh in my mind, I made verbatim transcriptions. It was very important to carry out the transcriptions as soon as possible because, particularly since English was not their first language, the participants’ speech could be indistinct and the meaning unclear and so it

was important to be able to recall exactly what was said. Also, by doing the work early, the particular emphasis of the participants' speech, sometimes accompanied by gesture, could be recalled. Sometimes non-verbal sounds could be quite communicative.

In all, I interviewed 16 participants. However, participants 12 and 16 read only TMC and not UH since they had already studied this text. Details of their interviews are included in the verbal protocol data analysis but quantitative data such as reading speeds are not included since this would distort comparisons between the two texts.

4.2.10 Additional Data

Many commentators on qualitative research (e.g. Guba 1981), and specifically on verbal protocols (e.g. Magliano and Graesser 1993; Pressley and Afflerbach 1995), emphasise the importance of triangulation, in which a variety of data sources, perspectives and methods are used in order to cross-check findings. As Green asserts (1998, p.11), "it is impossible to prove that verbalised information actually reflects information that is heeded as a task is carried out", but "close correspondences" between the verbalisation and the actual behaviour of the participant may support the validity of the procedure. In my research, a very useful alternative source of data would have been eye movement details of participants. Ericsson and Simon (1987) mention that many investigators have collected concurrent eye-movements of participants during the solution of tasks. In the case of research into reading for gist, if, for example, a participant says s/he spent more time on certain types of information, or certain parts of the text, this could be confirmed through a study of eye movements (Hyönä, Lorch and Kaakinen 2002). Unfortunately, the necessary equipment was unavailable for me to use. Of course, I was able to observe the participants as they read but this yielded very little data since, as Alderson (2000, p.4) states, reading is by its very nature "silent, internal, private." Consequently, nothing of note could be detected from simply watching participants skim read, except that at the end it was quite obvious if they went back to the beginning of the text and ran through it again quickly in preparation for summarising the text.

Despite the absence of such data, I was still able to collect some information in addition to the participants' reports. I timed their skimming and obtained an overall skimming speed, which I compared with their normal reading speed to determine whether they

were actually skimming, i.e. for the purpose of this study, reading 50% faster than normal. I also collected details of summary length and content. In this way an element of triangulation was introduced. For example, if a participant claimed that s/he had been slowed down in the reading of a particular text for some reason, the recorded speed could be checked.

4.2.11 Testing of Participants

A very important issue was whether or not the participants should be tested in some way. It might seem essential as a way of discovering whether the participants could skim effectively. However, this raised the fundamental question of the study's purpose: was it to evaluate skimming or discover how it was carried out? In fact, the primary focus was on finding out from participants about the way they skim. Thus the interviews were of greatest importance and it was necessary for them to follow the reading of the text immediately, since, as advocates of verbal protocols unanimously say, the recency of verbal reports to their actual occurrence is critical (Ericsson and Simon 1993; Pressley and Afflerbach 1995; Gass and Mackey 2000). If a test had been introduced, this would have been done straight after the reading and before the interview, thereby delaying the verbal protocols, and reducing their effectiveness.

Moreover, testing participants would have posed enormous problems. Firstly, there is the problem of interpretation. If it had been found that the participants failed to perform successfully in the test, it would simply show that for those particular participants, reading that particular text, followed by that particular test, results were of a low level. The only kind of testing that would be truly meaningful would consist of a whole series of tests based on all the parameters such as length of text, prior knowledge, interest, etc.

There is a temptation to say in a study that "comprehension questions were answered" without being clear what is meant by 'comprehension' (e.g. Muter and Maurutto 1991). Although it is accepted that, having read a text, the reader can be expected to know what the text was 'about', it is very difficult to define this more specifically. For example, what is the relationship between scores in comprehension tests and the reader's comprehension of the text? Does a perfect score in the test mean perfect comprehension of the text? Lunzer et al. (cited in Urquhart and Weir 1998, p.86) discount this:

How a student completes a test is an INDEX of his capacity to comprehend; it is not the capacity itself and still less is it the comprehension itself" (Lunzer et al. 1979, p.66).

Thus no test can be said to test total comprehension. Indeed, it is unclear what "total comprehension" means. Does a text contain a certain amount of information accessible to all careful readers? Readers may well read with the notion that they are aiming to achieve "full comprehension" but other factors play an important role here too, such as reading purpose and constraints (such as time). Moreover, as Urquhart and Weir (1998, p.88) write, "we can never be sure that we have totally entered the writer's mind." Clearly, comprehension cannot be taken as an unambiguous "given" in any situation but will depend, for example, on various reader-based factors such as background knowledge, aims etc. Thus it is important when gauging comprehension in skimming studies to be clear about what conception of comprehension the researcher is using. Otherwise, the meaning of the results obtained through a study will be unclear.

Even when all these parameters are taken into consideration and catered for in the testing, there is still the issue of the artificiality of the whole exercise. Skimming is a strategy which is normally chosen by the reader to perform a particular task. Koda (2005, p.205) points out that a key characteristic of reading strategies is that they are "reader-initiated/controlled". In any testing exercise, the need to skim is being imposed on the reader, and thus it is neither reader initiated nor reader controlled. Interestingly, Carver also decided not to test his participants because of the possible distorting effect on the reading. He writes: "It seems reasonable to design research conditions so that they approximate as much as possible to the real world condition to which it is desirable to generalize" (Carver 1983, p.193).

An additional argument against testing relates to the teacher/student dynamic of the interviewing. Tests, with all their academic connotations for students, might have put participants under much greater pressure when actually reading, thus distorting the skimming process. Testing would also have served to underline my role as teacher, a role I was hoping to play down during the interviews so that I was viewed as a researcher. While I recognised that this was difficult to achieve, testing students would only have made this even harder to attain.

For these reasons, the testing of participants using a specifically designed test was rejected. However, participants were asked to summarise the texts immediately after they finished reading them. As well as providing a purpose for reading, this offered some measure of comprehension, potentially useful for comparing participants' understanding of the two texts. There may have been differences between participants in the perception of the task, particularly the expected length of the summaries, but such discrepancies would not affect the comparison between the two texts. Moreover, as Cohen (1993, p.132) writes, "summarising tasks on reading comprehension tests have a natural appeal as 'authentic' tests in this era of communicative language testing, given that they attempt to simulate read-world tasks." Thus the tasks of skimming and then summarising have ecological validity. In addition, participants were specifically asked to "summarise" the texts rather than "recall all you can": it has been found (Riley and Lee 1996) that the former instruction results in protocols that focus more on gist.

4.2.12 Ethical Framework

The ethical implications of collecting the verbal protocols were carefully considered, following the framework provided by Opie (2004, p.24-32) and outlined below.

- **Research Design**

The first issue concerns the suitability of the research project as a worthwhile pursuit of knowledge. If people are going to give up their time to be involved in the research, it should be apparent that this sacrifice is justified. On this point, sufficient support for this research appears in the rationale given earlier (Chapter 1).

- **Procedures of Data Collection**

Opie makes the point that even if ethical and professional codes are strictly adhered to, research projects are so varied that harm may not be prevented. He suggests that a useful acid test when considering methodologies and procedures is to ask yourself how you would personally feel if you or your children or friends were 'researched' by means of them (Opie p.25). In fact, the verbal protocol data collection method was piloted with family members and friends as well as students, all of whom seemed quite happy about what they were asked to do.

In the case of the verbal protocols, the methods of data collection are quite overt and participation proceeded only after gaining the participant's written consent to take part, using a specially designed form (Appendix 5). I informed each participant:

- a. what I was investigating (in brief)
- b. the likely time needed for participation
- c. that they were able to withdraw at any time

One suggestion sometimes given regarding retrospective reports is that subjects should not be informed about the subsequent interview beforehand since the foreknowledge might affect their performance (Kormos 1988). However, I did not follow this suggestion: on ethical grounds, it seemed preferable to let the participants know as much as possible about what was involved so that they could meaningfully give their consent.

- **Research Relationships**

Several issues arise in relation to my relationships with participants. Firstly, the very word used to refer to those who take part in any research is significant since it is an indication of the attitude of the researcher towards them. I chose to use the word "participant", following the British Psychological Society's guidelines (as set out in *The Psychologist* 1993, 6, 33-35), rather than "subject" which has undesirable connotations.

Secondly, using students as participants, there could have been issues resulting from the balance of power within the relationships. For example, I had to remember that, as their teacher, they were likely to be respectful and obedient towards me and so, even at the recruitment stage, they may have become involved through a sense of obligation rather than willing co-operation. The fact that some students did decline to take part indicates that they at least did not feel such pressure.

A further issue was the potential benefit that participants might gain from involvement. In the case of the interviews, firstly it was hoped that the time spent obtaining the verbal protocols would be interesting and enjoyable and that participants would find it useful to consider their reading habits and practices in detail (Williams 1986). Secondly,

sensitivity to their feelings was required regarding the actual skimming of texts. Though the texts may have proved challenging for some participants, the whole experience should not ultimately have been a negative one for them, causing them to lose confidence in their reading skills.

- **Writing up**

At the writing up stage, participants were anonymised in the text and could not be traced. It was also made clear to participants what I intended to do with the tape recordings that I made (transcription and analysis) and who would hear the recordings and see the transcriptions (myself and perhaps my supervisor).

4.3. Method of data analysis

4.3.1 Analysis of verbal protocols - method

The verbal protocol data were analysed initially soon after they were collected and transcribed. After several readings, certain categories emerged. These were not pre-determined but developed from the analysis of the data. Firstly, there were the various actions carried out to obtain the gist and simultaneously skim the texts quickly, categorised as “strategies”. Secondly, the categories of “facilitating factors” and “hindering factors” became apparent, partly resulting from certain double-barrelled questions: “Was there anything that made it difficult or easy for you to skim this text?” and “What helped you to go faster or made you go slower?” In response to these questions, participants gave much information about what made the texts relatively easy or difficult to skim read. Thus the data were divided into three categories: strategies, facilitating factors and hindering factors.

A second analysis was carried out about a year later. Following Pritchard (1990, p.280), a colleague, Maria Semple, assisted in analysing five of the sixteen interview protocols. Firstly I showed Maria two analyses I had done (P3 and P4) to demonstrate the method of analysis: this consisted of highlighting strategies, facilitating factors and hindering factors. I also provided her with written guidelines (Appendix 6). We carried out our comparison in three phases: in the first phase, we compared our analyses of the verbal protocol for P5; in the second phase, for P6 and P7; and in the third phase, for P8 and P9. These comparisons yielded the raw data found in Table 4.9 below:

Table 4.9: Comparison of John’s and Maria’s analyses of verbal protocols (1)

Protocol Number	Number of Points					
	John’s total	Unique to John	In agreement	Chosen by both but different designation	Unique to Maria	Maria’s total
P5	22	0	17	5	2	24
P6	23	4	15	0	9	26
P7	21	2	19	0	2	21
P8	19	2	16	0	3	20
P9	17	3	13	1	3	17

In order to assess percentage agreement, John’s and Maria’s total number of points selected for a particular participant were added together (e.g. for P5, 22 + 24 = 46). The total number of points in common was worked out (for P5, 17) and multiplied by two (34). This was divided by the total number of selected points (34 / 46 = 0.74), resulting in the percentage agreement from that result (74%). Table 4.10 below shows the data for each of the participants:

Table 4.10: Comparison of John’s and Maria’s analyses of verbal protocols (2)

Participant	John’s and Maria’s total number of points (T)	John’s and Maria’s number of points in common (C)	C/T	Percentage
P5	46	34	0.74	74%
P6	49	30	0.61	61%
P7	42	38	0.90	90%
P8	39	32	0.82	82%
P9	34	26	0.76	76%

The overall percentage agreement is the average of the five percentages in Table 4.10 above, i.e., 76.6%, which falls only slightly below Green’s (1998, p.19) figure for “high agreement” of 80% or higher.

We met after each phase of the comparison, and reconciled all differences, often by strict observance of the guidelines. For instance, guideline 2 emphasises the importance of selecting only those points related directly to the reading under discussion, so eight general references to reading habits (often preceded by “I usually”), unique to Maria, were eliminated in the reconciliation process. In addition to Maria’s points of difference being reconciled to John’s, there were at least two instances of the reverse, i.e. John changing to conform to Maria’s analysis. Finally, there were examples of the

same points being classified in different ways but being reconciled by permitting both classifications: thus the same point might contain elements of both a strategy and a facilitating factor. Where the same strategy was referred to at different points in the discussion of the same text, the two points were combined. However, if the same strategies were referred to in relation to different texts, the two points were kept separate.

In the next stage of the analysis, a “cell” was created for each point, consisting of a unique reference code, the extract from the interview containing the point and a summary of it. An example is given below:

P10-U-S2

Note on Strategy	What the participant said
Strategy for middle paras – get main idea from first one or two sentences – skim the rest	in the middle I just get the main idea of this paragraph from the first one or two sentences because I found that the sentences after are not – most of the sentences after are giving examples to make this paragraph – make this more detailed so I will skim it.

The reference - P10-U-S2 – was constructed in the following way: this is strategy number two (S2) discussed by P10 concerning the text about underground homes (U). Similar cells were created for facilitating factors (e.g. P10-U-FF1) and hindering factors (e.g. P10-U-HF1). The aim was to isolate each point and include in the cell all that was said by the participant that was relevant to it. Thus the unit for analysis could vary a great deal in length.

As well as checking inter-rater reliability by comparing results with Maria’s, intra-rater checking was also carried out by comparing the April 2007 analysis with that carried out in the summer of 2006. In general, the analyses were quite consistent, in that the same points were selected and were categorised in the same way. The main difference was the additional thoroughness of the second analysis, with the result that more points were selected this time.

Once the three broad categories were established, each was broken down into sub-categories which the data suggested, e.g. subject matter, lexis etc. However, these sub-categories cut across the three main categories. For example, lexis might be a hindering factor in one context (if the vocabulary is unfamiliar) and a facilitating factor in another

context. In addition, participants might use various strategies in relation to lexis, e.g. to cope with unknown words. In the light of this, the most revealing method of presenting the analysis was to juxtapose Ss, FFs and HFs for each sub-category so that, for example, all the information about lexis is given in the same section.

4.3.2 Analysis of Participants' Summaries – Method

The analysis of the summaries focussed on what was deemed to be gist information. Thus a summary might be lengthy in terms of the number of words used but achieve a low score in terms of gist content. In fact some researchers regard this as an effective comprehension test, with its concentration on quality of ideas and not just quantity (Riley and Lee 1996).

In order to work out the gist points, six colleagues from the EFL and humanities departments at Cambridge Tutors College were asked to write summaries of TMC and UH in continuous prose of no more than 100 words each, this length being chosen since that was roughly the average length of the participants' summaries. These summaries were then broken down into idea units, facilitating comparison across all the colleagues' summaries. In the case of TMC, there were four points common to all the summaries, four common to five out of six, and seven common to four out of six. A marking scheme was devised in which different marks were awarded for different categories of points, as shown in Table 4.11 below.

Table 4.11: TMC summary points in common

Frequency of Occurrence of Point	Number of Marks Given
common to all the summaries	3
common to five out of six summaries	2
common to four out of six summaries	1

The same method for devising a marking scheme was used for UH. (See Appendix 7 for list of points and marks awarded.)

Chapter Five

Skimming: what the students say

5.1. Skimming speeds

In addition to the verbal protocols, some quantitative data also resulted from the readings. Though the number of participants was relatively small, and so the quantitative data and their implications need to be treated with caution, they nevertheless at times throw further light on the skimming process. Three sets of data were generated: skimming speeds, summary lengths and summary content.

The *minimum expected* skimming speeds for the participants were calculated, based on their normal reading speeds. They are 50% faster than the normal reading speeds and are given in Table 5.1 below:

Table 5.1: participants' minimum expected skimming speeds

Participant	Speed (wpm)
P1	202
P2	187
P3	162
P4	189
P5	200
P6	132
P7	184
P8	225
P9	195
P10	171
P11	271
P12	155
P13	271
P14	186
P15	205
P16	162
Mean	193.6
Standard Deviation	58

Thus the speeds range from 132 to 271, with a mean of 193.6. These speeds are obviously much lower than most of those found in other skimming research since those researchers used participants who were skimming in their first language.

Table 5.2 below shows the minimum expected speeds and the actual speeds achieved by the participants for each text which they skimmed, together with the amount of variation from the expected speed.

Table 5.2: Participants' minimum expected speeds and actual skimming speeds for the three texts

Participant	Minimum expected speed	Text AP		Text UH		Text TMC		Average Skimming Speed (wpm)
		Skimming speed (wpm)	Difference (wpm)	Skimming speed (wpm)	Difference (wpm)	Skimming speed (wpm)	Difference (wpm)	
P1	202	173	-29	203	+1	189*	-13	188
P2	187	330	+143	243*	+56	201	+14	258
P3	162	149	-13	180*	+18	206	+44	178
P4	189	181	-8	211	+22	204*	+15	199
P5	200	215	+15	298	+98	238*	+38	250
P6	132	138	+6	165*	+43	187	+55	163
P7	184	189	+5	232*	+48	234	+50	218
P8	225	247	+22	267	+42	217*	-8	244
P9	195	191	-4	239	+44	179*	-16	203
P10	171	206	+35	206*	+35	253	+72	222
P11	271	277	+6	273*	+2	388	+117	313
P12	155	283	+128	X	X	183	+28	233
P13	195	231	+36	173*	-22	213	+18	206
P14	186	337	+151	452	+266	462*	+276	417
P15	205	206	+1	295*	+89	214	+8	238
P16	162	128	-34	X	X	157	-5	142.5

* = the order in which texts UH and TMC were skimmed - the text with an asterisk indicates was skimmed first

Out of the 46 instances of attempted skimming, the minimum expected speed was exceeded in 36 cases. Of the 10 in which this was not achieved, five occurred while skimming AP, the practice text. Thus for the readings which formed the basis of the verbal protocols, only five fell below the calculated skimming speed, which at least suggests that the speeds the participants were being expected to achieve for the protocols were realistic for them. Of these five, four occurred while skimming TMC and only one while skimming UH.

In Table 5.3 below, the average speeds for normal reading and skimming are compared. It can be seen from this table that only two participants (P1 and P16) failed to achieve an average increase of over 50%. Indeed, many of the percentages are considerably more than 50%, including three which exceed 100%.

Table 5.3: Participants' average speeds for normal reading and skimming

Participant	Average Normal Reading Speed (wpm)	Average Skimming Speed (wpm)	Percentage Increase (Skimming compared with Normal Reading)
P1	135	188	39.2%
P2	125	258	106.4%
P3	108.5	178	64%
P4	126	199	57.9%
P5	133	250	88%
P6	88	163	85.2%
P7	123	218	77.2%
P8	150	244	62.7%
P9	128	203	58.6%
P10	114	222	94.7%
P11	181	313	72.9%
P12	103	233	126.2%
P13	130	206	58.5%
P14	124	417	236.3%
P15	136.5	238	74.4%
P16	108	142.5	31.9%

The overall mean for skimming is 229.5 wpm (s.d. 64.5), which is very close to the figure Fraser (2007) obtained with second language students – 223.22. However, in the case of Fraser's research, her figure represents only a 22% increase on the mean normal reading speed, whereas for my participants the figure of 229.5 represents an 83% rise over normal reading.

Further questions arise from these results in relation to the speeds for TMC (chosen because it was expected to be easier to skim read) and UH (expected to be harder). Firstly, did the participants skim the easier text (TMC) more quickly? 12 out of 14 participants (P12 and P16, having only completed one text for the verbal protocol, have been excluded) skimmed the easier text (TMC) more quickly than UH. The exceptions are P2 and P15. Overall the average speed for UH was 232 (s.d.73.3) wpm while that for TMC was 255 wpm (s.d. 40.3): in other words, they skimmed TMC 9.9% faster than UH.

Secondly, what was the effect (if any) of the order of reading? Six of the participants skimmed TMC first and the other eight skimmed UH first. However, the extent to

which the order of reading affected the speed is difficult to gauge. Table 5.4 below compares average skimming speeds depending on which text was skimmed first.

Table 5.4: Comparison of skimming speeds

	TMC average speed	UH average speed
Read First	248	221
Read Second	237	278

It can be seen from Table 5.4 that the positioning of TMC made little difference to the average speed - 248 when skimmed first compared with 237 when skimmed second - but UH was markedly faster when skimmed second. It could be that participants rushed this long final text – P3, for example, speaks of feeling tired at one point in reading a text “so I read it quickly.” However, it should be remembered that very small numbers are involved here and so it can be misleading to read much into these results.

A third question concerns the impact of L1 orthography. Slower L2 reading rates are associated with L1s that are more distant from English in language typology, especially in their writing systems (Muljani et al. 1998; Koda 2005; Fraser 2007). This would lead us to expect the Vietnamese to read more quickly than the Chinese. However, in the case of the participants in this research, the Chinese were on average quicker, as shown in Table 5.5 below.

Table 5.5: Participants’ average normal reading and skimming speeds according to nationality

Participants	Average Normal Reading Speed (wpm)	Average Skimming Speed (wpm)
Chinese (8)	131	247
Vietnamese (5)	124.5	214

General reading ability as measured by the IELTS reading test does not throw any further light on this difference: the mean score for the Vietnamese group was slightly higher than that of the Chinese group (6.9 compared with 6.4). However, given the very small numbers and the varied ages and years of English study, these figures cannot be said to challenge Fraser’s assertion.

5.2 Length of text summaries

Table 5.6 below provides the lengths of the summaries produced by each of the participants.

Table 5.6: Summary lengths

Participant	MOP	OLD	AP	TMC	UH	Average
P1	32	13	56	84*	106	58.2
P2	50	84	50	77	54*	63
P3	31	39	58	52	50*	46
P4	92	30	159	138*	132	110.2
P5	93 ¹	134 ¹	70 ¹	164 ¹ *	74	107
P6	89	81	158	79	90*	99.4
P7	66	62	77	99	47*	70.2
P8	40	63	131	171*	173	115.6
P9	157	215	109	121*	169	154.2
P10	16	18	53 ²	38	74*	39.8
P11	108	84	111	166	281*	150
P12	69	92	91	68	X	80
P13	47	26	63	96	76*	61.6
P14	90	50	63	87*	76	73.2
P15	60	125	123	160	101*	113.8
P16	14	31	68	110	X	55.75

* = this text was skimmed first

Note 1 – the text was present in these cases

Note 2 – I suggested at this point (after the reading of the third text) that the summaries could be a little longer.

There is considerable variation in summary length, even though the same instructions were given to each participant. One reason may simply be that some participants had more advanced speaking skills than others. Table 5.7 below gives average summary lengths and speaking levels (according to IELTS criteria). Because of the non-standard ways in which their summaries were collected (see Table 5.6), P5 and P10 have been omitted.

The participants in Table 5.7 below can be divided into two groups according to speaking skills levels: those at level 6.0 (the minimum level I accepted for the verbal protocols) and those above. The average summary length for those at level 6.0 is 73 words (s.d. 25.4) and for those above this level, 106 (s.d. 37.1). Thus there is a considerable difference which may be due to speaking skills, rather than reading skills.

Table 5.7: average summary lengths arranged according to speaking levels

Participant	Average	Speaking Level
P1	58.2	6.0
P2	63	6.0
P3	46	6.0
P6	99.4	6.0
P8	115.6	6.0
P14	73.2	6.0
P16	55.75	6.0
P4	110.2	7.0
P7	70.2	7.0
P9	154.2	7.0
P11	150	7.0
P12	80	7.0
P13	61.6	7.0
P15	113.8	8.0

Table 5.8 below gives the average lengths of summaries for each text. For the calculations for this table, I decided to exclude all participants' results which were incomplete or distorted in some way. This meant that four participants were omitted: P5, P10, P12 and P16.

Table 5.8: Summary lengths for different texts

Text	Type of Reading	Text Length	Average Length of Summary
MOP	normal reading	553	76
OLD	normal reading	554	80
AP	skimming	567	104
TMC	skimming	678	116.5
UH	skimming	852	104.5

The difference in length between the normal reading and skimming summaries is quite striking. The average length of summaries when reading normally is 78 words: when skimming it is 108 words. Of course there could be many explanations for this. It could be that the texts for skimming were easier to read, being more interesting, predictable etc. However, if this is so, it was certainly not my intention: I regarded UH as quite difficult for the participants (See 4.2.3). A second possibility is that the texts for skimming were easier to summarise. Thirdly, the skimming texts are longer. Finally, the student may have been improving their summarising skills. This is possible since all the normal reading was done first.

These alternative explanations notwithstanding, the results may indicate that participants found it easier to discuss text gist after skimming compared with after reading normally. Nevertheless, even if this is true, it does not necessarily follow that for these participants skimming is the best type of reading for obtaining the gist. Attention must be given to the *content* of the summaries, not just the length.

I considered the difference made by the order of reading the texts. The figures are given in Table 5.9 below:

Table 5.9: average summary lengths

	TMC average summary length	UH average summary length
Read First	120 (5)	100 (7)
Read Second	104 (7)	131 (5)

Note: the figures in brackets refer to the number of participants.

The differences in summary length depending on whether the text was skimmed first or second are quite conspicuous. The summary lengths for TMC were shorter when it was skimmed second. On the other hand, the UH summaries were longer when skimmed second. However, it must be remembered that these figures are based on quite small numbers of participants. Secondly, it should be borne in mind that certain participants may have had a tendency to give longer summaries: thus, those who gave longer summaries for TMC when that was skimmed first were the same people who gave longer summaries for UH when that was skimmed second. In fact it may well be that differences in summary length and perhaps skimming speed are both attributable to the higher level of reading skills of the group that skimmed TMC first: see Table 5.10 below.

Table 5.10: Comparison of groups of readers, divided according to which text was skimmed first

	Skimming Speeds		Summary Lengths		Mean IELTS Reading Score
	Skimmed First	Skimmed Second	Summarised First	Summarised Second	
Group One	TMC - 248	UH - 278	TMC - 120	UH - 131	7.3
Group Two	UH - 221	TMC - 237	UH - 100	TMC - 104	6.3

Table 5.10 clearly shows that participants in group one, i.e. those who skimmed TMC first, tended to read more quickly and give longer summaries but were on average one whole IELTS point higher in reading level than participants in group two. Thus the differences appear to be a function of reading ability and are not dependent upon which text was skimmed first.

Finally, Table 5.11 below compares summary lengths for TMC and UH.

Table 5.11: Comparison of participants' summary lengths

Participant	Summary Length (no. of words)	
	TMC	UH
P1	84	106
P2	77	54
P3	52	50
P4	138	132
P6	79	90
P7	99	47
P8	171	173
P9	121	169
P10	38	74
P11	166	281
P13	96	76
P14	87	76
P15	160	101
Mean	105	110
Standard Deviation	42.9	65.8

As can be seen from Table 5.11 above, there is little difference in mean summary lengths, with those for UH being slightly longer. In fact, this simply could be related to its greater length – TMC was 678 words and UH, 852.

5.3 Content of text summaries

The summaries were analysed to investigate which points were selected by the participants. Table 5.12 below shows the target points for UH and the number of participants who included them.

Table 5.12: summary points selected for UH – based on 14 participants

Target Point	Number of colleague summaries containing this point (out of 6)	Number of participants who included the point (out of 14)
1 Underground homes are gaining popularity	6	5
2 They result in greater efficiency in land use	6	8
3 Insulation is excellent	6	3
4 Large public buildings function equally well underground	6	5
5 Lack of natural light is not an issue	5	1
6 It avoids disfiguring sensitive landscapes	5	0
7 A Japanese company has even simulated the supra-terranean experience [especially with regard to windows]	5	2
8 The effects of extreme climates are mitigated	5	1
9 Building homes this way reduces noise – it is peaceful	4	1
10 Underground homes are energy efficient – solar-powered	4	2

The distribution of points for UH is much as one would expect – the 4 most popular points in the expert summaries are the 4 most popular points with the participants. However, that for TMC is less predictable, as shown in Table 5.13 below. The distribution of points here is somewhat surprising. Predictably, the first two points were the most frequently cited among the participants. But then points 11 and 14 were also often included, even though they were selected in only 4 out of the 6 expert summaries.

Table 5.13: summary points selected for TMC – based on 14 participants

Target Point	Number of colleague summaries containing this point (out of 6)	Number of participants who included the point (out of 14)
1 There has been a massive increase in car use	6	7
2 Unfortunate environmental consequences include unhealthy levels of pollution	6	11
3 Possible solutions include better mass transit systems	6	3
4 Problems will persist in developing economies	6	1
5 The convenience of the motor vehicle means that its use will continue to increase	5	1
6 Greater usage of motor cars is creating the major problem of safety	5	0
7 Motor vehicles incur great social costs	5	2
8 One solution is greater use of environmentally friendly cars	5	4
9 There has been a massive increase in freight carried by road	4	0
10 The rising number of cars is causing major environmental problems	4	2
11 Greater usage of motor cars is creating the major problem of congestion	4	6
12 Motor vehicles are preferred because of their flexibility	4	0
13 Technical improvements to vehicles' efficiency cannot counteract increased usage	4	2
14 Possible solutions of redesigning cities to fit pedestrians	4	6
15 Introduce toll roads for longer journeys	4	0

Scores for the text summaries of TMC and UH were derived using the scoring method discussed earlier (section 4.3.2). Table 5.14 below compares the scores based on the eight most commonly occurring points in the sample summaries. As there is an equal number of points for both texts, direct comparison of performance is possible. The surprising point that about these figures is that overall there is so little difference between them. Far higher scores for TMC than for UH were expected. The implications of this are examined later (5.12). A further point of interest is that the scores tend to be generally very low. The mean scores are only around 25% and some scores are lower than this, with three zeros.

Table 5.14: Direct comparison of summary scores

Participant	TMC (out of 20)	UH (out of 20)
P1	8	9
P2	6	8
P3	8	3
P4	8	8
P6	6	0
P7	0	3
P8	6	5
P9	6	8
P10	3	6
P11	8	6
P13	5	3
P14	3	0
P15	10	6
Mean	5.9	5.0
Standard Deviation	2.7	3

Note: I have omitted participant 5, who had the text available while summarising, and participants 12 and 16, who skimmed only one text.

To summarise, when comparing the scores for TMC and UH on three measures – skimming speed, summary length and summary content - the quantitative data show only minor differences between the two. Scores for TMC are higher for skimming speed and summary content but not appreciably so.

5.4 Introduction to verbal protocol data

The data obtained from the interviews with the participants are discussed below. Following for example Pritchard (1990), strategies and factors are included even if they occurred only once: inclusion is not on the basis of frequency of occurrence as is the case in some previous research. (For example, Olshavsky 1977 included strategies only if they were mentioned at least three times.) The shortcomings of the more restricted system are outlined by Johnston and Afflerbach (1985): it may be less sensitive to individual differences in the use of strategies and will also be less sensitive to unique strategies and to strategies that are common across participants despite their infrequent use. A further reason why it would be inappropriate to omit uniquely mentioned strategies and factors is that they may actually have occurred more frequently without being fully reported.

Table 5.15 below gives the total numbers of each of the three categories which emerged from the analysis: strategies (Ss), facilitating factors (FFs) and hindering factors (HFs).

Table 5.15: Numbers of mentions of Ss, FFs and HFs isolated

Participant	Strategies		Facilitating Factors		Hindering Factors	
	TMC	UH	TMC	UH	TMC	UH
P1	2	1	-	-	2	2
P2	2	6	-	-	-	3
P3	2	7	3	2	-	2
P4	9	1	2	2	2	2
P5	6	6	3	-	1	3
P6	2	7	4	1	-	6
P7	4	6	7	-	-	3
P8	4	4	4	3	-	2
P9	5	1	3	3	2	2
P10	2	5	5	3	1	4
P11	2	5	4	1	-	3
P13	5	13	6	1	-	6
P14	8	3	5	-	-	3
P15	5	9	5	3	1	5
Totals	58	74	51	19	9	46

As TMC was expected to be easier than UH (see 4.2.3), more mentions of facilitating factors were anticipated in the case of TMC compared with UH. In fact, the ratio is more than 3:1. The disparity in the number of mentions of hindering factors is even more striking: the ratio is more than 5:1. These figures suggest that, as expected, participants really did feel that TMC was easier and UH much more demanding.

The result of the count of strategy mentions is more complicated. Overall, the number is rather higher for UH than TMC. This is unsurprising since, given the extra challenges that UH posed, it was predictable that more strategies would need to be invoked in order to cope. Only a small number of participants (P4, P9 and P14) reported rather more strategies for TMC than for UH, possibly because they skimmed TMC first and gave more detailed explanations for the first text.

5.5 Text Content Factors

Following Goldman and Rakestraw (2000), I have divided the factors into two groups: content-related and structure-related. Content-related factors are then divided into vocabulary and topic. It might be argued that that these two factors are so inextricably linked that they are inseparable. However, in theory they can be distinguished in that if a participant does not know a lexical item in English, that does not necessarily imply that the concept is absent (Hudson 2007). Whereas the concept and word would normally be learned together in an L1, this may not be the case in an L2.

5.5.1 Vocabulary

Unknown Lexis as a Hindering Factor

The main difficulties with the lexis occurred during the skimming of UH (10 out of 14 participants): no participants expressed corresponding problems with TMC. The high frequency of unknown lexis proved particularly daunting for some participants. For example, P3 had problems with whole paragraphs.

If I see some difficult vocabulary, maybe all the sentence I can't understand. And some paragraph with many vocabulary in it. Maybe all the paragraph I should pass it. (P3-U-HF1)

This high frequency of unknown lexis proved to be a particular problem in the first paragraph of UH, as experienced by P5:

In the paragraph there are a lot of vocabulary but you can't understand it and if it's one, two or three it's fine but there's a lot of words mention about the house and some structure about it. (P5-U-HF2)

P6 also had problems with the vocabulary of the first paragraph, preventing him from deriving the gist of the text from the introduction as is his usual custom:

I think the most difficult is that the vocabulary because mostly you can know the main point of the paragraph in the title and in the first paragraph but if they use

quite a lot of complicated word in that paragraph it may confuse the reader and especially for me it's quite difficult. (P6-U-HF2)

For P6, although lack of familiarity with the topic was problematic, it was lexis, i.e. whether or not the vocabulary was known, that had greatest impact on skimming. P13 also found his speed reduced because of unknown lexis: "When you meet some words that you don't know, slower your speed" (P13-U-HF4). P7 had problems with concentration resulting from unknown lexis: "Because the difficult word I cannot understand and then I just skip it and then I don't know why but then I lost my concentration and I think of something else" (P7-U-HF1).

Thus for most participants the difficulties with vocabulary in UH proved a significant barrier to effective skimming, resulting in problems such as slower skimming speeds, confusion and loss of concentration.

Strategies to deal with unknown lexis

In order to cope with the lexical difficulties, participants utilised certain strategies, particularly skipping.

Table 5.16: Mention of strategies to deal with unknown lexis in UH

Participant	Skipping	Guessing	Other strategies for unknown lexis
P1			
P2	P2-U-S2		
P3	P3-U-S2	P3-U-S3	P3-U-S5
P4			
P5	P5-U-S4		
P6	P6-U-S3		
P7	P7-U-S6		
P8	P8-U-S3		P8-U-S2
P9			
P10	P10-U-S4		P10-U-S3
P11			
P13	P13-U-S1	P13-U-S3	
P14			
P15	P15-U-S9	P15-U-S8	
Total (out of 14)	9	3	3

As can be seen from Table 5.16 above, all the mentions of strategies for dealing with difficult lexis related to UH. 9 out of 14 participants simply skipped the unknown lexis in this text. For example, P3 said: “Some paragraph with many vocabulary in it - maybe all the paragraph I should pass it.” (P3-U-S2). P8 decided to concentrate on known vocabulary: “This passage – I just skim – not to read all the words – I will just take the easy word to understand” (P8-U-S2).

Other participants used strategies that they hoped would help them to understand the unknown words. P10 found that she had to re-read UH many times because of the difficulties with vocabulary (P10-U-S3): “If I found a lot of words that I didn’t see before then I will read it again again again.” Clearly this re-reading would have slowed P10 down as she tried to skim quickly through the text. (In fact her recorded speeds verify this: 253 wpm for TMC but only 205 wpm for UH.) Moreover, she later states that she did not find this strategy very successful. P3’s strategy was contextual inferencing, using the examples to work out the meaning of the unknown words (P3-U-S5). Surprisingly, this is the only detailed recorded example of a participant consciously using inferencing skills. It perhaps stems from the nature of the task: if this had been a task involving normal reading, it is likely that this skill would have featured far more prominently but given the time constraints of skimming, participants felt they could best accomplish the task by simply skipping the problematic words.

Known Lexis as a Facilitating Factor

Unsurprisingly, known lexis proved to be a facilitating factor. This was particularly true of TMC (7 out of 16 participants) but far less so for UH (only 2 out of 14). With regard to TMC, P13, for example, commented: “The words I don’t know less – fewer unknown words. . . . and less unknown vocabulary made me go quicker” (P13-T-FF1), in fact resulting in a reading speed 23% faster than for UH.

Only two participants spoke about finding the lexis of UH easier than TMC. P4 said that “this had less academic words than the previous one – the motor car” with the result that “I think it’s easier [in relation to lexis] than the previous one” (P4-U-FF2). P10 was helped in the middle section of UH “because they use . . . not so many difficult vocabulary” (P10-U-FF1).

5.5.2 Topic

Unfamiliarity of topic as a hindering factor

In general, there were relatively few direct references to difficulties caused by topic unfamiliarity: 1/14 for TMC and 4/14 for UH. The problems resulting from the unfamiliarity of the subject matter in UH are well expressed by P4 (P4-U-HF1):

Certainly it's interesting but I had no other information than this passage so I had to force myself to understand what they're saying – that makes me quite difficult to skip the passage . . . because only the information I have is in this passage so I have to read every sentence but as well I'm trying to skim the passage.

Topic unfamiliarity meant P4 had to rely on textual information, reducing skimming speed. Nevertheless, he felt torn between having to read more carefully and trying to skim quickly to fulfil aims of the task.

Lack of topic familiarity resulted in a range of problems for the participants. P5 found difficulty because of the combination of unfamiliar topic (“especially about the structure of the house”) and vocabulary (P5-U-HF3). P10 had difficulty in accessing the main ideas: “it's my first time hear the buildings underground so at first I can't get the main ideas of the passage” (P10-U-HF1). In addition, she says that her skimming speed was adversely affected (in fact resulting in speeds of 206 and 253 wpm for UH and TMC respectively).

P5 was the only participant who referred to the content of TMC as a hindering factor: “I think it's somehow specialist. It's talking about the gas – and especially some technology – and they mention about the word that I don't – it's normally I don't read” (P5-T-HF1). This account is supported by her reading speeds: 298 for UH but only 238 for TMC.

Strategic use of background knowledge to find gist more quickly

Only three participants actually gave details of how prior knowledge of the topic was exploited strategically: P4, P12 and P16. Unsurprisingly, this applied only to TMC. P4 referred to the relationship between what was already known and what was in the text –

“Sometimes they just happen to be the same thing so I can just skip the whole paragraph” (P4-T-S8). Recognising ideas from his background knowledge, he was able to jump to the next point. He gives a specific example: “Like the congestion charge – I’ve heard a lot of people saying that it helps so I generally know the idea so it helps me skipping [skimming] very fast” (P4-T-S8). In fact the congestion charge is not specifically mentioned in the text though there is mention of road pricing. (As a further comment on this extract, it should be noted that P4 regularly confused “skipping” and “skimming”. I was not able to check to see which word was intended on every occasion.) P12 also referred to the expeditious effect of background knowledge, saying that “I can check out the main point more quickly from what I know already” (P12-T-S6).

It is interesting to consider this in the light of the findings of Afflerbach (1990, p.35) who discovered that prior knowledge facilitates main idea construction. In particular, he claims that prior knowledge “aids in the assignment of importance” of ideas in the text, making it easier to distinguish main ideas from details. P12 appears to have used his background knowledge in exactly this way:

Because the passage is about motor car so I know the motor car is related to the pollution problems and some sort of problem like global warming something like that. So when skimming I paid perhaps most of my attention to that kind of thing – like the action needed to be taken or some technological innovation and some solution (P12-T-S5).

He goes on to state:

And in fact now I can see in a more clearer way that when I read about something and I have like my own knowledge about that thing reading is like a comparison actually (P12-T-S5).

He thus shows remarkable insight into how background knowledge operates while reading. What is more, it appears that this insight came to him during the course of the interview (“*now* I can see in a more clearer way”), an instance of how “the very act of conversing about one’s views alters them in some way” (Block 1995, p.36).

Familiarity of subject matter as a facilitating factor

7/16 participants referred specifically to the facilitative effect of topic familiarity regarding the skimming of TMC. They accounted for its familiarity in a variety of ways. Only two participants referred to encountering the text before as a listening exercise in class, though of course all of them had (4.2.8). This is probably because the time lag between the listening exercise and the interviews was much greater than I had wished for. The mean number of days was as high as 41.5 and therefore the exposure is unlikely to have any great effect for some participants.

P3 recalled having heard the same ideas in the listening exercise and referred to the facilitating effect: “because I have already listened it so it make it easier” (P3-T-FF2). Other participants said they had come across similar ideas “from the news” (P4-T-FF1) or in their A-level studies, particularly in Physics (P14-T-FF1) and Economics (P6-T-FF2; P7-T-FF1; P8-T-FF1; P9-T-FF1; P13-T-FF2).

The familiarity of the subject matter in TMC helped participants in a number of different ways as they were skimming the text. Perhaps the clearest explanation of this is given by P10, who highlights its cumulative effect:

P10: First of all it gives me confidence that I can control the main idea of this passage.

I: What was that?

P10: I can control . .

I: Control? What do you mean by that?

P10: I mean I can make sure I didn't get lost in the middle of the passage.

I: You could find the main ideas easily.

P10: Yes. And then there won't be many difficult vocabularies because even I didn't – I haven't seen the word before, I can guess because it's about these thing. Then thirdly the writer's idea is always support or against for a certain topic like pollution the writer's idea is often supported or against it.

I: So how did that help?

P10: When you can make sure that you know the writer's attitude you can easily follow the passage.

I: So you knew what the writer's attitude was.

P10: Yes in this passage the writer is support the change made in car use so it's also help to get the main idea.

I: Would you say that because you knew something about the topic it was easier to guess what was coming?

P10: Yes.

I: How helpful was that?

P10: [Pause] I think the most helpful thing is from the psychological view because you feel relaxed and not panic so you can do it quite easily (P10-T-FF2).

P10 refers to a number of ways in which the familiarity of TMC facilitated skimming. It gave her greater "confidence"; she felt in "control"; there were fewer lexical problems; it was easy to determine the writer's attitude; and in general there was a "psychological" benefit in that "you feel relaxed and not panic". Many of these points are made by other participants as well. However, P10 perhaps expresses more fully than any of the others the *cumulative* effect of familiarity: that it impinges on so many aspects of skimming, such as vocabulary recognition, but also affective factors such as confidence. Ultimately it is the combination of all these factors that is significant when considering the effects of content familiarity.

Several participants referred to their ability to skim more quickly because of topic familiarity, P14 being an example:

When I first see the solution I don't have to know – I don't have to read how the author explain why because I've already know why. . . I can just jump the explanation. (P14-T-FF1)

P14 says he was able to skip material since it was giving him information that he already knew. P4 also claimed to be able to increase his skimming speed because of

prior knowledge: he could connect his ideas with those in the passage because “sometimes they just happen to be the same thing so I can just skip the whole paragraph” (P4-T-FF1). P10 found skimming was made easier because “also in the first paragraph and the last paragraph I also skimmed” (P10-T-FF1) even though she would normally employ a more careful reading style for such paragraphs. In addition, P2 was able to “find the main ideas of the paragraph easily” (P2-T-FF3), thereby increasing skimming speed. Thus several participants claimed that skimming TMC was much easier because of prior knowledge. However, it is interesting to notice that this sense of greater ease was not always reflected in skimming speeds. Table 5.17 below compares the skimming speeds for TMC and UH for these participants.

Table 5.17: Selected participants’ skimming speeds for UH and TMC

Participant	Skimming speed (wpm) for UH	Skimming speed (wpm) for TMC
P2	243	201
P4	211	204
P10	206	253
P14	452	462

Only P10 skimmed TMC noticeably more quickly than UH. P14 skimmed TMC slightly more quickly. In the cases of the other two participants, they have higher speeds for UH than TMC. This evidence suggests that comments made about what was skimmed more quickly should not always be taken at face value but should be corroborated if possible, as a check (Magliano and Graesser 1993; Pressley and Afflerbach 1995). In addition, the evidence reveals discrepancies that may occur between perception and reality. The participants felt as if they were reading more quickly because of the familiarity of the topic, even though the empirical evidence does not always support this contention.

Other benefits were experienced that were not necessarily directly related to skimming efficiency but were still perceived as being facilitative. Familiarity had the effect of increasing interest (“If you know something that you will think that it’s more interesting” - P15-T-FF5) and facilitating concentration (P5-T-FF3).

Two further advantages were predictability of content (“I can guess what is it talking about easier” - P13-T-FF4) and fewer lexical problems since the vocabulary had been previously encountered: for example, P14 found his knowledge of science stood him in good stead for TMC when interpreting terms such as “efficiency” and “emission” (P14-T-FF1).

Thus for many participants, familiarity of lexis and/or topic had a marked effect, especially on their *perception* of the difficulty of texts, with important implications for strategy use.

5.6 Text organisation factors

5.6.1 Structure

The facilitative effects of an accessible structure

Most of the comments regarding the facilitative effect of the structure relate to the text TMC, with several concerning the first paragraph. P5 found the first paragraph helpful when trying to discern the structure of TMC because “it give me the main idea of the passage and when I look through - no, when I skim it - I can see that it’s talking about the effects that it’s mentioned already in the first passage [paragraph] so I think it’s easily for me” (P5-T-FF2). P15 also thought the first paragraph was helpful in determining the structure: “It gives a guide . . . because it talks about the main trend of motor cars - the number of motor cars - and the problems it causes and so it actually kind of in order thing” (P15-T-FF3).

There were several comments on the clarity of the overall structure of TMC. P4 discovered that different parts of the text have clearly distinguishable themes. P7 put it this way: “Each paragraph they have their own point and each point is quite separate so I think it’s quite easy for me” (P7-T-FF5).

Several participants explicitly demonstrated that they had discovered at least some aspects of the situation-problem-solution-evaluation structure of the text. P15 refers to the “pollution, the solution and the something . . .” (P15-T-FF4). P8 notes that “at first they give the introduction about the pollution – the car pollution – and then they give the examples from other countries about how they increase in the car - the pollution and

then they give the solution” (P8-T-FF4). Even more perceptively, P13 found that “the structure was quite easy because the first paragraph introducing the situation and then the second paragraph was talking about why – the cause – and then followed by some solutions so I can guess what is it talking about easier.” (P13-T-FF3). On the other hand, P10 claims to have a clear conception of the structure but is in fact misguided (P10-T-FF4). She claims that the structure was “introduction, then support or against the point then the conclusion,” which does not really capture the situation-problem-solution-evaluation of the text. Evidently, the clear structure and the signpost words were not a sufficient guide for all the participants.

In contrast, only two comments were made about the structure of UH that can be regarded as facilitative. P3 ((P3-U-FF2)) found the use of connecting words/phrases helped to follow structure. In addition, P15 occasionally found it easy to find the main points in the paragraphs: “I think two of these are easy to find but the others – maybe not” (P15-U-FF2).

References to difficulties in following the structure

All the detailed comments, made by participants 4, 7 and 14, regarding difficulties in following the structure related to the text UH. P4 experienced the following problem:

I thought this next paragraph was going to talk about another thing completely but it refers to the first paragraph – I mean the previous paragraph. Then it confuse me – is that the few paragraph together they are talking about one thing or the few paragraph are talking about several ideas. (P4-U-HF2)

P4 seems to have been confused because certain paragraphs were interrelated in terms of subject matter while others were not: as a result, he was never sure whether any particular paragraph would be directly connected with other paragraphs or not.

P15 also had problems with the structure, finding the text disjointed (“there’s no clear connections between paragraphs” – (15-U-HF2)). Apparently expecting single-topic paragraphs, she states: “I think in the middle of the paragraph it say something about

how the underground kind of how they saved the space but then it says some energy saving so I don't think it really talks about one thing" (P15-U-HF2).

Strategic attempts to uncover the structure of the text

Some participants attempted to discern the structure of the text. Most of these structure-relevant strategies apply to TMC (8), rather than UH (2). Participants used several methods to derive the structure of TMC. P8 found the first paragraph a useful guide to the structure of the text TMC, returning to it later in the reading because she became confused and so "I have to return to know the structure they give" (P8-T-S4). P3 took her cue from the last sentence of the first paragraph, stating that it mentions the harm caused by motor vehicles: "the first is pollution and the second is the depletion of oil source then I think the second and the third paragraph it's in this order to explain" (P3-T-S2). In other words, the topics are set out in order at the close of the first paragraph which acts as a template to subsequent paragraphs. In fact, this is only true of the first topic she mentions: the next one she refers to – "depletion of oil resource" – is not discussed in any detail anywhere in the text. P3 has mistakenly taken this last sentence as a key to unlocking the structure of this text. It is an example of a participant attempting to use prior knowledge of rhetorical structure (Carrell 1984) but misinterpreting the signals given by the writer.

Some participants showed awareness of other rhetorical devices commonly used by authors to convey the organisation of their texts to their readers. For P5, certain key words drew her attention to textual transitions. For example, she paid particular attention after the word "solution" appeared in the text as this was identified as introducing a new section – "the previous paragraphs they were talking about some problems about the motor cars and the designing of the cities, the old cities, but this one it mention about the solution how to solve the problem of the motor cars" (P5-T-S4). Thus the occurrence of a word such as "solution" acted as a lexical trigger, arousing awareness of the rhetorical structure of the text. This suggests that P5 had access to previous experience of problem/solution texts: in other words, rhetorical schemata. Similarly, P14 refers to the "solutions" section in the text as providing a key, providing the following explanation for attaching such importance to the solutions section: "I think from logic – it's always first part is to arise the problem and the following several paragraphs is about the facts and then the last one is what we will do in the future for

some solutions.” (P14-T-S4). He says that “logic” suggested that this section would be more important but this logic seems to be based on knowledge of rhetorical schemata.

P9 refers directly to her use of “background knowledge” while skimming TMC:

I read them paragraph by paragraph using my background knowledge so I could divide them into some parts. For example, like the cause of the increasing use of cars, the solution and social effects (P9-T-S1).

However, it is unclear whether she means knowledge of motor cars and the problems they cause, or rhetorical knowledge. Most probably it was both since her knowledge of the content – that motor vehicles cause pollution – may have led her to expect this to be linked with possible solutions.

Like P14, P9 paid special attention to the solutions section “because usually when a problem is put forward and all the facts then afterwards the solution is usually why the passage was written” (P9-T-S3). This again suggests some knowledge of rhetorical schemata, since she refers to the way such texts are “usually” written.

Two participants demonstrated further knowledge of rhetorical organisation by their close attention to linkers. P5 paid more attention to discourse markers since they were often used to signal a change in topic focus (P5-T-S5). P14 also paid attention to a variety of discourse markers that trigger understanding of the structure of the text. Such features include “some important word such as *firstly*, *secondly* or *finally*” and also “maybe some punctuation - maybe a question mark is probably leading the next paragraph” (P14-T-S5). The reference to the use of question marks is interesting. Presumably, he is referring to the way writers pose a question and then answer it, the question acting as a cue for the reader to follow. According to P5, the important point will often follow directly after such features – “Some linking phrases were . . . maybe it gonna change the topic or some supporting ideas” – which is a further example of background knowledge of textual organisation.

UH was expected to cause more problems in terms of structure (4.2.3), partly since it falls into the “descriptions” category of text types, which is regarded as being more

difficult to recall (e.g. Meyer and Freedle 1984). Nevertheless, the impact of rhetorical schemata can be seen here as well, though to a more limited extent. P15 comments that “when we talk about one thing I think usually we talk about advantage, disadvantage, benefits or something so I will concentrate on this kind of thing” (P15-U-S7). Thus she had in mind the likelihood that benefits and disadvantages would be discussed and these acted as organising slots into which the main points of the text could be “placed”. On the other hand, P5 was able to work out a different principle of organisation, in this case according to location: “it say in Canada and then it say in Japan and Europe and it easy to tell the organisation of how people relate to underground homes” (P5-U-S3). Thus once again a method of organisation is discerned, though the influence of pre-existing schemata is not as clear in this case.

5.6.2 Surface Features

There were references by the participants to surface features of the texts which proved to be either facilitating or hindering factors. Firstly, regarding text length, P7 claimed to have been helped by the fact that TMC is a shorter text than UH (TMC has 686 words; UH has 852). Conversely, three participants commented on the sheer length of the texts as having a negative effect on skimming. Interestingly, two of these comments were made about TMC and only one about UH despite the latter’s extra length. For example, P4 was initially daunted by the amount he was expected to skim: “When I first see it my first impression is that’s a lot – how am I supposed to skip [skim] and remember the idea?” (P4-T-HF1). In addition P7 found concentration when skimming UH was negatively affected by the text length (P7-U-HF2).

Another surface feature which participants remarked upon was text layout. Its importance has been highlighted by Lonsdale et al. (2006), who emphasised the importance of layout for search reading (*ibid.* p.449), claiming that this may be due to the need for perceptual processing in this type of reading. Clearly from the response of the participants, layout is important in skimming as well. Five participants (P1, P8, P10, P11 and P14) commented on the helpfulness of the layout of TMC (though P1 made similar comments about both texts). Two features are mentioned: short paragraphs and intervening one line spaces. These gave the impression that the text “doesn’t have much words” (P1-T-FF1). P11 elaborates on this, saying it is easier to

read many short paragraphs each with few main ideas: “It’s like one paragraph they continue only one or two main ideas . . .” (P11-T-FF1). A further feature that helped P10 was that “it have the number of the paragraph at the beginning – I mean, the letters A, B, C.” (P10-T-FF3). (In fact this was a feature of both TMC and UH.) P10 found this feature, and the separated paragraphs, “helps giving you the structure of the passage from the visual point, I think: it just looks comfortable” (P10-T-FF3).

All the above comments were made in relation to TMC. Only one participant, P1, made similar comments in relation to UH, stating that it was “easy because the straightout [layout] of the passage” (P1-U-FF1).

5.6.3 Rhetorical Style

The rhetorical style of the two texts had contrasting effects, with that of UH proving to be a hindering factor for some participants. P6 found that “the way they write the passage is confusing – it’s not so interesting” (P6-U-HF5). P13 found some of the sentence structures difficult (P13-U-HF5). P2 was deterred by the sentence length (P2-U-HF2) and also complained that the writer failed to keep to the point: “If they’re talking about the problem, they have to try to link it to other things like the first paragraph and the last paragraph” (P2-U-HF3).

In contrast, several aspects of the rhetorical style of TMC proved facilitative. P7 found it helpful that there were “not so many number” (P7-T-FF6). P9 discovered that the figures that did occur in TMC could be ignored, resulting in faster skimming (P9-T-FF2). P14 also skipped specific data which simply exemplified general statements (P14-T-FF3). According to P9, the text was easy to skim because “the idea was quite simple” (P9-U-FF1). P16 found the following factors: it was easy to locate the main point (P16-T-FF1); the sentence structures were accessible (P16-T-FF3); and the ideas were clearly separated (P16-T-FF4).

Two participants found further facilitative factors in features of the rhetorical style of UH. P2 was helped by the title (P2-U-FF1) and P3 found that words that were repeated in the text were helpful in discerning main ideas (“Sometimes when article repeat some

words very frequently and like ‘pollution’ I know that this article about pollution and like ‘build house underground’ it can help me” - P3-U-FF1).

5.7 Gist extraction

Given that they had to summarise the key information of the texts, some participants referred to particular ways of focussing on gist, defined earlier (following Koda 2005) as “a reader’s summary of what s/he considers to be the main information that the writer wants to convey.” (1.3.1). Like several others (P6 and P15), P12 tried to focus on the main points: “I think how to make a skimming reading is that I always be aware of I having to find out the main topic and it really make me read more quickly” (P12-T-S4). P13 had the same aim but expressed the strategy slightly differently (P13-U-S2):

Look at the passage in a bigger scale. . . You don’t have to focus on each word – focus on each paragraph and try to guess what does it mean. Most of the passage are very logic – you don’t have to understand all the words.

Another gist-oriented strategy was to make maximum use of the text title. P6, P14 and P15 tried to use the title of UH to help them derive the gist of the text. For example, P15 said “I just find the word which is relevant to the title” (P15-U-S4). P6 reports:

I didn’t understand what they writing on two or three first paragraph but in the next paragraph I compare with the title and say that – think that this paragraph is talk about the intent of people – they go to build a house underground and then from that I can – I know that is the main point and looking for the sentence relative to that main point and I can summarise (P6-U-S1).

Thus P6 used the title as a guide to finding the gist and looked for further ideas that related to this main point.

However, the most frequently reported strategies for gist extraction related to the participants’ understanding of how expository texts are constructed. They clearly believed that certain parts of the text were the most likely repositories of gist information and so more attention was given to them. Some sections were regarded as

“gist-rich”, i.e. places likely to have main information densely distributed. These sections were often thought to be the first and last paragraphs and the first (and sometimes last) sentences of each paragraph. In this way, they used a “selective processing strategy” in that they “devote additional processing resources at junctures in a text that are likely to represent transitions between topics” (Hyönä, Lorch and Kaakinen 2002, p.45). Conversely other parts of the text were deemed likely to be gist-poor. The following two sections deal with each of these types of material as construed by the participants.

5.7.1 Dealing with supposedly gist-rich sections

First and last paragraph

Quite a number of participants mentioned concentrating on first and/or last paragraphs of the texts (see Table 5.18 below). It should be noted here as elsewhere that the figures are not necessarily an accurate measure of technique use in that other participants may have used this strategy but not mentioned it.

Table 5.18: Participants who mentioned concentrating on first and/or last paragraphs

Participant	TMC First Paragraph	TMC Last Paragraph	UH First Paragraph	UH Last Paragraph
P5	P5-T-S1	P5-T-S1	P5-U-S1	
P15	P15-T-S2		P15-U-S3	P15-U-S3
P2			P2-U-S5	P2-U-S5
P4	P4-T-S3	P4-T-S3		
P6			P6-U-S2	P6-U-S2
P10			P10-U-S1	P10-U-S1
P14	P14-T-S1		P14-U-S1	
P7				P7-U-S3
P1				
P3				
P8				
P9				
P11				
P13				
Total	4/14	2/14	6/14	5/14

Note – For this comparison, P12 and P16 have been omitted as they skimmed only TMC and not UH.

In total, out of the 28 text readings represented on the table, participants concentrated on the first paragraphs in ten cases (36%), and on the last in seven cases (25%).

Surprisingly, the figures suggest this strategy was slightly more commonly used with UH, despite its unconventional opening and closing paragraphs. This could indicate that such strategies were used indiscriminately. However, there is also evidence in the data that if an initial strategy choice proved unhelpful, a contingency strategy might be used (see 5.7.1.2).

There is clear evidence in some of the verbal protocols that the first and last paragraphs were read in a different way from the rest of the text. For instance, “For the conclusion paragraph and the beginning paragraph I read very carefully. I read the whole thing” (P4-T-S3).

Some participants felt that the first paragraph acted as a kind of key to what followed in the text: as P14 put it – “that’s the leading information for the whole article” (P14-T-S1). Similarly, P16 said she concentrated on the first paragraph “to know what it’s about – get the basic ideas” (P16-T-S5). She continued: “The normally the essays will after the first paragraph like second paragraph or third paragraph or fourth paragraph is talking about same ideas so generally you just look these ideas the first paragraph so it’s more important than others” (P16-T-S5).

Likewise some participants expected the last paragraph to be useful in giving gist information: “Usually the main idea of the paragraph they will repeat in the last two paragraph of the essay or of the reading so if we can’t get the information from the front so maybe we can find it from the back” (P6-U-S2). Again, the use of the word “usually” implies the employment of rhetorical structure schemata.

P10 made an interesting comment on the effect of prior knowledge on reading the first and last paragraphs. She found that with TMC, because of the familiarity of the topic, she did not need to pay special attention to the first and last paragraphs. She was able to skim these in the same way as the other paragraphs (P10-T-S1). This appears to support Afflerbach’s (1990) assertion that when prior knowledge is present, main idea construction may well take place automatically.

First (and last) sentence of each paragraph

Table 5.19: Mentions of concentrating on first and/or last sentences of paragraphs in order of frequency of mention

Participant	TMC First Sentence of Paragraph	TMC Last Sentence of Paragraph	UH First Sentence of Paragraph	UH Last Sentence of Paragraph
P7	P7-T-S2	P7-T-S2	P7-U-S2	P7-U-S2
P13	P13-T-S3	P13-T-S3	P13-U-S5	P13-U-S5
P15	P15-T-S1	P15-T-S1	P15-U-S1	
P3			P3-U-S1	P3-U-S1
P4	P4-T-S2	P4-T-S2		
P14	P14-T-S2	P14-T-S2 (if necessary)		
P5	P5-T-S2			
P10	P10-T-S2			
P1				
P2				
P6				
P8				
P9				
P11				
Total	7/14	5/14	4/14	3/14

In total, out of the 28 text readings represented on the table, participants concentrated on the first sentences of paragraphs in eleven cases (39%), and on the last in eight cases (29%). The strategy appears to have been rather more widely used with TMC than with UH. Practices varied to a certain extent. P14 read the first sentence and the last if necessary. I asked him how he knew if he had gained the most important information from the first sentence – “Because there is also some sentence I can feel it’s a summary of this paragraph” (P14-T-S2). P12 and P13 also read the first and last sentences (P12-T-S2; P13-U-S5). Conversely, P5 just read the first two lines (P5-T-S2) and P10, the first two sentences (P10-T-S2).

The main reason for concentrating on first and last sentences was that these were expected to contain gist information. As P16 said: I “must know the first sentence and last sentence because I need to know what is the paragraph talking about” (P16-T-S1). P16 continued:

Normally they have the main idea at the first and last sentence. First is talking about what the paragraph talking about and the last might be like conclusion – you just get the basic idea and then you can through the passage quickly and you can just add in some point up (P16-T-S1).

However, P15 expressed awareness of the fact that the first sentence may not contain the main idea. According to P15, “If I find it [i.e. the first sentence] is not a kind of conclusion I will go through the whole passage but if it a kind of conclusion I won’t go through the paragraph” (P15-U-S1).

5.7.1.1 Difficulties caused by the introductory paragraph of UH

The introductory paragraph of UH posed a particular problem for many participants: as a first paragraph, it was expected to be gist-rich but in practice participants found this not to be the case as it begins with an extended example of an underground home. Similarly, the final paragraph returns to this example, rather than giving a more general conclusion/summary. As Masson (1985, p.202) states, readers make assumptions about how the information in texts will be organised: they “are not accustomed to having these rules violated and they react badly when infractions occur.” The difficulties caused and the measures taken are reflected in the extracts discussed below.

Table 5.20: References to problems encountered in introduction to UH

Problem Encountered	Participant References	Total number of References
Unknown Lexis	P2-U-HF2, P6-U-HF2, P8-U-HF1, P13-U-HF3	4
Lack of gist information, confounding expectations - “just a story”	P5-U-HF1; P6-U-HF3; P14-U-HF1	3
Lack of prior knowledge	P9-U-HF3; P-U-HF; P13-U-HF3	3
Confusion	P8-U-HF1; P14-U-HF3; P15-U-HF1	3
Incomprehension	P6-U-HF1; P8-U-HF1; P13-U-HF2	3
Boredom	P11-U-HF1; P13-U-HF3	2
Difficulty with concentration	P11-U-HF3	1
First paragraph presented an “obstacle”	P13-U-HF3	1
Reduction in skimming speed	P5-U-HF1	1
Sentences too long	P2-U-HF2	1
Resultant difficulties with later part of text	P8-U-HF1	1

10 out of the 14 participants who skimmed UH made some reference to the difficulties caused by the opening paragraph as set out in Table 5.20 above. As can be seen from this table, the range of difficulties is very wide. Though any particular participant only mentioned some of the difficulties listed, it was probably a combination of factors that resulted in comprehension difficulties: the surprising content, on an unfamiliar topic, expressed in unknown words, constituting what P8 described as a “very strange passage”.

In Table 5.20, references to problems caused by unknown lexis are the most frequent. P6 made special reference to this problem, regarding vocabulary as the key requirement to understanding the text: “I think the most difficult is that the vocabulary because mostly you can know the main point of the paragraph in the title and in the first paragraph but if they use quite a lot of complicated word in that paragraph it may confuse the reader and especially for me it’s quite difficult” (P6-U-HF2). P8 also had difficulties with the vocabulary (“many new word”), resulting in confusion which had implications for the skimming of the rest of the text: “it make the other paragraph really confused to me” (P8-U-HF1).

P5 provides a detailed example of what happened when first encountering the opening of UH. She usually reads the first paragraph more carefully and finds that unfolds the main ideas of the text, enabling her to predict (“anticipate”) textual content (P5-U-HF1):

You can have the gist idea – the main idea what it will talking and then in your mind you can imagine and it’s very useful – maybe I think one of the most important skimming techniques – anticipation.

However, with UH, this did not happen. She contrasts the introductory paragraphs of TMC and UH (P5-U-HF1):

The first passage it listed some problems that the motor car has caused but in this passage it just introduce the idea but it not talking about what it will be talking about – the advantage or the disadvantage or some problems.

P5 was prevented from following her normal strategy of reading the first paragraph to derive some aspects of the macrostructure and predict the content of the rest of the text because of the unusual nature of paragraph one of UH.

P2, P14 and P15 encountered similar difficulties. They expected the first and last paragraphs to summarise the text. However, P14, for example, found the nature of this introductory paragraph a problem: “because at first I didn’t understand what’s the function of the first paragraph and the I still feel a bit ambiguous – I feel a little bit strange” (P14-U-HF3). The use of the word “function” is interesting. It is not just that the content is unusual: the problem stems from the difficulty of understanding why a writer would choose to start an article in this way. Thus P14 lacks the requisite rhetorical schema as well as content schema. Unsurprisingly, for P14 the introduction to UH was a source of some frustration:

I just want to gain the most important details from the first paragraph but I didn’t. It’s just a story. And then I have to carry on to read the following paragraphs (P14-U-HF1).

Two participants were critical of the paragraph. P11 found it “boring and uninformative” (P11-U-HF1), causing difficulties with concentration since it was “meaningless” for him as “they are talking about nothing really important” (P11-U-HF3). Similarly, P13 found the first two paragraphs difficult to understand (P13-U-HF2): they were “tedious and boring” and presented “an obstacle” to understanding the text because it “talk about somebody I don’t know and so many words I don’t know” (P13-U-HF3). Once again we see the importance of the combination of factors: in this case, the adverse effects of a lack of content knowledge coupled with lack of lexical knowledge.

P9 also referred to a lack of prior knowledge as a problem when dealing with this section of UH: “For this passage I didn’t have much knowledge about it so at first it was quite hard” (P9-U-HF1). However, in her case, she quickly overcame this difficulty “because of the – the idea was quite simple so it was quite easy to get it” (P9-U-HF1)

The final paragraph caused similar difficulties for some participants. It was expected to sum up the text but in fact once again confounded expectations: “I don’t think in the last paragraph the main point is . . . I think they are in the second or the third” (P6-U-HF3). P7 also commented that the last paragraph will usually “contain all the information I need” but in this case did not effectively summarise the text (P7-U-S3).

Thus, in several ways the first and last paragraphs caused difficulty because they failed to conform to expectations for such paragraphs and so participants were unable to apply their customary “strategy schema” (Casanave 1988, p.297). It appears that part of the problem lies in unfamiliarity with the genre of this text. Hudson states that “what turns a collection of communicative events into a genre is the presence of shared communicative purposes” (Hudson 2007, p.204). Ostensibly, both texts had the same communicative purpose, i.e. to inform the reader of certain facts. However, the beginning of UH is a clear example of the way genres are best viewed not as single and separated but as “forming complex networks of various kinds switching mode from speech to writing (and vice versa)” (Swales 2004, p.2). In the case of UH, as well as a communicative purpose to inform the reader about significant developments in the field of underground homes, the writer had the additional purpose of gaining the reader’s interest and holding it and used story-like features to achieve this. It was a lack of familiarity with this aspect of the genre that contributed to the participants’ confusion. However, it cannot be said, as Chambliss claimed for some of her readers, that they “seemed to rely on introductory and concluding signals unquestioningly” (Chambliss 1995, p.804). Many participants clearly were aware that their usual strategy was proving ineffective and some took special measures to deal with this.

5.7.1.2 Contingency measures for the introductory paragraph of UH

Casanave (1988, p.288) states that “comprehension monitoring . . . consists of any behaviours that allow readers to judge whether comprehension is taking place and that help them decide whether or how to take compensatory action when necessary.” It is clear from some of the participants’ comments that they were monitoring their comprehension when reading the first paragraph of UH and used “fix-up strategies” (Afflerbach 1990, p.35) to deal with problems they encountered. These strategies are listed in Table 5.21 below.

Table 5.21: Participants' use of contingency strategies

Strategy	Participants who used this strategy
Searching for gist in later paragraphs by careful reading	P2, P5, P6, P15
Regressing to first paragraph	P7, P8, P10, P14
Skipping first paragraph initially	P7
Using title of text	P6

Participants found they had to search for the gist in later paragraphs, sometimes taking longer over these than they would normally have expected. For example, P5, finding herself unable to “anticipate” the content of the text from the introduction, had to resort to reading the later part of the text more carefully (P5-U-HF1) and taking more time over it than she would have expected (resulting in a speed of 298 wpm for TMC but only 238 wpm for UH).

P6 used the title as a way of circumventing the initial problem of incomprehension. He stated that he “didn’t understand what they writing on two or three first paragraph” but related the title to the content of the following paragraph which enabled him to ascertain the theme of the text. He also, like P5 and others, had to read the later part of the text more carefully (P6-U-HF1).

Four participants (P7, P8, P10 and P14) mentioned regressing to the opening paragraph because when they first read it they could not understand it. For example, P8 commented: “At first I don’t understand at all about the passage – what is it about and then when I read to the middle of the passage I have to stop and return to take the first sentence to understand what they are saying.” (P8-U-S1). P14 also regressed to the first paragraph because “I just want to know what’s the function of the first paragraph” (P14-U-S3).

On the other hand, a completely different strategy is mentioned by P7: “the first paragraph is quite difficult for me to get so I skip it” (P7-U-S5). Given the task of skimming quickly, skipping problematic parts of the text is perhaps a more likely strategy than, for example, guessing the meaning, which would be more time-consuming.

Thus participants used a range of “fix-up strategies” to overcome the initial problems posed by what they saw as a highly unconventional opening paragraph.

5.7.2 Dealing with supposedly gist-poor sections

In contrast to these supposedly gist-rich parts of the text, other sections were expected to be relatively gist-poor and were read in quite a different way by many of the participants. Three rough categories can be created for these sections, based on the interview data: the middle sections of paragraphs, examples and factual information. I will deal with each of these in turn.

The middle sections of paragraphs

A number of participants (mainly in relation to TMC) spoke of concentrating on the first (and last) sentence of each paragraph but skimming very quickly through the middle sections. In fact, it can be difficult to discern from the participants whether they skimmed or skipped these sections, as the following discussion with P13 shows:

P13: Sometimes I just ignore the middle part.

I: Did you actually skip the middle?

P13: Not skip it but just quicker. Sometimes your eyes goes on but your mind hasn't catch up with the meaning.

P13 here attempts to describe the process of skimming the middle sections of paragraphs, apparently veering between fast skimming and skipping. With P14, I asked further questions to investigate the skimming process (P14-T-S3):

I: What about the rest of the paragraph – not the ending but the middle part – what about that?

P14: I think it's most about the fact and just list some numbers or record and I can just ignore them because I know it's about to compare them with something and to show what the author wants to say about it.

I: When you say ignore does that mean you didn't read that?

P14: I read but I don't have to remember that.

I: OK so can you describe how you read the middle part?

P14: Yes I just go through maybe just check some numbers – how they compare.

Like P13, when further questioned, P14 claims not to have simply skipped these sections but to have gone through very quickly. It is unclear whether the additional questioning reveals the reality of the matter or whether they did in fact skip but feel that, when questioned more directly, it would be inappropriate to say they had done so. In other words, are they adopting different “voices” (Block 2000) at this point so that the response is based on social factors?

P12 attempted to find a link between the opening sentences of paragraphs, which he read more carefully, and the rest of the paragraph: “I read the first and last sentences and then skimming quickly through the other sentences in the body of the paragraph. Then I try to find the point that all of them have in common” (P12-T-S2). P16 followed a similar strategy, although “if you saw some like sentence that you think - you feel like this one is important then you read it carefully” (P16-T-S2), suggesting that sometimes she took more time over the middle sections.

Thus the participants claim that, for these middle sections, they either skimmed them very rapidly or skipped them completely.

Examples

The evidence from Table 5.22 below suggests that for some participants there was a clear distinction between the way examples were regarded, depending on whether they were skimming TMC or UH.

Table 5.22: Participant mentions of examples

Partici pant	TMC		UH	
	Examples regarded as useful for gist	Examples regarded as unnecessary for gist	Examples regarded as useful for gist	Examples regarded as unnecessary for gist
P1				
P2				
P3				
P4	P4-T-S5	P4-T-S1		
P5				
P6		P6-T-S1	P6-U-S8	P6-U-S6
P7				
P8			P8-U-FF2	
P9			P9-U-FF2	
P10			P10-U-FF1	
P11				
P13				
P14		P14-T-S8		
P15				P15-U-S2
Total	1	3	4	2

Especially when skimming TMC, examples were sometimes regarded as being superfluous, given the aim of rapid skimming for gist and were often skimmed quickly or even skipped (P15-U-S2). P12 gave one rationale for doing this: “Because I know that after I read it there is no question that I will be asked about such details so I really didn’t care about them. I just need to know that they are there and I’m sure I can find them if necessary” (P12-T-S3). Thus P12 felt it was sufficient to read the general statement which often preceded the example. Similarly P6 stated that “maybe they just give some example to support the main idea but we just skimming first so we don’t really need to concentrate on that example” (P6-U-S6). As long as he had already derived the main point, he felt free to skip the details.

However, if the gist proved difficult to extract, as was the case for some participants when skimming UH, the examples could be used as a way of determining the meaning of the general statement: P6 found he could “somehow withdraw the main point from the example” (P6-U-S8), though this was invoked only in situations where the main points were difficult to grasp, i.e. in UH. P8 found that she could increase her speed while skimming UH because of the examples: “if they just define or give some explanation it’s really hard to imagine but if they give example . . .” (P8-U-FF2).

Though this comment was left incomplete, the clear implication is that examples stimulate the imagination and facilitate the skimming process by fleshing out general statements.

Facts and Figures

Some participants tended to ignore specific facts such as names and numbers (P15-U-S2; P16-T-S6), either because they expected to forget them (P9-T-S2) or because they thought such details could easily be found later if necessary (P7-U-S1). P16 thought they were not relevant to the purpose of the exercise: “I mean if you doing summary I don’t think like - if you say it is increased you know the idea but you don’t need to know the figures” (P16-T-S3).

Conversely, three participants paid *more* attention to figures. P4 admitted that this strategy had not been effective: “by the time I finished I couldn’t remember them because I was just skipping [skimming]” (P4-T-S6). This is an example of a failed strategy, though the participant came to realise that it had failed, thus demonstrating metacognitive awareness. P11 focused on the numbers, thinking they might be important, though did not say for what purpose (P11-U-S3). P13 found that the numbers stood out and thus “you can easily find out where the numbers is” (P13-U-S11). Again, though the numbers are obviously easier to locate and easier to understand than text (particularly the text UH), no clear indication is given by P13 of the purpose of concentrating on numbers other than their accessibility.

Detail as a hindering factor

As has been stated, participants often skipped details such as facts and examples. However, they were sometimes confused, even overwhelmed, by the type and the sheer amount of information given in both UH and TMC. With regard to TMC, P1 was disconcerted by the large number of statistics given (P1-T-HF1) which made it “difficult and boring to read.” P4 found the middle section difficult: “In the middle part in which they’re giving different examples - I found it quite difficult to follow – the different European cities, what they’re trying to do” (P4-T-HF2). P1 was unsettled by the large number of solutions, each having detailed supporting facts and figures: “there are many countries, many solutions, many figures - and you know each country have different solution and I can confuse which country use which method” (P1-T-HF2).

Some participants found UH difficult for similar reasons. For P9, “this passage contained some facts which I think made it quite difficult to read” (P9-U-HF2). P1 was slowed down by the confusing figures (P1-U-HF1). Moreover, P15 felt she had wasted time reading material such as examples that turned out to be “trivial” with the result that “it makes me slower” (P15-U-HF4).

Clearly for some participants the heavy factual content proved a stumbling block when trying to skim read rapidly. Although unable to retain all the information, they felt they should deal with it in some way but were unsure about how to do so.

5.8 Variations in reading speed

Given the task of skimming, it is clear that participants were trying to go through the text very quickly: “you told me for skim reading so I tried to be my fastest” (P11-U-S1). However, it becomes clear from the two groups of strategies discussed above – one for gist-rich sections of text and the other for gist-poor – that speed was by no means uniform throughout the skimming of the texts. Table 5.23 below lists some of these variations referred to by participants in [presumed] order of speed:

Table 5.23: Participant reading styles

Reading Style	Type of Material	Protocol Extract
Normal Reading	gist-rich	“Yes, normal reading, because you have to understand the meaning.” - P13-U-S7
Faster than Normal but still Careful	gist-rich	“When there came the solutions I couldn’t skip them so I had to read them carefully” - P9-T-S5. P14: First I had to read details of the first paragraph – of all the first part and then I can know what they are going to say in the article . . . But it’s still faster than I read in detail. (P14-T-S6
Fast Skimming	gist-poor	“I just look through it – I don’t read it carefully” - P5-T-S3
Skipping completely	gist-poor	“Just skip it” - P5-T-S3, P9-T-S5

In the following example, P9 talks about a variety of reading styles, highlighted in bold, ranging from careful reading to skipping.

P9: Well when I **skipped** those figures I read faster. And slower - when there were all the sentences – for example, when there came the solutions I couldn't skip them so I had to **read them carefully**.

I: When you say skip do you mean miss out completely?

P9: Sometimes I do. (P9-T-S5)

P13 talks about a similar mixture. After talking about focusing on “the first and the last two sentences in each paragraph”, the interview continues:

P13: Yes. Sometimes I just **ignore** the middle part.

I: Did you actually skip the middle?

P13: **Not skip it but just quicker**. Sometimes your eyes goes on but your mind hasn't catch up with the meaning.

I: But when you read the first part and the last part of the paragraph would you say you were reading more or less like normal reading, like you were . . .

P13: Yes, **normal reading**, because you have to understand the meaning. (P13-U-S6)

P13 focuses on certain parts of the text he expects to be gist rich and uses “normal reading, because you have to understand the meaning”. In contrast, he says initially that he would “just ignore” the middle section of the paragraphs. However, he modifies this to “not skip but just quicker” later. Here is a similar discussion regarding variation in reading speed with P16:

I: What about the middle of the paragraph . . . when you say you spent longer on the first sentence let's say, would you say that that you were reading the first sentence like the other passages - were you skimming or were you reading it normally then?

P16: First sentence is like normally then . .

I: No faster than normal reading.

P16: Little bit but . .

I: Bit faster.

P16: And the middle part just skim.

I: So you went much more quickly through the middle part.

P16: Yes.

I: Would you say you in fact missed out some of it or you read it all but more quickly?

P16: Not miss out just through it quickly – might see some point if they haven't mentioned on the first paragraph we can add it . . (P16-T-S7)

For P16, as for P13, skimming appears to be a combination of normal reading and fast reading. Normal reading is used for content-laden sections of the text thought to contain important information, perhaps because of such features as dates, or perhaps on account of its location in the text; the skim reader then passes over some of the text quickly, in search of the next content-heavy section. The question arises as to what happens during these quicker phases of the skimming process. P4 kept using the word "skip" to describe what he did at these points, rather than "skim". This may simply have been a mistake resulting from the similarity of the words. However, it is possible that at least sometimes skipping rather than skimming was taking place.

Two participants actually stated that they skipped text that was difficult to understand. It may be that when reading normally they would have spent more time attempting to understand the text but as they were supposed to be skim reading, this was their strategy. P7 stated that she skipped the first paragraph of UH because it was difficult (P7-U-S5), but did not skip parts of TMC because it was easy to understand (P7-T-S1). It seems that P7 selected strategies for practical reasons: in a situation where fast reading is required, if it is difficult to extract gist from a portion of the text, P7 passes over it, in the hope of finding a more accessible section. This is also what P6 did:

“Because some of the sentence I cannot understand so I think it’s better just pass it” (P6-U-S2).

P13 makes an interesting comparison between skimming TMC and UH. For TMC, he says: “This passage is quite easy so I don’t have to skip so much” (P13-T-S4). He claims that his speed was faster and more consistent for this text (P13-T-S5). (It was actually 213 for TMC compared with 173 for UH.) P1 also found that when skimming TMC, “I read at the same speed all the time” (P1-T-S1). However, for UH, P13 varied the speed far more: he was reading normally for the first and last sentence of each paragraph and then going quickly through the middle (P13-U-S7). He suggests skipping is a strategy that he used because of the *difficulty* of the text: he skipped when he failed to understand but sometimes paid more attention to “the middle part - yes, when I understood” (P13-U-S8).

In all, quite a wide range of reasons were given for skipping text:

- The text is easy to understand - P5-U-S12
- The text is difficult to understand - P6-U-S2, P7-U-S5
- Examples – P6-U-S6, P6-U-S8
- Figures – P7-U-S1, P9-T-S5, P9-T-S2
- Ideas are repeated - P5-T-S3

Given the need to skim quickly through the text, participants probably took every occasion to skip text. Such opportunities arose when the text contained information that was deemed unnecessary for gist or when it was incomprehensible.

5.9 Regressions

As there was a specific question about regressions in the interview schedule, there is data from every participant on regressions, in relation to each of the two texts. Obviously, only the participants’ recollections of conscious regressions were mentioned: in these cases, the participant generally went back at least to the previous paragraph and in some cases to the first paragraph of the text.

The use of regressions reflects the participants' tension between the need to progress quickly through the text and the need to obtain the gist. If a skim reader is finding it difficult to understand the content of the text, a natural tactic is to regress to the point where understanding broke down or to necessary preceding information which has been overlooked or forgotten. However, regressing adds to the time taken for the skimming, being gist-oriented rather than speed-oriented. Thus, while there is some reporting of regressions being used as in normal reading (Pressley and Afflerbach 1995), for example to check up on detail linking current reading with the previous section, others felt regressions took valuable time and so were to be avoided. P4 noted that he went back "a couple of lines only" though "if I have time maybe I will read the whole paragraph again" (P4-T-S7). On the other hand, there was pressure to ensure that at least the main points were understood so that a summary could be produced. Several participants regressed after having skimmed the whole text with the express purpose of reviewing it prior to summarising it.

Table 5.24: Participant regressions for TMC and UH

Participant	Regressions while skimming TMC		Regressions while skimming UH	
	References	Number mentioned	References	Number mentioned
P1	-		P1-U-S1	1
P2	P2-T-S2	?	P2-U-S6	2/3
P3	-		-	
P4	P4-T-S7	"several"	P4-U-S1	1
P5	P5-T-S6	"Not often"	P5-U-S5	1
P6	-		P6-U-S7	?
P7	(for summary only)		P7-U-S4	2
P8	P8-T-S4	1	P8-U-S1	1
P9	P9-T-S4	2/3	-	
P10	-		P10-U-S3 P10-U-S5	?
P11	-		P11-U-S5	3?
P13	(for summary only)		P13-U-S13	"sometimes"
P14	P14-T-S7	1	P14-U-S3	1
P15	(for summary only)		P15-U-S5	1
Total	6/16		12/14	

As can be seen from Table 5.24, there is a striking difference between the two texts in the use of regressions: they are far more common with UH (12/14) than with TMC (6/16, excluding regressions for summary). The greater difficulty the participants found in skimming UH may well account for this: they needed to regress in order to understand the text, reflected in stated reasons for regressing given in Table 5.25 below.

Table 5.25: Reasons for regressing

Partici pant	Reasons mentioned for regressions	
	TMC	UH
P1		connect with sth previously mentioned
P2	understanding previous para helped with current one	connect with sth previously mentioned
P3		
P4	thought had misunderstood sth – double checking	went back – but didn't help – caused confusion
P5	regression not so necessary – not overlapping	connect with sth previously mentioned
P6		reread general statements
P7	(for summary only)	back to 1 st para – not understood 1st time
P8	regressed to 1 st para – to help get structure	back to 1 st para – not understood 1st time
P9	Felt had missed sth	
P10		strategy to deal with high density of unknown words back to sth not understood 1 st time esp. in 1 st para
P11		?
[P12]	help build mental outline connect with sth previously mentioned	
P13	(for summary only)	reminder of main ideas
P14	reminder of main ideas esp. solutions	back to 1 st para – not understood 1st time
P15	(for summary only)	Confused – went back to clarify
[P16]		

A fairly clear distinction can be drawn between some of the reasons for regressing with TMC and with UH. Half (6 out of 12) of the regressions with UH relate to comprehension difficulties. For example, P15 states: “I felt confused and I can't get clear idea from this article” (P15-U-S5). P4 regressed just once to help with a comprehension difficulty, but found it unhelpful: “it doesn't help me at all so I just give

up” (P4-U-S1). In fact this shows metacognitive awareness in that, rather than persevering with an unsuccessful strategy, he abandoned it.

Confusion while skimming UH applied particularly to the first paragraph: four of the participants (P7, P8, P10 and P14) returned to the first paragraph because of earlier comprehension difficulties. One example is P7: “The first paragraph is quite difficult for me to get so I skip it and then I move to the next paragraph and then about the fourth paragraph I have to come back again” (P7-U-S4).

Conversely, participants regressed while skimming TMC to enhance comprehension and retention of main ideas, rather than in response to a comprehension breakdown. P8 returned to the first paragraph because “I have to return to know the structure they give” (P8-T-S4). By this he seems to mean that the first paragraph set out the main topics to be discussed and so by returning he could pick up the thread of the structure that had been lost. Similarly, P12 “was always trying to like draw an outline of this passage after finishing each paragraph so I always look back at the ones above it” (P12-T-S7).

A common reason for regressing in either text was the need to connect what was currently being skimmed with something that had previously been mentioned. For example, P1, reading the name “Sigmund” in the final paragraph of UH, recalled meeting this name in the first paragraph also and so went back to see what had been said about this man (P1-U-S1). Similarly, P2, on reading the phrase “the big advantage”, realised it must refer to something already mentioned but could not recall what and so regressed (P2-U-S6).

A number of participants (four for TMC and two for UH) reported going back over the text after skimming through in order to prepare for the oral summary. The main method of regressing for the purpose of summarising was to review the first sentence of each paragraph (P7, P8 and P15). P7 comments: “I think that if I just remember the first word of the paragraph I can remember the whole” (P7-T-S4).

In addition, some strategies, though not explicitly stated as being used as summary preparation, certainly would have helped the participant in this and may have been invoked for this purpose. For example, P14 went back over the “solutions” section of

TMC, feeling it was particularly important to recall the various solutions suggested since “that’s the thing the author want suggest us to do” (P14-T-S7).

Clearly then the task (an oral summary) influenced the skimming to a certain extent but there is no evidence that the interview itself had any effect: in other words, there is no proof of reactivity (Russo et al. 1989) concerning the verbal protocols.

5.10 Affective Factors

Affective factors interact with others already mentioned above and with one another. For example, some participants found concentration difficult because of a lack of interest in the text.

5.10.1 Interest

Two participants referred to the facilitative effect of interest while skimming TMC. P11 found that interest in the topic made skimming easier “because once I read the passage and I get the idea what they are talking about I want to know more about those sort of stuffs” (P11-T-FF3). P13 simply said “interest – made me go faster” (P13-T-FF5).

Three participants mentioned that they found their interest in UH facilitative. P4 said, “It’s interesting topic so that make it easy” (P4-U-FF1), while P8 enjoyed the topic because “it concern with the normal life” (P8-U-FF1). P10 found “it’s not hard to concentrate because it’s interesting, I think” (P10-U-FF3). P1 found interest in the details which related to her personal experience. She says of the underground homes that “I went to Japan and I saw them in reality and I feel interesting when I found it in the passage.” This point, though of interest, has not been classified as evidence of a facilitating factor because no facilitation is referred to by P1.

In addition, some participants paid particular attention to parts of the texts that interested them. For example, P1 said in relation to TMC: “If there’s any interesting information I will pay attention to it - I just read what interests me” (P1-T-S2). In the case of TMC, P3 paid more attention to the earlier section about “the pollution of motor

vehicles” and less attention to the later part “because I feel more interested about the first part and after the first part I feel tired – I don’t want to read every word so I read it quickly” (P3-T-S1). Conversely, P13 paid more attention to the later, solutions section because “I’m interested in the solution” (P13-T-S2).

On the other hand, P3 was demotivated by lack of interest in the topic when skimming UH: “I don’t think it’s very interesting. I think if use my own language it will be fun, but using English language I feel it’s difficult and I want to sleep” (P3-U-HF2).

Thus, unsurprisingly, participants varied in the interest they found in the texts. However, it is noteworthy that UH, despite its linguistic difficulties, proved to be interesting for some participants.

5.10.2 Concentration

Three participants referred to factors (four in all) which they claimed had facilitated concentration. Three of the comments are related to TMC and one to UH. P7 found the easy structure of TMC aided concentration: “I think I can concentrate more on this one because it easy to follow” (P7-T-FF7). In the case of P5, it was the familiarity of the topic that proved helpful for concentration: “For this special passage I think it’s more easier for me to concentrate than the other passages . . . because this topic I have read about it before and I have some ideas about it” (P5-T-FF3). P10 found ease of comprehension aided concentration: “It’s quite easy because I can understand this passage so I can concentrate on it” (P10-T-FF5). On the other hand, it was the interest that P10 found in skimming UH that helped concentration in this case: “It’s not hard to concentrate because it’s interesting, I think” (P10-U-FF3).

Conversely, some participants found it difficult to concentrate, most of the comments (6 out of 7) relating to UH. Lack of interest was mentioned by three participants. For P10, concentration was “not very easy because it’s not so interesting so I just want to finish it quickly” (P10-T-HF1). P11 also had difficulty in concentrating, especially in the first paragraph because “it’s kind of meaningless for me . . . they are talking about nothing really important.” (P11-U-HF3). P13’s concentration was also adversely affected by lack of interest: “when I’m reading a passage I’m not interested in it’s very hard for me

to concentrate” (P13-U-HF6). The difficulty of the text was also a factor but she felt that interest was the key since “if you’re interested in the thing that is talking in the passage you will try hard to understand” (P13-U-HF6). Further factors hindering concentration were the many numbers (because “probably you have to know what these number stand for” - P14-U-HF3) and the text length (P7-U-HF2).

5.11 Uses of Skimming

At the end of the interviews, the participants were asked about their general use of skimming: how often they used it, in what situations and for what reasons. Table 5.26 below summarises their responses.

Table 5.26: participants’ general use of skimming

	Frequency of Use of Skimming	Situation	Why Used
P1	often	Reading an abridged novel	Short of time
P2	Not often	Reading the news. Some letter from school.	Only need the main idea. Limited time.
P3	Not often -	In tests only.	Because of the time limit.
P4	Not often	News from the internet. Equipment manual.	Uninteresting topic but thought to be important for studies.
P5	Not often	English exercises	
P6	Often	When studying, read the passage quickly first.	“I can get the main points first and when I reread it I can understand more clearly . . .”
P7	Often	Economics articles in the newspaper.	“I skim to get the information all I can get and then I read it again.”
P8	Not often	English stories	“I really want to know the end of the story”
P9	Does a lot in Chinese	Skims simplified novels from library	
P10	Not often	In tests.	Lack of time.
P11	Not often	Does not usually skim read	
P13	Not often	reading newspapers	Goes quickly when can’t understand
P14	Not often	Getting news off the internet	Just wants main facts
P15	Not often	IELTS exam	“I must, I have to skim read.”

In answer to the question, “Do you often skim?”, only four participants answered in the affirmative and one of those said this only happened in tests. The remaining ten

participants said they rarely used skimming. Moreover, only two participants said that they use skimming regularly for studying. In fact many of the examples of skimming cited are related to learning English: for instance, reading abridged novels was a homework assignment. In some cases, the participants skim only in the IELTS test (e.g. P15). P3 skims in tests but, she says, “If I do the homework I will look at every word. Even very small word I will look in the dictionary – I want to know the exact meaning of it.” Most participants saw skimming as being necessary only in certain situations such as the IELTS exam when time was very short. On the whole, it was seen as a strategy of last resort rather than of preference: they did not usually see it as an efficient tool in their repertoire of study methods.

These results are of interest in the light of the fact that IELTS is intended to test those academic skills that are required by students for academic study. The IELTS website states that the exam “measures ability to communicate in English . . . for people who intend to study or work where English is the language of communication” (www.ielts.org – 29/7/08). However, it does not seem that these A-level students regard skimming as an essential aspect of reading for their academic studies.

5.12 Discussion

5.12.1 Speed, summary length and summary content

Although participants were expected to find UH much more difficult than TMC, the data are somewhat ambivalent. Comments in the verbal protocols suggest that participants did find UH much harder, but the results using behavioural measures (see Table 5.27) do not support this convincingly. None of the three measures, namely skimming speed, summary length and summary content, reveal any major differences.

Table 5.27: Comparison of participants skimming scores using three measures

Participant	Skimming Speed (wpm)		Summary Length (no. of words)		Summary Content (out of 20)	
	TMC	UH	TMC	UH	TMC	UH
P1	189	203	84	106	8	9
P2	201	243	77	54	6	8
P3	206	180	52	50	8	3
P4	204	211	138	132	8	8
P6	187	165	79	90	6	0
P7	234	232	99	47	0	3
P8	217	267	171	173	6	5
P9	179	239	121	169	6	8
P10	253	206	38	74	3	6
P11	388	273	166	281	8	6
P13	213	173	96	76	5	3
P14	462	452	87	76	3	0
P15	214	295	160	101	10	6
Mean	242	241	105	110	5.9	5.0

Note - data given only for the 13 participants from whom complete sets of data were collected following the standard method.

These results suggest that, although participants claim to have encountered far more difficulties with UH, there was no significant effect on skimming speed, summary length or summary content (as scored by the marking scheme). In each case the mean is similar for the two texts. This seems to contradict my position at the outset that skimming works best when the text is familiar, simple and predictable. It could be argued that under different circumstances, a considerably greater difference might have been obtained between the results for two contrasting texts. Three key factors can be considered: the number of participants, the suitability of the measures and the suitability of the texts.

Firstly, only a very small number of participants were used to obtain these results. 16 took part and of these, three had to be eliminated from the comparative statistics either because not all data were present (participants 12 and 16 skimmed only TMC) or the conditions for data collection deviated from the normal pattern (P5 had the text present during summarising). Thus it could be argued that the low number of participants affected the validity of the data.

Secondly, the suitability of the measures used might be questioned. For example, summary length could be related to speaking skill level and/or length of text (See 5.2).

As for skimming speed, there is evidence (see 5.8) that the increased difficulty of UH caused some participants to skip more frequently with the result that their overall speed may have risen for the more difficult text. Moreover, only one of the measures relates directly to comprehension, i.e. summary scores. One point to note about these is that they are generally low, whether for UH or TMC: the mean scores are only around 25%, with three as low as zero. In addition, this is a measure of memory as well as of comprehension.

A further doubt about the effectiveness of the summary content measure emerges when the summaries are analysed to investigate points selected by participants (see 5.3). While points commonly mentioned from UH accorded well with those selected for the expert summaries, this was not so of TMC. What this may signify is that UH, despite its complexity with regard to introduction, lexis etc., has relatively few main points and these are comparatively easy to pick out, in contrast to TMC.

Thirdly, the suitability of the texts might be questioned. Arguably the contrast between the two should have been greater and indeed could have been. The time lapse between the classroom listening exercise with TMC and the interview ideally would never have been more than several days but it was far more extended in some cases for practical reasons. The mean number of intervening days is 41.5 and the range is from 3 to 99 days. On the other hand, using a text whose ideas are extremely familiar also has its dangers. Over-familiarity could result in boredom and reduce motivation. In addition, it would move the text outside the “zone of learnability” (Wolfe et al. 1998) in that there would be too much overlap between the text and the reader’s background knowledge.

Another factor regarding the texts is that they were both non-specialist texts. Earlier research in L2 settings using non-specialist texts (e.g. Alderson and Urquhart 1985; Bernhardt (1991) presents a rather confusing picture of the relationship between background knowledge and individual differences in reading comprehension. For example, Bernhardt (1991) found that group data suggested background knowledge is a viable predictor of comprehension scores but when individual scores were linked with individual background knowledge, they were not even slightly good predictors of each other. Thus, the fact that UH, though unfamiliar and expected to be difficult for the

participants, was a non-specialist text meant the contrast in difficulty with TMC was less marked.

In conclusion, because of these three elements - the low number of participants, doubts over the suitability of the measures used, and the possible lack of contrast between the difficulty levels of the two texts - it may be that the quantitative data results are less revealing in their own right than might have been the case. Nevertheless, they perform a useful function in shedding further light on the comments made in the verbal protocols.

5.12.2 The activity of skimming

In the discussion of the verbal protocol data that follows, an attempt is made to clarify what readers do while skimming by making a comparison with normal reading. In addition, two important factors in skimming are discussed: effective strategy use and background knowledge.

A central aim of obtaining verbal protocols on skimming was to investigate what readers do while skimming. One important fundamental finding is that skimming consists of a combination of slower reading of what are expected to be gist-rich sections coupled with rapid reading or skipping of other sections.

The question arises as to the key differences between skimming and normal reading. One way of investigating this is to compare strategies used in normal reading with those used in skimming. The list of strategies given in Anderson (1991) was chosen as a basis for comparison, partly because his research also involves adult second language learners and also because part of his research involved reading academic texts of comparable length (643-1057 words) to IELTS texts. In these two ways it is similar to my own research. Moreover, the research is widely cited (for example, Anderson's strategy list is given in full in Koda 2005) and the strategy list is extensive but not unwieldy. For the purpose of comparing this list with the findings of the verbal protocols, I have used it as it stands, despite doubts that some of the strategies he lists are indeed strategies. Like many researchers in this area (e.g. Paris, Wasik and Turner – 1996; Urquhart and Weir - 1998; Alexander and Jetton - 2000), I would want to include the idea of a strategy being

an action taken by the reader: thus, for example, Anderson's strategy number two – "recognizes loss of concentration" – would not be classified as a strategy since no action is taken.

Table 5.28 below lists Anderson's reading strategies (though not the test-taking strategies, which he also investigated as these are irrelevant to the present study) and, sets alongside them, mentions of such strategies used by participants in my study.

Table 5.28. Comparison of Anderson’s reading strategies and participant “mentions” in verbal protocols
List of Anderson’s Reading Strategies

	TMC - /16	Participant “Mentions”	UH - /14
I. Supervising strategies. The reader:			
1. refers to the experimental task;			2/14
2. recognizes loss of concentration;		Difficulty with concentration: 1/16	Difficulty with concentration: 5/14
3. states failure to understand a portion of the text;			First paragraph: 10/14
4. states success in understanding a portion of the text;			-
5. adjusts reading rate in order to increase comprehension;	9/16		8/14
6. formulates a question;			
7. makes a prediction about the meaning of a word or about text content;	1/16 (P5)		1/16 (P5)
8. refers to lexical items that impede comprehension;			10/14
9. Confirms/disconfirms an inference;			-
10. refers to the previous passage; or			-
11. responds affectively to text content.	E.g. Interest: 2/16		E.g. Interest – 2/14
II. Support strategies. The reader:			
12. skips unknown words;			-
13. expresses a need of a dictionary			9/14
14. skims reading material for a general understanding;		[N/A – it was understood that dictionaries would not be used.]	
15. scans reading material for a specific word or phrase;		[Implicit in the task itself.]	
or			-
16. visualises.			-

List of Anderson's Reading Strategies	Participant "Mentions"	
	TMC	UH
III. Paraphrase strategies. The reader:		
17. uses cognates between L1 and L2 to comprehend;	-	-
18. breaks lexical items into parts;	-	-
19. paraphrases;	-	-
20. translates a word or a phrase into the L1	-	-
21. extrapolates from information presented in the text; or	-	P6 found he could "somehow withdraw the main point from the example" (P6-U-S8).
22. speculates beyond the information presented in the text.		
IV. Strategies for establishing coherence in text. The reader:		
23. rereads;	6/14	12/14
24. uses context clues to interpret a word or phrase;		1/14
25. reacts to author's style or text's surface structure;	Rhetorical style of TMC as facilitative (5/14) Helpfulness of the layout (5/16)	Rhetorical style of UH as hindering factor (3/16 PMs) Helpfulness of the layout (1/14)
26. reads ahead;		
27. uses background knowledge;	Strategic use of background knowledge - 3/14. References to facilitative effect - 7/16	-
28. acknowledges lack of background knowledge; or	1/16	4/14
29. relates the stimulus sentence to personal experiences	-	P1 related underground homes to what she had seen in Japan.

In order to use this comparison as a means of uncovering differences between the normal reading and skimming, it is valuable to consider which strategies are found only in normal reading and which are found only in skimming. However, there are reasons for differences which may have nothing to do with uncovering the essence of skimming. Firstly, number 17 would be impossible given the first languages of the participants. Secondly, the participants' silence with regard to some of the other strategies does not necessarily mean that none of the participants used them: it could be that they simply were not remembered or seen as relevant to answering the questions I asked. Nevertheless, it is likely that the interviews captured the strategies that were particularly salient to the participants at the time, given the open-ended nature of many of the questions.

Anderson divides the strategies into four categories. With regard to the second and third groups, "support" and "paraphrase" strategies, references are almost wholly absent from my data. It is likely that, given the need for speed, participants did not resort to such time-consuming methods.

On the other hand, strategies from the first and last categories – "supervising strategies" and "strategies for establishing coherence in text" – were frequently mentioned in the verbal protocol data. This is not unexpected but does point to the particular emphasis resulting from the task of skimming quickly for gist. Participants needed to monitor their reading carefully and to ascertain the gist as efficiently as possible. Thus, they made far greater use of gist- and speed-orientated strategies. As a result, sampling strategies were used such as concentrating on first and last sentences in paragraphs. Moreover, Anderson's strategy no.5, adjusting speed, may well have been much more important for the skim readers who made many references to varying their reading speed, depending on whether they thought they were encountering gist-laden text or not. If they were not, then they read very fast or even skipped gist-poor sections such as the middles of paragraphs. In fact, with no time to lose, participants frequently skipped material and not only in gist-poor sections. Another reason they cited for skipping is lack of comprehension. This suggests that participants did not feel there was time to ponder difficult sections and use "paraphrasing strategies": rather, if that part of the text did not yield useful results instantaneously, they looked elsewhere. Although Pressley and Afflerbach (1995), in

their survey based on 38 primary studies, found some evidence of this skipping strategy being used in normal reading, it could be described as one of the major features of skimming.

In contrast, another group of strategies appeared in the verbal protocols but not in Anderson’s list: strategies for establishing structure. These were fairly prominent in the skimming data, occurring in 10/28 skim readings. Yet such strategies do not feature in Anderson’s list. Again, various explanations are possible, but it may well be that this area was of greater importance to skim readers, attempting to derive the macrostructure of a text. However, Pressley and Afflerbach (1995, p.39) did find references to structure-based strategies in the reading research that they review, commenting that “familiarity with the conventions of writing allows expert readers to anticipate meaning as they draw on their experiences and familiarity with composition.” As with skipping, it seems likely that certain strategies which may already be employed in normal reading acquire greater importance in skimming in the effort to save time.

Table 5.29: Summary of differences in use of strategies between normal reading and skimming

Strategy Groups	Found in “Normal Reading” data (Anderson)	Found in Skimming Data	Found in Pressley and Afflerbach***
Supervising Strategies*	✓	✓	✓
Support Strategies*	✓		✓
Paraphrasing Strategies*	✓		✓
Strategies for establishing coherence in text*	✓	✓	✓
Strategies for establishing structure of text**		✓	✓

* = Anderson’s strategy category

** = my strategy category

*** based on the findings of 38 primary studies

Thus, while there is an overlapping in the use of certain strategies, there are some that are more commonly found in normal reading and some that are used far more often in

skimming and help us to understand the key differences between them. These differences are summarised in Table 5.29 above.

However, these differences should not be exaggerated. They are suggestive of certain trends but do not imply that skimming is a completely different process from normal reading; rather, that it is a variant of it. This view is supported by the fact that in Pressley and Afflerbach's (1995) meta-analysis of normal reading, examples of all strategy groups can be found, indicating that none of the strategies isolated in the current study is unique to skimming.

5.12.3 Effective strategy use for skimming

One important point when considering the participants' strategy use is that its effectiveness is not taken into consideration in this analysis. Nevertheless, it must be borne in mind that, as Anderson (1991, p.466) writes, "strategies per se are not intrinsically either successful or unsuccessful but rather, it is the effective use of a strategy that makes it successful." Thus, participants may have used a strategy inappropriately and ineffectively. Indeed, some participants mentioned using a strategy and then abandoning it since they felt it was unproductive. For example, P4 found regressing while skimming UH added to his confusion and thus he gave up using this strategy in this text (P4-U-S1). This leads to a significant point: that strategies which may be effective in one context may prove unhelpful in another. However, the findings described earlier in this chapter refer to raw strategy use without reference to effectiveness. Koda draws attention to this frequent limitation in verbal protocols:

" . . .without behavioral data showing which action preceded, and which followed, a reported behavior – say, skipping words – it is impossible to determine whether the word skipping is a sign of reader *competence* (knowing which words to skip) or *incompetence* (not knowing how to deal with unfamiliar words)" (Koda 2005, p.265 – Koda's italics).

This uncertainty does apply to the current data. Perhaps one way of considering reader competence in relation to strategies is to study how their use changed as

participants monitored their performance, particularly their comprehension, while skimming. It is clear from the data that participants were at times following a normal routine of strategy use but occasionally they invoked contingency measures, particularly in relation to the reading of the first paragraph of UH. It is unclear whether these strategies were devised on the spot to cope with the situation or were regularly used.

Strategy switching may also be a sign that participants are aware of the limitations of the strategy they are currently using. One example of strategy switching occurs in P14's protocol, where he tells us that when skimming TMC he used his usual strategy of concentrating on first and last sentences only, but when he got to the "solutions" part of the text, he sensed that this section was very important and changed his strategy, reading this part more carefully. He says that normally he did not skim the middle part of each paragraph in detail since "it's most about the fact and just list some numbers or record and I can just ignore them." However, he switched strategy for the last part of the text: "for the last part it's the solution side - I think I read it in details." He attaches much greater importance to this section because of his knowledge of rhetorical structure: "it's always first part is to arise the problem and the following several paragraphs is about the facts and then the last one is what we will do in the future for some solutions" (P14-T-S3).

On the other hand, sometimes strategies were switched because the text was easier to skim. P13 said his strategy for reading TMC was different from UH: he did not distinguish between the way he read introductory and concluding sentences of paragraphs and the way he read the rest of the paragraphs: he read in the same way throughout but faster – "This passage is quite easy so I don't have to skip so much" (P13-T-S4). Because he found TMC easier, he could read it more quickly and so did not need to skip to save time.

These findings support Pritchard's claim that "reading is a content-specific activity" and thus "when the content of reading materials changes, processing behaviour changes as well" (Pritchard 1990, p.291).

5.12.4 The importance of background knowledge

A combination of factors either hindered or facilitated the skimming process (5.5.2).

Further evidence of this is P7's response to the specific question regarding text structure (P7-U-HF3):

I: How easy was it to follow the passage – the structure?

P7: Not easy.

I: Why not?

P7: Quite a lot paragraphs and difficult words.

I: Even with difficult words sometimes the structure can be easy – was there anything that made the structure difficult to follow?

P7: I think many examples - I cannot follow all of them.

P7 found the structure difficult to follow, claiming this was due to the large number of paragraphs, difficult lexis and the many examples. Her comments suggest that it was the combination of these hindering factors which caused her problems. However, in spite of the evidence of a cumulative effect produced by a number of interconnected factors, it may be that there is one underlying factor that is predominant or even triggers the other factors. Based on the literature survey (see Chapter 1), I expected familiarity of subject matter to be of great importance for skimming. Certainly there is much evidence to suggest that this was highly significant for the participants (see Table 5.15: Numbers of participant mentions of FFs and HF3 – section 5.4). In particular, the lengthy extract from participant 10 (5.5.2) implies that for her, familiarity was the key, enabling her to skim with greater “confidence” as she sensed that she was in “control”; there were fewer problems with unknown lexis; it was easy to determine the writer’s attitude; and in general there was a “psychological” benefit in that “you feel relaxed and not panic”.

Another contender for this underlying factor would appear to be vocabulary. After all, readers, one might expect, cannot understand the message if they cannot understand the words by which that message is conveyed. Admittedly, the data suggest that lexis played a crucial role either as a hindering factor (in the case of UH) or as a facilitating one (in the case of TMC). In Table 5.20 (section 5.7.1.1), which summarises the problems experienced when reading the first paragraph of UH, the

most common is vocabulary. P6 in particular seems to regard this as the key element: “I think the most difficult is that the vocabulary because mostly you can know the main point of the paragraph in the title and in the first paragraph but if they use quite a lot of complicated word in that paragraph it may confuse the reader and especially for me it’s quite difficult” (P6-U-HF2). However, it is not easy to separate the effects of topic and vocabulary familiarity (or the lack of it). For example, if the topic is familiar, it is likely that the vocabulary will be familiar too since, as Afflerbach (1990, p.35) suggests, “in accessing schemata the reader may also access domain specific vocabulary.”

Lack of topic familiarity when skimming UH certainly affected P5. She was unable to utilise the strategy of prediction for this text. According to schema theory (Afflerbach 1990, p.40-41), schemata activation enables readers to generate hypotheses about text content and structure so “the richer the prior knowledge, the more opportunities the reader will have to generate an initial hypothesis about the main idea of a text.” Conversely, lack of prior knowledge will impoverish hypothesis-making.

P5 comments on the importance of this strategy of using prior knowledge to predict content and of her inability to “anticipate” when skimming UH because of the unfamiliarity of the subject matter. As Pressley and Afflerbach (1995, p.42) state, “in order to generate tentative hypotheses of text meaning, prior knowledge of the topic (or related topics) is needed.” Prior knowledge can be particularly useful when trying to isolate gist, as in the skimming task, since it can provide hints about what the text might include. Without the possibility of predicting content, P5 found her ability to skim severely hampered. Thus, in this case, as with P10, topic familiarity would appear to be the key factor in determining whether skimming can be carried out effectively.

This emphasis on background knowledge may appear to be in conflict with other researchers in this field, most notably Clapham, who has researched this area very thoroughly. She claims that it is impossible to predict from a student’s background whether the content of an academic text will be familiar to him/her, concluding that “it may be impossible in EAP classes, therefore, to be certain of giving students

appropriate texts which will enable them to bring their background knowledge to bear” (Clapham 2001, p.99). Elsewhere, this is used to justify the use of non-subject-specific texts for IELTS (Clapham 1996). However, her key point is not that background knowledge is unimportant: rather that its importance is usually impossible to verify. On the other hand, in the texts used in the current study, the content of TMC was certainly to some extent familiar to participants, enabling them to utilise existing schemata, since they had studied the content in class not long before skimming it in preparation for the interview. What could not be guaranteed was a lack of familiarity with the content of UH, despite the expectation that it was highly unlikely to be familiar. In fact, the data from participants regarding familiarity support this expectation (5.5). Even the participant (P1) who had actually seen underground homes in Japan did not mention background knowledge as a facilitating factor.

When readers skim, there is an interaction between existing knowledge and new knowledge from the page. However, in the case of skimming, the importance of background knowledge is far greater than for normal reading since it is a key factor in determining whether skimming can take place efficiently. Urquhart and Weir (1998, p.252) write:

The efficiency with which L2 readers skim a text is likely to depend crucially on their knowledge, either of the topic of the text being skimmed, or the structure of the text, or both, and that this is likely to be even more the case than with careful reading.

The analysis in this section provides empirical evidence to support Urquhart and Weir’s conjecture.

5.13 Conclusion

The skimming process in general

Skimming was earlier defined (1.3.1) as the fast, selective reading of a text for gist and other purposes. However, this definition leaves many questions unanswered: In what sense is skimming selective? What is meant by fast? How is the gist derived?

The analysis of the verbal protocols suggests that the following description of skimming is accurate for the L2 readers who participated (though individual variation occurs):

- Skim readers attempt to go through the text as quickly as possible, deriving the gist.
- Much use is made of existing schemata where possible in order to enable inference of gist-related information. Thus, as content is predicted, skimming speed can be increased.
- Speed of skimming varies a great deal, depending on whether or not the skimmer believes s/he is skimming gist-rich material. Supposed gist-laden sections may be read as slowly as in normal reading. However, gist-poor material is skimmed quickly or even skipped completely.
- Skim readers try to avoid dwelling on problematic areas such as unknown lexis or obscure meaning. Instead they tend to skip such areas, in search of more fruitful sections.
- In general, time-consuming strategies such as regressing will be kept to a minimum, though may be invoked if perceived to be essential.
- As a means of obtaining the gist, skim readers often pay attention to the structure of the text in order to derive the macrostructure. Knowledge of rhetorical schemata appears to increase the efficiency with which this is done.

To sum up, skim readers try to balance the effect of increasing time taken for a more certain grasp of gist with the reduction in overall efficiency that this might cause. The aim is to extract as much gist as possible in the shortest possible time.

$$\text{skimming efficiency} = \text{gist extraction} / \text{time taken}$$

Reconciling the quantitative and qualitative data

As earlier stated, the three quantitative measures - skimming speed, summary length and summary content - did not reveal any significant difference in participant performance between TMC and UH, whereas data regarding hindering and facilitating

factors showed that the participants considered TMC to be considerably easier than UH. The reason for this contradiction is not immediately apparent. One explanation might be that the quantitative measures are flawed, a point which has already been discussed (5.12.1). A second explanation may lie with the qualitative data. It was stated earlier (4.1) that the question the researcher must ask in relation to any statement made by a participant is not – “What direct insight does this give me into this participant’s thought processes?” – but rather – “What must have happened within this participant’s thought processes to have given rise to this statement?” In the case of UH, it was certainly the *perception* of the participants that UH was more difficult. Thus, what the protocol data reveal is the impact of affective factors, the feelings triggered by the apparent difficulties of UH such as the unconventional first paragraph, the less familiar lexis and so on. On the other hand, TMC generated a different set of affective factors, some of which are mentioned in the lengthy quotation of P10 (given in 5.5.2). Here are some key phrases: “it gives me confidence”; “I can control the main idea”; “the most helpful thing is from the psychological view because you feel relaxed and not panic”.

For some participants skimming UH, the negative psychological effect of the introduction to UH was something from which they never fully “recovered”. On the other hand, for the better, more confident skim readers, once they got beyond the introduction, the problems were less extreme. For example, P9 referred to a lack of prior knowledge as a problem when dealing with the opening of UH: “For this passage I didn’t have much knowledge about it so at first it was quite hard” (P9-U-HF1). However, she quickly overcame this difficulty “because of the – the idea was quite simple so it was quite easy to get it” (P9-U-HF1).

Thus there are two possible explanations for the discrepancy between the quantitative and qualitative results: the inadequacy of the objective measures and the deeper importance of participant perception in the qualitative data. It is probably not necessary to choose between these explanations since both may be valid.

More fundamentally, what this also shows is that data collected in this way, i.e. by retrospection, need to be interpreted with care and cannot necessarily be taken at face value. Ericsson and Simon’s (1987, p.25) claim that “information *recently acquired*

(attended to or heeded) by the central processor is kept in STM, and is *directly accessible* for further processing (e.g. for producing verbal reports)” looks highly questionable within the context of the present study. For despite the recency of the memories, they nevertheless pass through several filters before being uttered. Firstly there is the filter of the participant’s own metacognition. S/he may believe that s/he reads in a certain way and this may be what is reported at times, rather than what actually happened. As I have stated, some statements of this sort were easily detected by the presence of a reference to habitual actions (“I usually . . .”) but it is impossible to be sure that others were not overlooked. A second layer of filters relates to social factors (as discussed in 4.2.5), i.e. the way the participants wished to present themselves to me. Bearing all these factors in mind, the data that were collected could be described in the following way: information that the participants chose to pass on to me as their perception of what had happened, based on their own (possibly distorted) recollections of what they had done. This is clearly at odds with Ericsson and Simon’s promise of direct accessibility to recently acquired information. It could be argued that participants were being asked to recall too long after the event – the interviews lasted up to ten minutes for each text skim read, whereas working memory is generally regarded as much more short-term than that (see 1.3.8). Be that as it may, in the light of observations made about the accuracy of some participant comments where cross-checking was possible, a more sober judgment of what was obtained seems more realistic.

Chapter Six

Conclusion

The final chapter begins with a brief assessment of the three research methodologies used in the study. Next the three foci highlighted at the end of Chapter 1 are discussed in the light of the research findings. In particular the traditional view of skimming is challenged. Finally, pedagogical implications are presented, followed by suggestions for further research.

6.1 Limitations of research methodologies used

The analysis of textbooks yielded a rich resource of data showing the way the writers operationalised the teaching of skimming. One limitation was the lack of information regarding reasons for decisions made, such as the particular timings chosen or even the particular tasks related to skimming. At times there was little that could be done other than speculate upon the author's motives. However, direct contact with some of the writers themselves was extremely helpful in this respect since questions about reasons could be posed directly. Thus, for instance, it was possible to explain some of the variations in the use of metalanguage: e.g., alternation between co-authors (*Objective IELTS Advanced* - Black and Capel 2003).

The questionnaire yielded a wide variety of responses in terms of teaching methodology and personal insights. However, as has already been reported (3.1.4), responses were almost uniformly positive about the value of skimming and the need to teach it – an unexpected result and one that may result from limitations in the sampling procedure.

With regard to verbal protocols, there is still a degree of scepticism surrounding this methodology and users frequently see a need to justify its use (e.g. Guthrie et al. 1991). Pressley and Afflerbach (1995, p.1) refer to it as “a maturing methodology” and Cohen (1996, p.19) devotes his paper, not to “justifying verbal report in the face of criticism” but “fine-tuning” verbal report methodology. Nevertheless, doubts still persist and Koda, writing as recently as 2005, mentions general “shortcomings inherent in verbal protocol analysis” as well as further “methodological concerns” (p.216). The key

question is whether the doubts regarding verbal protocols render it unsuitable as a methodology. In fact no methodology is unproblematic: as Brown and Dowling 1998, p.8) state, “There is no position or method that you can adopt which will give you an indisputably clear view of the empirical field . . . you want to investigate.”

Verbal protocols are most likely to be useful when three elements are brought together: theory, the reports themselves and other measures (Magliano and Graesser 1993; Pressley and Afflerbach 1995). In the current study, an attempt was made to draw together theory (reading research findings and models), retrospective reports (given by 16 participants), and other objective measures (reading speeds, summary lengths and summary content). I have defended the use of retrospective rather than concurrent reports (4.1), given the particular nature of skimming. However, online objective measures would have been helpful and could have acted as cues for questions as well as providing a means of triangulation. Equipment for tracking eye movement was unavailable and, again given the specific characteristics of skimming, little could be discerned through direct observation while the participant was reading. The objective measures proved useful in certain cases as a means of verifying a participant’s report: for example, if a participant claimed that the topic familiarity of TMC enabled him/her to skim faster than for UH, this could be checked. In fact the reliability of the reports was not always substantiated when checked in this way (e.g. see 5.5.2). More significantly, the objective measures did not support the claim by most participants that UH was a more difficult text than TMC. This could be seen as a severe limitation to the internal validity since “the closer and more consistent the alignment of verbal report data with what is anticipated a priori, and with the product measures generated from the investigation, the higher the level of confidence one can have in each” (Pressley and Afflerbach 1995, p.126). In this case, the verbal reports are at odds with the objective data for the three measures used. While this could be seen as a limiting factor for the investigation, it should also be viewed as a stimulus for further thought and research. Furthermore, this should not be seen merely as a discrepancy between quantitative and qualitative data: the data relating to facilitating and hindering factors themselves could be seen as quantitative data (Hillocks 1994) in that instances can be counted and compared, revealing the clear perception of a difference in difficulty between the two texts that were skimmed.

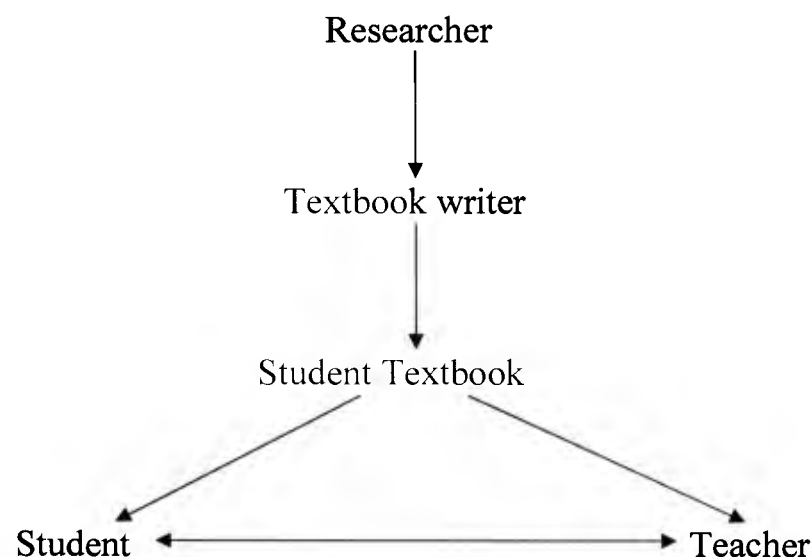
Given the criticisms of verbal protocols as a methodology (e.g. Nisbett and Wilson 1977; Seliger 1983), it seems that what can be said about this study's verbal protocol data is that they provide a record of what the participants *think* they did. To claim that direct access was given to mental processes seems too bold, given the delay, short though it was, and also given the inability to verify such a claim. The question then becomes one of disentangling what actually happened from what the participants claim happened. Clearly the two may not always be the same and the validity of the reports comes into question. "Validity" is here used in the sense of whether the information that was captured within the verbal reports corresponds with information that was actually heeded as the texts were read (Green 1998). As Green (*ibid.*, p.11) says, "it is impossible to prove that verbalised information actually reflects information that is heeded as a task is carried out." Nevertheless, are there grounds for thinking that certain statements are more likely to be valid than others? Instinctively it seems that reports of difficulties encountered are particularly likely to be valid. They are examples of what Flanagan (1954) refers to as "critical incidents". For example, the problems experienced while skimming UH, especially the beginning, relate to real events, rather than generalised experience. Two specific indicators support this claim. Firstly, such statements were often couched in expressions of frustration that the participant's usual method of gist extraction, e.g. concentrating on the first paragraph, could not be used: "I usually . . . but with this text . . ." Since participants could not simply relate their usual strategy (which may have been recovered from long term memory rather than their actual immediate experience of reading the text), the validity of comments based on "critical incidents" is supported. Secondly, many of these comments were expressed at the very beginning of the interviews (e.g. P5, P6, P8 and P14) in response to the most general of questions: "What can you tell me about the way you were reading that text?" The immediacy (without a time delay for interference to creep in) and spontaneity (without specific prompting about difficulties) of the reporting support its validity. As Grabe (2009) suggests, strategies may be combined in regular combinations, based on the reader's past experiences, and used unconsciously, with much greater conscious attention being paid only when the default habits prove ineffective. The skimming of UH, particularly its introduction, may well have been just such a situation where conscious attention was needed, resulting in enhanced recall.

Even those statements which may be thought to be invalid are nevertheless of interest, since they beg the question as to why the participant made them. For example, if a participant suggests that TMC was easier to skim read than UH, claiming that his/her skimming speed was faster, and it transpires that this was not the case, we can nevertheless conclude that for that participant it *felt* as if this was so. Overall, the decision to use verbal protocols as a methodology, despite its inherent weaknesses, can be justified since useful information was uncovered that would not have been revealed by any other methodology.

6.2 Focus One – the nature of skimming

In Chapter 1 (1.6), questions about skimming were raised, centring on three key foci. Each of these will be dealt with in the light of this study. However, before going into the detail of research findings, it needs to be reiterated that this was found to be a highly atheoretical field with a dearth of direct research into skimming. Both in the research papers themselves and in the textbooks, there appeared to be an excessive reliance on intuition, resulting in teaching practices based on “faith” (Stevick 1990) rather than any empirical evidence.

Figure 6.1: Elements contributing to the students’ learning how to skim



This can be seen more clearly in relation to Figure 6.1 above (reproduced from Chapter 1: Figure 1.2). Firstly, research into skimming is impoverished, with very few

published research papers, especially regarding skimming in an L2 (Shin 2000; Fraser 2007). This study then revealed that textbook writers (Chapter 2) have little knowledge and/or little concern about even the limited research that has been done. This is reflected in the lack of any reference to the speed/comprehension trade-off, despite its recurring importance in skimming research (Masson 1982; Just and Carpenter 1987; Muter and Maurutto 1991; Dyson and Haselgrove 2000; Duggan and Payne 2006) and also in the continuing use in some textbooks (see 2.4.2; Table 2.13) of sampling techniques which are likely to mislead, such as the first sentence of each paragraph (Braddock 1974; Baumann and Serra 1984; Smith 2008). As a result, it is not surprising that there is confusion among teachers regarding the best method of teaching skimming, and a reliance on intuition, or “faith”.

6.2.1 What does skimming consist of?

When considering the nature of skimming, there appear to be two main possibilities: either it is a different process altogether from normal reading or a mixture of slower careful reading and skipping. Carver (1990) holds the view that it is a separate process, but has a somewhat idiosyncratic notion of skimming. He refers to “model skimming”, in which, he claims, an individual searches a prose text looking to find two adjacent words whose order has been reversed or transposed. According to Carver, skimming, when operationalised in this way, involves lexical access and semantic encoding, but not sentence integrating, which he reserves for the next, slower gear of “rauding”. This operationalisation allows Carver to make a clear distinction between skimming and rauding. However, the goal of skimming in this case – finding anomalous words – bears no relation to the aims of skimming usually cited, particularly finding the gist (Masson 1982, Urquhart and Weir 1998). In the case of gist extraction, sentence integrating is of course vital if the skimmer is to make any overall sense of the text. Carver’s case for viewing skimming as a separate process on the basis of operationalisation proves flawed.

In fact, the evidence discussed in this study suggests that skimming consists of slower, more careful reading, combined with skipping. Masson (1985) arrives at this view via logic (see 1.4.7), and Just and Carpenter (1987) give evidence from eye movement data

(see 1.4.3) which shows that skimmers scan the text fairly erratically, sampling some sections in detail while skipping others.

The verbal protocols (Chapter 5) throw further light on skimming, illuminating the erratic scanning patterns reported by Just and Carpenter (1987). One striking aspect of the verbal protocols was the way in which the skimming speed varied during the reading of the texts. The participants asserted that they sampled potentially gist-rich sections carefully (see section 5.7.1), some even claiming that they used normal reading at these points. On the other hand, other sections, expected to be gist-poor, were passed over very quickly or even skipped completely. The verbal protocols revealed a reading pattern which varied a great deal in speed, according to the nature of the material being read – or, more accurately, according to the participants' *perception* of the material being read. Thus it seems likely that the clustering of fixations that Just and Carpenter found resulted from the skimmer's perception that s/he was reading gist-related material, whereas the widely separated fixations occurred when the skimmer saw these parts of the text as less important for gist. In summary, the verbal protocols provide not only evidence of the normal reading/skipping pattern, but also an explanation for it: it appears that the search for gist explains the erratic scanning patterns that Just and Carpenter (1987) describe.

In order to skim successfully, the skim reader needs to be able to locate gist information. However, this often proves difficult since the gist is not always found in obvious places. In addition, the skimmer needs to be particularly adept at making inferences, according to Masson (1982). Of course, all readers need a facility for inference-making, which is an integral part of reading. But in the case of skimming, the importance of inference-making (particularly bridging inferences – see 1.3.7) is increased because less of the text is sampled.

There is still the question of how skimming differs from normal reading. In addition to the increase in speed, are there any differences in operationalisation? In both some textbooks and some questionnaires there was a lack of clarity in this regard. Four of the textbooks (*Achieve IELTS; IELTS Masterclass; Instant IELTS; On Course for IELTS*) were silent as to how skimming might be operationalised. Some teachers freely

confessed they did not know how to teach students to skim beyond making them read more quickly (See 3.3.3).

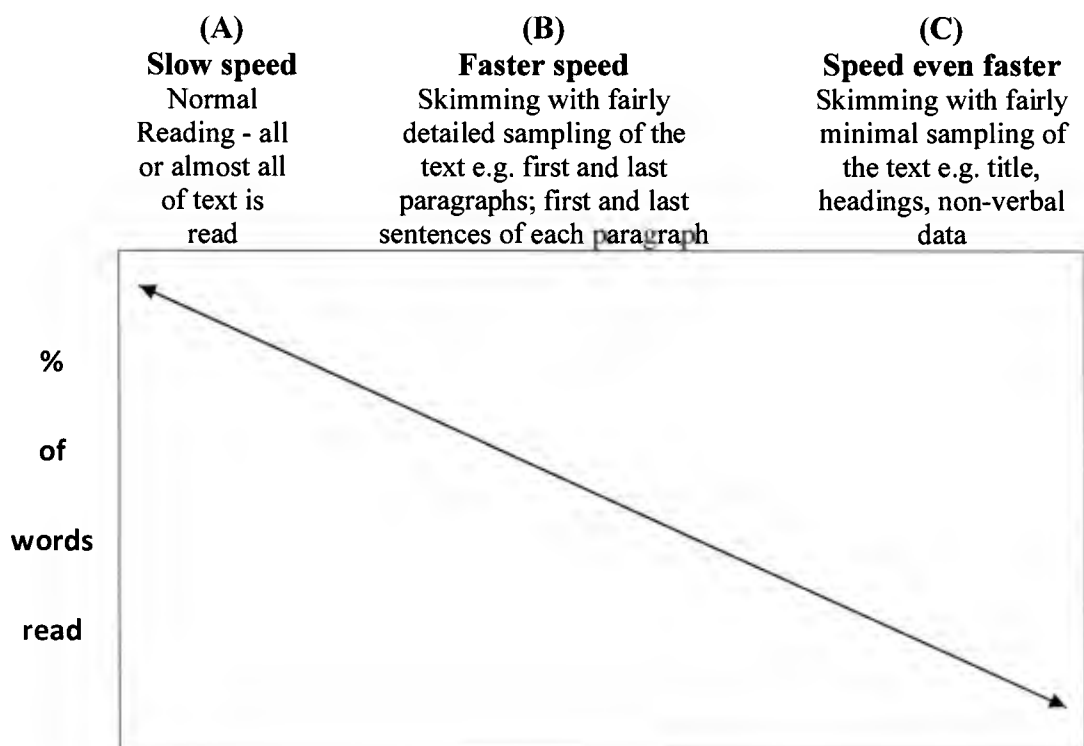
However, certain common elements emerged within the data from textbooks and teachers, and from the students' verbal protocols. Firstly skimming involves sampling, since it is not possible to read the whole text in detail. A common pattern of sampling emerged which incorporates the beginning and end of the text and the beginning and end of each paragraph. This practice is promulgated by some of the textbooks (e.g. *Focus on IELTS*) and teachers and many of the verbal protocol participants also followed this method. In addition, there were certain differences which emerged in the comparison between Anderson's (1991) list of strategies and those which emerged from the verbal protocols (5.12.2). References to "paraphrase strategies" (e.g. "breaks lexical item into parts") were common in Anderson's data, but rare in the verbal protocols. "Supervising strategies" and "strategies for establishing coherence in text" were frequent in both. It is not surprising that these were frequent in the verbal protocols as they are important for determining gist. Conversely, strategies for establishing text structure were fairly common in the verbal protocols (10 out of 28 readings) but absent from Anderson's data, again suggesting such strategies are more common in skimming and are instrumental in establishing gist.

6.2.2 How fast does reading need to be in order to be called skimming?

Permeating this study has been the problem of speed: if skimming is by definition faster reading, how fast does reading need to be to constitute skimming? No clear means of defining this has emerged. In previous research (Laycock 1955; Masson 1982; Just, Carpenter and Masson 1982; Muter and Maurutto 1991; Dyson and Haselgrove 2000; Fraser 2007), the percentages by which skimming speeds exceed "normal reading" (as defined in 1.3.2) vary enormously. The question arises as to the point at which "normal reading" becomes skimming. A further difficulty, raised by Williams (1984), is that supposed skim readers may finish a text quickly using sampling techniques, such as reading the first sentence of each paragraph, but may in fact use careful reading in order to carry out the sampling, raising the question as to whether this can be described as skimming.

In fact, there appears to be a continuum (see Figure 6.2). As speed increases, the amount of material that is skipped increases, and the amount which is read carefully falls. It follows that there is no clear dividing line between normal reading and skimming. The resourceful reader will use a variety of reading speeds depending on purpose, time available, etc. This understanding of skimming is extremely helpful in explaining the problems raised by trying to specify skimming speeds. In fact, all attempts to do this, including raising participants' normal reading speed by 50% (4.2.4), are subjective: since there is a continuum, it is impossible to arrive at a dividing line objectively, as Figure 6.2 indicates.

Figure 6.2: The “normal reading”/skimming continuum



This may help to explain why, as Alderson et al (2004) have pointed out in relation to the Council of Europe Framework of Reference, it has not been possible to decide what time constraints would need to be imposed to reflect successful skimming. Since it is impossible to detect when normal reading becomes skimming, no definitive method of testing whether skimming is being employed successfully can be devised.

However, if there is indeed a continuum, this throws into doubt the very existence of skimming as a process separate from normal reading. Of course, the term “skimming” can be used for convenience to refer to faster reading, e.g. for pedagogical reasons for the benefit of students. However, it must be recognised as a fuzzy term, in that a reader may move backwards and forwards along the continuum many times during the course of reading a single text, making it impossible to tell if s/he is actually skimming (according to the traditional use of the term) or not.

Since there is a continuum, no new model needs to be devised for skimming. Although Carver (1990) contends that skimming is a separate process with a different model, in this study it has been found to be merely a variant of normal reading, and so models for normal reading should be able to accommodate skimming. There are many “modes” of reading, depending on factors such as the reader’s purpose and text type, but only one basic process which underlies them all (Just and Carpenter 1980). The only exception is scanning, which in its purest form consists of no more than perceptual processing – the recognition of the shape of the search item - with no cognitive processing being necessary. Of course, the model is likely to operate in a certain way for skimming, with greater reliance on top-down processing (one aspect of which is covered in 6.4). In fact, it is an inability to use top-down processes that lies at the heart of some of the frustration experienced by the participants when reading UH: P4 found he had to “read every sentence”, i.e. resort to bottom-up processing, because of the unfamiliarity of the subject matter (P4-U-HF1); similarly, P5 was unable to use the top-down processing method of “anticipation” (P5-U-HF1).

Given this clearer understanding of the nature of skimming, many of the confusions of the textbooks (See Chapter 2) can be viewed from a different perspective. For example, it was noted that skimming speeds vary enormously, both between books and even within books (2.4.1). It is not surprising that they fail to agree on skimming speed, since there is no universally recognised understanding of what speed constitutes skimming nor ever could be as there is a continuum. Similarly, the failure of the textbooks to agree on the operationalisation of skimming becomes understandable. Since the speed of skimming cannot be clearly defined, its method of operationalisation will also vary with speed along the continuum. Very fast skimming may consist of little more than

glancing through titles, sub-headings and graphic data. However, for a more in-depth survey of a text, much more of the text may be sampled.

Even the variations in the use of metalanguage become explicable. Thus, for example, in *Achieve IELTS*, there is a unit-by-unit alternation between the use of the terms “skimming” and “quick reading”, though the aim in each case is for the student to read at 300 wpm. Again, if skimming is nothing more than reading quickly with increased skipping, this variation in terminology has no material implication for what the student actually does.

In summary, it is impossible to make a clear separation between normal reading and skimming in terms of speed as the relationship between the two is that of a continuum. It follows that no separate model is needed for skimming. Moreover, many issues regarding skimming are resolved with this understanding. In particular, if skimming does not exist as a separate process, its precise operationalisation no longer needs to be determined, as the next section explains.

6.2.3 What is the range of activities that is encompassed within skimming?

Once it is accepted that skimming is merely faster reading and that there is a continuum between normal reading and skimming, the question of what is encompassed within skimming becomes easier to answer. For example, in Chapter 3 (3.3.5.1), the following remark was cited:

There is currently a debate at our place of work as to the degree of skimming appropriate before reading IELTS questions. I say 10 seconds (i.e. hardly anything) some say 1-2 minutes, for a fairly good understanding. (R41)

It can now be seen that the contrasting timings given by R41 represent different points along the continuum, with R41 favouring a point a long way along the continuum while his colleagues' preference is for a point closer to normal reading. However, based on this understanding of skimming, there is no reason to exclude either from the general umbrella term of skimming.

This understanding of skimming can be contrasted with that expressed in a paper investigating the relationship between strategies and reading comprehension (Bimmel and van Schooten 2004). In their study of the degree to which 15-year-old Dutch students master certain strategic skills, they refer to “four strategic reading activities” detailed in the extract below:

- (a) *Skimming* (i.e., predicting text content on the basis of the title, headings, illustrations, etc.);
 - (b) *Reading the beginning and the end of paragraphs (BEP)* (predicting text content on the basis of the beginning and the end of paragraphs);
 - (c) *Key fragments* (looking for and underlining passages with a high informational value); and
 - (d) *Connecting words* (using structuremarking connecting words (hinge words) that indicate logical connections in a text).
- (ibid. p.92 – their italics)

According to the understanding of skimming adopted within the current study, these researchers have a view of skimming which is far too narrow, since all four activities can be regarded as aspects of skimming. These authors seem to have reduced skimming to a pre-reading activity in which the reader looks at peripheral information. Indeed they actually state that they “added headings and some illustrations to make the *Skimming* strategy possible” (ibid. p.92). Given that skimming is a continuum, this operationalisation of skimming can be encompassed at the extreme end (i.e. position C in Figure 6.2). However, this does not preclude the other activities mentioned by Bimmel and Schooten (2004) from also inclusion within skimming.

6.3 Focus Two – attitudes to skimming

6.3.1 How valuable is skimming regarded as being?

Both the textbooks (Chapter 2) and the teachers (Chapter 3) appear to be positive about the value of skim reading for IELTS candidates, endorsing the high value placed on skimming in EAP (Jordan 1997; Flowerdew and Peacock 2001). It has been suggested (3.1.4) there may be a sampling-related reason why so few teachers gave negative views of skimming. Nonetheless, of those who responded, they are generally but not unanimously enthusiastic about skimming, believing it is necessary and useful for

IELTS and for themselves in their own reading. Several commented on its critical role in helping them study for higher degrees.

However, the data reveal a mismatch between pedagogy and student attitudes and practice. Whereas textbook writers and teachers promulgate skimming as a reading method and encourage students to practise and use it, many students are reluctant to engage in it (according to the teacher survey – 3.3.10) and rarely use it (according to the verbal protocols – 5.11). There are many comments from teachers regarding the reluctance of students to accept the need to skim read and to be less pre-occupied with every unknown word and also concerning the lengths to which teachers go to persuade their students of the efficacy of skimming (3.3.10). Similarly, although the students who produced the verbal protocols were prepared to carry out the skimming tasks required of them, the extent to which skimming was part of their commonly used repertoire is questionable since only 2/16 said they regularly used it in their studies. The rest used skimming rather sparingly, some not at all. They saw skimming as being sometimes necessary for the IELTS exam but not for their studies in general. On the whole, it was seen as a strategy of last resort – if there is insufficient time to read something in detail, skimming becomes the only available option – rather than of preference, i.e. they did not usually see it as an efficient tool in their repertoire of study methods.

At least three explanations are possible. It may be that the students' language and/or reading skills are not sufficiently developed to allow them to use skimming effectively at this point. Alternatively, it may be that their current studies do not make demands on them which necessitate the use of skimming. It could be significant that the questionnaire respondents refer to the value of skimming for higher degrees (and as many as two-thirds of them hold higher degrees – 3.1.5) whereas the verbal protocol participants are only at the A-level stage of their education. A further reason could be posited on the basis of skill transfer. Clarke and Silberstein (1977, p.55) indicate that “since we assume that students skim in their own language, we see our task as helping them to transfer this skill to English.” However, since many of the participants came to Britain when still quite young (many of them were only 17 when the verbal protocols

were collected) it may well be that they have not become accustomed to skimming in their own languages, with the result that this skill was not available to transfer.

The three sources of data revealed a difference of opinion regarding the purpose of skimming. The textbooks present the main purpose of skimming as reading for gist. However, in the survey of teachers, they themselves showed that they skim more frequently as a tool to help with decision-making, rather than for gist per se. This difference may be easily reconciled. The textbooks are preparing students for the IELTS test in which they have to study three fairly lengthy texts within a short time span and so the need for rapid gist derivation becomes paramount. However, in the case of English teachers, other requirements may take precedence such as the need to make rapid assessments of students' work or of potentially useful teaching materials.

6.3.2 Can skimming be taught successfully to students of EFL?

Nowhere in the literature of skimming research (apart from one less than satisfactory instance cited in Maxwell 1972, and discussed in 1.4.2) is there a study of teaching skimming, let alone one that indicates the teaching has been successfully carried out. Carver (1990, p.133) refers to "the paucity of research relevant to investigation of . . . skimming improvement," suggesting that "the reason there is so little published research in this area is because it is difficult, if not impossible, to teach people how to improve their ability to get the gist" (ibid. p.133). One problem is the notion of skimming "success" is vague and unclear. If the aim is seen as deriving the gist, then whether or not this has been obtained could be the measure of success. However, there is no definitive way of deciding what the gist is since, according to Koda 2005, it is "a reader's summary of what s/he considers to be the main information that the writer wants to convey." Thus it will vary from reader to reader and cannot be objectively derived or tested. Furthermore, it will depend to a large degree on the reader's purpose: whether a slightly more detailed understanding of the gist is required or only the most basic of outlines. In any case, some aspects of the gist will be lost when skimming at high speeds since the research literature is almost unanimous in claiming that there is a trade-off between speed and comprehension (Masson 1982; Just and Carpenter 1987; Muter and Maurutto 1991; Dyson and Haselgrove 2000; Duggan and Payne 2006).

In the teachers' questionnaire responses there was minimal reference to success at teaching skimming. Admittedly no question directly asked about this but the open-ended questions giving the respondents the opportunity to say whatever they wished in relation to teaching skimming prompted some quite detailed answers, particularly concerning the difficulties of teaching skimming. In fact, there were only two comments on respondents' success in skimming training (as reported in 3.5). R59 felt that "generally with a little training students are able to do it quite well." In addition, R45 commented: "I think frequent practice of skimming has made my students more confident readers." One possible reason for such a dearth of accounts of success may be that teachers are unsure about how to measure success in this skill so that "the result is quite hit and miss" (R81). However, a further possibility is that they do not feel their teaching is successful.

6.4 Focus Three – factors affecting skimming success

The evidence that background knowledge had a major impact of some sort on the skimming reading participants is incontrovertible. Admittedly, in the quantitative data of the candidates reading UH and TMC (skimming speed, summary length and summary content), scores for TMC tended to be only marginally higher (5.1-5.3). On the other hand, data on the facilitating and hindering factors (5.4 – see Table 5.15) clearly show a huge difference between the ways the candidates felt about the two texts. There were far more facilitating factors for TMC and far more hindering factors for UH.

Participants *perceived* UH to be much more difficult because of the unfamiliarity of the topic and TMC to be easy because of their prior knowledge of this subject.

Interestingly, even though the cumulative evidence from other studies does suggest that background knowledge affects text comprehension (Hudson 2007), Carrell (1983, p.200) found a similar discrepancy between perception and response among ESL readers, in this case between perception of text difficulty and ability to recall it: "they may perceive a text as easy, but yet not recall it well." Moreover, Hammadou's (1991) results showed no significant difference between the recall of texts based on familiar and unfamiliar topics.

Regarding the impact of topic familiarity, it is useful to investigate the contribution of schema theory. Relevant evidence relates to both content and form. As far as content is concerned, in the verbal protocols there is much evidence of the influence of background knowledge. However, it is not always easy to show the relationship between this influence and schemata. Following the differentiation made earlier (1.2.2.2) between prior knowledge and schema theory (i.e. between “*background knowledge and a theory of that knowledge*” - Nassaji 2007, p.81 – his italics), it is not always clear that specific schemata have been called up by the participants. In fact, errors – i.e. calling up the wrong schema – are probably the best evidence for them (such as the misapplication of cultural schemata, e.g. Steffensen, Joag-Dev and Anderson 1979). For example, P4, having made the general point that sometimes he recognised the ideas in the text from his prior knowledge, gives “the congestion charge” as a specific example (P4-T-S8). In fact the congestion charge is not specifically mentioned in the text though there is mention of road pricing. It could be that the congestion charge was part of an existing schema of “anti-pollution measures for vehicles” and was thus over-generalised to this text.

P12 gives possible evidence of schemata at work, saying that “I can check out the main point more quickly from what I know already” (P12-T-S6). It appears that one or more schemata were activated during the reading of TMC, acting as a kind of template for the ideas in the text. Thus P12 says:

Because the passage is about motor car so I know the motor car is related to the pollution problems and some sort of problem like global warming something like that. So when skimming I paid perhaps most of my attention to that kind of thing – like the action needed to be taken or some technological innovation and some solution. (P12-T-S5)

He claims to have been able to compare the ideas he was reading with the activated schema of vehicle pollution problems. There are many other references in the data to prior knowledge, but the above references (to P4 and P12) are the clearest indications of actual schemata activation.

As for formal schemata (Carrell 1984), the evidence is rather more convincing that some participants sought to access knowledge of such schemata. In contrast to Carrell (1984), this occurred with texts that were much longer (Carrell's were around 130-140 words, compared with 678 for TMC and 852 for UH) and consequently the structure was less immediately apparent. Moreover, again unlike Carrell's (1984) texts, these texts had not been specially adapted to represent a discourse type, making it even more noteworthy that participants accessed knowledge of these schemata. However, there are examples in the data of accessing incorrect schemata. For example P10, discussing the helpfulness of topic familiarity when reading TMC, said "the writer's idea is always support or against for a certain topic like pollution the writer's idea is often supported or against it" (P10-T-FF2). She continued: "When you can make sure that you know the writer's attitude you can easily follow the passage." However, the attitude of the writer is not really conveyed in the text, its purpose being to analyse various solutions to the problem of vehicle pollution rather than persuade the reader of a particular viewpoint. Again elsewhere, she claimed (P10-T-FF4) to have a clear conception of the text structure as being "introduction, then support or against the point then the conclusion." P10's conception of the structure does not really capture the situation-problem-solution-evaluation of the text but is nonetheless evidence of an attempt to activate formal schema.

P15 thought the first paragraph of TMC was helpful in determining the structure: "It gives a guide . . . because it talks about the main trend of motor cars - the number of motor cars - and the problems it causes and so it actually kind of in order thing" (P15-T-FF3). P3 took her cue from the last sentence of the first paragraph, stating that it mentions the harm caused by motor vehicles: "the first is pollution and the second is the depletion of oil source then I think the second and the third paragraph it's in this order to explain" (P3-T-S2). In other words, she thinks the topics are set out in order at the close of the first paragraph which acts as a guide to subsequent paragraphs. It was pointed out (5.6.1) that this is only true of the first topic she mentions: the next one she refers to – "depletion of oil resource" – is not discussed in any detail anywhere in the text. P3 has mistakenly taken this last sentence as a key to unlocking the structure of this text. It is an example of a participant attempting to use prior knowledge of rhetorical structure but misinterpreting the signals given by the writer.

Although some participants were better able to discern the situation-problem-solution-evaluation structure of the text, it is unclear as to whether this was because knowledge of formal schemata was activated. One example is P13 who found that “the structure was quite easy because the first paragraph introducing the situation and then the second paragraph was talking about why – the cause – and then followed by some solutions.” (P13-T-FF3). In such cases, though insight into the structure is clearly demonstrated, it is impossible to know whether this comes from prior knowledge of formal schemata or from the text itself. Again it is the mistakes that are most revealing of schemata activation.

However, there are also what appear to be instances of correct activation of formal schemata. Sometimes, as for P5, a key word acted as a lexical trigger (e.g. “solution” – P5-T-S4), arousing awareness of the rhetorical structure: in particular, identifying the start of a major new section in the text. This suggests that P5 had previous knowledge of how a text might be organised to present the problem first and then the solution: in other words, a rhetorical schema. P14 gave the following explanation for attaching such importance to the solutions section: “I think from logic – it’s always first part is to arise the problem and the following several paragraphs is about the facts and then the last one is what we will do in the future for some solutions.” (P14-T-S4). He says that “logic” suggested that this section would be more important but this seems to be based on knowledge of rhetorical schemata: the first part “always” raises the problem and the last part the solution. In a further clear example, P9 also paid special attention to the solutions section “because . . . I think that’s the main point of the passage” (P9-T-S3). When asked why she thought this, she said it was “because usually when a problem is put forward and all the facts then afterwards the solution is usually why the passage was written” (P9-T-S3). This again suggests some knowledge of rhetorical schemata, since she refers to the way such texts are “usually” written.

Conversely, there were times when participants struggled because of a lack of rhetorical schemata, particularly when dealing with the first paragraph of UH. P14 found the first paragraph “a little bit misleading because didn’t – it’s not the first important thing of this article . . . [it’s] just a story” (P14-U-S1). P14 also found the nature of this introductory paragraph a problem: “because at first I didn’t understand what’s the

function of the first paragraph and the I still feel a bit ambiguous – I feel a little bit strange” (P14-U-HF3). The use of the word “function” is interesting. It is not just that the content is unusual: the problem stems from the difficulty of understanding why a writer would choose to start an article in this way. The final paragraph caused similar difficulties for some participants. P7 also commented that the last paragraph will usually “contain all the information I need” but in this case did not effectively summarise the text (P7-U-S3).

Thus, in several ways the first and last paragraphs caused confusion and difficulty because they failed to conform to the participants’ expectations for such paragraphs and so participants were unable to apply their customary “strategy schema” (Casanave 1988, p.297). It appears that part of the problem lies in unfamiliarity with the genre of this text, for, as Cohen (1996, p.15) points out, “the genre of the text can make a big difference in the ease of reading.” Hudson (2007, p.204) states that “what turns a collection of communicative events into a genre is the presence of shared communicative purposes.” Ostensibly, both texts that the participants studied had the same communicative purpose, i.e. to provide information about a topic. However, the beginning of UH is a clear example of the way genres are best viewed not as single and separated but as “forming complex networks of various kinds switching mode from speech to writing (and vice versa)” (Swales 2004, p.2). In the case of UH, as well as a communicative purpose to inform the reader about significant developments in the field of underground homes, the writer had the additional purpose of gaining the reader’s interest and holding it and used story-like features to achieve this. It was a lack of familiarity with this aspect of the genre that contributed to the participants’ confusion.

To summarise, in these data, there is evidence for the use of schemata. In some cases the most compelling evidence is from the misuse of schemata. While there is some support for content schemata being used, the more convincing evidence is for formal schemata, again whether used appropriately or not. It is not surprising that formal schemata were activated since knowledge of rhetorical structures and genres are in fact crucial for effective skimming, enabling skim readers to find the gist more efficiently.

6.5 Pedagogical Implications

Given the view of skimming presented in this chapter, and in particular that there is a continuum between normal reading and skimming, one view might be that this justifies the abandonment of teaching skimming to concentrate on other seemingly more profitable areas such as vocabulary (Buckmaster 2005a). However, it is likely that students who progress in their studies will find they reach a point where faster reading is necessary to cope with the work load. It would be useful for students to be informed of the continuum between normal reading and skimming and to be made more aware of the way reading speed varies along this continuum for a variety of reasons, including reader's purpose, text difficulty etc. Students should understand that there is not just *a* skimming speed but many speeds.

6.5.1 Schemata and Skimming

This research has important implications for the teaching of skimming in an EFL context. Skimming is fast reading which requires the reader to make inferences (defined in 1.3.7). The making of such inferences can be helped or hindered depending on the difficulty of the texts being skimmed. In the case of difficult texts, students will again find that they need to make inferences, for example, to deal with the problem of unknown lexis. If they are making inferences because of the speed of reading and also because of the difficulty of the text, it is unsurprising that comprehension may break down on occasions. Gaps in their reading of the text that occur because of sampling, added to gaps that occur because of unknown lexis, may render the text incomprehensible. It is this combination that reduces the possibility of making the necessary inferences.

A possible way round this problem would be to reduce one or other of the two gaps (Paran 1996). In other words, if it is deemed that exercises in faster reading are needed, the students could be given texts with relatively easy vocabulary, reserving those with more complex vocabulary for detailed reading. Alternatively, when teachers are attempting to encourage their students to skim read, they might provide their students with opportunities to develop relevant schemata (Pritchard 1990). In this way, inferences can be made more readily. Exercises which help to build up relevant schemata can be

useful confidence builders in the early stages of teaching skimming. One such exercise could be based on the listening exercise used with the TMC text in which the students were exposed to the vocabulary and ideas of the text via a note-taking activity before actually reading it (4.2.8).

However, the aim is that students will begin to activate relevant background knowledge automatically. It was clear from the verbal protocols that some of them had been doing this, especially when reading the text “The Motor Car”. Indeed one participant went so far as to say the following:

And in fact now I can see in a more clearer way that when I read about something and I have like my own knowledge about that thing reading is like a comparison actually. (P12)

It becomes apparent from this and other verbal protocols that schema activation occurred without the presence of any pre-reading exercises, i.e. automatically.

In addition to background knowledge of content, the verbal protocols revealed the importance of rhetorical schemata (6.4). Skimming confidence increased when the relevant rhetorical schema was present, but was lacking without such prior knowledge. This is strong support for Carrell’s suggestion that direct teaching of discourse structures is effective in facilitating comprehension (Carrell 1984; Carrell 1985). Direct teaching of a range of structures (and also genre types) might help students to avoid the types of problems that were experienced when reading UH.

6.5.2 The relationship between general reading level and skimming speed

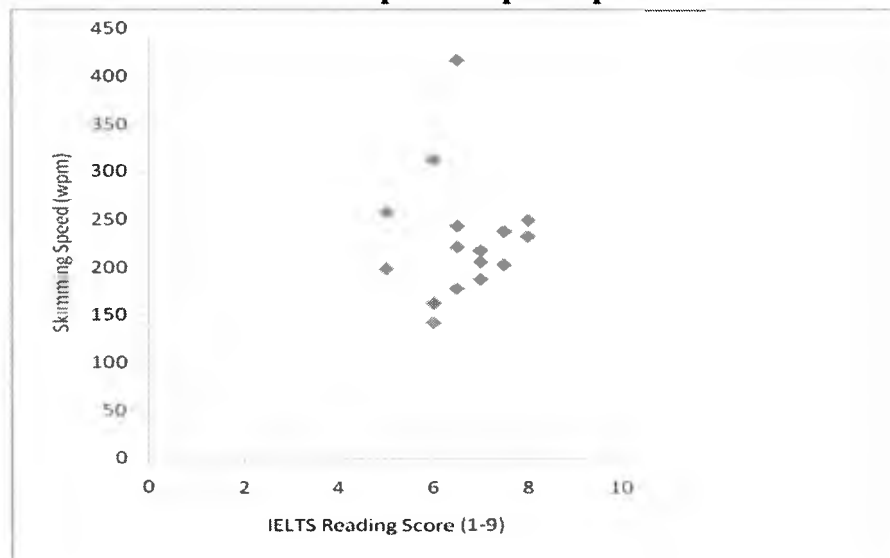
The participants’ general reading level (as indicated by the IELTS band for reading) can be compared with their actual skimming speeds, as shown in Table 6.1.

Table 6.1: Average skimming speeds and IELTS band scores of verbal protocol participants

Participant	IELTS Reading Band Score	Average Speed (wpm)
P2	5	258
P4	5	199
P6	6	163
P11	6	313
P16	6	142.5
P3	6.5	178
P8	6.5	244
P10	6.5	222
P14	6.5	417
P1	7	188
P7	7	218
P13	7	206
P9	7.5	203
P15	7.5	238
P5	8	250
P12	8	233

This data can be shown in a graph as below, plotting IELTS reading levels (1-9) against skimming speeds.

Figure 6.3: Average skimming speeds and IELTS band scores of verbal protocol participants



If it is true that students with generally weaker reading skills skim more slowly, there should be a gradual increase in the skimming speeds indicated in the third column of Table 6.1. However, this is not the case. The highest speed was achieved by a participant with an IELTS level of only 6.5. On the other hand, P9 had one of the highest band scores – 7.5 – but one of the lowest skimming scores – 203. A sample

correlation coefficient of .118 (one-tailed significance test - .5029) was derived using Spearman's rho test, indicating no significant correlation between IELTS reading level and skimming speed.

What these data indicate is that for these students skimming speeds are highly individual and are not tied to general reading level. Fraser (2007, p.387) found that "English language proficiency . . . did not predict L2 reading rate" for her participants. My research suggests that general reading ability also fails to predict skimming speed. There may be several reasons for this, one possible one being that, while some weaker readers slow down when faced with comprehension difficulties, others speed up when skimming, skipping the problematic section of text in search of a more amenable one (See 5.8). This relates to a point made earlier, namely that the use of any particular strategy of itself does not demonstrate competent reading. It is only by knowing how it was deployed that a true measure of its effectiveness can be assessed. In this case, skipping can be a sign of reader confidence and competence: conversely it can be a strategy of despair.

The implication of this finding regarding skimming speed is that, where possible, students should be encouraged to discover their own speeds for normal reading and skimming rather than comply with a general class norm. In other words, instead of giving the whole class three minutes to skim read a text – a practice promoted by several teachers (3.3.5.1) – students should be conscious of their own timings and try to improve them with each experience of skimming, a practice promulgated by *Objective IELTS* (both Intermediate and Advanced – 2006). This could be a feature of reading laboratories, designed to practise certain skills and strategies (e. g., recognition exercises, timed reading, vocabulary learning strategies) outside of the content-centred course (Grabe 1991).

6.5.3 Text topic, structure and genre

There is no convincing evidence in my data that comprehension is significantly affected by the presence or absence of prior knowledge (5.12.1). This appears to lend support to the IELTS policy of offering three texts based on topics from a variety of backgrounds

without reference to the candidate's interests or fields of study (Clapham 1996). However, there is convincing evidence in the verbal report data that affective factors such as confidence and interest are influenced by topic familiarity (5.5.2): for example, the unfamiliarity of UH (5.5.2) brought about a loss of confidence. The impact of such a decline in confidence due to topic unfamiliarity could be far-reaching in a high stakes test on which the candidate's future academic career may depend.

This finding also points to the importance of exposing students to the widest possible range of text types. In this way they can become familiar with different structures and genres. Moreover, they will have opportunity to develop the more sophisticated rhetorical schemata apparently necessary for texts such as UH.

6.5.4 The importance of skimming for IELTS candidates

Although teachers and textbooks almost unanimously endorse the use of skimming for IELTS candidates, it may well be possible to complete the test without this. Given that the number of words in the three texts is approximately 2750, a candidate with a reading speed as low as 150 wpm would need just over 18 minutes to read all the texts, leaving over 41 minutes to answer the questions. A candidate with a reading speed of 200 wpm would need 13-14 minutes, with more than 46 minutes remaining. Provided that the careful read through is productive in revealing the main ideas and text structure, enabling the candidate to locate answers quickly, normal reading rather than skimming might be preferable for some candidates. Once the initial reading is complete, the key skill for locating answers in the text is probably search reading (Pugh 1978). Even the task involving matching headings with paragraphs, for which skimming is advocated by several textbooks (see 2.3.2), may be difficult to execute using skimming. Weir et al.'s reader-analyst report (2009, p.131) of this task suggests that, "especially given the 'tricky' questions with their deliberate overlap across the headings", it is very difficult to respond to this task using sampling techniques and so careful reading needs to be invoked even for this task. In fact, Weir et al. found there was a general "preponderance of careful reading over expeditious reading strategies" in their research (ibid. p.133).

Students also need to be made aware of the dangers of skimming as well as the possible benefits. In particular, sampling could result in misunderstanding. It has already been shown that reading the first sentence of each paragraph to derive the gist may fail to yield gist information (see 1.3.3), despite the idea's wide promotion by textbooks (2.4.2), teachers (3.3.6) and reading manuals (Grellet 1981; Williams 1984).

Furthermore, while sampling the text, students may not be able to gain sufficient grasp of the contents due to inadequate sampling as well as typical L2 reader difficulties such as unknown lexis. As a result, the hypotheses that the student develops (Nuttall 1996) may be inaccurate. Nuttall does in fact give a warning about the possibility of weaker readers persisting in their original hypotheses, despite conflicting evidence. This has been termed "perseverative reading" (Kimmel and MacGinitie 1984; Pressley et al. 1990). According to Kimmel and MacGinitie, some weaker readers develop a hypothesis about the meaning of the text and then "hold on to that interpretation rigidly in spite of disconfirming information in the later text" (ibid. p.164). It could be argued that by sampling only limited amounts of text, the possibility of such misunderstandings will be increased significantly, especially if the text is difficult and the student is under exam pressure.

Thus skimming should be presented as *one* of the ways of gaining an initial understanding of the texts, but not the only one. Here again then, the learning needs to be individualised, so that each student finds the best approach for him/her. This will only happen through discussion of the reading process in class (Williams 1986). Indeed the benefit of such discussion can be seen in the following remark made by P12.

And in fact now I can see in a more clearer way that when I read about something and I have like my own knowledge about that thing reading is like a comparison actually. (P12)

The evidence of this study is that skimming becomes more relevant at a relatively high academic level – perhaps M.A. – rather than at A level and this needs to be taken into account by teachers of English working with students at different stages in their academic career.

6.6 Suggestions for further research

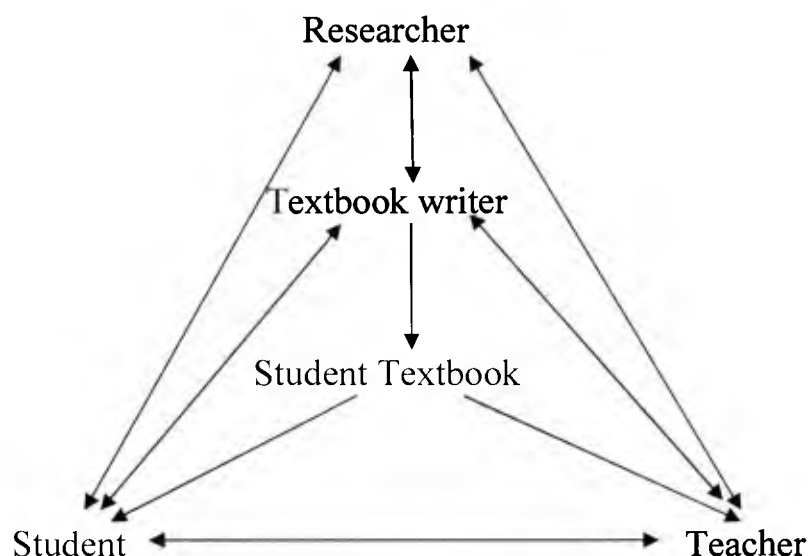
With regard to suggestions for future research, there are many possibilities, since skimming is greatly under-researched. The widespread endorsement of the use of skimming in EFL creates certain expectations. Firstly, one would expect that there is a body of research revealing how skimming operates among L1 readers, and showing that they are generally able to skim successfully, perhaps with suitable training. In other words, if they are skimming for gist, they are actually able to derive the gist from the text. The second expectation is that there should be another body of research into skimming in EFL. The teacher's manuals and textbooks would be based on this (Figure 6.1). This research would be expected to show that competent L2 readers are able to skim read successfully. In addition, it would have the results of training in skimming, showing that students have improved in this skill and indicating suitable methods of achieving this. It is surprising that neither exists and further research could rectify this.

Another question, which arises in relation to inference-making, could also be the subject of future research: is the reader's ability to make inferences based simply on the factors that have been discussed or does inference-making exist as a discrete skill that readers may be endowed with to varying degrees? It is possible that this is the most pressing question of all to investigate. If it is found that this is so, then inference-making ability would be an effective indicator, even predictor, of skimming competence. Moreover, such a discovery would have significant pedagogical implications for training students.

A more general suggestion emanating from this research is that relationships indicated in Figure 6.1 could usefully be extended as shown in Figure 6.4 below. The lack of communication between the different groups shown in Figure 6.1 was lamented earlier (6.2). A more progressive attitude is displayed in the following excerpt from a personal communication from textbook writer Jeffries (2009), who obtained and studied Grabe 2009 since, as she writes, "I was finishing up the new editions of Reading Power and Basic Reading Power and I wanted to check that I wasn't going countercurrent." Such willingness on the part of a textbook writer to engage with recent research developments is laudable. However, as Figure 6.4 indicates, further research relationships could be added to the model shown in Figure 6.1, enriching the whole

network from researchers to students. Research will not take place in a vacuum but will be enriched by the input of students and teachers, as in the case of the present study.

Figure 6.4: Research relationships



6.7 Conclusion

On the basis of this study, skimming appears to be an extension of normal reading. It follows that some of the claims made about skimming are misconceived, such as Carver's (1990) idea that it is a different process from normal reading. Furthermore, claims about its importance, in particular for IELTS candidates are exaggerated: though it no doubt could prove useful for some, others could find alternative ways of achieving the same purpose. Steven McDonough's summary of the role of the teacher in the area of strategy development is relevant here:

we should try to establish what our students actually do and learn to evaluate for them as individual learners whether they are acting in a way that will lead them to progress. (McDonough 1995, p.61)

Ultimately it is for each reader to discover which reading styles and strategies are most useful for them and then to learn how to orchestrate their use appropriately.

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APPENDIX 1
Covering Letter and Questionnaire

Covering Letter for Questionnaire on Teaching Skimming

Dear IELTS teacher,

I am a research student at the Institute of Education in London and am carrying out a research project into skim reading in EFL, with particular reference to the IELTS examination. I prepare students for the IELTS examination at Cambridge Tutors College in Croydon.

In this study, skimming is defined as the fast, selective reading of a text in order to derive the gist for various purposes. Part of my research involves finding out the views of teachers regarding skimming (other parts of this study involve interviews with students and analysis of materials). Some teachers regard skimming as very useful and important for students taking IELTS. Others do not think it is of any value. I am very interested to know what your views are. Please note that all responses are of value to me: there are no right or wrong answers to the questions about skimming and teaching in the questionnaire.

I assure you that anonymity will be preserved: I may wish to quote from your response but no names will appear in any writing that I do as a result of this research. Indeed, you will note that no names are required in the questionnaire, unless you wish to know more about my results. I would be grateful if you could respond as soon as possible.

I am hopeful that my study as a whole will be of value to teachers, giving insights into the very important, but also rather secret, reading processes of our students. If you would like to know more about my findings so far, please give your email address and I will send you a short summary.

Yours sincerely,

Questionnaire on Skimming for IELTS Teachers

Please read the covering letter before completing the questionnaire.

I would be grateful if you would use CAPITAL LETTERS or PRINT your answers where appropriate. Otherwise please tick the boxes.

1. Are you male or female? MALE FEMALE
2. What is your age? 21-30 31-40 41-50 51-60 61+
3. Is English your first language? YES NO
4. How many years have you been teaching EFL (including ESL, EAP etc)? _____
5. What academic/teaching qualifications do you have? (Include qualifications you are studying for at the moment.)
Undergraduate (e.g. BA) _____
Postgraduate (e.g. MA) _____
Teaching Qualifications (e.g. CELTA) _____
6. Which type of organisation do you teach in?
 University
 Language school
 Sixth form college
 FE college
 Other (Please specify)
7. How many years have you been preparing students for IELTS? _____
8. Which IELTS textbooks do you use regularly for teaching (i.e. not for testing)? If you use many, write only the three most frequently used.

9. In your view, to what extent is the ability to skim necessary for success in the IELTS reading test? (Please choose one answer. 1 means "absolutely necessary" and 5 means "Not necessary at all")
 1 2 3 4 5

10. Do you give your students any training in skim reading? Yes No

If the answer to question 10 is YES, please answer questions 11-13 below:

11. At what level(s) do you train students to skim? (Tick as many categories as you want.)

- Beginner
- Lower Intermediate
- Intermediate
- Upper intermediate
- Advanced

12. How do you train your students to skim? Please give brief details:

13. To what extent is the skimming training given in the textbooks that you use helpful for your students?

- Very helpful
- Quite helpful
- Not very helpful
- Not helpful
- Don't know
- No training given in the book(s) I use
- Don't use textbooks

If the answer to question 10 is NO, please answer question 14 below:

14. Are there any particular reasons why you do not give your students any skimming training?

15. In your experience, what factors determine whether a student will succeed in skimming? Please choose UP TO THREE main factors from this list:

- General language ability
- Prior knowledge of the topic
- General interest in reading
- Specific interest in the particular text they are reading
- The amount of skimming practice
- The quality of training in skimming
- Other (Please specify).

16. How useful do you yourself find skim reading?

- Very useful Quite useful Not very useful Not useful

17. In what situations do you personally skim read? For what purpose(s)?

Situation	Purpose

18. Please feel free to add any comments on your teaching of skimming.

PTO

19. Please feel free to add any comments on your experience of skimming.

Thank you very much indeed for your help!

Please return the completed questionnaire in the SAE provided or send to:

**Mr J. Rodgers
38 Whittington Road
Crawley
West Sussex
RH10 5AQ**

Appendix 2
Demographic Data
for Questionnaire Respondents

Age Range	Number of Respondents	Percentage of Respondents
21-30	5	5.4
31-40	28	30.4
41-50	32	34.8
51-60	23	25.0
61+	4	4.3

Teaching Experience Range (in years)	Number of Respondents	Percentage of Respondents
1-5	11	12.0
6-10	24	26.1
11-15	23	25.0
16-20	15	16.3
21-25	6	6.5
26-30	12	13.0
31+	1	1.1

Type of Qualification	Percentage of Teachers with this Qualification
First Degree	89.1%
Second Degree	67%
Teaching Qualification (e.g. CELTA)	91.3%

Type of Institution	Number of Respondents	Percentage of Respondents
university	33	35.9
language school	38	41.3
6th form college	6	6.5
FE college	9	9.8
other	6	6.5

Experience of Teaching IELTS(in years)	Number of Respondents	Percentage of Respondents
1-5	57	62.0
6-10	31	33.7
11-15	2	2.2
No answer given	2	2.2

Appendix Three

The Texts for Reading and Skimming

Text One - Measuring Organisational Performance

(From Cambridge Practice Tests for IELTS – Book Three, p.92-3 - 553 words)

There is clear-cut evidence that, for a period of at least one year, supervision which increases the direct pressure for productivity can achieve significant increases in production. However, such short-term increases are obtained only at a substantial and serious cost to the organisation.

To what extent can a manager make an impressive earnings record over a short period of one to three years by exploiting the company's investment in the human organisation in his plant or division? To what extent will the quality of his organisation suffer if he does so? The following is a description of an important study conducted by the Institute for Social Research designed to answer these questions.

The study covered 500 clerical employees in four parallel divisions. Each division was organised in exactly the same way, used the same technology, did exactly the same kind of work, and had employees of comparable aptitudes.

Productivity in all four of the divisions depended on the number of clerks involved. The work entailed the processing of accounts and generating of invoices. Although the volume of work was considerable, the nature of the business was such that it could only be processed as it came along. Consequently, the only way in which productivity could be increased was to change the size of the work group.

The four divisions were assigned to two experimental programmes on a random basis. Each programme was assigned at random a division that had been historically high in productivity and a division that had been below average in productivity. No attempt was made to place a division in the programme that would best fit its habitual methods of supervision used by the manager, assistant managers, supervisors and assistant supervisors.

The experiment at the clerical level lasted for one year. Beforehand, several months were devoted to planning, and there was also a training period of approximately six months. Productivity was measured continuously and computed weekly throughout the year. The attitudes of employees and supervisory staff towards their work were measured just before and after the period.

Turning now to the heart of the study, in two divisions an attempt was made to change the supervision so that the decision levels were pushed down and detailed supervision of the workers reduced. More general supervision of the clerks and their supervisors was introduced. In addition, the managers, assistant managers, supervisors and assistant supervisors of these two divisions were trained in group methods of leadership, which they endeavoured to use as much as their skill would permit during the experimental year. For easy reference, the experimental changes in these two divisions will be labelled the 'participative programme'.

In the other two divisions, by contrast, the programme called for modifying the supervision so as to increase the closeness of supervision and move the decision levels upwards. This will be labelled the 'hierarchically controlled programme'. These changes

were accomplished by a further extension of the scientific management approach. For example, one of the major changes made was to have the jobs timed and to have standard times computed. This showed that these divisions were overstaffed by about 30%. The general manager then ordered the managers of these two divisions to cut staff by 25%. This was done by transfers without replacing the persons who left; no one was to be dismissed.

Text Two - Obtaining Linguistic Data

(Cambridge Practice Tests for IELTS – Book Four, p.74-75 – 554 words)

Many procedures are available for obtaining data about a language. They range from a carefully planned, intensive field investigation in a foreign country to a casual introspection about one's mother tongue carried out in an armchair at home.

In all cases, someone has to act as a source of language data — an informant. Informants are (ideally) native speakers of a language, who provide utterances for analysis and other kinds of information about the language (e.g. translations, comments about correctness, or judgements on usage). Often, when studying their mother tongue, linguists act as their own informants, judging the ambiguity, acceptability, or other properties of utterances against their own intuitions. The convenience of this approach makes it widely used, and it is considered the norm in the generative approach to linguistics. But a linguist's personal judgements are often uncertain, or disagree with the judgements of other linguists, at which point recourse is needed to more objective methods of enquiry, using non-linguists as informants. The latter procedure is unavoidable when working on foreign languages, or child speech.

Many factors must be considered when selecting informants - whether one is working with single speakers (a common situation when languages have not been described before), two people interacting, small groups or large-scale samples. Age, sex, social background and other aspects of identity are important, as these factors are known to influence the kind of language used. The topic of conversation and the characteristics of the social setting (e.g. the level of formality) are also highly relevant, as are the personal qualities of the informants (e.g. their fluency and consistency). For larger studies, scrupulous attention has been paid to the sampling theory employed, and in all cases, decisions have to be made about the best investigative techniques to use.

Today, researchers often tape-record informants. This enables the linguist's claims about the language to be checked, and provides a way of making those claims more accurate ('difficult' pieces of speech can be listened to repeatedly). But obtaining naturalistic, good-quality data is never easy. People talk abnormally when they know they are being recorded, and sound quality can be poor. A variety of tape-recording procedures have thus been devised to minimise the 'observer's paradox' (how to observe the way people behave when they are not being observed). Some recordings are made without the speakers being aware of the fact — a procedure that obtains very natural data, though ethical objections must be anticipated. Alternatively, attempts can be made to make the speaker forget about the recording, such as keeping the tape recorder out of sight, or using radio microphones. A useful technique is to introduce a topic that quickly involves the speaker, and stimulates a natural language style (e.g. asking older informants about how times have changed in their locality).

An audio tape recording does not solve all the linguist's problems, however. Speech is often unclear and ambiguous. Where possible, therefore, the recording has to be supplemented by the observer's written comments on the non-verbal behaviour of the participants, and about the context in general. A facial expression, for example, can

dramatically alter the meaning of what is said. Video recordings avoid these problems to a large extent, but even they have limitations (the camera cannot be everywhere), and transcriptions always benefit from any additional commentary provided by an observer.

Text Three - Air Pollution

(Cambridge Practice Tests for IELTS – Book Three, p.84-5 – 567 words)

Air pollution is increasingly becoming the focus of government and citizen concern around the globe. From Mexico City and New York, to Singapore and Tokyo, new solutions to this old problem are being proposed, trialled and implemented with ever increasing speed. It is feared that unless pollution reduction measures are able to keep pace with the continued pressures of urban growth, air quality in many of the world's major cities will deteriorate beyond reason.

Action is being taken along several fronts: through new legislation, improved enforcement and innovative technology. In Los Angeles, state regulations are forcing manufacturers to try to sell ever cleaner cars: their first of the cleanest, titled 'Zero Emission Vehicles', have to be available soon, since they are intended to make up 2 per cent of sales in 1997. Local authorities in London are campaigning to be allowed to enforce anti-pollution laws themselves; at present only the police have the power to do so, but they tend to be busy elsewhere. In Singapore, renting out road space to users is the way of the future.

When Britain's Royal Automobile Club monitored the exhausts of 60,000 vehicles, it found that 12 per cent of them produced more than half the total pollution. Older cars were the worst offenders; though a sizeable number of quite new cars were also identified as gross polluters, they were simply badly tuned. California has developed a scheme to get these gross polluters off the streets: they offer a flat \$700 for any old, run-down vehicle driven in by its owner. The aim is to remove the heaviest-polluting most decrepit vehicles from the roads.

As part of a European Union environmental programme, a London council is testing an infra-red spectrometer from the University of Denver in Colorado. It gauges the pollution from a passing vehicle - more useful than the annual stationary test that is the British standard today - by bouncing a beam through the exhaust and measuring what gets blocked. The council's next step may be to link the system to a computerised video camera able to read number plates automatically.

The effort to clean up cars may do little to cut pollution if nothing is done about the tendency to drive them more. Los Angeles has some of the world's cleanest cars — far better than those of Europe — but the total number of miles those cars drive continues to grow. One solution is car-pooling, an arrangement in which a number of people who share the same destination share the use of one car. However the average number of people in a car on the freeway in Los Angeles, which is 1.3, has been falling steadily. Increasing it would be an effective way of reducing emissions as well as easing congestion. The trouble is, Los Angelinos seem to like being alone in their cars.

Singapore has for a while had a scheme that forces drivers to buy a badge if they wish to visit a certain part of the city. Electronic innovations make possible increasing sophistication: rates can vary according to road conditions, time of day and so on. Singapore is advancing in this direction, with a city-wide network of transmitters to collect information and charge drivers as they pass certain points. Such road-pricing,

however, can be controversial. When the local government in Cambridge, England, considered introducing Singaporean techniques, it faced vocal and ultimately successful opposition.

Text Four - How much higher? How much faster?

Limits to human sporting performance are not yet in sight

(Cambridge Practice Tests for IELTS – Book Four, p.88-9 – 474 words)

Since the early years of the twentieth century, when the International Athletic Federation began keeping records, there has been a steady improvement in how fast athletes run, how high they jump and how far they are able to hurl massive objects, themselves included, through space. For the so-called power events that require a relatively brief explosive release of energy, like the 100-metre sprint and the long jump time and distances have improved ten to twenty per cent. In the endurance events the results have been more dramatic. At the 1908 Olympics, John Hayes of the U.S. team ran a marathon in a time of 2:55:18. In 1999, Morocco's Khalid Khannouchi set a new world record of 2:05:42, almost thirty per cent faster.

No one theory can explain improvements in performance, but the most important factor has been genetics. 'The athlete must choose his parents carefully,' says Jesus Dapena, a sports scientist at Indiana University, invoking an oft-cited adage. Over the past century, the composition of the human gene pool has not changed appreciably, but with increasing global participation in athletics - and greater rewards to tempt athletes - it is more likely that individuals possessing the unique complement of genes for athletic performance can be identified early. 'Was there someone like [sprinter] Michael Johnson in the 1920s?' Dapena asks. 'I'm sure there was, but his talent was probably never realised.'

Identifying genetically talented individuals is only the first step. Michael Yessis, an emeritus professor of Sports Science at California State University at Fullerton, maintains that 'genetics only determines about one third of what an athlete can do. But with the right training we can go much further with that one third than we've been going.' Yessis believes that U.S. runners, despite their impressive achievements, are running on their genetics'. By applying more scientific methods, 'they're going to go much faster'. These methods include strength training that duplicates what they are doing in their running events as well as plyometrics, a technique pioneered in the former Soviet Union.

Whereas most exercises are designed to build up strength or endurance, plyometrics focuses on increasing power - the rate at which an athlete can expend energy. When a sprinter runs, Yessis explains, her foot stays in contact with the ground for just under a tenth of a second, half of which is devoted to landing and the other half to pushing off. Plyometric exercises help athletes make the best use of this brief interval.

Nutrition is another area that sports trainers have failed to address adequately. 'Many athletes are not getting the best nutrition, even through supplements,' Yessis insists. Each activity has its own nutritional needs. Few coaches for instance, understand how deficiencies in trace minerals can lead to injuries.

Text Five - The Motor Car

(Cambridge Practice Tests for IELTS – Book Two, p.66-7 – 678 words)

A There are now over 700 million motor vehicles in the world and the number is rising by more than 40 million each year. The average distance driven by car users is growing too from 8 km a day per person in Western Europe in 1965 to 25 km a day in 1995. This dependence on motor vehicles has given rise to major problems, including environmental pollution, depletion of oil resources, traffic congestion and safety.

B While emissions from new cars are far less harmful than they used to be, city streets and motorways are becoming more crowded than ever, often with older trucks, buses and taxis, which emit excessive levels of smoke and fumes. This concentration of vehicles makes air quality in urban areas unpleasant and sometimes dangerous to breathe. Even Moscow has joined the list of capitals afflicted by congestion and traffic fumes. In Mexico City, vehicle pollution is a major health hazard.

C Until a hundred years ago, most journeys were in the 20 km range, the distance conveniently accessible by horse. Heavy freight could only be carried by water or rail. The invention of the motor vehicle brought personal mobility to the masses and made rapid freight delivery possible over a much wider area. Today about 90 per cent of inland freight in the United Kingdom is carried by road. Clearly the world cannot revert to the horse-drawn wagon. Can it avoid being locked into congested and polluting ways of transporting people and goods?

D In Europe most cities are still designed for the old modes of transport. Adaptation to the motor car has involved adding ring roads, one-way systems and parking lots. In the United States, more land is assigned to car use than to housing. Urban sprawl means that life without a car is next to impossible. Mass use of motor vehicles has also killed or injured millions of people. Other social effects have been blamed on the car such as alienation and aggressive human behaviour.

E A 1993 study by the European Federation for Transport and Environment found that car transport is seven times as costly as rail travel in terms of the external social costs it entails such as congestion, accidents, pollution, loss of cropland and natural habitats, depletion of oil resources, and so on. Yet cars easily surpass trains or buses as a flexible and convenient mode of personal transport. It is unrealistic to expect people to give up private cars in favour of mass transit.

F Technical solutions can reduce the pollution problem and increase the fuel efficiency of engines. But fuel consumption and exhaust emissions depend on which cars are preferred by customers and how they are driven. Many people buy larger cars than they need for daily purposes or waste fuel by driving aggressively. Besides, global car use is increasing at a faster rate than the improvement in emissions and fuel efficiency which technology is now making possible.

G One solution that has been put forward is the long-term solution of designing cities and neighbourhoods so that car journeys are not necessary - all essential services being

located within walking distance or easily accessible by public transport. Not only would this save energy and cut carbon dioxide emissions, it would also enhance the quality of community life, putting the emphasis on people instead of cars. Good local government is already bringing this about in some places. But few democratic communities are blessed with the vision - and the capital - to make such profound changes in modern lifestyles.

H A more likely scenario seems to be a combination of mass transit systems for travel into and around cities, with small 'low emission' cars for urban use and larger hybrid or lean burn cars for use elsewhere. Electronically tolled highways might be used to ensure that drivers pay charges geared to actual road use. Better integration of transport systems is also highly desirable and made more feasible by modern computers. But these are solutions for countries which can afford them. In most developing countries, old cars and old technologies continue to predominate.

Text Six - Moles happy as homes go underground

(Cambridge Practice Tests for IELTS – Book One, p.64-5 – 852 words)

A The first anybody knew about Dutchman Frank Siegmund and his family was when workmen tramping through a field found a narrow steel chimney protruding through the grass. Closer inspection revealed a chink of sky-light window among the thistles. And when amazed investigators moved down the side of the hill they came across a pine door complete with leaded diamond glass and a brass knocker set into an underground building. The Siegmunds had managed to live undetected for six years outside the border town of Breda, in Holland. They are the latest in a clutch of individualistic homemakers who have burrowed underground in search of tranquillity.

B Most, falling foul of strict building regulations, have been forced to dismantle their individualistic homes and return to more conventional lifestyles. But subterranean suburbia, Dutch-style, is about to become respectable and chic. Seven luxury homes cosseted away inside a high earth-covered noise embankment next to the main Tilburg city road recently went on the market for \$296,500 each. The foundations had yet to be dug, but customers queued up to buy the unusual part- submerged houses, whose back wall consists of a grassy mound and whose front is a long glass gallery.

C The Dutch are not the only would-be moles. Growing numbers of Europeans are burrowing below ground to create houses, offices, discos and shopping malls. It is already proving a way of life in extreme climates; in winter months in Montreal, Canada, for instance, citizens can escape the cold in an underground complex complete with shops and even health clinics. In Tokyo builders are planning a massive underground city to be begun in the next decade, and underground shopping malls are already common in Japan, where 90 percent of the population is squeezed into 20 percent of the landscape.

D Building big commercial buildings underground can be a way to avoid disfiguring or threatening a beautiful or 'environmentally sensitive' landscape. Indeed many of the buildings which consume most land - such as cinemas, supermarkets, theatres, warehouses or libraries - have no need to be on the surface since they do not need windows.

E There are big advantages, too, when it comes to private homes. A development of 194 houses which would take up 14 hectares of land above ground would occupy 2.7 hectares below it, while the number of roads would be halved. Under several metres of earth, noise is minimal and insulation is excellent. 'We get 40 to 50 enquiries a week,' says Peter Carpenter, secretary of the British Earth Sheltering Association, which builds similar homes in Britain. 'People see this as a way of building for the future.' An underground dweller himself, Carpenter has never paid a heating bill, thanks to solar panels and natural insulation.

F In Europe, the obstacle has been conservative local authorities and developers who prefer to ensure quick sales with conventional mass-produced housing. But the Dutch development was greeted with undisguised relief by South Limburg planners because of Holland's chronic shortage of land. It was the Tilburg architect Jo Hurkmans who hit on the idea of making use of noise embankments on main roads. His two-floored, four-

bedroomed, two-bathroomed detached homes are now taking shape. 'They are not so much below the earth as in it,' he says. 'All the light will come through the glass front, which runs from the second floor ceiling to the ground. Areas which do not need much natural lighting are at the back. The living accommodation is to the front so nobody notices that the back is dark.'

G In the US, where energy-efficient homes became popular after the oil crisis of 1973, 10,000 underground houses have been built. A terrace of five homes, Britain's first subterranean development, is under way in Nottinghamshire. Italy's outstanding example of subterranean architecture is the Olivetti residential centre in Ivrea. Commissioned by Roberto Olivetti in 1969, it comprises 82 one-bedroomed apartments and 12 maisonettes and forms a house/hotel for Olivetti employees. It is built into a hill and little can be seen from outside except a glass facade. Patrizia Vallecchi, a resident since 1992, says it is little different from living in a conventional apartment.

H Not everyone adapts so well, and in Japan scientists at the Shimizu Corporation have developed 'space creation' systems which mix light, sounds, breezes and scents to stimulate people who spend long periods below ground. Underground offices in Japan are being equipped with 'virtual' windows and mirrors, while underground departments in the University of Minnesota have periscopes to reflect views and light.

I But Frank Siegmund and his family love their hobbit lifestyle. Their home evolved when he dug a cool room for his bakery business in a hill he had created. During a heatwave they took to sleeping there, 'We felt at peace and so close to nature,' he says. 'Gradually I began adding to the rooms. It sounds strange but we are so close to the earth we draw strength from its vibrations. Our children love it; not every child can boast of being watched through their playroom windows by rabbits.'

Appendix Four

The Motor Car – Note-taking Exercise



A. Situation

1. There are over _____ motor vehicles in the world.
2. This number is rising by over _____ per year.
3. Average distance driven by car users in Europe is increasing (Complete the table):

Year	Km / Day
1965	
	25

B. Problem

Dependence on vehicles → problems: (1) environmental pollution, (2) _____ of oil resources, (3) traffic congestion and (4) _____.

Improvement - _____ from new cars are less harmful.

BUT streets are becoming more → overcrowded → excessive fumes → poor even _____ air quality. E.g. _____ - vehicle pollution is major health hazard here.

The background. Until about 100 years ago, most journeys were within a _____ range, determined by the range of the _____. Heavy freight – transported by _____ or _____.

With the advent of the motor vehicle: (1) personal _____ and (2) rapid freight _____ over a wide area.

Now about 90% of inland _____ carried by road.

The situation in Europe. Cities still designed for old modes of _____.

The situation in the USA. More land is assigned to car use than to _____. It is almost impossible to live without a car because of _____.

Social effects:

1. Millions of people are killed or _____.
2. People blame the car for other social effects: e.g. alienation and _____ behaviour.

Comparison: Car/Rail. (Put ticks or crosses to show which has the advantage: the car or rail.)

	Car	Rail
Cost		
Convenience		

C. Solutions

Solution 1 – Technical solutions – reduce pollution and increase engine _____.

Evaluation of Solution 1. Problems:

1. People buy cars that are unnecessarily _____.
2. People waste fuel by _____ driving.
3. Global car use is increasing too fast.

Solution 2 – A long-term solution – design cities and _____ so that cars not needed. Advantages:

1. Save energy and cut carbon dioxide _____.
2. Improve _____.

Evaluation of solution 2. Most democratic communities do not have the _____ or the _____.

Solution 3 – Combine 3 modes of transport: (Complete the table.)

Type of Transport	Use
Mass transit systems	Travel around _____
'low emission' cars	Urban use
Larger _____ cars	For use elsewhere

Other possible solutions:

1. electronically _____ highways.
2. transport systems that are better _____.

BUT – these solutions will only suit _____ countries. Elsewhere, there will still be old cars and old _____.

Appendix Five

Instructions and Consent Form for Verbal Protocols

Instructions and Consent Form for Verbal Protocols

Name of Student _____

1. As a student at the Institute of Education (part of London University), I am doing some research into how students skim read. I hope the results will be helpful for other teachers and students. I would like you to do some reading for me and discuss it afterwards.
2. This will take about three-quarters of an hour. If you want to, you can stop at any time. That will not be a problem.
3. The conversation will be recorded and written down so that I can look at what you say in more detail. I will be the only person who hears the tape – and possibly my supervisor.
4. I may want to include something of what you say when I write up my research. Can I have your permission to use this? I will not use your name and it will only be used for work related to my research.

I give permission for comments from my interview to be used for Mr. Rodgers' research.

Signed _____

Appendix Six

Analysis of Interviews: Guidelines

Analysis of Interviews – Guidelines

Three types of points can be found and classified:

1. Strategies (S)
2. Facilitating Factors (FF)
3. Hindering Factors (HF)

Some guidelines:

1. How to distinguish between strategies and facilitating factors? The key point to remember about a strategy is that it is taken to be an *action* consciously taken by the reader. A facilitating factor is something that lies in the reading situation. It may relate to the text (the layout, the vocabulary etc.) or to the reader's situation in relation to it (e.g. the topic is familiar, the topic etc.)
2. The analysis is to be confined to what participants say about the two texts in question: Underground Homes and The Motor Car. References to the way participants usually read or to the way they read earlier texts in the series of tasks are not to be included. In addition, these thoughts must have occurred **WHILE READING** the text – not afterwards.
3. Factors need to be directly referred to as facilitating or hindering. For example, it is not enough for a participant to say the text was interesting. There must be a reference to this interest helping the reading process. However, if they answer that the structure is “easy to follow” that does constitute a facilitating factor.
4. If it seems that the same point is repeated in a different part of the protocol, it should still be counted as a new point. It may be slightly different or it may refer to a different text so it is worth including at this stage.

Appendix Seven

Marking Schemes for Summaries

Marking Schemes for Summaries

TMC

Target Point	Possible Score	Actual Score
1 There has been a massive increase in car use	3	
2 Unfortunate environmental consequences include unhealthy levels of pollution	3	
3 Possible solutions include better mass transit systems	3	
4 Problems will persist in developing economies	3	
5 The convenience of the motor vehicle means that its use will continue to increase	2	
6 Greater usage of motor cars is creating the major problem of safety	2	
7 Motor vehicles incur great social costs	2	
8 One solution is greater use of environmentally friendly cars	2	
9 There has been a massive increase in freight carried by road	1	
10 The rising number of cars is causing major environmental problems	1	
11 Greater usage of motor cars is creating the major problem of congestion	1	
12 Motor vehicles are preferred because of their flexibility	1	
13 Technical improvements to vehicles' efficiency cannot counteract increased usage	1	
14 Possible solutions of redesigning cities to fit pedestrians	1	
15 Introduce toll roads for longer journeys	1	
TOTAL	29	

UH

Target Point	Possible Score	Actual Score
1 Underground homes are gaining popularity	3	
2 They result in greater efficiency in land use	3	
3 Insulation is excellent	3	
4 Large public buildings function equally well underground	3	
5 Lack of natural light is not an issue	2	
6 It avoids disfiguring sensitive landscapes	2	
7 A Japanese company has even simulated the supra-terranean experience [especially with regard to windows]	2	
8 The effects of extreme climates are mitigated	2	
9 Building homes this way reduces noise – it is peaceful	1	
10 Underground homes are energy efficient – solar-powered	1	
TOTAL	24	

