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4 Construct validity in the IELTS Academic Reading test: A comparison of reading requirements in IELTS test items and in university study

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This study investigates suitability of items on the IELTS Academic Reading test in relation to the reading and general literacy requirements of university study, through a survey of reading tasks in both domains, and interviews with academic staff from a range of disciplines.

Click here to read the Introduction to this volume which includes an appraisal of this research, its context and impact.

ABSTRACT

The study reported here was concerned with the issue of test development and validation as it relates to the IELTS Academic Reading test. Investigation was made of the suitability of items on the test in relation to the reading and general literacy requirements of university study. This was researched in two ways – through a survey of reading tasks in the two domains, and through interviews with academic staff from a range of disciplines.

Tasks in the two domains were analysed using a taxonomic framework, adapted from Weir and Urquhart (1998), with a focus on two dimensions of difference: *level of engagement*, referring to the level of text with which a reader needs to engage to respond to a task (local vs global); *type of engagement* referring to the way (or ways) a reader needs to engage with texts on the task (literal vs interpretative).

The analysis found evidence of both similarities and differences between the reading requirements in the two domains. The majority of the IELTS tasks were found to have a 'local-literal' configuration, requiring mainly a basic comprehension of relatively small textural units. In the academic corpus, a sizeable proportion of tasks had a similar local-literal orientation, but others involved distinctly different forms of engagement, including tasks that required a critical evaluation of material (ie, more interpretative), or which stipulated reference to multiple sources (ie, more global). The study also found a good deal of variation in the reading requirements across the disciplines.

The results of the study are used to suggest possible enhancements to the IELTS Academic Reading test. A useful principle to strengthen the test's validity, we argue, would be to push test tasks, where possible, in the direction of those more 'global-interpretative' reading modes characteristic of academic study.

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1 INTRODUCTION

Reading has always been a key element of university study. There was a time in fact when the preferred terminology for studying in a subject area at university was 'reading the subject'. Nowadays, many recognise that it is the intelligent engagement with one's sources that more than anything else defines the quality of being academically literate. Taylor (2009), for example, sees most student endeavours in the academy – whether the writing of essays, or engaging with the content of lectures, or the discussing of ideas in tutorials and seminars – as emerging from a "conversation" with one's readings in a discipline (p 54). In the domain of language testing, the manifest importance of reading in university study is reflected in the prominence given to this skill area in the various language tests used by universities for the selection of students. Thus, in all the varieties of format found in the more widely-used language tests over the last 30 years (ELTS, IELTS, TOEFL), one single common element has been the use of a dedicated reading component.

Given the importance of reading within academic study, an issue of continuing interest for researchers and test developers is the validity of tests used to assess students' academic reading abilities. A test is said to be valid if it 'reflects the psychological reality of behaviour in the area being tested' (Hamp-Lyons, 1990, p 71). In the case of a test of academic reading proficiency, this validity relates to a number of different areas, including:

- task stimulus ie the texts that candidates engage with on the test
- task demand ie the test items, which prescribe certain types of interaction between the reader and text
- task processes ie the reader-text interactions that actually take place in the completing of the test (McNamara, 1999).

Previous IELTS validation research has seen strong emphasis placed on the first of these areas – the task stimulus component of the reading test (see for example, Clapham, 1996). Recently-commissioned research has also seen some attention given to task processes – in the work of Weir, Hawkey, Green and Devi (2009) into performance conditions on the test and how these might relate to the subsequent reading experiences of first year university students. To our knowledge, there has been limited validation work done in recent years on the second of these areas (one needs to go back to Alderson's 1990a; 1990b major work on the testing of reading comprehension skills) – that is, the task 'demands' of the current version of the reading test, and how much these might relate to the types of reading tasks and activities required of students on university programs.

The study described in this report investigated the suitability of test items in the Academic Reading Test in relation to the reading and general literacy requirements of university study. Specifically, the research sought answers to the following questions:

1. In what systematic ways can items on the IELTS academic reading module be analysed and classified?
2. What does a taxonomic analysis of test items reveal about the construct of reading underlying the IELTS academic reading module?
3. What is the degree of correspondence between the reading skills required on the IELTS test and those typically required on a range of undergraduate university programs?

Two methods were employed in the research: 1) a comparative analysis of IELTS test items and assessment tasks from a range of undergraduate courses; and 2) semi-structured interviews with academic staff involved in the teaching of courses covered in 1). Findings from the research are used to make suggestions about how the IELTS Academic Reading test could be adapted to make it more closely resemble the modes of reading required in formal academic settings.

2 REVIEW OF LITERATURE

The literature in the fields of reading research and reading assessment research is vast and complex. In the following section, we review briefly those areas thought to have particular relevance to the current study. These include the idea of construct validity; theoretical models of reading; and inventories of reading skills and strategies. We begin with a brief review of the IELTS Academic Reading test, including an account of some of the changes that have been made to the test over the 20 years of its use.

2.1 The IELTS Academic Reading test

The IELTS system in its current form provides two different reading tests: a general training module and an academic module. The general training module is designed for a variety of cohorts and assesses "basic survival skills in a broad social and educational context", while the academic module is said to "assess the English language skills required for academic study or professional recognition" (IELTS, 2007, p. iii). The present study is concerned only with the latter of these modules. According to test specifications, the skills tested in the IELTS Academic Reading test include: following instructions, finding main ideas, identifying the underlying concept, identifying relationships between the main ideas, and drawing logical inferences (cited in Alderson, 2000 p 206; IELTS, 1996).

An IELTS Academic Reading test is typically comprised of three sections (or testlets), each organised around a separate reading passage. These passages, which average about 750 words in length, are drawn from a range of sources including magazines, journals, books and newspapers, with topics designed to be of general interest, written for a non-specialist audience. Accompanying the reading passages are a range of tasks (40 in total) used to test students comprehension of material in the 60 minutes allocated. These tasks or techniques are characterised by IELTS (1996) as follows:

- multiple choice
- short answer questions
- sentence completion
- notes/summary /diagram/flow chart/table completion
- choosing from a heading bank for identified paragraphs/sections of text
- identification of writer's view/attitudes/claims
- classification
- matching lists
- matching phrases.

Alderson (2000) notes that an "interesting" feature of the IELTS Academic Reading test is its use of multiple methods to test understanding of any one passage. This is a strength he suggests because in real life, readers typically respond to reading texts in many different ways (p 206). The *Official IELTS Practice Materials* (2007) include the following range of tasks used with each reading passage:

Passage 1: section-summary match; gapped summary; true/false/not given

Passage 2: true/false/not given; information-category match; multiple choice

Passage 3: section-summary match; sentence completion

The IELTS Academic Reading test has been subject to several major changes since its introduction in 1989. The most important of these, the result of extensive monitoring and evaluation work in the early

1990s (eg Clapham 1996), saw the removal of subject-specific reading subtests, and the removal of the thematic link between Reading and Writing tests. The rationale for such changes has been extensively described in the IELTS literature (Charge & Taylor, 1997; Taylor, 2007). For example, the removal of the discipline specific component of the Reading Test was the outcome of findings that suggested that the range of subject-specific modules was not warranted, and that a single test did not discriminate for or against candidates from various disciplines (eg Taylor, 2007). The decision to separate the Reading from the Writing Test was based on the observation that candidates varied considerably in the extent to which they exploited reading material in the Writing Test, with the implications this had for test fairness. It was thought further that having this connection also increased the potential for confusing the assessment of writing ability and reading ability (Charge & Taylor, 1997).

As mentioned, the focus of the current study is exclusively on the reading tasks and not on the reading passages that accompany them. It does need to be acknowledged however, that having a separation of these components limits the perspective somewhat. This is for the reason pointed out by Alderson (2000, p 203) that there may be a relationship between the text type and the sort of task or technique that can be used with it. This idea will be returned to briefly in the concluding section of the report.

2.2 Construct validity

The present study is concerned with investigating the construct validity of the IELTS Academic Reading test. In terms of reading tests, 'construct validity' is a measure of how closely a test reflects the model of reading underlying the test. In other words, the concept of 'construct validity' is related to those abilities it is thought readers need to possess in order to handle the demands of the target language domain. In the case of the IELTS Academic Reading test, this domain is study at university level. Thus, if the ability to scan for specific information is considered an important part of university reading requirements, then the reading construct should include scanning and the test should diagnose the ability to quickly locate specific information (Alderson, 2000). Whilst construct validity is often associated with skills, another dimension is task structure. Bachman and Palmer (1996) suggest that a focus on the structure as well as the skills of target language use tasks might lead to the development of more 'authentic' test tasks (p.147).

The construct validity of a test is particularly important when the test is a large scale public test, and where there is a close connection between the operations of the test and the conduct of related educational programs. The construct validity of such tests thus has implications for curriculum and classroom practice through the so-called 'test washback' (Alderson and Wall, 1993). As Messick (1996, p 252) points out:

> "[i]f important constructs or aspects of constructs are underrepresented on the test, teachers might come to overemphasise those constructs that are well-represented and downplay those that are not."

Washback is considered harmful then when there is a serious disjunct between a test's construct of reading and the broader demands of real world or target language tasks.

The IELTS test is an example of a public test that is used to make crucial decisions about large numbers of people – whether they are eligible for English-speaking university entrance or not based on their English language abilities. An increase in the numbers of international students wanting to study at English-speaking universities and a concomitant increase in the number of universities requiring IELTS scores has led to a significant expansion of the IELTS test in recent years. This in turn has resulted in IELTS preparation programs being an important focus of many EAP courses taught in language centres throughout the world (Saville and Hawkey, 2003; Read and Hayes, 2003). The increased influence of IELTS and possible concerns about test washback suggest the need for, in this case, the reading construct underlying the test to be firmly based on a thorough understanding of the nature of reading demands in university study. It is this issue – the importance for the reading test

to be as authentic as possible given practical and other constraints – that has motivated the present study.

2.3 Dimensions of reading

The current project is framed within broad theories of reading. Central to these are differing views about the nature of textual meanings and the relationships that exist between these meanings and the reader of a text. The more traditional view – the 'transmission model' – sees texts embodying relatively stable, objective meanings, ones that a proficient reader is able to locate and reproduce. Carroll (1964), for example, characterises reading as "the activity of reconstructing the messages that reside in printed text". This conception of reading as the finding of pre-existent meanings is arguably the predominant construct in many reading comprehension tests, especially those that rely heavily on multiple choice formats (Hill & Parry, 1992; Alderson, 2000).

An alternative view, one that has gained increasing acceptance in many areas of the academy (particularly in education and in some branches of the humanities) is to see texts as having no single definitive meaning, but rather the potential for a range of meanings, ones that are created through the engagement of individual readers. As Widdowson (1979) states, "since conceptual worlds do not coincide, there can never be an exact congruence of coder's and encoder's meanings" (p 32). Despite the growing acceptance of 'receptionist' theories of meaning, there appears to be a reluctance – even on the part of more committed post-modernists – to accept fully the logical consequences of this position – namely, that *any* subjective account of the meaning of a text may ultimately be valid. It is the view of the researchers that both a strong receptionist and a strong transmissionist position represent rather idealised accounts of reading, and are best thought of as end points on a continuum of more reader-oriented and more text-oriented perspectives on meaning.

Related to these broad definitions of reading are differing ideas about what the processes of reading are thought to involve. Traditionally, accounts in this area have tended to aggregate around two broad approaches: bottom-up 'information processing' (with a focus on the processing of more micro-level constituents of texts – letter, words, phrases, sentences etc); and top-down 'analysis-by-synthesis' (with a focus more on macro-level constituents – genre, text structure, as well as the role of background schematic knowledge etc). Recently, there has been a move towards a more interactive, hermeneutic approach, one that assumes a degree of bi-directionality in these processes (Hudson, 1998). In the current project, research in the area of reading processes was useful as a way of identifying the type(s) of processing that test items appear to be principally concerned with, and also the levels of texts.

2.4 Frameworks used in reading assessment studies

Much of the research into the nature of reading in different domains has relied on taxonomies that seek to divide reading practices into a variety of skills and sub-skills. Particularly influential among these has been Munby's (1978) list of general language skills, used both for the purposes of syllabus and material design, as well as for the design of tests. In a list that he described at the time as "not exhaustive", Munby distinguished a total of 266 skills – sub-categorised into 54 groups, including such reading specifics as:

- understanding the communicative value (function) of sentences and utterances with explicit indicators
- understanding relations between parts of texts through grammatical cohesion devices of reference, comparison etc
- scanning to locate specifically required information: a single point/more than one point involving a simple search.

Amid the complexity of Munby's scheme, it is possible to detect a basic division between reading skills that are involved in the simple comprehension of texts (eg *understanding explicitly stated information* p 126), and those involving interpretation of some kind (eg *interpreting text by going outside it* p 128).

In recent years there have been efforts to pare such taxonomies down to a more manageable catalogue of skills (eg Carver 1997; Grabe & Stoller, 2002). Carver (1997), for example, recognises five basic elements: 'scanning', 'skimming', 'rauding', 'learning' and 'memorising'. Rauding is defined as a 'normal' or 'natural' reading, which occurs when adults are reading something that is relatively easy for them to comprehend (Carver, 1997, pp 5-6). For Grabe and Stoller (2002), the activity is best captured under seven headings:

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

One notes that this latter list takes on a slightly simplified form in a recent study conducted for the TOEFL reading test (Enright *et al*, 2000):

1. Reading to find information (or search reading)
2. Reading for basic comprehension
3. Reading to learn
4. Reading to integrate information across multiple texts

Of the various taxonomies developed, the most useful for the present project was thought to be that proposed by Weir and Urquhart (1998), and used in another recent study into the IELTS Academic Reading test conducted by Weir *et al*. (2009). Rather than compile a list of discrete skills, Weir and Urquhart construct their taxonomy around two dimensions of difference: reading level and reading type. For reading level, a distinction is made between reading processes focused on text at a more global level, and those operating at a more local level. For reading type, the distinction is between what is termed 'careful' reading and 'expeditious' reading, the former involving a close and detailed reading of texts, and the latter "quick and selective reading … to extract important information in line with intended purposes" (Weir & Urquhart, 1998, p 101). The 'componential matrix' formed by Weir and Urquhart's two dimensions has the advantage of being a more dynamic model, one that is capable of generating a range of reading modes.

In the literature on reading taxonomies, one notes a degree of slippage in what construct it is exactly that is being characterised. Most commonly, it is one of reading 'skill' (eg, Munby), but an assortment of other terms and concepts are typically used, eg, 'processes' (Carver, 1997), 'purposes' (Enright *et al*, 2000, Weir *et al*, 2009), 'strategies' (Purpura, 1998). Such terms, which are arguably somewhat inchoate in nature, all refer in some way to the putative abilities or behaviours of readers. In the present project, the construct we are dealing with is not related to any qualities of the readers as such. Rather the focus is on some entity that is external to the reader – the reading task. In this way, the preferred construct for the project is one of 'activity', or rather of 'prescribed activity'.

3 METHOD

In this section, we outline the analytical framework used in the research, the disciplines investigated, and the nature of the data that was collected and analysed in the study.

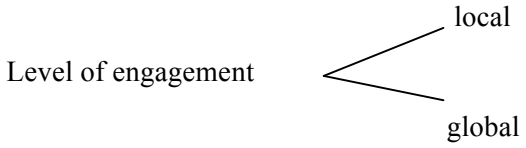
3.1 Towards an analytical framework

The approach adopted for the development of the analytical framework was a syncretic one, drawing initially on both IELTS tasks and academic tasks to establish broad dimensions of difference between reading tasks and then to refer to relevant theoretical frameworks later to refine the classification scheme. The method followed was similar to the one adopted in a similar validation study of the IELTS writing test conducted by several members of the research team (Moore & Morton, 2007). The framework that was used ultimately was derived in large part from the componential schema of Weir and Urquhart (1998), described in the previous section.

Dimension 1: Level of engagement

The first dimension used was what we term 'level of engagement' with text. For our study of IELTS and academic reading tasks, this dimension refers to how much of a text (or texts) a reader is *required* to engage with in the performing of a prescribed task. It was noted in our preliminary survey of reading tasks that some tasks were focused on quite circumscribed (or 'local') sections of a text (eg, single sentences, or groups of sentences), whilst in others, there was a need to appraise larger textual units (eg a series of paragraphs, or a whole text). The most extensive 'level of engagement' related to those tasks that required engagement with a number of different texts.

For this dimension of reading tasks, the following two broad categories were used after Weir and Urquhart (1998), and Hill and Parry (1992).



As Weir *et al*. (2009) note, different types of reading activities are, of their nature, either more local or more global in their orientation. Thus, for example, the act of 'scanning' (ie locating specific information within a text) has a more local focus; on the other hand, the act of 'skimming' (ie obtaining an overview of a text) is necessarily a more 'global' form of reading.

Dimension 2: Type of engagement

Our second dimension – 'type of engagement' – involved an adaptation of the Weir and Urquhart (1998) schema. Whereas their categories of 'careful' and 'expeditious' readings refer arguably to the reading 'strategies' (or 'processes') that students may adopt, our focus on academic tasks meant that the interest was more on what was needed to be done with texts, that is to say the prescribed outcomes of the reading. In our preliminary observations of tasks in the two domains (IELTS and academic study), it was clear that different tasks called for different types of readings. Sometimes, for example, the requirement was simply one of understanding the basic contents of a text; in other instances, readers needed to bring a more personal response to material.

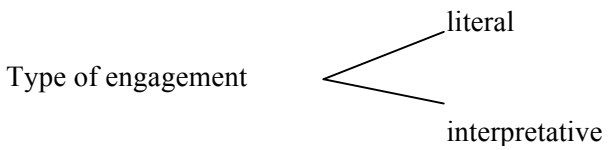
In developing this dimension, the study drew initially on the distinction traditionally made in linguistics between semantic and pragmatic meaning. The semantic meaning of a text is typically characterised as the sum of the individual propositions contained within it; pragmatic meanings, on the other hand, refer to those meanings that emerge from the relationship between the text and the context of its production (Yule, 1996). As Yule (1996, p 4) explains it, whereas semantics is concerned with the literal meanings of sentences, pragmatics is concerned with probing less tangible qualities, such as "people's intended meanings, their assumptions, their purposes or goals, and the kind of actions they are performing when they speak [or write]."

Related to acts of reading, a broad distinction can be made in this way between a focus on what a text *says* (semantic meaning), and what a text *does*, in saying what it says (pragmatic meaning). To illustrate this distinction, Taylor (2009, p 66) cites the following short text sample from a French History textbook:

> *The winter of 1788-9 was a very harsh one in France, inflicting untold misery on the peasants. The revolution broke out in July 1798.*

These two sentences, as Taylor explains, can be read 'literally' ie as a sequence of propositions about events in late 18th century France (a semantic reading); or they can be read more 'interpretatively'; in this case, as an attempt by the author to *explain* events ie to see the first event as a cause for the second (a pragmatic reading). Taylor (2009) suggests that while both types of reading are important in the context of academic study, it is the latter mode – the more interpretative readings – that is often missing in accounts of the types of reading students typically need to do in their studies.

This basic distinction in the way one might engage with a text (or be required to engage) provided the second category of our framework as shown in the figure below. A similar basic distinction is often drawn in the broader area of learning theory, where engagement with materials is seen to divide between such binaries as surface vs deep learning (Marton & Saljo, 1976), higher and lower order skills (Bloom, 1956), reproductive vs. analytical (Ballard & Clanchy, 1991), critical and non-critical approaches to knowledge (Ennis, 1987):



Whereas the 'literal' element of our binary refers to the unitary act of comprehending the propositional content of a text, there are arguably many different ways that one might engage with texts 'interpretatively'. These might include, for example, as Alderson (2000, p 320) suggests:

- identifying the function of a piece of writing
- recognising an authors presuppositions and assumptions
- distinguishing fact from opinion
- recognising an intended audience and point of view.

Catherine Wallace (1999, p 109), working within a more 'critical literacy' paradigm, provides a different list of skills, including:

- understanding the hidden messages in texts
- identifying how texts persuade one to behave or think
- appreciating how texts are written for different audiences
- appreciating how texts might be read in different ways by different audiences

The present study resisted any effort to draw up a definitive, *a priori* list of these interpretative modes, and indeed to try to establish any hierarchical relationship between them. Instead, the approach employed was to rely on the broad brush distinction drawn between 'literal' and 'interpretative' forms of reading, and to assess whether reading tasks set for students (either on the IELTS Academic Reading test, or in academic study) seemed, on the face of it, to require more of one form of engagement than the other.

Summary of analytical framework

The two dimensions of the analytical framework – *level of engagement* and *type of engagement* – are represented on the matrix shown in Figure 1 below. The *level of engagement* dimension, which describes a continuum from more 'local' to more 'global' engagement, refers to the level of text with which a reader needs to engage to respond to a task. At the extreme left of the axis (most local) would be tasks requiring engagement at the level of 'word'; at the extreme right of the axis (most global) would be tasks requiring engagement with multiple texts.

The *type of engagement* dimension, which describes a continuum from more 'literal' to more 'interpretative' engagement, refers to the way (or ways) a reader needs to engage with a text to respond to a task. At the top of this axis (most literal) would be tasks requiring a basic comprehension of textual material; at the bottom of the axis (most interpretative) would be tasks requiring a highly critical, and personal engagement with texts.

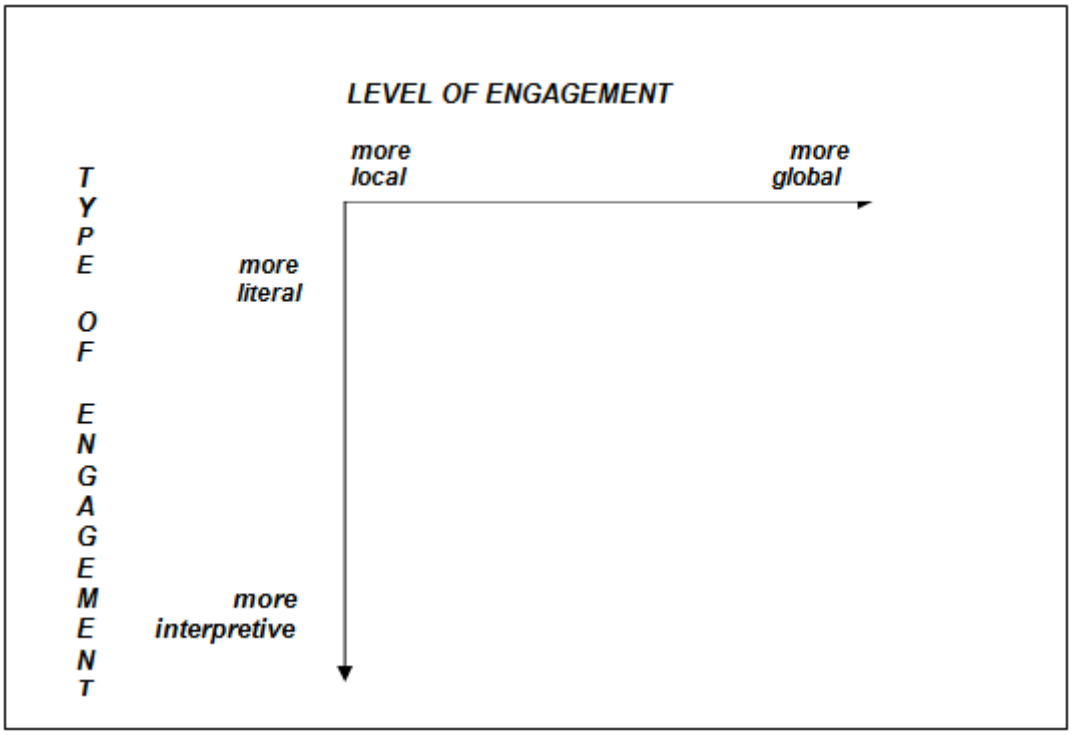


Figure 1: Analytical framework used in the study

To demonstrate the use of the analytical framework, a number of reading-related tasks are outlined in Table 1 below, with an analysis of each according to the two dimensions of the schema. In Figure 2 below we have shown how such tasks might then be plotted on the two continua of the matrix.

	SAMPLE READING-RELATED TASK	*ANALYSIS*
S1	answering a comprehension question relating to a single piece of information	HIGH LOCAL HIGH LITERAL
S2	explaining the connotative meaning of a word in a text	HIGH LOCAL HIGH INTERPRETATIVE
S3	compiling a bibliography of texts related to a specific subject	HIGH GLOBAL HIGH LITERAL
S4	preparing a critical review of the literature on a specific subject	HIGH GLOBAL HIGH INTERPRETATIVE
S5	summarising a single text	MID LOCAL/GLOBAL MID LITERAL/INTERPRETATIVE

Table 1: Analyses of sample reading activities using analytical framework

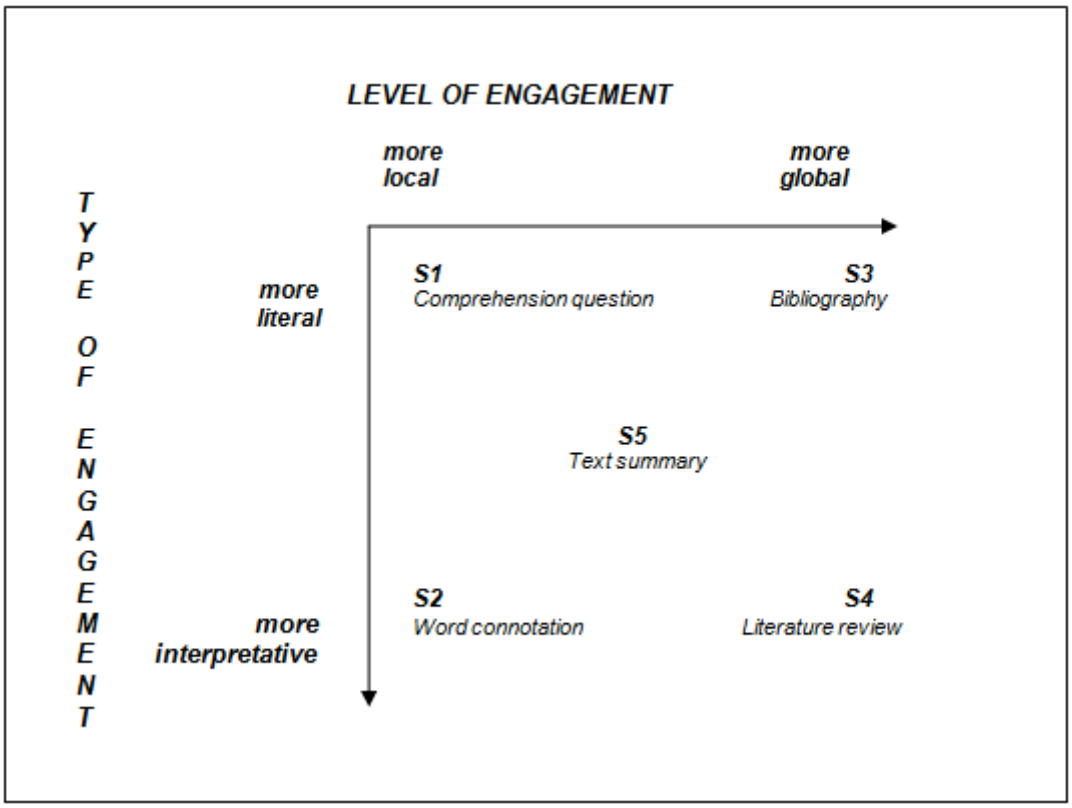


Figure 2: Plotting of sample reading tasks on matrix

Whilst the two dimensions used in the study were conceived of as separate features of reading tasks, it was noted in our preliminary survey of data that there was often an inter-relationship between the two. Thus, a general pattern was observed that if tasks were highly 'local' in their focus, it was often the case that a more 'literal' form of engagement was required. Similarly, for those tasks which took in larger more 'global' textual units, the tendency was for the engagement to be pushed more towards the 'interpretative' end of our continuum.

3.2 Disciplines investigated

To obtain a picture of reading requirements across the academy, data were collected from two different universities, and from a variety of disciplines. One of the institutions was a long-established Australian university offering programs of a more traditional nature; the other was what is characterised as a 'new generation' university with a focus on more vocationally-oriented programs. Becher's (1989) matrix of hard-soft/pure-applied disciplines was used to ensure sampling from a cross-section of disciplines. Becher's typology groups academic disciplines on the basis of research methods and attitudes to knowledge. Whilst the disciplines selected in our study fit neatly within the four groupings (see Table 2), it is acknowledged that boundaries between groups may not be as clear-cut as a typology such as this suggests (see also Becher, 1989).

	PURE	APPLIED
HARD	Physics Biology Economics	Engineering Computer Science Architecture
SOFT	Media Studies Linguistics History	Business Studies Management Communications

Table 2: Disciplines investigated in study: Becher (1989) taxonomy

DISCIPLINE	TITLE OF SUBJECT
Physics	Life sciences and environment
Biology	Genetics and the Evolution of Life
Economics	Macroeconomics
Media Studies	The Media in Australia
Linguistics	Intercultural Communication
History	Contemporary History
Engineering	Engineering Systems Design
Computer Science	Informatics – Practical Computing
Architecture	Constructing Environments
Business Studies	Deriving Business Value
Management	Business in the Global Economy
Communications	Professional Writing

Table 3: List of disciplines and subjects

Within the 12 discipline areas covered, a single subject in each was selected for investigation (Table 3). All subjects were offered at first year undergraduate level, and were selected partly on the basis of their having relatively high enrolments of students from second language backgrounds. Whilst these subjects were chosen as representative of their discipline area, it is acknowledged that any single subject can only ever cover a portion of the intellectual content and educational practices of the parent discipline as a whole.

3.3 Data and procedure

The study was mainly qualitative in nature involving the use of two research methods: an analysis of tasks (both IELTS and academic tasks) and interviews with academic staff. This combination of methods fits roughly with what Swales (1998) calls 'textography' – described as "something more than a disembodied textual or discoursal analysis, but something less than a full ethnographic account" (p 1).

IELTS task survey

A corpus of IELTS Academic Reading test samples was compiled for the study. These were from two sources: 1) the official IELTS Practice Test (IELTS, 2007); and 2) practice test material published by Cambridge University Press (see Appendix 1 for list of corpus materials). It is understood that the CUP materials are made up partly of retired official materials, and so were thought to reflect better than many other commercial materials the actual nature of the official test. No live reading test materials were available to the study. A total of 13 complete tests were investigated, each made up of a variety of task types.

Reading tasks were analysed by the researchers according to the two dimensions of the study's analytical framework ie the 'level' and 'type' of engagement. Whilst a degree of interpretation invariably enters into any analysis of this kind, some objectivity was achieved on the study by having each researcher analyse tasks independently, and then for a consensual analysis to be arrived at through processes of moderation.

Academic task analysis

To compile data for the university component of the study, lecturers from the 12 selected disciplines were contacted and invited to participate in the study. Participation involved initially the passing on of course reading and assessment materials, and then later being interviewed about these materials. A provisional analysis was made of the assessment tasks drawing on the same analytical framework used in the IELTS analysis. This analysis was also subject to processes of moderation.

Academic staff survey

As a follow-up to the task analysis, interviews were conducted with the twelve participating staff. Prior to the interviews, a schedule of questions was sent to interviewees (see Appendix 2), along with a sample of IELTS Academic Reading test materials. The IELTS materials were selected so as to cover a representative sample of test tasks (see Appendix 2).

The interviews were divided into three main phases, covering:

- general reading requirements on courses
- reading requirements on specific assessment tasks
- perceptions regarding the degree of correspondence between the academic reading requirements and those on the IELTS reading text.

The interviews were semi-structured and followed the procedure known as the 'discourse-based interview' (Odell, Goswami & Herrington, 1983). Such a procedure involves discussion with interviewees about specific text samples – in this case, the course materials provided by the lecturers and the sample IELTS Academic Reading test items. The interviews ran for an average of one hour. All interviews were audio-recorded, and transcribed. The main themes and ideas to emerge from our informants' commentaries are presented in Section 4.2.

The interview extracts presented throughout the report are in the main verbatim transcriptions of the interviews. In some instances, there has been some minor cleaning up of the text for the purpose of

removing any extraneous features – false starts, hesitations, fillers and the like. As in Swales' (1998) study, the intention here was to make some small improvement to the readability of the spoken discourse of informants (p 26) while at the same time seeking to be faithful to the substance of their talk.

4 FINDINGS

The bulk of the research report is devoted to describing the findings of the study. In the first part of this section, findings from the IELTS task analysis are described. In the second part, we outline the findings from the academic task analysis and interviews.

4.1 IELTS reading tasks

The IELTS corpus compiled for the study consisted of a total of 13 tests, with each of these tests made up, on average, of three reading testlets (ie organised around three separate reading passages). In all, the total number of reading tasks across the corpus was 108, comprising 494 individual items.

A preliminary analysis found a variety of task types, with some featuring regularly in the corpus, and others less so. Table 4 lists the different task types identified, along with their relative frequencies. The figures in the left hand column show the total number of uses of each task type in the corpus, and those in the centre column, the total number of items under each of these types. Thus in the table, we can see for example, that the *True/False/Not given* format was used 23 times in the corpus, which included a total of 130 individual items (an average rate of 5.6 items per use of task type – see right hand column). Note that the order of frequency of task types in the table is based on the 'total number of items' – see centre column.

Task type:	*No of occurrences of task type in corpus (% in bracket)*		*Total no of items under task type (% in brackets)*		*Average no of items per use of task*
True/False/Not given	23	(21)	130	(26)	5.6
Section-summary match	18	(17)	80	(16)	4.4
Gapped summary	14	(13)	78	(16)	5.6
Information-category match	12	(11)	61	(12)	5.1
Multiple choice	15	(14)	47	(10)	3.1
Short answer	8	(7)	33	(7)	4.1
Other (eg sentence completion, information transfer etc.)	18	(17)	65	(17)	3.6
Total	108	(100%)	494	(100%)	4.6

Table 4: Task type by frequency

In what follows, a description is provided for each of the task types identified, along with discussion of how each relates to the 'level of engagement – type of engagement' dimensions used for the analysis. Most space is devoted to describing and analysing the more frequently- occurring types. It is noted that in the corpus assembled for the study, the first three task types – *True/False/Not given*, *Section-summary match*, *Gapped summary* – accounted overall for more than half of the total items (57%). The category 'Other' shown at the bottom of the table included a range of additional task types, with each of these constituting less than 5% of items. No individual discussion is provided for these task-types.

4.1.1 Type 1: True/False/Not given

The most common task-type was *True/False/Not given*, accounting for about a quarter of all items (26% – see Table 4). In this format, test-takers typically needed to evaluate the truth status of summary information derived from the reading passage. In all cases in the corpus, this information was found to be in the form of a single sentence, and was normally related to a cognate sentence (or part of a sentence) from the reading passage. In those cases, where the true or false options applied, the sentence was typically constructed either as a synonymous (or near synonymous) paraphrase version of the related information from the passage, or was divergent in meaning in some way (eg. in a contradictory relationship). The exceptional case was the 'Not given' option, where the prompt was a proposition not included in the reading passage.

Sample 1:1 below is an example of the *True/False/Not given* task format, showing several sample items. Included in the sample are extracts from the associated reading passage showing relevant content for each item. Examples of both 'true' and 'false' formats are shown.

An alternative wording for this task-type noted in the data was to use *Yes/No/Not given* options rather than *True/False/Not given*. Thus, instead of writing true/false "if the statement agreed with /contradicted the information", test-takers were asked to write yes/no. There would appear to be no substantive difference in these variable rubrics.

True/False/Not given task

Do the following statements agree with the information given in the reading passage?

On your answer sheet write:

TRUE	if the statement agrees with the information
FALSE	if the statement contradicts the information
NOT GIVEN	if there is no information on this

1. It has been suggested that children hold mistaken views about the 'pure' science that they study at school.

Relevant material from reading passage

Many studies have shown that children harbour misconceptions about pure curriculum science …

Correct response: TRUE

2. The plight of the rainforest has largely been ignored by the media.

Relevant material from reading passage

Despite the extensive coverage in the popular media of the destruction of the rainforests, little formal information is available about children's idea in this area.

Correct response: FALSE

Sample 1.1: **True/False/Not given *task*** *(Sample 1:1 denotes that this is a Type 1 sample (ie, True/False) and that this is the first sample of this type)*

Level of engagement

With respect to text 'level', it is noted that in the design of these tasks, the single sentence proposition contained in the prompt generally matches with a semantic unit of similar length in the passage, as seen in the first item above. This was not always the case however. In the second item above, for example, it is noted that whereas the prompt is a single sentence:

> The plight of the rainforest has largely been ignored by the media.

the cognate information in the reading passage is realised in a smaller grammatical unit – a noun phrase:

> Despite extensive coverage in the popular media of the destruction of the
>
> rainforests …

The process was also found to work the other way, where the relevant information in the reading passage stretched over a larger grammatical unit than the prompt. In the following example (Sample 1:2), which shows 'agreement' between prompt statement and text, it can be seen that the relevant components of the prompt statement occur inter-sententially in the passage (shown in bold).

Prompt statement:

The approach to health during the 1970s included the introduction of health awareness programs.

Relevant material from reading passage:

> **The 1970s** was a time of focusing on the prevention of disease and illness by emphasising the importance of lifestyle and behavior of the individual. Specific behaviours which were seen to increase risk of disease, such as smoking, lack of fitness, and unhealthy eating habits, were targeted. **Creating health meant providing not only medical health care but health promotion programs** and policies which would help people maintain healthy behaviours and lifestyles.

Correct response: TRUE

Sample 1.2: Example of information occurring inter-sententially in* True/False/Not given *format

Overall, however, it was found that most tasks of this type required engagement at or around sentence level. Accordingly in the analysis, such tasks were assigned to the more local end of the local-global continuum.

In performing such an analysis, one also needs to consider the additional component of the task – adjudicating on the 'not-given' option. This component suggests engagement at a different textual level. To establish whether certain information is or is not contained within a text requires some appraisal of the content of the whole text, and so for this component, the engagement is judged to be at a more global level.

Type of engagement

The type of engagement required for the completion of *True/False/Not given* tasks is one of establishing the semantic relationship between two discrete units of information (one in the prompt, and a cognate one that needs to be located by the test-taker in the passage), and to decide whether the relationship is one of synonymy or non-synonymy (eg contradiction). The additional component of the task requires one to establish whether the propositional content of the prompt does in fact occur in some form in the reading passage – consideration of the 'not-given' option. Where this option applies, the task is thus one of detecting a lack rather than a presence.

The specific features of this task type – the need to establish the presence of certain propositional content in a text, and then to establish the relationship between this content and a variant version of it – suggest a strongly 'literal' engagement with reading material. Accordingly, this task type was assigned to the higher end of the 'literal–interpretative' continuum.

The preceding analysis gives the configuration shown in Figure 3 below (*T1a* refers to the 'True/False' component of the task, and *T1b*, the 'Not Given')

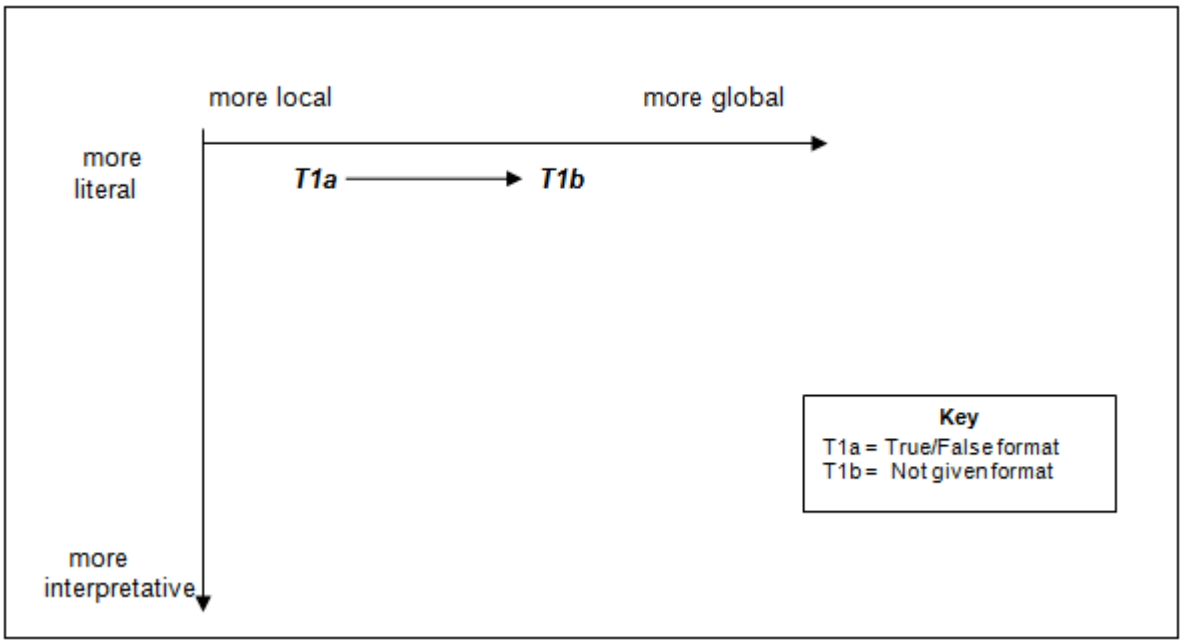


Figure 3: Analysis of* True/False/Not given *task type

4.1.2 Type 2: Section–summary match

Section-summary match tasks were the second most common format, accounting for 16% of items in the corpus (Table 4). In this format, the task for test-takers was to match a section of the reading passage (usually a paragraph) with a statement that summarised the principal content of that section. An example of this format is shown below (Sample 2:1).

Section – summary match

Choose the correct heading for sections A-E from the list of headings below. Write the correct number i-x on your answer sheet.

List of Headings

i) Contrary indications

ii) Europe's Alpine glaciers

iii) Growing consensus on sea level

iv) Causes of rising sea levels

v) Sea level monitoring difficulties

vi) Group response to alarming predictions

vii) The world 130,000 years ago

etc

Relevant section from reading passage:

RISING SEA LEVELS

SECTION A

During the night of 1st February 1953, a deadly combination of winds and tide raised the level of the North Sea, broke through the dykes which protected the Netherlands and inundated farmland and villages as far as 64 km from the coast killing thousands. For people around the world who inhabit low-lying areas, variations in sea levels are of crucial importance and the scientific study of oceans has attracted increasing attention. Towards the end of the 1970s, some scientists began suggesting that global warming could cause the world's oceans to rise by several metres. The warming, they claimed, was an inevitable consequence of increasing carbon dioxide in the atmosphere, which acted like a greenhouse to trap heat in the air. The greenhouse warming was predicted to lead to rises in sea level in a variety of ways. Firstly heating the ocean water would cause it to expand. Such expansion might be sufficient to raise the sea level by 300mm in the next 100 years. Then there was the observation that in Europe's alpine valleys, glaciers had been shrinking for the past century. Meltwater from the mountain glaciers might have raised the oceans 50mm over the last 100 years and the rate is likely to increase in the future. A third threat is that global warming might cause a store of frozen water in Antarctica to melt, which would lead to a calamitous rise in sea level of up to five metres.

Correct response: iv) Causes of rising sea levels

Sample 2.1: **Section – summary match** ***item***

It is noted that in this particular sample, the summary information is given as a 'List of headings' (ie *Contrary indications*; *Europe's alpine glaciers*; *Growing consensus on sea level* etc), with the correct heading in this case being option iv) – *Causes of rising sea levels*.

A variation on this theme noted in the corpus was for the 'headings' category not to be used for the summary text, but instead for this material to be constructed in a more extended form. In these instances, prompts were designated 'information', as shown in Sample 2:2 below (emphasis added). Note that the relevant option for the reading passage extract is ii) *Predictions regarding the availability of the synthetic silk.*

Section – summary match 2

Reading passage 1 has nine paragraphs, A - I

Which paragraph contains the following **information**?

i) A comparison of the ways two materials are used to replace silk-producing glands

ii) Predictions regarding the availability of the synthetic silk

iii) Ongoing research into other synthetic materials

iv) The research into the part of the spider that manufactures silk

v) The possible application of the silk in civil engineering

Sample section from reading passage for option ii)

SPIDER SILK CUTS WEIGHT OF BRIDGES

SECTION H

At Du Pont's laboratories, Dorsch is excited by the prospect of new super-strong biosilk materials, but he warns they are many years away. "We are at an early stage but theoretical estimates are that we will wind up with a very strong, tough material, with an ability to absorb shock, which is stronger and tougher than man made materials that are conventionally available to us", he says.

Sample 2.2: **Section – summary match** ***item, using 'information' rubric***

The two samples provided above point to an additional variation in the *Section – summary match* format. This relates to the relative number of summary prompts and sections. Thus, for example, in Sample 2:1 above the number of summary prompts exceeds the number of sections, whilst in Sample 2:2, the ratios are reversed, with sections outnumbering prompts. This variation has implications for the process by which section and summary are matched up. In the former case (greater number of prompts), the process requires consideration of the text sections first, followed by identification of the appropriate summary prompt from the list given. In the latter case (greater number of sections), the

sequence is reversed, with test-takers needing to begin with the summary prompt and then to match each of these up with the appropriate section of the text.

Level of engagement

As the designated name of this task type indicates (ie *Section – summary match*), the level of engagement in this format is clearly at a supra-sentential level. In almost all cases in the corpus, the unit of text to be negotiated in the completion of tasks was the paragraph. Some variation was noted regarding the length of these paragraphs. In Sample 2.1 above, for example, the relevant paragraph is 10 sentences long (240 words); in sample 2.2 it is considerably shorter, running to only 2 sentences (67 words). In the whole corpus, the average paragraph length was 5 sentences. Overall for this task type, we can say that the level of engagement is on a more 'global' scale than for the *True/False* format analysed in the previous section (see Figure 4).

Type of engagement

To complete *Section – summary match* tasks, test-takers need to be able to match up a putative summary of a section of text with the propositional content of this section. A feature of these summaries is their tendency to draw on a number of broad rhetorical categories eg cause and effect, comparison, prediction etc (Trimble, 1985). Thus, in Sample 2:1, we saw that the relevant rhetorical category for the section of text in question was 'causality' (*Causes of rising sea levels*); in Sample 2:2, this category was 'prediction' (*Predictions regarding the availability of the synthetic silk*).

The task for test-takers then, in many instances, is to be able to recognise the connection between the content of the designated section of text, and this broader rhetorical unit around which the summary prompt is structured. In the case of sample 2:1, this requires drawing a semantic link between the category of 'causation' in the prompt, and various 'causal' elements in the text – for example, i) certain key lexis (eg *cause*, *consequence*, *threat*) and ii) key structures (eg *Y would lead to a calamitous rise in sea level*). Similarly, in Sample 2:2, the task is to be able to recognise how key lexical items such as *prospect*, *warning*, as well as future time constructions – eg *we will wind up with a very strong, tough material* – equate to the rhetorical category of 'prediction'. We note in passing the wide range of rhetorical functions used in the constructing of the summary prompts. The more prominent of these identified in the corpus are shown in Table 5, along with prompt samples for each category.

Rhetorical category	*Sample prompt*
Definition	*Definition of health in medical terms*
Role	*The role of the state in health care* *The role of video violence*
Importance/significance	*Relative significance of trade and service industry* *The importance of taking notes on body language*
Comparison	*A comparison of the ways two materials are used to replace silk-producing glands*
Causes/reasons	*Causes of volcanic eruptions* *Reasons for the increased rate of bullying*
Impacts/effects	*The impact of the car on city development* *The effects of bullying on children*
Changes	*Changes to concepts of health in Western society*
Problems/difficulties/ failures	*Sea level monitoring difficulties* *The failure of government policy*
Merits/benefits	*The relative merits of cars and public transport* *The benefits of an easier existence*
Reactions/responses	*Group response to alarming predictions* *Reaction of Inuit communities to climate change*
Methods/approaches	*Holistic approach to health*
Predictions	*Predictions regarding the availability of the synthetic silk*
Views/consensus	*The views of the medical establishment* *Growing consensus on sea level*
Suggestions/ recommendations	*A suggestion for improving trade in the future*

Table 5: Rhetorical categories used in summary prompts

For this type of engagement, the moving between propositional content and summary, or what van Dijk and Kintsch (1983) call a mediating of 'micro- and macro-processes', is analysed as an 'interpretative' form of reading, or at least a more interpretative one than was seen in the *True/False/Not given* format discussed previously. The task for test takers in the *Section–summary match* format does not involve identifying a one-to-one correspondence between propositions as we saw in Task Type 1, but instead requires a 'pragmatic' understanding of material of the type identified by Taylor (2009 – see section 3.1). On the 'literal-interpretative' continuum on our grid, the generic *Section–summary match* task is therefore placed somewhat below the first task type (See Figure 4).

Regarding the degree of 'interpretative-ness', a variation in the design of *Section – summary match* tasks deserves brief comment here. Whereas most summary prompts were typically realised in a neutral, academic style; it was observed that in some instances a more idiomatic, 'journalistic' style of heading was used. Examples of this latter style are shown in Sample 2:3 below. (In this case the prompts relate to a reading passage describing the function of different types of security devices).

List of Headings
i) Common objectives
ii) Who's planning what
iii) This type sells best in the shops
iv) The figures say it all
v) Early trials
vi) They can't get in without these
vii) How does it work?
viii) Fighting fraud

Sample 2.3: Journalistic-style headings used in Section-summary match *task*

These more journalistic-style headings are notable in the first instance for their lack of reference to the larger rhetorical units evident in many of the other prompt samples (eg *cause*, *prediction* etc). Other distinguishing linguistic features include the use of:

- a range of syntactic structures ie noun phrases (eg *Fighting fraud*, *Common objectives*); full sentences (eg *This type sells best in the shops*); question forms (eg *How does it work?*)
- more idiomatic phrasing or 'prefabs' (eg *The figures say it all*, *Accepting the inevitable*) and
- inexplicit pronominal reference (eg *They can't get in without these*).

A number of writers have commented on the challenges generally involved in interpreting journalistic language (Nwogu 1991; Myers, 2003). It seems reasonable to suppose that dealing with less systematic categories of the type shown in Sample 2:3 is likely to require a greater interpretative stretch for the test-taker. In the grid shown in Figure 4, an attempt has been made to account for this task variety (see T2b).

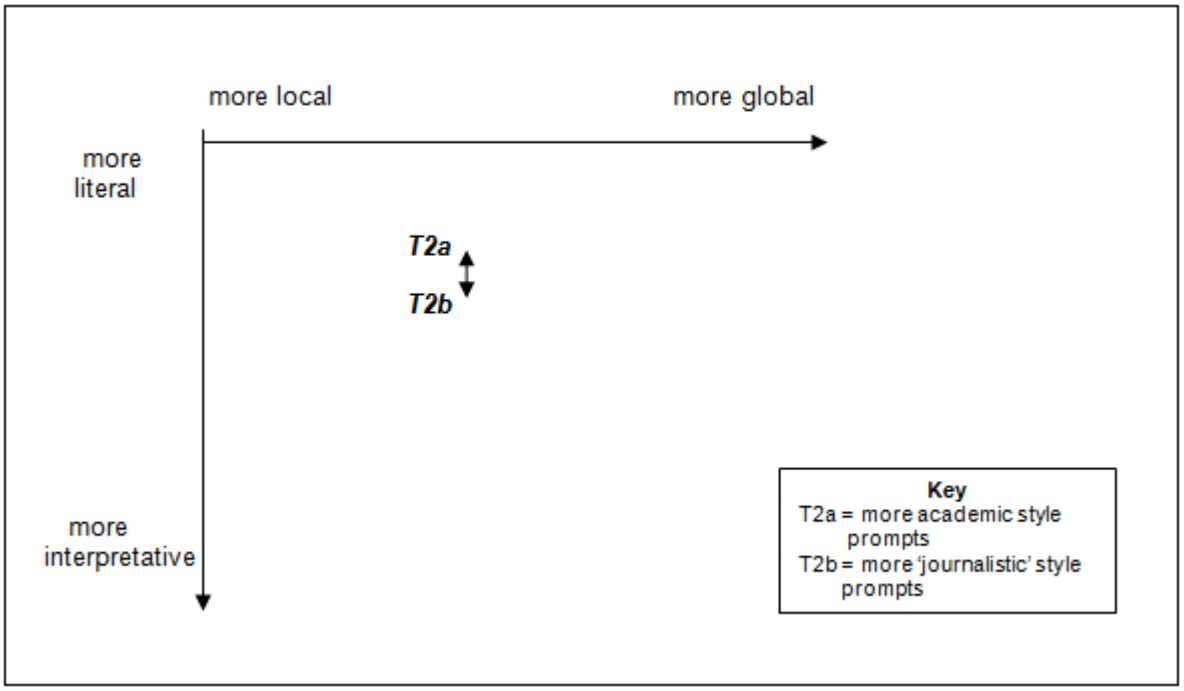


Figure 4: Analysis of* Section – Summary match *task type

4.1.3 Type 3: Gapped summary

The next most common format, by number of items in the corpus (16% of total items), was the *Gapped summary*. These tasks involved a different type of summary activity from that noted in the previous section. Here test-takers are presented with a continuous prose summary of a section of the reading passage from which key information/lexis has been removed. The task for test-takers is to draw on the reading passage to restore the omitted information.

We noted two alternative formats used for this task type: 1) tasks where there was a bank of word/phrase options to choose from; and 2) where no options were provided. In the 'no options' format, test-takers are instructed to limit their responses to a maximum of two or three words from the passage. Examples of the two formats are shown in Sample 3.1 and 3.2. Relevant sections of the reading passage are provided for each sample.

Gapped summary 1

Complete the summary below.

Choose your answers from the box below the summary and write them in boxes 10-13 on your answer sheet.

There are more words than spaces, so you will not use them all.

The island will be partially protected from storms by …(10)… and also by …(11)…

Further settlement caused by …(12)… will be prevented by the use of …(13)…

construction workers	coastline	dump-trucks
geotextile	Lantau Island	motorway
rainfall	rock and sand	rock voids
sea walls	typhoons	

Relevant section of reading passage:

AIRPORTS ON WATER

The airport, though, is here to stay. To protect it, the new coastline is being bolstered with a formidable twelve kilometers of sea defences. The brunt of the typhoon will be deflected by the neighbouring island of Lantau; the sea walls should guard against the rest. Gentler but more persistent bad weather – the downpours of the summer monsoon – is also being taken into account. A mat-like material called geotextile is being laid across the island to separate the rock and sand particles from being washed into the rock voids, and so causing further resettlement. This island is being built never to be sunk.

Correct responses:

10 = sea walls (either order possible)

11= Lantau Island (either order possible)

12= rainfall

13 = geotextile

Sample 3.1: **Gapped summary** ***sample, with options bank***

Gapped summary 2

Complete the summary of Paragraph G below. Choose NO MORE THAN THREE WORDS from the passage for each answer.

Write your answers in boxes 37-40 on your answer sheet.

A linguist can use a corpus to comment objectively on **37**…… . Some corpora include a variety of language while others are focused on a **38**…… . The length of time the process takes will affect the **39**……. of the corpus. No corpus can ever cover the whole language and so linguists often find themselves relying on the additional information that can be gained from the **40**…. of those who speak the language concerned.

Relevant section of reading passage:

OBTAINING LINGUISTIC DATA

A representative sample of language, complied for the purpose of linguistic analysis, is known as a *corpus*. A corpus enables the linguist to make unbiased statements about the frequency of usage, and it provides accessible data for the use of different researchers. Its range and size are variable. Some corpora attempt to cover the language as a whole, taking extracts from many kinds of texts; others are extremely selective, providing a collection of material that deals only with a particular linguistic feature. The size of the corpus depends on practical factors, such as the time available to collect, process and store the data: it can take up to several hours to provide an accurate transcription of a few minutes of speech. Sometimes a small sample of data will be enough to decide a linguistic hypothesis; by contrast corpora in major research projects can total millions of words. An important principle is that all corpora, whatever their size, are inevitably limited in their coverage, and always need to be supplemented by data derived from the intuitions of native speakers of the language, through either introspection or experimentation.

Correct responses:

37 = frequency of usage

38 = particular linguistic feature

39 = size

40 = intuitions

Sample 3.2: **Gapped summary** ***sample – without options bank***

Level of engagement

Each item in the gapped summary tasks, it was noted, was focused on the locating of quite specific information. For example, in responding to items in Sample 3.1 above, candidates need to identify the various 'protective' measures that have been employed in the airport project discussed (sea walls, island, geotextile). On this basis, we would say that the level of engagement with the text is fairly local.

However, it was noted that in some Gapped summary tasks individual items could not be treated entirely in isolation, but instead needed to be considered in relation to the whole summary text, as well as to the relevant section of the reading passage. Thus, for example, in completing items 12 and 13 below (from Sample 3.1), one is not able to confirm the answer to 12 without looking further on in the reading passage to establish the likely response to 13.

> Further settlement caused by …(12 **rainfall**)… will be prevented by the use of …(13 **geotextile**)…

> Gentler but more persistent bad weather – the downpours of the summer monsoon – is also being taken into account. A mat-like material called geotextile is being laid across the island to separate the rock and sand particles from being washed into the rock voids, and so causing further resettlement.

We would say then that the 'level of engagement' for this task type relates to the span of text in the reading passage that is the subject of the summary. Some variation was noted in the length of these sections, ranging from summaries of a single paragraph from the original passage, to coverage of up to three or four paragraphs. This variation in engagement level is captured on the 'local – global' scale in Figure 5.

Type of engagement

Whilst the level of engagement in the *Gapped summary* extends beyond the single proposition, the way in which test takers need to engage with material is arguably a fairly literal one. As was the case with the *Yes/No/Not given* format, the task for test takers involves, in essence, the matching of information from the reading passage with a paraphrased version of this information in the summary. Thus, the following items (taken from Sample 3.2) are completed by juxtaposing information in the item with corresponding information in the original passage.

Sample item 1

> Some corpora include a variety of language while others are focused on a
>
> ___38___.
>
> **Correct Response =** particular linguistic feature

Relevant section from reading passage

> Some corpora attempt to cover the language as whole, taking extracts from many kinds of texts; others are extremely selective, providing a collection of material that deals only with a particular linguistic feature.

Sample item 2

The length of time the process takes will affect the ___39__ of the corpus.

Correct Response = size

Relevant section from reading passage

The size of the corpus depends on practical factors, such as the time available to collect, process and store the data: it can take up to several hours to provide an accurate transcription of a few minutes of speech.

The relatively 'literal' form of engagement suggested by *Gapped summary* tasks is indicated in our analytical matrix shown in Figure 5.

We note in passing that *Gapped summary* items can suffer from the problem of having items which it may be possible to complete (or partially complete) without referring to the original reading passage (Alderson, 2000). This is a characteristic however, only of the 'options provided' variant of this task type. In the sample items below, for example, we can see that certain items among the provided options are semantically implausible within the information structure of the summary sentence, and so can be immediately discounted as possible answers (eg rainfall, typhoons).

The island will be partially protected from storms by …(10)… and also by …(11)…

construction workers	coastline	dump-trucks
geotextile	Lantau Island	motorway
rainfall	rock and sand	rock voids
sea wall	typhoons	

An additional dimension to this aspect were those cases where the provided options come in a variety of grammatical forms, and where some options could be automatically discounted on the grounds that they were syntactically anomalous in the summary sentence.

Alderson (2000) suggests that the problem with formats such as this is that they may be involved in testing constructs other than those that the instrument purports to test. Thus, with some of the *Gapped summary* tasks shown above, we might conclude that engagement with material is involved as much with grammatical competence or with principles of logical analysis, as with reading comprehension processes *per se*.

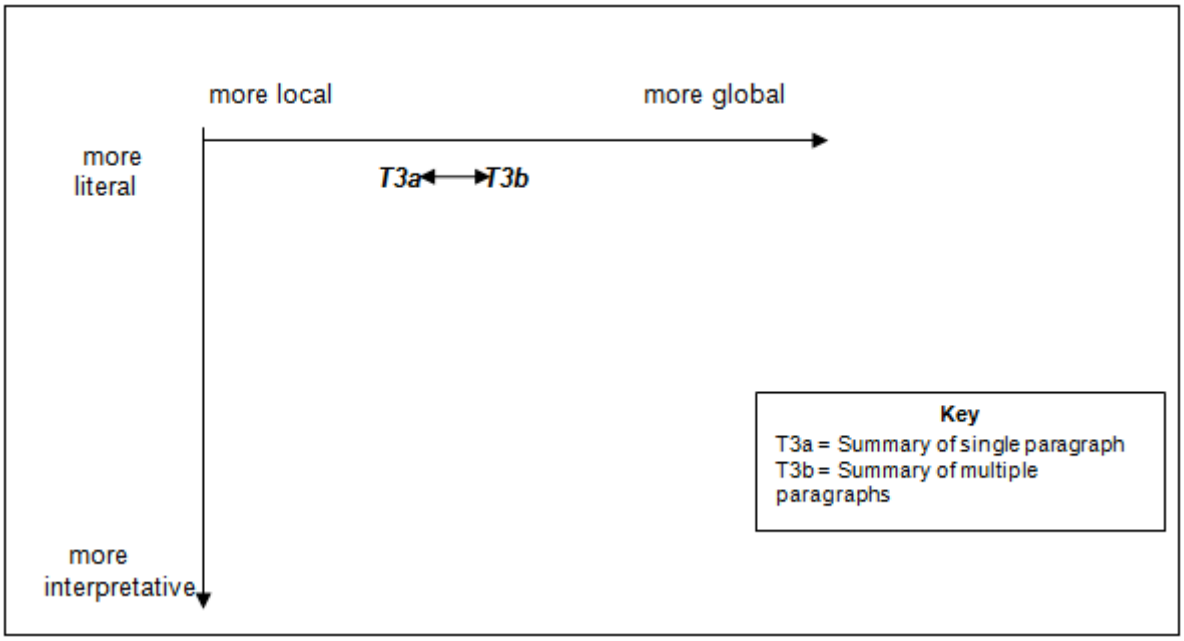


Figure 5: Analysis of 'Gapped Summary' task type

4.1.4 Type 4: Information-category match

Information–category match tasks were one of the less frequently occurring tasks accounting for 12% of items (Table 4). Under this format, test-takers need to match information from the reading passage with a specific information category to be selected from a range of category options. The category-type used in the design of these tasks was found to be salient in some way in the reading passage, and which could be used as a basis for differentiating key information contained within it. Thus, in Sample 4.1 below, a task based on a reading comparing the design of different airports, the category of 'airport location' is used as the distinguishing element. Other category-types noted in the corpus of these tasks were places (eg cities); people (eg types of employees); time periods (eg decades).

Question 1-5.

Classify the following statements as applying to:

A *Chek Lap Kok airport only*

B *Kansai airport only*

C *Both airports*

Write the appropriate letter A-C in boxes 1-5 on the answer sheet.

Sample statements:

1. *having an area of over 1,000 hectares*
2. *built in a river delta*

Sample 4.1: **Information–category match** ***item***

A specific type of *information–category match* task noted in the corpus was that which used individual scholars/writers as the category type. These were often used in tasks that accompanied reading passages consisting mainly of the attributed ideas or research findings of various individuals. The task

for test-takers in this particular format then was to match a summary statement of a specific idea (or finding) described in the text with an individual scholar. Sample 4.2, based on a reading passage about endangered languages, is illustrative of this format.

Question 5-9.

Look at the following statements (Questions 5-9), and the list of people in the box below.

Match each statement with the correct person.

Write the appropriate letter A-E in boxes 5-9 on the answer sheet. NB You may use any letter more than once.

A Michael Kraus

B Salikoko Mufwene

C Nicholas Ostler

D Mark Pagel

E Doug Whalen

Sample statements:

1. Endangered languages cannot be saved unless people learn to speak more than one language.
2. The way we think may be determined by our language.

Sample 4.2: **Information–category match –** ***scholar as category***

Level of engagement

Information–category match items were generally found to be concerned with the locating of fairly specific information in the reading passage (eg size of airport in Sample 4.1). A feature of these tasks however, was that information often had to be retrieved from several different places in the text. Thus, for example, in the following item taken from the airport sample (Sample 4.1), test-takers need to identify whether the following statement concerning size of airport pertains to just one of the locations or both:

3 (Which airport) has an area of over 1,000 hectares

Completion of such an item thus necessitates engagement with several separate sections of the passage, as follows:

> An island six kilometres long and with a total area of **1248 hectares** is being created there. The new island of Chek Lap Kok, the site of Hong Kongs's new airport, is 83% complete.

> As Chek Lap Kok rises however, another new Asian island is sinking back into the sea. This **is 520 hectare** island built in Osaka Bay, Japan that serves as a platform for the new Kansai airport.

Correct Response = Chek Lap Kok airport only **(Option A)**

This particular characteristic of *Information–category match* tasks means that whilst engagement is generally at a local level, it is not as narrowly local as we have seen for other 'specific information' task types eg *True/False/Not given* (see Figure 6).

Type of engagement

The airport example above suggests a highly literal engagement with reading material. In this case, the task for test takers is to identify specific information concerning the total area occupied by each airport site. A slightly less literal engagement is required arguably for the 'scholar as category' tasks (shown in Sample 4.2). In such tasks, the relevant ideas/findings of the scholar cited in the text are summarised in a relatively condensed form. The task for test-takers is to be able to link this condensed summary to the more extended version of the idea cited in the passage, as shown in the example below.

Statement:

The way we think may be determined by our language.

Relevant section in reading passage:

> There is mounting evidence that learning a language produces physiological changes in the brain. "Your brain and mine are different from the brain of someone who speaks French for instance", Pagel says, and this could affect our thoughts and perceptions. "The patterns and connections we make among various conceptions may be structured by the linguistic habits of our communities".

Correct Response = Mark Pagel **(Option D)**

Overall, the engagement with material in *Information-category match* tasks was concluded to be quite literal, but with some variation noted around the 'scholar as category' examples. An attempt has been made to capture this variation in Figure 6 below.

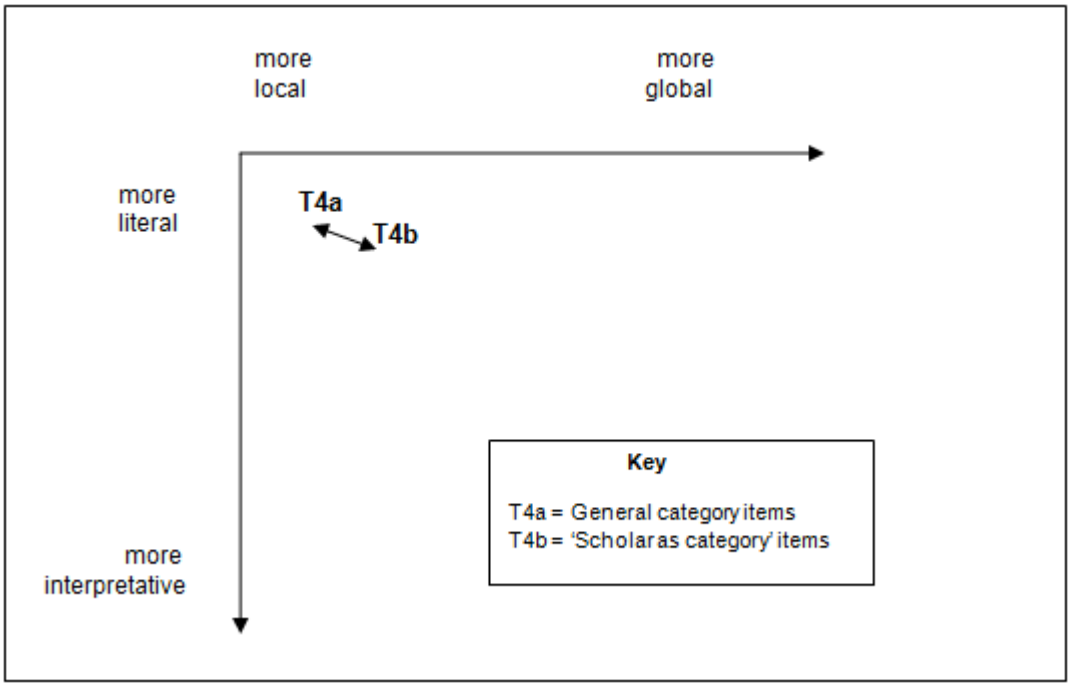


Figure 6: Analysis of* Information – category match *task type

4.1.5 Type 5: Multiple choice

About 10% of items in the corpus used a standard multiple choice format, with almost all relying on a 4-option structure. For all items, test-takers were required to select a single 'correct' option. Sample 5.1 shows a range of multiple choice items related to a passage about the development of cinema.

Question 10-13

Choose the correct letter A, B, C, D.

Write the correct letter in boxes 10-13 on your answer sheet.

10 When cinema first began, people thought that

A it would always tell stories

B it should be used in fairgrounds

C its audiences were unappreciative

D its future was uncertain.

11 The writer refers to the film of the train in order to demonstrate

A the simplicity of early films

B the impact of early films

C how short early films were

D how imaginative early films were

12 What is the best title for this passage?

A The rise of the cinema star

B Cinema and novels compared

C The domination of Hollywood

D The power of the big screen

Sample 5.1:* Multiple choice *sample

Level of engagement

The *Multiple choice* task format in the IELTS corpus was found to be distinctive for implying no particular level of engagement with text. This is in contrast with the other task types considered so far. Thus, we saw for example that the *True/False/Not given* format was linked to engagement at a mainly sentential level; similarly the principal unit of analysis in *Section-summary match* was seen to be the paragraph. No such generalisation could be made however, for the multiple choice tasks in the corpus, with different items probing quite different levels of text. This is evident in the sample items above. In Item 10, for example, shown with the relevant section from the associated reading passage, the required engagement is at a more 'local', propositional level. (Correct response = D)

10. When cinema first began, people thought that

A it would always tell stories

B it should be used in fairgrounds

C its audiences were unappreciative

D its future was uncertain.

Relevant section from reading passage:

> When the Lumiere Brothers and other pioneers began showing off this new invention, it was by no means obvious how it would be used.

In contrast, Item 11 requires engagement with a more extended section of text – what in the passage is a full paragraph, as seen below (Correct response = B).

11. The writer refers to the film of the train in order to demonstrate

A the simplicity of early films

B the impact of early films

C how short early films were

D how imaginative early films were.

Relevant section from reading passage:

> One of the Lumiere Brothers' earliest films was a 30–second piece which showed a section of a railway platform flooded with sunshine. A train appears and heads straight for the camera. And that is all that happens. Yet the Russian film director Andrei Tarkovsky, one of the greatest of all film artists, described the film as a 'work of genius'. As the train approaches', wrote Tarkovsky, panic started in the theatre; people jumped and ran away. That was the moment when cinema was born. The frightened audience could not accept that they were watching a mere picture. Pictures are still, only reality moved; this must therefore be reality. In their confusion, they feared that a real train was about to catch them.'

Finally, the last question in this sample, Item 12, requires consideration of the whole reading passage – a text consisting of 10 paragraphs (Correct response = D).

12. What is the best title for this passage?

A The rise of the cinema star

B Cinema and novels compared

C The domination of Hollywood

D The power of the big screen

Significantly, items of this latter kind – requiring test-takers to decide between different possible titles for a reading passage – were the only tasks found in the corpus that called for engagement at this whole text level. A total of five instances of this item type, all in a multiple choice format, were noted in the overall corpus, accounting for 1% of items.

From the examples above we can see that multiple choice items in the IELTS Academic Reading test probe a variety of textual units, ranging from the very local to the very global, as shown in Figure 7.

Type of engagement

As was the case with the level of engagement, IELTS multiple choice tasks in our corpus resisted any simple generalisation regarding the way test takers needed to engage with material. The sample items above suggest a variety of modes. Thus, Item 10, requiring identification of quite specific information (ie the perceived future of cinema), is clearly of a more literal type. In contrast, Item 12, which asks test-takers to consider how the contents of the whole text can be encapsulated in a single noun phrase title (ie 'The power of the big screen'), involves a more 'interpretative' engagement.

Between these two examples is the third sample item (Item 11), requiring test-takers to consider what point is made in the text through the citing of particular information (ie reference to the film of the train).

11. The writer refers to the film of the train in order to demonstrate

    A the simplicity of early films

    B the impact of early films etc

Such an item, with its focus on the underlying rhetorical purpose of a span of text, was analysed as requiring a less literal form of engagement. The variety in the required form of engagement in these items is captured in Figure 7 below.

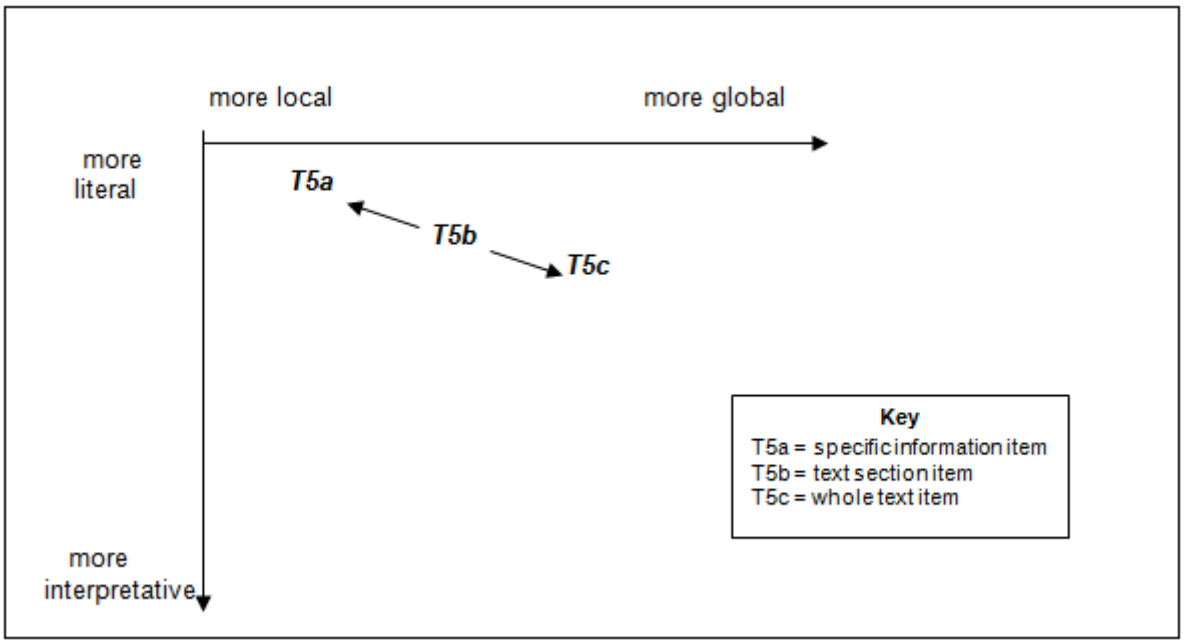


Figure 7: Analysis of Multiple Choice task type

4.1.6 Type 6: Short answer

In *Short answer* tasks in the corpus (7% of total items), test-takers needed to locate quite specific information from the reading passage in response to basic wh-questions. A stipulation of responses in this format was that answers needed to be limited to no more than two or three words (or numbers), and that answers were composed only of lexis drawn from the reading passage. An example of this type, referred to by Bachman and Palmer (1996) as 'limited production response', is shown in Sample 6.1 below. The questions in this sample relate to a passage describing methods used to enhance the performance of athletes.

Question 11 and 12

Answer the questions below.

*Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.*

Write your answers in boxes 11 and 12 on your answer sheet.

11 What is produced to help an athlete plan their performance in an event?

12 By how much did some cyclists' performance improve at the 1996 Olympic Games?

Sample 6.1:* Short answer *sample

Level of engagement

Like a number of other 'specific information' task types we have seen previously (eg *True/False/ Not Given*; *Gapped summary*), engagement with the passage in *Short answer* tasks is at a local level, as shown in the examples below.

Question 11:

What is produced to help an athlete plan their performance in an event?

Relevant section from reading passage:

Well before a championship, sports scientists and coaches start to prepare the athlete by developing a 'competition model', based on what they expect will be the winning times.

Correct Response = 'competition model'

Question 12:

By how much did some cyclists' performance improve at the 1996 Olympic Games?

Relevant section from reading passage:

At the Atlanta Olympics Games in 1996, these [coolant jackets] sliced as much as two percent off cyclists' and rowers' times.

Correct Response = two percent

The requirement of these tasks – that is, to use a minimal number of words in relation to quite specific items of information – makes these tasks particularly 'local' in their orientation, as indicated in Figure 8.

Type of engagement

The *Short answer* format in IELTS Academic Reading, as we have seen, has a focus on quite specific items of information (eg the name of a specific performance-enhancement tool; the rate of improvement in a sports performance). We would say then that this involves a very basic form of text comprehension, and so this task type is located very much towards the literal end of our 'literal–interpretative' continuum. The allocated position of this task type on the matrix below suggests in fact that the short answer format constitutes the most 'literal' and most 'local' of all the task types considered so far.

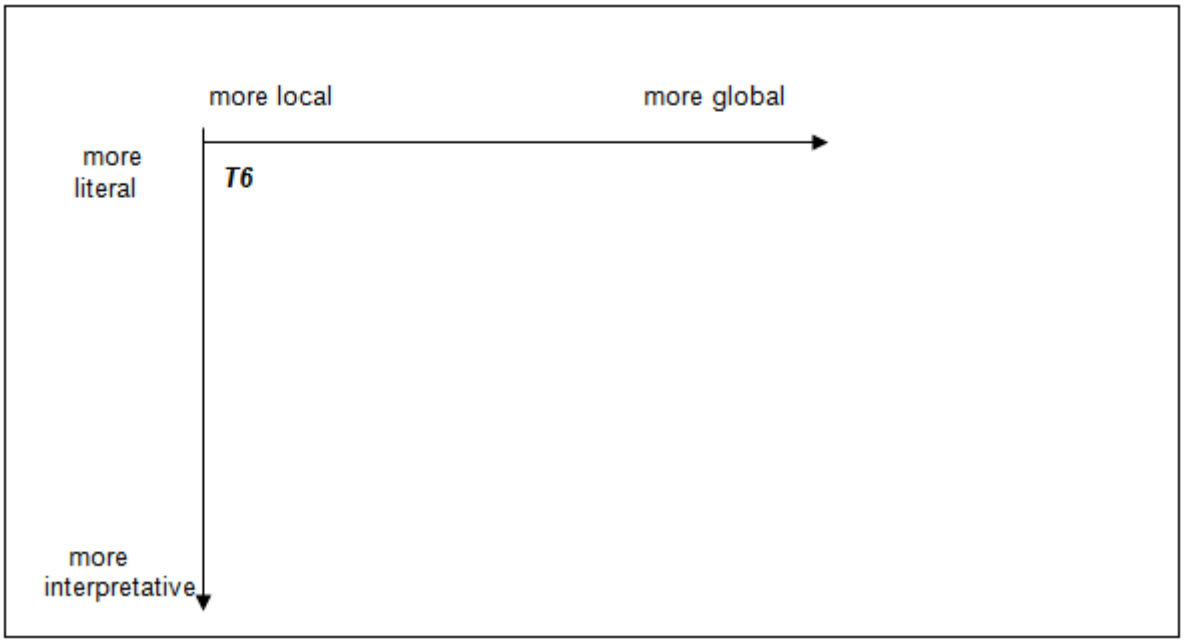


Figure 8: Analysis of Short Answer task type

4.1.7 Type 7: Other

A number of other, infrequently-occurring task types were identified in the corpus, as follows:

- Sentence completion (4%)
- Information transfer (completion of table, diagram, flow chart etc) (4%)
- Information-paragraph match (2%)
- Information identification (0.8%)

All of these formats had a minimal presence in the corpus (<5%), and so were not analysed on an individual basis. It is noted that none appear to involve engagement of a distinctly different order from the patterns already identified in the previous task types.

4.1.8 Summary of analysis of IELTS reading task types

In summary, the analysis found that a majority of tasks in the IELTS corpus were of a distinctly 'local-literal' configuration, requiring mainly a basic comprehension of relatively small textual units (sentences, inter-sentences, paragraphs). It was noted that for a number of the more common task-types, the required engagement was in fact of a highly 'local' and 'highly' literal kind (ie *True/false/Not given*; *Short answer*). Other task types were found to be slightly less 'local and literal' in their orientation (ie *Section-summary match*), but were thought nevertheless to mainly inhabit the 'local-literal' region of our analytical matrix. The only items in our corpus that clearly traversed the 'local-literal' domain were certain multiple choice items that required an appraisal of the reading passage as a whole (eg items requiring the selection of a title for a reading passage). It was noted that the *Not given* option in *True/False* questions also required a more global engagement (ie, in order to establish whether information is in fact present in a text). As was discussed however, items of this type arguably constitute a special case.

For the analysis overall, it does need to be acknowledged that the results are based on a limited sample of test tasks, and also one not deriving from actual live test materials. Assuming however, that the data used represent some approximation of current item-design practices at IELTS, we would argue, that the analysis provides at least a broad picture of the tests' overall construct– that is, a distinct orientation towards reading of a 'local' and 'literal' nature.

4.2 Academic reading tasks

In the second part of the study, investigation was made of the types of readings tasks required of students in undergraduate study in a range of disciplines. As discussed, a total of 12 discipline areas were investigated. This part of the study was informed by two different research methods: interviews with academic staff, and an independent analysis of reading–based tasks provided by these academics.

In what follows, we provide first of all a summary of the findings from the interviews, covering such issues as the quantity and type of reading prescribed on undergraduate courses, along with discussion of the way students are expected to engage with the material prescribed. This is followed by the analysis of the academic tasks. For this latter section, we draw on the framework used in the analysis of the IELTS tasks; that is to say, a consideration of the two key dimensions of the study – 'level' and 'type' of engagement with reading material.

4.2.1 Findings from interviews

The importance of reading in university study

The first substantive finding from the interviews was that reading in some form was a requirement in all the subjects investigated. Some informants were at pains, in fact, to stress that it was the activity of reading more than anything else that underlay the educational processes in their subject area. Thus, the lecturer in Media Studies saw reading as providing the common thread for all the various activities on his course:

> MEDIA STUDIES: *The reading is just so essential, and it's just integral to the whole structure of my course. We set weekly readings which are of course what the lectures are based on, and then we use these readings as the basis for our discussions in tutes. … And then later on hopefully [this material] will reappear in a different form when it comes to [students] writing their essays and assignments.*

For the Linguistics lecturer, the development of key skills in reading was one of the more important objectives on her course.

> LINGUISTICS*: I am trying to encourage students to be critical thinkers and readers and reflect on the material that they have …. not just having an approach to learning where we transmit some knowledge and they absorb it. So being able to critically engage with texts is very much a primary generic skill on the course.*

A number of other informants spoke of the effort they put in at the beginning of semester to persuade students to commit to doing the prescribed reading on their courses. For many, any adequate participation on academic programs (whether it be related to attending lectures, discussion in tutorials, participation in lab sessions) was contingent on students coming along to classes having read the relevant material. The lecturer from Communications, for example, drew attention in interview to the following 'firm instruction' to students contained in the course manual.

> COMMUNICATIONS: *I really hammer the following home to students at the beginning of the course* (Referring to course outline document)*: "Please make sure you have done the reading before each lecture. The lectures and workshops will be based on the assumption that you have done this reading, and you will be expected to demonstrate some familiarity with the content"*.

Whilst not emphasising reading to quite the same extent, some lecturers in the more technical ('hard') areas also affirmed the importance of this activity on their courses. The Architecture lecturer, for example, saw the development of good habits of reading as a key part of students' professional training.

> ARCHITECTURE: *Even though we are a more technical subject, students need to appreciate that it is principally through reading that they will acquire key knowledge in the discipline. We're aware of this not only for their university study, but for their ongoing development as professionals too … I say to my students that good habits of reading will make them good professionals.*

The overwhelming importance of reading in academic study was perhaps stated most emphatically by the informant from History:

> HISTORY: *What is very clear is that those students who do a lot of reading do better at whatever they are called upon to do than students who don't do very much, and this seems to be the case with virtually all the academic work we set.*

As we shall see later in the discussion of the interview findings, a number of staff reported a not-always-felicitous relationship between the expectations they had of reading, and the actual reading behaviours and attitudes that students brought to their studies.

Quantity and type of reading prescribed on courses

Whilst there was general agreement among informants about the importance of reading, a fair amount of variation was noted regarding the amount and types of reading prescribed in specific subject areas. The differences observed here were mainly disciplinary ones, and perhaps not surprisingly, were found to divide mainly along the hard–soft distinction we have drawn between the disciplines investigated in the study.

Such differences were quite noticeable, for example, in the quantity of reading expected of students. In the 'softer' disciplines, informants spoke of the need for students to do 'substantial' reading on their courses, and generally to go beyond the set readings:

> MEDIA STUDIES: *There is a standard textbook***.** *Every week there are particular pages of references they need to read, but then there are other important books, journal, magazine articles as well. To be properly informed in this subject, students also need to get into the habit of reading newspapers every day, and to be monitoring articles on media developments.*

For the History lecturer, seeking out a range of sources and a variety of interpretations on a topic was an indispensable part of engaging with the discipline:

> HISTORY: *To properly engage with the subject is very much dependent on having a certain level of knowledge which … is why we say to students you must do adequate reading otherwise you cannot respond to the questions [that we pose]. You might find a perfectly reasonable answer in a single book on this topic, but you're in no position to evaluate that unless you've read alternatives.*

Other informants in the softer disciplines said they were quite precise to students about the quantity of materials that needed to be read each week, and the time that should be put in. The Linguistics lecturer, for example, said she advised students they should be reading the prescribed material from the textbook each week, and at least two relevant journal articles. The lecturer in Communications insisted to her students that they should devote at least 3-4 hours per week to reading in her subject.

In general, whereas the softer humanities disciplines required extensive reading, and from a range of different sources and genres, in the harder more technical areas reading was found to be less extensive, and mainly confined to the reading of the prescribed textbook in a subject:

> COMPUTER SCIENCE: *There is a textbook. Students are expected to read a chapter a week, but not every week, just for the first eight weeks or so. That's the first half of the textbook – which amounts to only about 150 pages for the course.*

It was explained that in these harder disciplines the main purpose of weekly readings was to support the content of lectures.

> PHYSICS: *The textbook would be the main form of reading that students would do. We like students to be prepared for lectures and so we ask them to read the sections of the textbook that are relevant for a particular lecture.*

Whilst in this case, the textbook material was intended to be read in advance of lectures, in other subjects, the purpose of textbook reading was mainly for review:

> ENGINEERING**:** *We have a textbook in the subject and after every lecture at the end of every lecture we put up the relevant pages of the textbook that they should read. So the idea is for them to read the PowerPoint slides, read the textbook and then write up their notes.*

Several lecturers from other hard fields went on to explain that it was the nature of their discipline that the reading of texts was not always the only means of engaging with disciplinary knowledge.

> ARCHITECTURE: *Reading is important in this subject, though because of the nature of the discipline there are other literacies that come into play – visual literacy, kinesthetic literacy – to the extent that students are actually building things. Numeracy is also very important.*

> COMPUTER SCIENCE: *We have a specialist type of reading in this subject which is related to the programming component. Students have to spend a bit of time reading other people's code, and this is a new type of reading for most.*

The nature of reading on courses

Along with variation in the quantity and type of reading material prescribed on courses, were perceived differences in the ways that students needed to engage with this material. Early piloting of the research suggested to us that it would not necessarily be a straightforward task for academic staff to expound at length on different types of required reading skills, nor indeed for them to be able to distinguish these skills in any substantive way. This was partly because the characterisation of such skills constitutes arguably an 'insider' educational discourse, one related to the study of academic literacy *per se*, and a discourse not necessarily readily accessible to academics working within their own disciplinary specialisations. As a way of facilitating discussion around this point in the interviews, it was decided to provide a list of possible reading skills ('abilities') drawn from the literature (Alderson 2000; Grabe, 1999), and to ask informants to comment on which of these they thought were relevant to study to their subject area (see below). This list seeks to capture some of the distinctions we have used in our analytical framework (ie type and level of engagement).

Ability to:

1. have a **basic comprehension** of key information in a text (LOCAL + /LITERAL +)
2. **summarise** the main ideas in a text in one's own words (GLOBAL + /LITERAL +)
3. understand an idea for the purpose of **applying** it to a particular situation or context (LOCAL +/ INTERPRETATIVE +)
4. understand the **purpose** for why a text may have been written (GLOBAL +/ INTERPRETATIVE +)
5. **critically evaluate** the ideas in a text (GLOBAL +/ INTERPRETATIVE +)
6. identify **a range of texts** relevant to a topic (GLOBAL +/ LITERAL +)
7. draw on ideas from a range of texts to **support** one's own argument (GLOBAL +/ INTERPRETATIVE +)

Given the relatively small sample size in interviews, the results are reported qualitatively (rather than quantitatively), with a focus on the key skill areas commented on by informants. Again basic differences were observed in the perceptions of academics across the disciplines. It was noted, for example, that those in the 'harder' disciplines thought skills towards the top of the list had the most obvious relevance to study in their subject area. The following are a sample of the responses from the more technical areas.

> ENGINEERING: *In Engineering I think we're mainly concerned with basic comprehension* (item 1) *and summary skills* (item 2). *My sense of summary is students being able to convey the ideas back to us. So they need to understand the ideas and concepts, and report them back.*
>
> PHYSICS: *I would be emphasising those skills more towards the top of the list. So we don't really ask students to identify a range of texts relevant to a topic* (item 6) *nor draw on ideas from a range of texts to support one's own argument* (item 7). *This is because students are not really making arguments at a first-year level. There are not so many things that are contestable at this level.*
>
> BIOLOGY: *Well certainly basic comprehension and summarising of ideas* (items 1 & 2)*, but understanding the purpose of why text is written is not important* (item 4) *Critically evaluate ideas* (item 5)*, well only to a very limited extent – in most of first-year biology we don't really challenge the ideas – we sort of present them as these are the ideas you need to know, and the last two are not important for us.*
>
> ARCHITECTURE: *I think all have some importance, but apart from the first one (ie having a basic comprehension of key information in a text), they are not as important in this subject, as they might be in other subjects.*

The main picture to emerge from these commentaries was that the important type of reading in these more technical disciplines was that related to basic comprehension of material. From these informants, it was generally felt that what was crucial in the first year of study in their disciplines was for students to come away with a good working knowledge of foundational ideas and concepts – and not to be spending too much time deciding whether such ideas were valid or not. A number pointed out that whilst more 'interpretative' forms of reading were clearly important in students' overall academic development, they had less obvious relevance in the early stages of training in the discipline. Among these more interpretative forms included in the list of skills, the least relevant, they thought, were those that involved 'critical evaluation' of material. As one informant explained it: "In the first year, we want students to accept certain things more-or-less as read, and to hold off with too much critical scrutiny of them at this stage".

It was explained however by several, that such a profile of reading skills was a specific feature of the first years of undergraduate programs, and that at more advanced levels in these disciplines, the other more interpretative types of reading had a much greater role to play.

> BIOLOGY: *As students move through the discipline I guess some of the things that were previously taken for granted start to become a bit more contentious – and we see these other skills like critically evaluating texts* (item 5) *coming more into play. Certainly students need to have a critical eye out when they read research articles, and the sorts of claims that are made in these.*

The view expressed from the more humanities-oriented areas represented a clear contrast. For informants in these areas, all items on the list were thought to be important, and those at the lower end, particularly so. A common theme here was that in one's teaching, the more 'literal'-based skill areas were taken for granted to some extent, and that much of what students were expected to do simply assumed an understanding of basic concepts in the field.

> LINGUISTICS: *I think I make certain assumptions about those items further up the list, like being able to understand the ideas we present* (item 1). *That is, that students come to my course able to do these things.*
>
> MANAGEMENT: *Having a basic comprehension* (item 1), *well obviously that's really important. If [the students] can't do that, the rest [of the skills] become a bit redundant.*

For these academics, the focus was squarely on the more interpretative reading skills. Among those on the list, the idea of being critical of texts (item 5), and of being able to draw on multiple sources to support an argument (item 7) had particular resonance.

> LINGUISTICS: *The really important [skills] on the course are definitely critically evaluate* (item 5) *and drawing on ideas from range of texts to support argumentation* (item 7). *They are all important but those are the important formative skills for this subject. That's really the point that I try to get students to by the end of semester.*

> MEDIA STUDIES: *All of the skills are important – having a basic comprehension, summarizing* (item 1) *is obviously important. On my course however, students being critical in their reading is absolutely essential* (item 5). *Students need to assess arguments, and part of this is identifying where arguments and ideas have been left out.*

> MANAGEMENT: *the aim [on my course] is for [students] to develop an awareness of multiple types of sources, multiple viewpoints and to build confidence in their writing to draw on these different viewpoints in advancing their own view* (item 7).

Among the more humanities-oriented areas, additional distinctions were observed at the individual discipline level. Our History informant, for example, attached special significance to students being able to "understand the purpose for why a text may have been written" (item 4). For him, such an ability related to a crucial part of the training students needed to undergo as novitiate historians – namely the ability to read and interpret primary source material.

> HISTORY: *working with primary source material is, I suppose, a specialist kind of reading in history, and we spend a lot of time on that. Students need to be able to see what's surrounding a document, why it was created, what the author of the document is trying to achieve through it.*

Additional variation was also found in the more applied disciplines. For informants in these areas, a key skill emphasised was the ability to draw on concepts in one's reading for "the purpose of applying them to a particular situation or context" (item 3). Thus, the informant from the new applied Business discipline of E-commerce was keen to stress the essentially utilitarian nature of reading in the field:

> BUSINESS STUDIES*: The focus of E-commerce is very much about finding solutions to practical problems, and to develop electronic means to advance existing ways of doing things. Our sense of students learning is really about them grasping a concept, and then being able to apply it. Later on they might want to be critical of the concept, but in the first instance we just want them to focus on using it in some practical way.*

In another of the applied disciplines, Communications, a similarly utilitarian conception of reading was emphasised. In this case, the focus was not so much on students being able to draw on conceptual resources for the purpose of solving real-world problems; but instead to draw on *linguistic* resources within texts for a different practical purpose – namely, the development of their writing. The lecturer in the subject explained this particular type of reading thus:

> COMMUNICATIONS: *Students need to write in a variety of genres, say for example the book review, and we get them to look at samples of these genres as a resource for their own writing.*

> INTERVIEWER: *So how would you describe the nature of the reading that students have to do in this situation?*

> COMMUNICATIONS: *Well, I tell them in the beginning that they are not reading so much as consumers anymore, but that they are reading it like a carpenter might look at a chair – not so much to sit in it, but to see how it is put together.*

4.2.2 Perceived changes in students' reading practices

A final area covered in this summary of interview findings is informants' perceptions of students' reading practices on their courses. Interestingly, this was an issue not directly probed in the interviews. As has been stressed, the primary construct that informed the research was the notion of 'task demand', and so it was not an imperative of the study to investigate issues of actual student behaviour and performance. We found however, that these were key issues for informants, and ones that many were keen to air in the course of our discussions. In short, concern was expressed by a number of informants – and indeed a degree of disdain by some of these – about the lack of commitment shown nowadays by students towards reading on their courses. The following are some representative comments on this issue:

> LINGUISTICS: *It is a constant struggle to get students to do the reading these days. So for example in the tutorial that I had earlier this week, I asked what I thought was a really self-evident question, and the answer was very clearly in the second reading from the week. Nobody got it. Literally nobody had even read the article.*
>
> COMPUTER SCIENCE: *At the end of this semester we asked for a show of hands of how many of the students actually had a copy of the textbook and it was a slightly depressingly low proportion. So I think quite a lot of students [aren't] actually doing the reading.*
>
> MEDIA STUDIES: *I've told you about what we expect, but one can't avoid mentioning what actually happens. So reading in fact has become a major problem. Students are just doing less reading than they've ever done before, and that would be local students as much as international … Many complain that the standard of textbook is just too difficult … We feel though that we have to resist dumbing these things down. It's a university textbook we prescribe; we can't go looking at something fit for secondary level.*

Whilst the last informant, from Media Studies, thought vigilance was necessary to avoid any 'dumbing down' of requirements, others thought the pressures to scale things down – both the quantity and level of reading – difficult to resist at times. The Management lecturer, for example, described how the subject he taught had been forced in recent years to take a less rigorous, less 'literary' turn in response to changing student cohorts and preferences:

> MANAGEMENT: *I've taught the course for about five years. I took the course over from two of the older academics here who are probably well … more literary in their take on the world. One was a trained historian; the other was an economic historian. But I've had to tone down the volume of reading and that's in response to the changing student mix and changing student behaviour. I have probably shifted it more to use of business press material, less academic material.*

More ominously, another lecturer thought that on some programs, the reading load had had to be reduced partly in response to certain pressures felt through formal processes of student review and feedback:

> ENGINEERING: *Students only have to read the textbook and the powerpoint slides to be successful in this subject nowadays. And this is a lot to do with student expectations, because we have found that they are very reluctant to do extra reading. And again this has to do with quality of teaching. If you give them a lot of reading, you are going to get really knocked back on quality of teaching scores.*

Mention was made in interviews of some of the possible factors underlying this apparent decline in reading, including a general sense of students disengaging from study, financial pressures, time spent in employment and so on. Another clear factor identified – one related to actual literacy practices – was students' increasing use and reliance on digital resources, and the effect this seemed to be having

on the way they engage with textual material. The view generally was that a lot of online working with material was not encouraging of good reading practices:

> MEDIA STUDIES: *There is a lot of material now that students access that they just typically browse. It's a kind of trawling for information. They just don't read this stuff in any serious and sustained way.*

Concern was expressed too that access to the limitless resources available on the web has resulted in some students being less-than-judicious in their use of materials:

> COMMUNICATIONS: *Research is showing that the evaluation and management of material that's coming out over the internet is the biggest issue. And some students do not have particularly well-developed evaluation skills.*

Some thought however, that the considerable changes in the way that information is now accessed had major implications for teaching, and that there was need to address these issues positively with students. Several for example spoke of the importance of developing students' 'information literacy' and 'media literacy' skills.

> HISTORY: *The web has been a boon to the study of history. But we have to help students to be a bit discerning about their use of websites. .... We actually have discussions in tutorials. How can we tell whether this is a reliable site or not? So its evaluation of who is producing this, in what context, and for what purpose.*

> MEDIA STUDIES: *What I try to teach [students] is to get them to be selective in their reading of the media ... So, I want them to understand the context of what [they] are reading, and also the legitimacy of what they are reading.*

For at least one informant, the lecturer from Linguistics, to resist such developments was really a futile pursuit, and that the onus was very much on the universities to adapt to emerging literacy practices. For her, the shift from a print-based academic culture, to a more digitally-based one, posed a much greater challenge for many academics than for students.

> LINGUISTICS: *So I think we in the university have to learn more about student's reading habits and practices and to rethink our assumptions. And we are probably going to have to make big adjustments about what it is that students do these days when they study.*

4.2.3 Findings from task analysis

Along with the conducting of interviews with staff about reading requirements, the research also collected samples of the various academic tasks set by these staff on their courses. Each of the tasks compiled in the corpus involved a reading component of some kind, and included the following formats:

1. weekly exercises and questions, set principally for the purpose of lecture and tutorial preparation/review
2. questions and tasks set in examinations, tests etc
3. assignment tasks, set as part of the major assessment requirements on courses.

In the analysis that follows, we draw on the same framework used to analyse the IELTS reading task types, involving an allocation of each task to a category in the schema. This was done both through processes of moderation between members of the research group, and also through reference to informants' descriptions of these tasks in interview. The findings of this section are organised around the four analytical categories, *viz*:

- local – literal
- global – literal
- local – interpretative
- global – interpretative

LOCAL + LITERAL

In our corpus, we could find many examples of tasks that required a mainly 'local – literal' form of engagement with reading material. It is significant to note also that such examples were present in *all* the discipline areas covered in the study. The following two items are presented as samples from the corpus fitting this 'local – literal' configuration.

> Read Chapter 8 of *The Gecko's Foot – Bio-inspiration: Engineered from Nature,* and take notes around the following questions.
>
> 1. What is meant by the concept of 'ordered crumpling'? Why, according to the author, is this concept useful?

***Sample A1: Weekly exercise task* – Architecture**

(A1 denotes that this is an Academic task, and this is the first task.)

2. Postmodernists basically believe that:

a) All texts are closed
b) Most texts are closed
c) All texts are open
d) Most texts are open
e) All of these depending on the circumstances

***Sample A2: Exam question* – Media Studies**

The first example, Sample A1, is from a set of exercise questions, prescribed as part of the weekly readings in the Architecture subject. This task, as the rubric states, requires students to produce a short summary ("notes") of a specific concept from the readings ('ordered crumpling'), along with an account of its 'usefulness' – as described by the passage's author. This focus on explication of a single concept clearly fits with a more 'local and literal' engagement with material. Such interpretation was confirmed by the lecturer, who described the purpose of "basic comprehension-style" tasks like this as being "to help students come to grips with material and to get a grasp of key concepts in the subject". The lecturer went on to explain that in her subject such concepts were then typically drawn on in some practical way – in this case, it was to explore in tutorial discussion the issue of "how certain patterns in nature can be applied to design".

The second sample, Sample A2, is a multiple choice question set in an exam context. The lecturer in this subject (Media Studies) explained in interview, that this particular question, related to "quite specific information" contained in the textbook (and also covered in lectures), and would involve students, as he explained, recalling "basically factual information about one of the core beliefs of this intellectual movement" (Correct response: C). Other multiple-choice questions on the exam in this subject, the lecturer explained, followed a similar format, requiring the same literal recall of key content covered on the course. It was noted however, that the exam paper in Media Studies also included other question types (eg short essays), the specifications of which, as we shall see, fit with other configurations on our matrix.

The sample tasks we have described cover two of the task formats noted above, namely:

1. weekly exercises and questions, set principally for the purpose of lecture and tutorial preparation/review.
2. questions and tasks set in formal examinations

It is interesting to note that virtually all the 'local – literal' examples in our corpus relate to these two formats; that is to say, tasks set principally for the purposes of either *inputting* key concepts and knowledge during a course of study, or else for the *testing* of students' acquisition of these concepts and knowledge at the end of a course (or course segment). We discuss each of these two formats briefly below.

Weekly exercises and questions

A number of lecturers stressed the importance of weekly exercise tasks as a way for students to acquire (or to have reinforced) key content in their subject area:

> COMPUTER SCIENCE: *We set questions each week which are generic technical questions, and involve encyclopedia-style retrieval of the relevant information from the textbook and lecture.*

As explained by some, such questions do not usually need to be answered formally, but often involve the taking of notes (or 'scribblings') from the set readings, that students would then bring to class to discuss:

> MANAGEMENT: *In terms of reading for the tutorials, there is definitely a set of study questions each week ...where the students can scribble things down and that will form part of the discussions of the tutorials. So those questions are guiding them through the reading, comprehension questions to make sure they have understood the reading.*

As suggested in the discussion of Sample A1 above, a focus of these comprehension-style questions is often on key *concepts* in the discipline. This was a point taken up by a number of informants.

> BIOLOGY: *Students have a handbook of tutorial questions that they get at the start of semester. Their purpose very much is to filter out what is most important about a specific concept. So in their reading they have to be able to look for the concepts and fish out the most crucial points.*

The lecturer in *Physics* explained that part of this 'conceptual' understanding involved students recognising how terms within a discipline often carry with them quite distinctive meanings, ones that differ from a term's everyday usage:

> PHYSICS: *In physics [like other disciplines], there are particular conceptual challenges that students have, in part related to the fact that we do use some words which have a very precise meaning in physics that is different from how they are used in normal everyday usage.*

This lecturer went on to explain that often the study questions she set were intended to draw out these distinctive meanings. Examples she gave were the terms 'heat' and 'temperature'

> PHYSICS: *If we actually unpack a word like 'heat' and use it in the precise way it is intended then we are actually thinking about some energy being transferred from one object to another because their temperatures are different. That's not normally how one would use the word, and there are lots of words like that. So words like 'heat', 'temperature' have really precise meanings and we try to bring this out in the questions we set for students.*

Samples A3-6 show questions from a variety of disciplines, all which have this focus on facilitating students' understanding of specific discipline–based concepts. It was noted, interestingly, that in the format of many such questions, the relevant concept with which students need to engage is often signaled through the use of inverted commas or italics.

> Read Section X of the textbook on *thermal energy*:
>
> Which has the greater amount of *thermal energy*, an iceberg or a cup of coffee? If the coffee and the iceberg were placed in contact, what would happen? Use this context to explain clearly the terms *temperature*, *heating* and *thermal energy*.

***Sample A3: Weekly exercise question* – Physics**

> What is 'currency risk'? Why does international business inevitably involve this type of risk? How can firms reduce these risks?

***Sample A4: Weekly exercise question* – Management**

> What is the difference between the 'Lossy' and 'Lossless' types of media compression?

***Sample A5: Weekly exercise question* – Computer Science**

> Explain what a 'speech act' is, and give several examples.

***Sample A6: Weekly exercise question* – Linguistics**

Exam and test questions

Exams and tests were set in almost all of the subjects investigated, the only exception being Communications. The reading requirements for exams, as explained by a number of informants, mainly involved reviewing the content of lecture and textbook material:

> ENGINEERING: *The exam is basically about testing students' understanding of key ideas and terms. As preparation for the exam [students] would need to look at the PowerPoint slides of the lectures and reread the relevant sections of the textbook.*

Among the items set on the exam/test papers was a sizeable proportion requiring a mainly 'local – literal' engagement with material. These included 'Short answer' questions, very much in the vein of the 'study'-type questions discussed in the previous section – that is, questions requiring short summaries of key concepts and ideas. Samples of such question-types are shown below (A7-10).

> What assumption about 'savings behaviour' is made by the Solow Swan model?

***Sample A7: Short answer exam question* – Economics**

> Briefly explain Fukuyama's *End of History* thesis.

***Sample A8: Short answer exam question* – History**

> What is meant by the concept of 'value configuration'?

***Sample A9: Short answer exam question* – Business Studies**

> What is the hypodermic model of media effects?

***Sample A10: Short answer exam question* – Media Studies**

Also used in the exam/test samples collected were a range of more objective, 'closed' formats. The most common of these was *Multiple Choice*; *True/False*, and *Gap Fill* formats were also noted.

Examples from the corpus of each of these formats are shown below:

An etic description of a cultural practice:

A. reflects the culture member's own understanding

B. focuses on sound differences

C. takes an outsider's perspective

D. requires a prolonged engagement and "going native"

***Sample A11: Multiple choice question* – Linguistics**

The statements A-D are either correct or incorrect. Record whether the statement is Correct by entering 11 or Incorrect by entering 12.

A The binomial name of a species is by convention printed in italics

B. Phylogeny is the study of the life cycle of an organism

C. Slime moulds get their name from the mucilage trains they leave behind

D. Diatoms and dinoflagellates are important photosynthetic plankton contributing greatly to the productivity of the oceans.

***Sample A12: True/False question* – Biology**

In a Keynesian short-run model of a two sector economy, suppose that savings are greater than planned investment. This will result in _____ _____ in inventories.

a) unplanned, increases b) unplanned, decreases

c) planned, increases d) planned, decreases

***Sample A13: Gap fill question* – Economics**

Such formats, on the face of it, bear a close resemblance to some of the IELTS reading task types we have seen. One needs to be mindful however, of an important difference in the processes involved in completing tasks in these two contexts. On the IELTS test, test-takers have access to the information required to complete tasks ie as information contained in the reading passage. This is not normally the case in subject-based examinations, where students are not usually permitted access to reading materials during the exam. Thus the two contexts rely arguably on different cognitive processes – in the IELTS test, these mainly involve the locating and comprehending of specific information to be found in the reading materials; in the examination format there is a distinctive "memory and recall" component to the required form of engagement.

Such differences relate very much to the very different purposes of reading in the two domains. In a reading test such as IELTS, the focus is more on assessing the extant skill level of tests takers; in university exam items, such as in the examples we have seen above, the focus is less on skill, and more on the extent to which students have acquired key knowledge in the discipline area. In short, in the university context, content is salient; in a language testing context, it is largely incidental. The implications of this difference for test design are discussed in more detail in Section 5 of the report.

GLOBAL + LITERAL

According to the study's analytical schema, tasks of a 'global-literal' configuration are those that require primarily basic comprehension of textual material (literal) in relation to larger textual units – ie whole texts as well as multiple texts (global). It was noted that almost all tasks in our corpus fitting these patterns were *assignment tasks* (ie out of class tasks, set as part of the major assessment requirements on courses). Most, but not all, came from the 'softer' humanities disciplines. Examples of such task types are presented and discussed below.

Summary tasks – single text

We saw in the previous section ('local–literal'), a number of tasks requiring the summary of a single concept (eg 'thermal energy' in Physics; 'speech acts' in Linguistics). Tasks requiring the summary of a single *whole* text were relatively uncommon in the corpus. The following from the History subject, involving here the summary of a book chapter, was a rare example.

Secondary source summary

One of the most important skills in conducting research in history is the ability to comprehend a particular text, and then to summarise its major arguments and conclusions in your own words.

For this exercise, you need to read chapter X of *The path to genocide* by Christopher Browning, and then write a 500 word summary.

***Sample A14: Assignment task* – History**

In setting this task, the History lecturer explained that it was important for students not just to give "some simple blow-by blow recapitulation of the text".

> HISTORY: *What I stress to students is that they need to read chiefly with the purpose of identifying the author's main argument. And the other part is then to identify the evidence the author presents to support this argument. All this needs to come out in their summaries.*

Summaries of arguments – multiple texts

A more common type of summary task was that requiring the summary of a number of texts, as in the following two samples from *Management* and *Media Studies*. As in the History example above, the main focus of these tasks was for students to give an account of *arguments* contained within texts. In both the sample tasks below, a key component is for these arguments to be seen as part of a larger debate – in the *Management* task (A15), it is one about how much globalisation has progressed as a phenomenon; in the *Media Studies* task (A16), it is a debate about different policy approaches to media ownership.

The globalisation debate

In no more than 800 words, address the following question:

> **What are the arguments for and against the idea that 'the world has become flat' in recent years?**

Please base your discussion on readings for Week 3 and further research. You must meet the referencing requirements listed below.

Business in the global economy

***Sample A15: Assignment task* – Management**

Media ownership

What are some of the basic for and against arguments in the debate about abolishing the cross media ownership AND foreign ownership laws in Australia? Refer to at least 4 primary sources in your response.

***Sample A16: Assignment task* – Media Studies**

Both lecturers were keen to stress that such tasks were really focused on developing the skill of accurately representing the views of various writers on an issue. As the Management lecturer explained it:

> MANAGEMENT: *Students often struggle in just seeing what the main points of a piece of writing are, to have the confidence to say: "Yes, this is what this person is saying, this is what they're arguing".*

This lecturer went on to explain that in such tasks, students were sometimes under the misapprehension that they should also be expressing their own view in the debate. For this lecturer, the ability to provide a clear summary of 'the arguments of others' in the field was a basic foundational skill, one which was then built on later in the course.

> MANAGEMENT: *One thing [students] struggle with is that it's actually a summary task. I'm after a set of arguments. I'm not after [their own] opinions which can throw them a little. We tell them that comes in later.*

Summaries of research findings

A different version of the summary task was that focused not on the identification of the arguments contained within expository texts, but rather on the purposes and findings contained within empirical research studies**.** In Sample A17 below, an essay set in the Biology subject, a major component of the work for students is to "summarise a range of recent studies" concerned with the search for a cure for malaria.

Malaria

Why do botanists study the malarial parasite (Plasmodium) and how do they hope to find a cure for this disease? In your response, you should summarise a range of recent studies, focusing on the kinds of drugs currently being tested, and why.

***Sample A17: Essay task* – Biology**

Another example of a task requiring students to document a series of research findings is the following from the Linguistics subject (Sample A18). In this instance, students need to conduct their own research, but first of all to place their study in the context of previous work done in the area, involving "a summary of earlier studies in the subject".

Speech act research

The purpose of this assignment is for you to collect and analyse speech act data. You will be expected to design a brief Discourse Completion Task (DCT) which elicits apologies or requests.

Write your paper with the following sections (including inter alia):

Introduction (about 400 words): Talk about the speech act you're investigating, and the role of politeness for realising it. Define your terms, **and summarise some of the earlier studies on the subject** (you may use your reader and lecture notes for this).

***Sample A18: Research project task (extract)* – Linguistics**

LOCAL + INTERPRETATIVE

Our category of 'interpretation' is a broad one and, as explained earlier, has been defined for the purposes of the study as "those forms of engagement with reading material that go beyond a literal comprehension of a text's propositional content". In this sense, as we pointed out, it is a more reader-focused than text-focused form of engagement.

Under the 'local-literal' category discussed earlier, we saw a range of tasks that were focused on students showing their understanding of key *concepts* in the discipline (eg 'thermal energy' in Physics; 'speech acts' in Linguistics; 'value configuration' in Business Studies). Tasks falling under this new category, 'local-interpretative', had a similar focus on key disciplinary *concepts*, but were distinguishable from these largely comprehension-based tasks in their requirement that students engage in some reflective way with this material. Such a distinction is well-illustrated in the following quotation from one informant.

> ARCHITECTURE: *Some of the texts in the subject are difficult so we typically set some guide questions to help [students] pick out what we see as the key points in the reading. But we also want them to reflect on what they have read and always relate it somehow to their design work.*

In the analysis of our corpus, we observed two main types of interpretative tasks around this more local material: 1) tasks requiring students to show how a concept or idea in their reading could be utilised in their work in the discipline (application), and 2) tasks requiring some assessment of the validity, worth and so on of an idea, or concept (evaluation).

Application tasks

The first of these task types, the 'application type', was the more common in the corpus, with instances identified in a range of discipline areas. In the following task, taken from the *Architecture*

subject, we see exemplification of the principle enunciated above by the lecturer in this subject (Sample A19). As outlined in the task rubric, students here need first of all to consider certain concepts presented in their course reader (in this case 'efficient structures found in nature'), and then for them to reflect on how these concepts might be applied in their 'future design work'.

Structures in nature

The chapter *Introduction to Building Structures* gives a good overview of the structural systems you have been learning about. The author also looks at how *efficient structures* found in nature are good case studies in which to examine structural principles.

Make some notes from your reading on several of these structures, and suggest how you think the concepts discussed could be **useful** to you in your future design work.

***Sample A19: Exercise task* – Architecture**

The following are additional tasks that have this focus on the *application* of key disciplinary concepts (Sample A20 and A21). In the Economics task (A20), students need to draw on a particular economic model ('Solow-Swan model') as a basis for analysing a particular economic state-of-affairs (or rather a state-of-affairs imputed by a particular economic commentator). A similar configuration is evident in the Physics task (A21), where students need to draw on a concept in the literature ('gel electophoresis'), as a basis for assessing the 'accuracy' of an example constructed by themselves.

Consider the following statement made by a leading Australian economic commentator:

Where once our economic growth was determined solely by the number of machines, today it is determined by our ability to generate new ideas and develop new ways of producing output.

Using the Solow-Swan model, assess this statement.

***Sample A20: Exercise task* – Economics**

Extended written answer

a) From a physics perspective, and using the simple model (F= CAv), discuss how gel electrophoresis allows fragments of different mass and/or electric charge to be separated over time.

b) Using an example constructed by you (ie you decide the mass, size, and charge of each fragment), demonstrate that two different fragments will separate over time.

c) **consult the literature on gel electrophoresis** and briefly discuss one aspect of your initial analysis that is idealised or inaccurate.

***Sample A21: Exercise task* – Physics**

In their commentaries on these more interpretative tasks, informants emphasised the need for students to be operating beyond any 'simple factual' understanding of knowledge, where answers fall neatly into correct and incorrect responses. Interestingly, such a view was also enunciated by some from the hard technical disciplines, including the Physics lecturer who was keen to disavow students of the idea that studies in her subject involved a simple quest for the right answer:

> PHYSICS*: People think traditionally that Physics is really just about the mathematical solving of problems, and coming up with the right answer. In fact there's a lot in it that's just*

> *not that. A lot is about being able to understand concepts and working out how and when to apply them.*

A similar view was expressed by the Architecture lecturer who also stressed the 'open-ended' nature of reading tasks in her discipline area. She pondered whether this in fact was a conception that was at odds somehow with those held by students from certain educational backgrounds.

> ARCHITECTURE: *In terms of tasks we set around reading, we have many open- ended tasks with no right or wrong answer. If students are coming from a different culture where there is an expectation that they need to get something right, then there are difficulties there I suppose.*

Evaluation tasks

Less prominent among the tasks fitting a 'local interpretative' pattern were those that required explicit *evaluation* of material, involving the assessment of the value, worth, benefit etc. of some entity. Consistent with the finding from the interviews, it was noted that such tasks in the corpus were confined to the softer 'humanities' disciplines, as seen in the following examples. We note in passing that a range of different types of entities are presented here as the objects of evaluation; in Sample A22 it is a 'policy'; in A23, a 'thesis'; and in A24, a 'concept'.

> Explain what a 'polycentric' staffing policy is. What are the positives and negatives of a firm adopting such a policy?

***Sample A22: Exam question* – Management**

> What is Samuel Huntington's 'Clash of civilizations'? How convincing is his thesis?

***Sample A23: Exercise task* – History**

> What is 'liquid modernity'? How useful do you find this concept? Discuss in relation to the phenomenon of reality television.

***Sample A24: Exercise task* – Media Studies**

In such tasks, one sees clear expression of the 'critical' approach to knowledge advocated by a number of informants, as seen in the following remarks made by the lecturers from Media Studies and History:

> MEDIA STUDIES: *On my course … students being critical in their reading is absolutely essential. Students need to assess arguments, and part of this is identifying where arguments and ideas have been left out.*

> HISTORY: *I stress to students the need for a critical approach. The way I get at this is to say them: "Well just because this guy writes it in a book, it's not something you have to accept".*

GLOBAL + INTERPRETATIVE

The category 'global-interpretative' refers to those tasks requiring students to bring a broadly interpretative approach to their reading in relation to whole texts or multiple texts. Most tasks in the corpus fitting this configuration were assignment tasks, taking in a range of genres: essays, reports and the like. The most prominent of these genres identified in the data are discussed below.

Essays

The assignment-type task most clearly requiring a 'global-interpretative' approach to reading material was found to be the expository essay. In the study, the essay genre was set for students in about half the subjects investigated – with the majority of these prescribed in the 'soft' disciplines. Below are two such samples, from *Management* (Sample A25) and *History* (Sample A26). In the rubric of these tasks we can see the need for students to engage with a variety of materials ('a range of views'; 'available evidence' etc) and to bring a critical approach to these materials ('to 'examine, 'to assess', 'to come to your own judgment').

Globalisation and Cultural risk

"Globalisation is reducing cultural differences between countries and thus cultural risk. International firms can now pursue global strategies without fear of failure". Please assess the merits of this advice. Can firms ignore cultural risks?

In your essay you will need to consider a range of views on this issue before coming to your own final judgment.

***Sample A25: Essay task* – Management**

Kennedy's Vietnam policies

In retrospect, JFK can be seen to have increased the American commitment in Vietnam. Many argue, however, that Kennedy would have resiled from extending the War. Examine the available evidence, including the views of Kennedy's contemporaries and the historians who have studied his presidency to assess the nature and impact of JFK's Vietnam policies.

***Sample A26: Essay task* – History**

This 'global interpretative' approach was also outlined by informants in interview:

> HISTORY: *We require our students to read widely – both primary and secondary material. I stress to them that they need to do adequate reading otherwise they cannot respond to the questions that we pose. I say "You might find a perfectly reasonable answer in a single book on this topic, but you're in no position to evaluate that unless you've read alternatives".*

Accompanying such essay tasks in the subject manuals was a good deal of material covering issues of appropriate use of sources and plagiarism, including the following from the History manual:

Essay writing is an essential part of the learning process and a vital medium through which we can assess your understanding of the subject. The essay must therefore be your own work. This does not mean you should not make extensive use of the work of others. However when you quote or paraphrase the explanations of others, you must acknowledge your sources in full.

Advice concerning plagiarism – History course manual

In relation to essay writing, a number of informants spoke of the challenges of imparting to students how they should go about using reading material legitimately in their writing:

> MANAGEMENT: *Using sources appropriately is a tertiary skill, and in teaching that we try to inculcate some of the ideas of what plagiarism is … but we do often face issues with students on that score.*

Reports

Another assignment-type requiring a 'global-interpretative' engagement was the report. In the following example, a section of a linguistics research report task (cited earlier – Sample A18), students needed to interpret the results of their study against the findings of a range of studies described earlier in the report.

Speech act research

Discussion & Conclusion (400-500 words). Analyse and interpret your findings: Why did it turn out like this? What is the reason for the differences you found? **How do these results stand with respect to some of the studies you reported in the introduction?** End with a brief conclusion.

***Sample A27: Research project task (extract)* – Linguistics**

In the following case study report from *Business Studies,* students needed to draw on certain discipline-related concepts ('value configuration', 'business structure') as a basis for analysing the effectiveness ('value') of a specific business organisation.

Value proposition analysis

This assessment task requires you to analyse how the environment, value configuration and business structure affect the nature of a value proposition.

Task: Your tutor will assign you with a small to medium business (SME) example for you to focus your analysis. …. Drawing on key concepts from the course, you need to analyse various aspects of the business to explain and evaluate where and how an organisation delivers value to their customers.

***Sample A28: Report task* – Business Studies**

Text analysis

One final type of 'global-interpretative' reading task involved forms of text analysis. This type of task is arguably a more recent task-type set for students in the academy, and reflects the growing influence of notions of 'genre' and 'academic literacy' on teaching in university programs. In such tasks in our corpus, students were typically encouraged to see particular texts as 'generic resources' from which they could draw for their own writing, as seen in Sample A29 below. In this task, from the Communications subject, students need to investigate a range of Opinion pieces from a newspaper (Op-Ed articles) as a basis for writing their own pieces.

Writing an Op Ed piece

For this task you need to research and write an opinion piece on a timely topic. You need to express an opinion and then to make an argument to support that opinion. This type of article is called in the industry an 'op-ed' piece. No ESSAYS please. Note that the op-ed is an entirely different genre from the academic essay.

To prepare for the writing of this piece, you should locate several examples of op-ed pieces written on a similar topic from a major newspaper (eg *The Age*). These examples of the genre can serve as a model for your own writing. In consulting the piece, you should consider what is said about the topic in question, but also – and very importantly – how the piece is put together (the language used, structure etc).

***Sample A29: Assignment task* – Communications**

This genre-based reading was elaborated on by the Communications lecturer, who saw such training as essential to the development of students' writing abilities:

> COMMUNICATIONS: *Because they have to write in this subject, if they don't read, then they will be completely' off genre'. They'll just be writing stuff that they would have written at high school. So I get them to analyse texts. I actually get them to do things like count the words in the sentences, get the sentence range, what style of language it is. Is it elaborate or is it plain? And then they need to emulate that.*

Whilst the setting of tasks such as this is quite understandable in the context of a course explicitly aimed at developing writing skills in students, we noted similar genre– based activities set on courses without the same focus on writing *per se*. Thus, in Sample A30 below from the Management subject, students are instructed to study a sample answer based on 'The Globalisation Debate' task discussed earlier (Sample A15), and to use this as an 'indicative guide' for completion of the 'debate' task set for students.

Sample review

The following text is a sample review in the manner of the debate review exercise (see sample X).

Study the text carefully. It should be used as an indicative guide to the sort of tone, analysis and structure expected of such a review. The references and quotations used are fictional and solely for illustrative purposes.

***Sample A30: Exercise* – Management**

A different type of text analysis task was one where students needed to adopt a 'critical' approach to language use. Examples of such tasks were confined to the *Media Studies* subject, such as the following 'Media Watch' task (Sample A31), requiring students to analyse different media representations of a particular story or issue.

Media Watch

Groups of 4–5 students will choose to look at one contemporary issue currently represented on media outlets – eg issues to do with politics, economics, religious affairs, sport music, celebrity or even the media itself. You should consult a variety of media outlets eg print media (including online sites), television news and current affairs.

The main purpose of this assignment is to analyse the similarities and differences in the coverage of the one story or issue that the different media organisations put out. Pay special attention to the language used and how this might involve distortion, bias, plagiarism or unethical reporting.

***Sample A31: Assignment task* – Media Studies**

The focus of such a task, as the rubric indicates, is very much on the way that language is used to construct particular representations of events. The lecturer in the subject described the approach thus:

> MEDIA STUDIES: *In the course we're interested in students becoming deconstructive readers. The emphasis is not so much on what the meanings of the texts are, and whether I agree with them, but rather how meaning is being created. I want them to focus on how the words used in a text can carry particular nuances of meaning, or how images are used to create certain effects.*

Such readings, which operate arguably at the most 'interpretative' end of our literal– interpretative continuum fit very much with recent developments in language analysis including critical discourse analysis (Fairclough, 1998) and critical literacy (Gee, 2008).

4.2.4 Summary of academic task analysis

The analysis of the reading tasks showed a wide variety of reading requirements across the disciplines investigated. As we saw, instances of tasks fitting all four configurations in our matrix were identified (ie local-literal; global-interpretative etc). Because of the largely qualitative nature of the study, it is not possible to make any definitive statements about which of these four reading modes was the most prominent overall. There are however, a number of broad generalisations that can be made:

1. most reading tasks in the corpus fitting a *local-literal* configuration tended to be in the form of short weekly exercise tasks or examination questions, and were set principally for

the purpose of either inputting or testing a student's understanding of key foundational knowledge in the discipline. Such tasks were linked very much to readings from prescribed textbooks in subjects.

2 most reading tasks that fitted the other configurations from the matrix (*global-literal, local-interpretative, global-interpretative*) tended to be related to more extended written assignment tasks, and often involved readings from a variety of genres: monographs (or sections of monographs); research articles; newspapers and magazines; internet sites etc.

3 the variety of assessment requirements across the disciplines pointed to some discipline-based differences in reading modes, with *local-literal* patterns more prominent in the harder technical disciplines, and *global-interpretative* more so in the softer humanities disciplines.

4.3 Findings from interviews – Comments on IELTS reading tasks

In this final results section, we turn again to the responses from informants in the interviews. As described earlier, the interview was divided into three phases, covering discussion of: 1) general reading requirements on courses; 2) reading requirements on specific assessment tasks; and, in the final phase 3) perceptions regarding the correspondence between reading requirements on courses and those on the IELTS Academic Reading test. To facilitate discussion in this final part of the interview, informants were provided with samples of IELTS reading tasks and asked to comment on perceived similarities and differences in reading requirements in the two domains (Appendix 2a). They were also asked to speculate on how useful they thought these sample IELTS tasks were likely to be as preparation for the reading demands of their courses. Responses to these questions were of three broad types:

1 an overall positive view of the relationship between reading in the two domains

2 a more qualified view of the relationship

3 a critical view of the relationship.

As has been the case in previous parts of the study, there was an identifiable disciplinary bias in the responses of informants, with those more positive about the relationship generally coming from the more technical areas, and those having a more critical view from the humanities disciplines.

Those who commented most favourably on the relationship between the test and study on their courses were the lecturers from Computer Science, Engineering, Biology, Business Studies, and Communications, comprising almost half the study's informants (5 out of 12). In general, these informants saw a clear connection between some of the IELTS task types and the types of tasks set on their courses, as seen in the following comments:

> BIOLOGY: *I think the skills required here [on the IELTS test] would be very closely aligned to what I would expect a student in first-year biology to come to terms with. There's a fair bit of reading there and a fair bit of basic comprehension, and that is certainly what our students need.*

> COMPUTER SCIENCE: *Our exam questions are not dissimilar to some of the questions [on IELTS]. [This is] certainly true of the multiple-choice format, not so much true or false. One of the questions in our exam also involves the students rearranging lines of code in order to create a logical program, and that looks like at least one of the items in this material.*

Several informants in this group expressed surprise at what one described as the test's 'unexpected complexity'. The view here was that the reading demands on the IELTS Academic Reading test appeared to them to be higher than those in their particular subject area – though it does need to be

acknowledged that in such comments, a clear distinction was not always drawn between the demands of the test items and those of the reading passage on which the items were based:

> COMPUTER SCIENCE: *If anything, we're expecting less of students in terms of reading. The test is definitely relevant and having it at a higher level than what we're asking for in the course is a good thing. So it seems to be an appropriate sort of thing to be testing them on.*
>
> COMMUNICATIONS: *I think [the IELTS Academic Reading test] would be good preparation actually. I found the science-based articles and items quite complicated actually. If I had to answer questions about the science, I'd have to go back and read it twice.*

For informants in this 'more positively-disposed' group, the sense of correspondence between reading demands in the two domains, as well as the test's perceived difficulty led them to believe that IELTS would be an unequivocally useful form of preparation for tertiary study:

> ENGINEERING: *These sorts of skills [tested in IELTS] would definitely be useful in a generic sense … and I can see that it would be good preparation for what we require on our course.*
>
> BIOLOGY: *I think looking at [these samples], I would be happy if a student was coming to me with those skills.*
>
> COMMUNICATIONS*: I think [the IELTS Academic Reading test] would be good preparation actually. … I think if the students scored well on this then they would probably be OK.*

Another group of informants had a generally positive view of the test – or at least of the sample materials provided in the interview – while at the same time, expressing some reservations about its overall usefulness. A similar number of informants fell into this group as the previous (5 out of 12), and consisted of the lecturers from Physics, Architecture, Economics, History, and Management. The main reservation expressed was a sense of a limited degree of correspondence between the test and reading requirements in their particular disciplinary domain, as suggested in the following remarks:

> ECONOMICS: *I think [the IELTS material] is fine. It's just comprehension really… I've got no problems with that whatsoever. Where economics is slightly different from this is that we use a combination of mathematical techniques, diagrammatic techniques and texts. … It's a very abstract mathematical way of thinking about the real-world.*
>
> HISTORY: *I'd see this as all useful. The test is very focused on reading comprehension … that is a basic pre-requisite for our courses. It doesn't cover the quite discipline-specific methods of reading we're concerned with … for example the way students need to be able to handle the reading of primary source material.*
>
> ARCHITECTURE: *The topic area of the test – bridges – is spot on for our area. I think the type of questioning is also ideal for the level of language skill required in [our subject]. It's not clear though whether you just have to match words, or whether you have to read between the lines a bit – students certainly need to do some [of the latter] on the course.*

In asserting these distinctions, a common theme among this group related to the importance of students reading to understand certain key concepts in the discipline, and to be able to show their understanding of these. This was felt by some to be a quite basic difference between the two formats:

> ARCHITECTURE: *I think a difference is that we want students to pull out key concepts from paragraphs. In IELTS it seems they are given the concepts and just need to match these up.*

> PHYSICS*: In Physics, the majority of material in the text is trying to explain concepts and also explain problem-solving strategies, and this is what we want [students] to get from their reading. The IELTS tasks seem more arbitrary in what they pick out from the text … and seem to be mainly about pattern recognition.*

One other gap commented on was the lack of connection with processes of writing on the IELTS Academic Reading test. Several informants discussed the considerable challenges on their courses in getting students to understand and also adopt acceptable use of reading material in their written work. The view here was that this was perhaps an aspect of academic reading that could somehow be given explicit coverage in the test.

> MANAGEMENT: *[To use sources appropriately] students need to see concrete examples to know what is acceptable and what's not … I can't see much evidence in the test of this aspect of academic study, and this would certainly be helpful.*

Whilst identifying certain differences in the skills in the two domains, informants in this second group acknowledged that it would be most difficult to create a generic reading test that could accommodate in any systematic way the various discipline-bound forms of reading identified. One informant also thought it necessary to be realistic about the extant reading skills that students bring to their courses, and was sure that the responsibility for the teaching of any discipline-specific skills lay squarely with academics on their particular programs.

> HISTORY: *We just can't make too many assumptions nowadays about our students and their capacities. And this is irrespective of their background. … the onus is clearly on us to develop these capacities within our courses.*

A final group – a considerably smaller one than the previous two – had a more critical view of the test and its likely usefulness. This group was confined to just two informants – those from the humanities disciplines of Media Studies and Linguistics. The general view expressed by these two was that the construct of reading in the test was somehow at odds with that which operated in each of their discipline areas, and that, as a result, the test risked giving students a misleading impression of the nature of academic reading. Their takes on this disjuncture were slightly different ones. For the Media Studies lecturer the problem was at heart an epistemological one:

> MEDIA STUDIES: *In the tasks on the test, it seems to me that students are really just dealing with information. That's the way these texts are presented. And then it's mainly about regurgitating the information. This author is saying this. But it doesn't allow students options to engage with the material. Whether they think what is being said in the text is valid or not. I see it as pretty low level.*

This lecturer went on to explain that from the outset on his course, he did not want students to see texts fundamentally as "repositories of information and facts", but rather as the expression of particular ways of seeing and constructing the world:

> MEDIA STUDIES: *There's a need for students to have an argumentative, conceptual, even ideological understanding of material. [I tell them that when] they come to university they need to learn how to critique … well everything … You question all that you read, and all that your lecturer gives you, and I can't see much evidence of this in the test.*

The concerns of the Linguistics lecturer related more to what she saw as the non-contextual nature of reading on the IELTS test. What was notable about reading at university, she thought, was that it always operates within a context, one which is shaped by the discipline itself and also by the particular task with which students are engaged. This, she thought, was a feature strongly lacking in the IELTS test:

> LINGUISTICS: *There is a broader context for interpreting the reading which university students have because they have a purpose for assignments, and the discipline serves to make it clear what is important and what is not. ... so [in the IELTS test], this is quite strange and difficult to relate to because the tasks are completely out of context. What is missing is the purpose for knowing this information.*

This lecturer thought that a way to improve the test in this regard would be to construct tasks around particular contexts of study (or 'scenarios'), which could serve to provide this sense of purpose:

> LINGUISTICS: *I think a good way to go would be if students had some background information like: "You are a student. You are studying blah blah blah, you need to know X,Y and Z in order to complete a certain assignment. This is the context for your reading. Now try and answer some specific questions. How would this information be useful to you and why?" Because that is the sort of expectations we have of students.*

5 SUMMARY AND DISCUSSION OF FINDINGS

A range of findings have been presented so far, drawn from the two methodologies employed in the study; namely, the analysis of the IELTS and academic tasks, and the interviews with academic staff. In what follows we provide a summary of these findings focusing on:

1. main findings, which are those patterns to emerge from the data as a whole, and
2. more specific findings, which relate to particular areas of the data.

5.1 Main findings

IELTS reading vs academic reading

A feature of the study's design was the development of an analytical framework that would allow systematic comparison to be made between reading requirements in the two domains – IELTS and academic study. As discussed, this framework took in two dimensions: 1) the 'level' of engagement with text, which distinguished between a more 'local' and a more 'global' engagement with material; and 2) the 'type' of engagement, where the distinction was one between more 'literal' and more 'interpretative' readings of this material. Drawing on this analysis, we can say there is evidence in the study of some correspondence between the reading requirements in the two domains, but also evidence of a fair degree of difference.

The main similarity is to be found in those forms of reading that required mainly a local and literal engagement with material. As was noted previously, this configuration was true for the vast majority of items in the IELTS corpus, with many tasks requiring mainly a basic comprehension of relatively small textual units (sentences, inter-sentences, paragraphs). In a similar vein, a sizeable proportion of tasks in the academic corpus were also found to have the same 'local-literal' orientation. Such tasks within the academic data, it was noted, tended to be set as weekly class exercises or on exams and tests, and had as their focus the need for students to understand certain discipline-based concepts.

But while this particular similarity was evident, the study also noted a good deal of divergence between the two domains. This was mainly found to arise from the considerable variety of reading tasks identified in the academic corpus, especially in those that related to more extended assignment tasks (eg essays, reports and so on). Thus, whereas the IELTS corpus saw virtually all task-types fall within the 'local–literal' area of our analytical matrix, the academic corpus was notable for incorporating tasks that covered all four areas. Amid this diversity were tasks which seemed, on the face of it, to be quite remote from the IELTS profile of tasks, including, for example, those which

required a critical engagement with material, or which stipulated engagement with 'a multiplicity of sources and viewpoints'.

These patterns – both of similarity and of difference – were largely confirmed in the interview commentaries of staff. Thus, some of our informants saw a basic congruence between the type of reading they expected their students to do on their courses, and what they perceived to be the demands of the IELTS test. Others, by contrast, were keen to point out what for them were clear differences.

Disciplinary variation in reading requirements

The similarities and differences observed between the IELTS Academic Reading test and academic study can be accounted for in part by the variety in the types of reading required across the disciplines considered in the study. Much of this variety, as we have noted, related to the broad division in the disciplines investigated; that is between the 'harder' technical disciplines on the one hand, and 'softer' more humanities-oriented disciplines on the other. Thus, it was noted that in the more technical disciplines (eg Engineering, Architecture, Physics, Biology), less reading overall was required of students, and that much of this had the clear purpose of having students assimilate certain foundational concepts in the discipline. Such a view of reading was affirmed in the interviews, where it was suggested that the contents of reading materials on such courses were presented to students as essentially "the ideas they needed to know".

In the more humanities disciplines, by contrast, reading was found to take on many different guises. While students on these courses (including Media Studies, Linguistics, History, Management) were also required to learn basic 'concepts and viewpoints' in their field, there were many additional ways they were expected to interact with material. In some contexts, for example, the task for students was one of comparing different ideas and viewpoints on an issue; in other contexts, it was to evaluate these ideas; in others again, students needed to synthesise a range of material as a basis for developing their own viewpoints. In contrast to the mainly 'assimilationist' approach to reading described by informants in the technical disciplines, the view from these latter fields was that students needed always to bring their own perspective to bear on material – an approach characterised by one informant as "the need to question everything".

The findings from this part of the study suggest then, that in the first year of undergraduate study at least, the types of materials students need to read on their courses, and the ways they need to go about reading these material are subject to a good deal of variation. This feature of academic study points to the difficulties inherent in trying to conceive of some generalist construct of academic reading, one that has clear relevance to all disciplinary contexts. The implications of this situation are discussed in the final sections of the report.

5.2 Specific findings

Along with these general findings were a number of more specific findings that emerged from the data, ones that provide greater detail about some of the differences observed between the two domains.

Epistemic entities

It was noticed in the two task corpora (IELTS and academic) that the types of entities that students/test-takers needed to focus on in their reading were generally of a different order. In the IELTS test samples, for example, these entities were typically characterised as 'information', as exemplified in the following sample rubrics (our emphasis):

> Do the following statements agree with the ***information*** given in the Reading Passage?

(Sample 1.1)

Which paragraph contains the following ***information?***

(Sample 2:2)

In the academic tasks, by contrast, this knowledge tended to be characterised in a variety of ways. Firstly it was noticed that it was quite rare in fact for students to be asked to engage with 'information' *per se*; instead they needed to contend with a range of different entities. Most prominent among these was a characterisation of knowledge as 'concept' (or related entities – 'model', 'definition' and the like), as seen in a number of tasks in the academic corpus. Among the more humanities disciplines, we also saw an emphasis on entities associated with the ideas of particular scholars – including 'arguments', 'viewpoints', 'theses', 'perspectives' etc. Other entity-types were those related to the outcomes of empirical research eg 'studies' and 'findings'.

This contrast in the epistemic entities in the two domains points to a more 'constructivist view' of knowledge in the case of the academic tasks, where knowledge is typically seen to arise from the thinking and researching of individual scholars in a field, or from the collective disciplinary community as a whole (Myers, 1992). The contrasting focus in IELTS on reading content as 'information' suggests instead a more positivist view of knowledge, where, as Hill and Parry (1992) suggest, "authorship is essentially anonymous" (p 439).

Interpretative readings

These different ways of conceiving of academic knowledge were found to have implications for the way that this knowledge needed to be engaged with in the two domains. Thus, we saw that the essential task for students in many of the IELTS items was to demonstrate a basic comprehension of the propositional content of reading material. By contrast, the focus of many of the academic tasks was not only to arrive at a basic understanding of material, but also to 'work' with this material in order to proffer some interpretation of it. This basic requirement of academic study was well summarised by one informant thus:

> "we typically [want students] to pick out … the key points in the reading. But we also want them to reflect on what they have read and always relate it to their … work somehow."

In the academic corpus, it was noted that two types of interpretative reading tasks predominated – what we have termed *application* and *evaluation*. In application-related tasks, students were typically required to show how a concept or idea in their reading could be utilised in their work in the discipline; in evaluative tasks, the focus was more on making some explicit assessment of these concepts (eg with respect to their validity, worth etc). Of these two interpretative modes, the application-related tasks were found to be the more common.

We note in passing that interpretations such as these tend to be very much discipline-based (McPeck, 1992), evident not only in the specific concepts and ideas that students need to engage with, but also in the types of 'interpretations' they need to make of these concepts along the way. Indeed for some scholars, the process of being trained in a discipline is often characterised in these precise terms; that is, to learn the particular ways in which certain concepts are 'applied' and 'evaluated' within a field (Lave & Wenger, 1991). As Bourdieu (1990) points out, such practices are not only cognitive in nature, but are effective when assimilated into habituated dispositions**.** The strong discipline-base of these more interpretative forms of reading may provide some explanation for the apparent absence of these modes among the various IELTS tasks collected for the study. We can also recognise in this situation, the challenges that would be involved in incorporating such modes into any possible adapted version of the test.

Readings of multiple texts

Another difference noted between the two domains was the quantity of reading required to complete some tasks. As we saw, all tasks in the IELTS corpus were focused on engagement with a single text (the relevant reading passage), and in the case of some task-types, a focus on relatively small components of the text. In contrast, a feature of some of the academic tasks, especially in the more humanities areas, was the need for students to engage with a range of texts. Examples of such tasks were: 1) summary tasks which required students to give an account of a variety of sources in relation to a particular topic; and 2) essay tasks requiring the exploration of a range of views as a prelude to students presenting their own views on the topic.

Some of the academic tasks, as we saw, alluded again to a particular conception of knowledge, one that sees knowledge in a discipline being advanced through processes of debate and dialogue between scholars, as opposed to the furnishing of single, definitive answers to issues and problems. Several informants were sure that it was only through the engagement with multiple sources that students could develop a suitably critical frame in their studies. As one informant explained it, students might feel they have come across "a perfectly reasonable answer" to a question, but that they are in fact only in a position to presume this if they've had the opportunity to "measure this answer against alternatives".

The contextual nature of reading

Reading in the two domains was also seen to differ around the notion of context. One observation made about the IELTS samples provided to informants was the apparent lack of an underlying intellectual purpose for the particular questions posed in tasks; that is to say, that in many tasks, the particular items of information needing to be focused on appeared, on the face of it, to be rather arbitrary. In contrast, it was suggested that it is the nature of university study that there is usually a clear purpose and context for the type of reading that students need to do. As one informant explained it, such a context – which is created at once by the broader knowledge base of a discipline, and also by the immediate demands of tasks and assignments set within courses – "serves to make it clear to students what [information] is important and what is not".

This disparity between reading in the testing and academic domains has been commented on in the literature. Alderson (2000) notes after Barton (1994) that it is rarely the case in academic study, that reading as an activity is performed *in vacuo*; that is, without being related in some way to other academic activities. A concept invoked to capture this idea is 'literacy event', described by Barton and Hamilton (1998, p 9) as a series of observable activities mediated by text. As Alderson explains it:

> "Often literacy events – TLU reading tasks – are not undertaken in isolation. .. A coursework reading assignment leads to note-taking, which leads to further reading, to drafting a written paper, re-reading the draft critically" (Alderson, 2000, p 148).

To accommodate this feature of academic study within the IELTS test is undoubtedly a challenge; as Weir *et al* (2009) suggest, full contextual authenticity "is generally unrealistic for language assessments" (p 12). The suggestion from one of the study's informants was to construct tasks around specific study 'scenarios', ones that would seek to place the reading of test passages into some real-world context for students.

The reading – writing nexus

Arguably one of the more significant literacy events in academic study is that which involves the integrating of one's reading on a topic into some related writing activity (Horowitz, 1986; Moore & Morton, 2007). This was evident in many of the academic tasks analysed in the study, with virtually all of the assignment-style tasks in the corpus having a substantive reading component attached to them. A number of informants commented on the importance of this reading–writing nexus, seeing it

as an area of particular challenge to students. Concern was expressed here about students' abilities to use and document sources appropriately, along with perceptions about the growing incidence of plagiarism on courses. Several informants noted the absence of these reading–writing connections in the sample IELTS materials provided, and wondered whether this dimension of academic reading could be incorporated into the test somehow.

Information literacy

Another area thought to have limited coverage in the test related to the skills involved in locating, selecting and evaluating information sources. In their discussions of the reading practices of students, a number of informants noted the opportunities, but also the considerable challenges created for students by the increasing online environment of academic study. As we saw, concern was expressed that students did not always bring a particularly 'discerning' attitude to the vast textual resources now available to them. The response of some of our informants to this situation was increasingly to adopt an 'information literacy' approach in their teaching, with students called upon to appraise texts in some broader social context, and to develop an awareness of such matters as the context of their production, their authorship, communicative purpose, and ultimately their 'reliability' as sources.

It was noted by some informants that the increasingly important skills related to the searching and selecting of sources appeared to have little or no coverage in the IELTS Academic Reading test. Indeed, the tendency of IELTS tasks to focus on quite specific items of information in reading passages, would seem to limit the possibilities of appraising texts in the broader social and contextual terms of an 'information literacies' approach (Shapiro & Hughes, 1996).

Genre readings of texts

A final type of reading evident in the academic corpus is what we have called 'genre readings of texts'. As noted, a number of reading tasks in the corpus required a focus not so much on the contents of texts, but rather on the ways in which 'texts are put together' (The focus of such tasks was on such textual features as rhetorical organisation, sentence structures, lexical choices and so on). In some of these tasks, it was noted, the main purpose was a more utilitarian one; that is, for students to 'get a feel for the genre', as one informant described it, so that they might emulate the particular written style in their own work. In other tasks, the purpose was more a critical or 'deconstructive' one, with students needing to identify how language operates in texts to create certain meanings – including 'ideological meanings'.

As was mentioned, these types of 'genre readings', which take in both more 'pragmatic' approaches (Johns, 1997; Allison, 1996; Swales, 1990) and more critical approaches (Shor, 1999; Street, 2003), reflect the increasing role of textual analysis activities in academic study. It is fair to say that readings such as this were not really apparent in the IELTS corpus compiled for the study.

An explanation for differences

The study has identified a number of differences between reading demands in the two domains, even if they are ones that can be readily accounted for. Arguably, the purpose of a test of reading is to assess students' abilities to process written text. In this context, as we have seen, the actual contents of the reading tend to be somewhat incidental. In university study, by contrast, such content – which relates to study in a discipline – is of paramount important. Thus, in university study, there is not the same interest in the skills of reading *per se*; instead acts of reading, as we have seen, are tied intimately to the acquisition, application, and ultimately to the advancement of disciplinary knowledge. This contrast in the role of knowledge in the two domains necessarily entails some quite basic differences in the nature of the texts students need to read, and what it is students need to do when they read them.

6 IMPLICATIONS OF FINDINGS FOR FUTURE DEVELOPMENT OF THE ACADEMIC READING TEST

In considering the implications of the study, there are arguably two key questions that need to be addressed:

1 Is there a case for making some modification to the IELTS Academic Reading test?

2 If so, how could the test be modified?

6.1 Should the IELTS Academic Reading test be modified?

In relation to the first question, the general push in language assessment to maximise a test's 'authenticity' would suggest that some modification to the IELTS Academic Reading test is at least worth considering. Bachman and Palmer (1996) define "inauthenticity as that situation where the link between the TLU task and the test task is weak". Whilst the findings of the task analysis do not suggest overall a 'weak' link between tasks in the two domains, they do suggest that it is one that could at least be strengthened. Such a view was also reflected in the responses of some of the academic informants in our study, where it was felt that the demands of the test might be brought more into line with the type of reading required on their courses. The ever-expanding influence of IELTS – and especially its curriculum effects on programs of English for Academic Purposes – provide additional impetus for modification of some form.

Clearly however, there are important practical considerations in any push to institute changes to a well-established test such as IELTS. One can point to a number of caveats. The first of these relates to the broad issue of achieving the right balance between the validity of a test and its reliability (Wigglesworth & Elder, 1996). For the IELTS Academic Reading test, this would include, among other things, ensuring that any modified version of the test fit with the overall structure of the current IELTS battery eg for the reading test to remain as a separate test of reading without significant overlap with other modules such as writing (Charge & Taylor, 1997); and for it to be retained as a clerically-markable module within the battery. A second caveat relates to the difficulty of accommodating the many different versions of academic reading we have seen in the study all within the one test. Much of this variety, as was noted, arose from the quite different reading demands evident in different disciplines and programs. This suggests a need to be prudent in selecting the type of reading tasks on the test, so as to avoid having items which may be pertinent in one disciplinary area, but have little relevance to others.

A final consideration is the matter of what one can reasonably expect an objective test of reading to cover. On this point, Taylor (2007) suggests we need to recognise the limits to which a test such as IELTS can simulate (and indeed should be expected to simulate) language use in the target situation. Thus, she notes that "IELTS is designed principally to test *readiness to enter* the world of university-level study in the English language", and does not assume that test takers have already mastered the skills they are likely to need (original emphasis, p 482). Taylor goes on to explain that students will often "need to develop many of these skills during their course of study", including those "skills … specific to their academic domain". Such an understanding was voiced, as we saw, by at least one of the study's informants who suggested that the onus was clearly on academic staff to develop discipline-specific capacities "within courses".

6.2 How could the IELTS Academic Reading Test be modified?

If any modifications were to be made to the Academic Reading test, one useful principle to employ, we believe, would be to seek to push test tasks, or at least a proportion of them, in the direction of the more global/more interpretive regions of the analytical matrix used in the study, as shown in Figure 9.

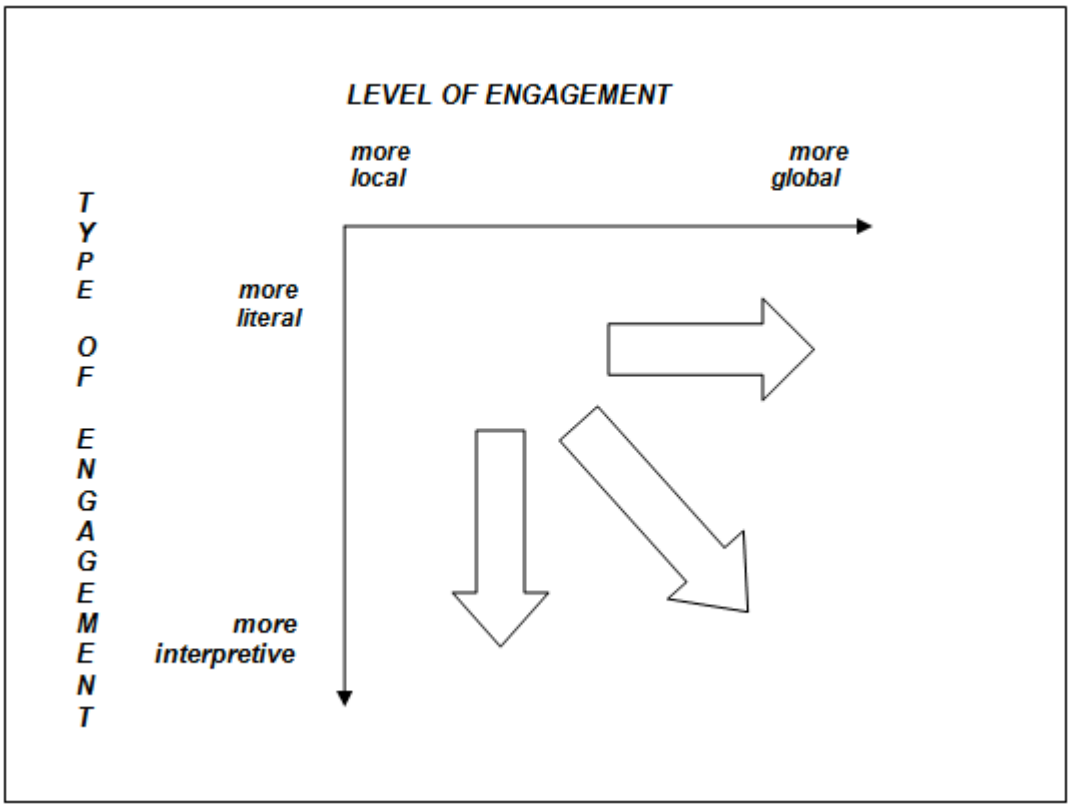


Figure 9: Suggested principle for modifications to Academic Reading test

In what follows we provide a number of sample tasks, where the intention is to indicate how we think some of these less-covered areas of the matrix could have some coverage in the test. The samples have been divided up into three areas of 'extension', each relating to the three under-represented quadrants of our matrix *viz*:

1 Extension 1: Local/Interpretative

2 Extension 2: Global/Literal

3 Extension 3: Global/Interpretative

Several samples are provided for each extension; some additional samples are shown in Appendix 3. In the construction of these tasks, we have attempted to incorporate some of the specific differences noted between reading in the two domains (see Section 5.2) with a focus on such dimensions as: authorial stance; specific academic entities (eg arguments); reading–writing connections; information literacy skills; genre readings of texts; text evaluation; and so on. In some of these tasks, there has also been an effort to structure tasks around the idea of relating tasks to specific study scenarios (see Section 5.2).

It will be noted that all of the sample tasks provided follow a multiple choice format. This is for the reason noted earlier – namely that the multiple choice tasks of their nature, appear to have a greater versatility than some of the other task types currently used in the test, and on the face of it, seem better able to incorporate these more 'global' and 'interpretative' engagements with material. This is not to suggest however, that one would necessarily want to see a greater use of multiple choice items on the test. Following Alderson (2000, pp 211-214), we recognise that multiple choice tasks have a number of limitations, including the potential effect of candidates guessing the correct response. We would argue in fact that it is a major challenge for the test's designers to develop certain conventionalised

techniques that are able to test some of the more 'interpretative' and more 'global' dimensions of reading we have identified.

EXTENSION 1 --> LOCAL/INTERPRETATIVE

In Passage A, the writer states that ….. PROPOSITION (Line B)

The **implication** of this sentence is that the writer thinks:

a) X is a good thing and should be encouraged

b) X is a bad thing and should be discouraged

c) not enough is known about X, and it should be investigated further

d) sufficient research has been conducted into X

Sample 1.1: Focus on inferential readings of sentences

A student referred to information in Paragraph B of Passage A in an essay. Which sentence is a reasonable interpretation of the writer's view:

a) Smith (2000) argues that X is a Y

b) Smith (2000) argues that X is not a Y

c) Smith (2000) argues that X is a Z

d) Smith (2000) argues that X is not a Z

Sample 1.2: Focus on reading-writing connections (scenario format)

EXTENSION 2 --> GLOBAL/LITERAL

The author of Passage A claims that (Proposition Y). The main evidence presented in the text for this claim is:

a) Findings from a study she conducted

b) Findings from a study conducted by B

c) Findings from a study conducted by her, and by B

d) Findings from several different studies conducted by B and C

Sample 2.1: Focus on macro-content of text (Epistemic entities= claim/evidence)

Imagine you are writing an essay on the following topic (State topic X). Which paragraph from Reading Passage A do you think would be the **most useful** to draw information from.

a) Paragraph 1

b) Paragraph 2

c) Paragraph 3

d) Paragraph 4

Sample 2.2: Focus on use of sources – information literacy (scenario format)

EXTENSION 3 --> GLOBAL/INTERPRETATIVE

Which of the following do you think best describes the main purpose of Reading Passage A:

a) to advise on the best ways to do X

b) to criticise the current ways of doing X

c) to provide background information on X

d) to predict what will happen to X

Sample 3.1: Focus on overall rhetorical purpose of text

The following are some possible criticisms that could be made of Passage A. Which particular criticism seems the most **relevant** to this text?

a) The writer states his support for X, but does not consider the other side

b) The writer claims that X is Y, but provides no evidence for this claim

c) The writer presents contradictory views about X

d) The writer gives practical information about X, but doesn't indicate how it can be used

Sample 3.2: Focus on evaluation of text

It will be clear from the samples above that the use of certain item techniques is very much dependent on having to hand reading passages which are relevant to the particular focus of the technique. For instance, an item that was focused on the relationship between claims and evidence in a reading passage would clearly only be able to be used in relation to text samples that were structured around these particular rhetorical characteristics. The study deliberately confined itself to a study only of reading tasks without consideration of the texts upon which they are based. It may be however, that any proposed shift in focus towards more global and/or interpretative modes on items would have major implications for reading passage design and selection on the test. The broad principle of the inseparability of reading technique and task has been commented on by Alderson (2000). Any modification to the test may indeed require substantial investigation into this aspect of reading assessment.

6.3 Further research

McNamara (1999), as noted earlier, has identified three areas of focus in appraising the validity of a reading proficiency test:

1. *task stimulus* ie the texts that candidates engage with on the test
2. *task processes* ie the reader-text interactions that actually take place in the completing of the test
3. *task demand* ie the test items, which prescribe certain types of interaction between the reader and text.

This list provides a useful framework for thinking about further study into the IELTS Academic Reading test. In relation to 'task stimulus', the issue of text selection on tests has already been identified as an area of priority. Such an investigation would also be well complemented by additional research into the nature of texts typically used in studies in the disciplines in the contemporary university (Green, Unaldi & Weir, 2010). Whilst the present study observed the continuing importance of traditional texts such as textbooks and journal articles, the ever-increasing role played by various electronic media was also noted. Any efforts to enhance the validity of the text component of the test ('task stimulus') would need to be based on a thorough and up-to-date understanding of these developments, along with the dynamic effects they appear to be having on literacy practices in the academy.

Another area of interest is the way that students actually read and interact with reading materials when engaged with specific academic tasks ('task processes'). Whilst the analysis used in the present study allowed us to make some estimate of what was required to complete certain tasks, it was not possible

to know definitively from the data what the 'psychological reality' would be for students actually engaged in such tasks. Indeed research in the field of activity theory (Lantolf and Thorne, 2006) has shown that one must be wary about assuming any straightforward correspondence between the 'task-assigned' and the 'task-performed' (Coughlan & Duff, 1994). Weir *et al*'s (2009) study provides useful general information about student performance on the reading test and the TLU situation. Additional research could also be conducted to find out about how these processes compare between performance on specific test items and on larger 'literacy events' in academic study (Barton & Hamilton, 1998).

Finally, in the area of 'task demand', the present study was relatively small-scale in its design, investigating the assessment requirements in only a limited number of subject areas. The largely qualitative findings obtained could be complemented by larger-scale survey research which looked into reading requirements across a wider range of disciplines and institutions. To have a fuller picture of university reading would not only help in processes of test validation, but also assist us in a broader educational aim – to be able to prepare our students as best we can for the challenges and demands they will face in their studies.

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APPENDIX 1: LIST OF MATERIALS USED IN IELTS TASK CORPUS

Official IELTS practice materials, University of Cambridge; British Council; IDP, IELTS Australia, 2007 (1 x academic reading test)

Cambridge IELTS 2: Examination papers from University of Cambridge ESOL examinations, Cambridge University of Press, Cambridge, 2000 (4 x academic reading tests)

Cambridge IELTS 4: Examination papers from University of Cambridge ESOL examinations, Cambridge University of Press, Cambridge, 2005 (4 x academic reading tests)

Cambridge IELTS 6: Examination papers from University of Cambridge ESOL examinations, Cambridge University of Press, Cambridge, 2007 (4 x academic reading tests)

APPENDIX 2: SCHEDULE USED IN INTERVIEWS WITH ACADEMIC STAFF

Interview schedule

The following questions will form the basis of the interview.

PART 1 Introduction (content, skills, general reading requirements)

1. How would you describe the main content of the course you teach on?
2. What do you see as the course's main objectives regarding the skills/attributes to be developed in students?
3. How would describe the general reading requirements for students on the course?
   - i) How much reading do students need to do?
   - ii) Are there weekly reading requirements?
   - iii) What sorts of texts do students need to read?
   - iv) Are there any activities they need to complete when doing the weekly readings?
   - v) What purposes do you have for setting weekly readings for students?
   - vi) Have the reading requirements on your course changed over the years?
   - vii) What challenges generally do students face in handling reading requirements on the course? What about students from second language backgrounds?

PART 2 Reading and Assessment tasks

4. What are the main assessment tasks/activities you set for students on the subject?

   Taking **each of these tasks** at a time:

   - i) What do students need to do to successfully complete the task?
   - ii) How much reading is required to complete the task? How many texts? What types of texts?
   - iii) How would you describe the nature of the reading they need to do to successfully complete the task? (eg basic comprehension of material? Some form of interpretation?)
   - iv) What type of material from the reading would students need to include in the written assignment?
   - v) What challenges do students face in drawing on reading material for this assignment? Are there particular difficulties for students from second language backgrounds?

5. The following is a list of specific reading skills required of students in their academic study. All are important in some way – which ones would you see as being **particularly important** on your course? Explain? Are there any other important skills not included on the list?

Be able to

- ❑ *have **a basic comprehension** of key information in a text*
- ❑ ***summarise** the main ideas in a text in one's own words*
- ❑ *understand an idea for the purpose of **applying** it to a particular situation*
- ❑ ***understand** the purpose for why a text may have been written*
- ❑ ***critically evaluate** the ideas in a text*
- ❑ ***identify a** range of texts relevant to a topic*
- ❑ *draw on ideas from a range of texts to **support** one's own argument*
- ❑ *OTHER* _____

PART 3 IELTS reading tasks

Questions in this section concern comparisons between the assignment tasks you provided and the attached sample IELTS reading tasks.

6. What do you see as the main similarities and/or differences between the type of reading set on the IELTS test, and the type of reading you require of your students on the course?
7. On the evidence of these IELTS tasks, to what extent do you think training for the IELTS Academic Reading test would be useful preparation for the reading demands on your course? Explain.

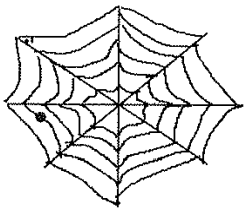
Sample IELTS Academic Reading test material distributed to interviewees for comment:

Official IELTS practice materials, University of Cambridge; British Council; IDP, IELTS Australia, 2007

READING PASSAGE 1

You should spend about 20 minutes on ***Questions 1-14****, which are based on Reading Passage 1.*

Spider silk cuts weight of bridges



A strong, light bio-material made by genes from spiders could transform construction and industry

A Scientists have succeeded in copying the silk-producing genes of the *Golden Orb Weaver* spider and are using them to create a synthetic material which they believe is the model for a new generation of advanced bio-materials. The new material, biosilk, which has been spun for the first time by researchers at DuPont, has an enormous range of potential uses in construction and manufacturing.

B The attraction of the silk spun by the spider is a combination of great strength and enormous elasticity, which man-made fibres have been unable to replicate. On an equal-weight basis, spider silk is far stronger than steel and it is estimated that if a single strand could be made about 10m in diameter, it would be strong enough to stop a jumbo jet in flight. A third important factor is that it is extremely light. Army scientists are already looking at the possibilities of using it for lightweight, bullet-proof vests and parachutes.

C For some time, biochemists have been trying to synthesise the drag-line silk of the *Golden Orb Weaver*. The drag-line silk, which forms the radial arms of the web, is stronger than the other parts of the web and some biochemists believe a synthetic version could prove to be as important a material as nylon, which has been around for 50 years, since the discoveries of Wallace Carothers and his team ushered in the age of polymers.

D To recreate the material, scientists, including Randolph Lewis at the University of Wyoming, first examined the silk-producing gland of the spider. 'We took out the glands that produce the silk and looked at the coding for the protein material they make, which is spun into a web. We then went looking for clones with the right DNA,' he says.

E At DuPont, researchers have used both yeast and bacteria as hosts to grow the raw material, which they have spun into fibres. Robert Dorsch, DuPont's director of biochemical development, says the globules of protein, comparable with marbles in

an egg, are harvested and processed. 'We break open the bacteria, separate out the globules of protein and use them as the raw starting material. With yeast, the gene system can be designed so that the material excretes the protein outside the yeast for better access,' he says.

F 'The bacteria and the yeast produce the same protein, equivalent to that which the spider uses in the drag lines of the web. The spider mixes the protein into a water-based solution and then spins it into a solid fibre in one go. Since we are not as clever as the spider and we are not using such sophisticated organisms, we substituted man-made approaches and dissolved the protein in chemical solvents, which are then spun to push the material through small holes to form the solid fibre.'

G Researchers at DuPont say they envisage many possible uses for a new biosilk material. They say that earthquake-resistant suspension bridges hung from cables of synthetic spider silk fibres may become a reality. Stronger ropes, safer seat belts, shoe soles that do not wear out so quickly and tough new clothing are among the other applications. Biochemists such as Lewis see the potential range of uses of biosilk as almost limitless. 'It is very strong and retains elasticity; there are no man-made materials that can mimic both these properties. It is also a biological material with all the advantages that has over petrochemicals,' he says.

H At DuPont's laboratories, Dorsch is excited by the prospect of new super-strong materials but he warns they are many years away. 'We are at an early stage but theoretical predictions are that we will wind up with a very strong, tough material, with an ability to absorb shock, which is stronger and tougher than the man-made materials that are conventionally available to us,' he says.

I The spider is not the only creature that has aroused the interest of material scientists. They have also become envious of the natural adhesive secreted by the sea mussel. It produces a protein adhesive to attach itself to rocks. It is tedious and expensive to extract the protein from the mussel, so researchers have already produced a synthetic gene for use in surrogate bacteria.

Questions 1 – 5

Reading Passage 1 has nine paragraphs, **A-I**.

Which paragraph contains the following information?

*Write the correct letter, **A-I**, in boxes 1-5 on your answer sheet.*

1 a comparison of the ways two materials are used to replace silk-producing glands

2 predictions regarding the availability of the synthetic silk

3 ongoing research into other synthetic materials

4 the research into the part of the spider that manufactures silk

5 the possible application of the silk in civil engineering

Questions 6 – 11

Complete the flow-chart below.

*Choose **NO MORE THAN THREE WORDS** from the passage for each answer.*

Write your answers in boxes 6-11 on your answer sheet.

Synthetic gene grown in **6** ..... or **7** .....

↓

globules of **8** .....

↓

dissolved in **9** .....

↓

passed through **10** .....

↓

Questions 12 – 14

Do the following statements agree with the information given in Reading Passage 1?

In boxes 12-14 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

12 Biosilk has already replaced nylon in parachute manufacture.

13 The spider produces silk of varying strengths.

14 Lewis and Dorsch co-operated in the synthetic production of silk.

APPENDIX 3: ADDITIONAL SAMPLE ITEMS SHOWING MORE GLOBAL AND/OR INTERPRETATIVE ENGAGEMENTS

1 EXTENSION 1 --> LOCAL + INTERPRETATIVE

1.1 Focus on connotative meanings of words

In Passage A, the author refers to X as a "Y" (Line B). This use of the term "Y" suggests that the writer sees X as:

a) eg a positive development

b) eg a negative development

c) eg an expected development

d) eg an unexpected development

1.2 Focus on author purpose

The writer of Passage A refers to X in Paragraph B, in order to demonstrate:

e) X is a good thing and should be encouraged

f) X is a bad thing and should be discouraged

g) not enough is known about X, and it should be investigated further

h) sufficient research has been conducted into X

2 EXTENSION 2 --> GLOBAL/LITERAL

2.1 Focus on macro-content of text (Epistemic entity = argument)

Which of the following statements best summarises the author's **main argument** in Reading Passage A:

a) that X is a good thing, and should be encouraged

b) that X is not a good thing, and should be discouraged

c) that X is neither a good thing nor a bad thing

d) that X is a good thing for some, but not for others.

2.2 Focus on macro-content of text (Epistemic entity = study)

Reading Passage A describes a study conducted into X. Which of the following statements best summarises the study's main outcomes:

a) that X is a Y

b) that X is not a Y

c) that X is neither an X or Y

d) no clear outcomes were obtained

2.3 Focus on macro-content of text (Scenario format)

Four different students wrote a one sentence summary of Passage A. Which one most accurately reflects the content of the passage?

a) The writer discusses the main difficulties of X and describes some of the solutions that have been proposed

b) The writer discusses the main difficulties of X, and recommends a range of solutions

c) The writer discusses the main difficulties of X, and suggests that the problems are too difficult to solve

d) The writer discusses the main difficulties of X, without recommending any solutions

2.4 Focus on multiple texts

Consider Reading Passage A and Reading Passage B. The main content difference between these two passages is best summarised as:

a) Reading Passage A is about X and Reading Passage B is about Y

b) Reading Passage A is about Y and Reading Passage B is about X

c) etc

3 EXTENSION 3 --> GLOBAL/INTERPRETATIVE

3.1 Focus on authorial stance in text

In Passage A, the writer discusses the issue of X. Which of the following statements best characterises the writer's view of this issue.

a) The writer appears to be a supporter of X

b) The writer appears to be an opponent of X

c) The writer recognizes both the advantages and disadvantages of X

d) The writer expresses no personal view about X

3.2 Focus on genre/source of material

Reading Passage A is concerned with X. Which of the following do you think best describes the type of text it is:

a) a research article

b) a magazine article

c) a textbook extract

d) a newspaper report

3.3 Focus on author purpose/audience

Passage A provides information about X (eg higher education). Which type of reader do you think the author had in mind when writing this text

a) a student wanting to improve their grades

b) a student wanting to choose which course they will do

c) a lecturer wanting to develop their teaching methods

d) a lecturer wanting to advise students on course options