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Construing Experience and Organising Information in Reading Comprehension Texts: A Systemic Functional Comparison of Punjab Textbook Board and Cambridge Secondary English Materials

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ABSTRACT

This study compares the discourse organisation of reading comprehension texts in two sets of secondary English materials, namely the Punjab Textbook Board (PTB) English textbook for Grades 9 and 10 and a Cambridge University Press practice book (Cox, 2018) used as Cambridge secondary reading material, in order to examine how the two curriculum traditions, construct and organise meaning through linguistic resources. A corpus-based mixed methods design was adopted, and a corpus of 50 reading comprehension texts, comprising 25 texts from each set of materials, was analysed through Systemic Functional Linguistics (SFL) (Halliday & Matthiessen, 2014), whereas Genre Theory (Martin & Rose, 2008) and Schema Theory (Carrell & Eisterhold, 1983) were drawn upon to interpret genre and cultural content. Transitivity, thematic organisation and cohesion were analysed. It was found that transitivity patterns were broadly similar, with relational and material processes predominating and no significant difference in the distribution of process types. Significant differences were, however, observed in thematic organisation and in the distribution of cohesive subtypes, although the effect sizes were small. PTB texts contained more than twice the proportion of marked topical Themes, whereas Cambridge O Level texts used a higher proportion of textual Themes and additive conjunction. The qualitative analysis further indicated that PTB texts more often drew on familiar social, historical and religious contexts, whereas Cambridge O Level texts offered wider geographical, literary and descriptive contexts.



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1. Introduction

Language is regarded not merely as a set of formal structures and rules but as a resource through which experience is construed, knowledge is organised and social life is enacted (Halliday & Matthiessen, 2014). In this regard, language is argued to play a central part in education, since the manner in which knowledge is presented largely shapes the manner in which it is understood (Schleppegrell, 2004). This is particularly pertinent to reading comprehension, which extends beyond the decoding of sentences and requires readers to make sense of how experience is represented, how information is organised and how ideas are linked across a text. Consequently, it is suggested that educational materials may influence the way in which learners construct the meaning of educational content through the language in which that content is presented.

Textbooks are, therefore, not to be viewed as neutral collections of information, since knowledge is conveyed through particular linguistic and rhetorical selections (Schleppegrell, 2004). The construction of textbook discourse is shaped by what is foregrounded, how events and experiences are represented, how information is sequenced and how ideas are linked. Likewise, reading comprehension texts are considered important sites for examining how educational discourse creates meaning and presents knowledge to learners (Martin & Rose, 2008).

SFL provides the principal analytical framework of the present study, since language is viewed within it as a social semiotic system in which meaning is realised through functional choices (Halliday & Matthiessen, 2014). Although ideational, interpersonal and textual metafunctions are identified in SFL, the present study is confined to the ideational and textual metafunctions, because these are most directly relevant to the organisation and interpretation of reading texts. The ideational metafunction is examined through transitivity, whereas the textual metafunction is examined through thematic organisation and cohesion (Halliday & Hasan, 1976).

Furthermore, Genre Theory and Schema Theory are employed to support the SFL analysis. Genre Theory allows linguistic structures to be related to the communicative purpose and staging of

particular text types (Martin & Rose, 2008), whereas Schema Theory offers an account of how prior and experiential knowledge contributes to comprehension (Carrell & Eisterhold, 1983). It is pertinent to note that these theories are not used as independent quantitative coding systems but as interpretive lenses for the SFL findings. Similarly, a corpus-based approach is adopted to permit systematic comparison of linguistic patterns across the two collections, so that quantitative frequency patterns may be integrated with qualitative interpretation of textual meaning.

The study is situated in the secondary education system of Pakistan, in which different curriculum traditions provide learners with different English materials. English textbooks for the public sector are issued by the Punjab Curriculum and Textbook Board (n.d.), whereas Cambridge O Level is followed by a substantial segment of the secondary sector, chiefly in private institutions. These traditions are argued to differ in their approaches to language, learning and curriculum context (Afzal et al., 2021). Consequently, learners in the two systems may be exposed to different forms of reading comprehension and to different constructions of textual meaning, although the linguistic organisation of the texts themselves has received comparatively little attention in discussions of public and private education in Pakistan.

Moreover, previous studies have tended to focus on a single meaning-making resource, most commonly transitivity (Samreen et al., 2025; Jayanti et al., 2025). Corpus-based studies that directly and systematically compare PTB and Cambridge O Level reading comprehension texts within a single SFL framework remain limited. In particular, limited attention has been paid to the relationship between the representation of experience through transitivity and the organisation of meaning through thematic and cohesive patterns, and to the way in which these linguistic patterns relate to the genre properties and cultural knowledge conveyed by educational texts (Martin & Rose, 2008). To address this gap, ideational and textual SFL analysis is combined in the present study with Genre Theory and Schema Theory in a comparative analysis of the two curriculum traditions.

Hence, a corpus-based comparative analysis of reading comprehension texts in PTB Grades 9 and 10 and Cambridge O Level English materials is undertaken. The construal of experience, the organisation of information and the achievement of cohesion are examined through transitivity, thematic organisation and cohesive devices (Halliday & Matthiessen, 2014). Fifty reading comprehension texts, 25 from each set of materials, are analysed through both frequency-based quantitative analysis and qualitative interpretation. It is pertinent to note that the interpersonal metafunction lies outside the scope of the study.

1.1 Objectives

The study was designed to achieve the following objectives, which were formulated within the SFL framework (Halliday & Matthiessen, 2014):

1. To examine and compare the transitivity patterns of reading texts in PTB Grades 9 and 10 and Cambridge O Level materials, with attention to process types, participant roles and circumstantial elements used to construct experiential meaning.
2. To analyse the thematic organisation of PTB and Cambridge O Level texts, specifically marked and unmarked topical Themes and textual Themes, and their bearing on information flow.
3. To examine the use of cohesive devices in PTB and Cambridge O Level texts and the manner in which they contribute to textual continuity.
4. To explore the cultural resources, genre characteristics and background knowledge drawn upon in PTB and Cambridge O Level texts in the Pakistani educational context.
5. To derive pedagogical implications from the linguistic and interpretive findings for reading pedagogy and textbook design in Pakistan.

In this regard, a contribution is made to the study of educational discourse by combining transitivity, thematic organisation and cohesion within a single comparative corpus-based analysis, and by relating these results to Genre Theory and Schema Theory in order to interpret communicative purpose and experiential knowledge (Martin & Rose, 2008; Carrell & Eisterhold, 1983). Methodologically, frequency-based analysis is combined with qualitative

interpretation, and implications are drawn for reading pedagogy and textbook design in Pakistan.

1.2 Research Questions

The study was guided by the following research questions, which correspond to the objectives stated above (Halliday & Matthiessen, 2014):

1. How do PTB Grades 9 and 10 and Cambridge O Level comprehension texts differ in their transitivity patterns, including process types, participant roles and circumstantial elements, and what do these differences reveal about the representation of experience?
2. How does thematic organisation, including the distribution of marked and unmarked topical Themes and textual Themes, differ between PTB and Cambridge O Level texts, and what do these differences suggest about the way information is organised for readers?
3. How do PTB and Cambridge O Level comprehension texts differ in the range and distribution of cohesive devices, and what do these patterns reveal about textual organisation?
4. What cultural resources and background knowledge do PTB and Cambridge O Level reading texts draw upon, and how do these relate to the genre characteristics of the texts?

2. Theoretical and Conceptual Framework

The present study is grounded principally in SFL, whereas Genre Theory and Schema Theory serve as subsidiary frameworks. Within SFL, language is viewed as a social semiotic system through which meanings are construed and exchanged in particular social contexts (Halliday & Matthiessen, 2014). From this perspective, language is not examined only in terms of grammatical correctness; rather, linguistic choices are examined in relation to the meanings they create. It is, therefore, argued that SFL is highly applicable to the study of reading comprehension texts, in which the organisation of language contributes to the representation, development and interpretation of experience.

Three metafunctions are identified in SFL, namely the ideational, the interpersonal and the textual (Halliday & Matthiessen, 2014). The present study is confined to the ideational and textual

metafunctions, since they are directly relevant to the organisation of reading comprehension texts. The ideational metafunction is concerned with the representation of experience, whereas the textual metafunction is concerned with the organisation of meaning into coherent text. The interpersonal metafunction is not analysed, as the focus of the study lies on experiential representation and textual organisation.

The ideational metafunction is examined through the system of transitivity, which provides a means of analysing how experience is represented through types of process, the participants involved and the circumstances in which events occur (Halliday & Matthiessen, 2014). The major process types, namely material, mental, relational, verbal, behavioural and existential, are investigated together with participants, circumstantial elements and voice. Such an analysis is considered useful for identifying the kinds of experience foregrounded in texts and the ways in which actions, perceptions, relations, communication and existence are linguistically represented.

Likewise, the textual metafunction is explored through Theme and cohesion, which provide complementary evidence of how meaning is organised and connected in text (Halliday & Hasan, 1976; Halliday & Matthiessen, 2014). Theme is the point of departure of the clause and provides a basis for exploring how messages are developed across a text. Marked and unmarked topical Themes receive particular attention, since they may indicate how information flow is managed, while textual Themes indicate how a clause is linked to its co-text. Cohesion is examined as the set of resources, including reference, conjunction and substitution, through which a text is bound together beyond the single clause.

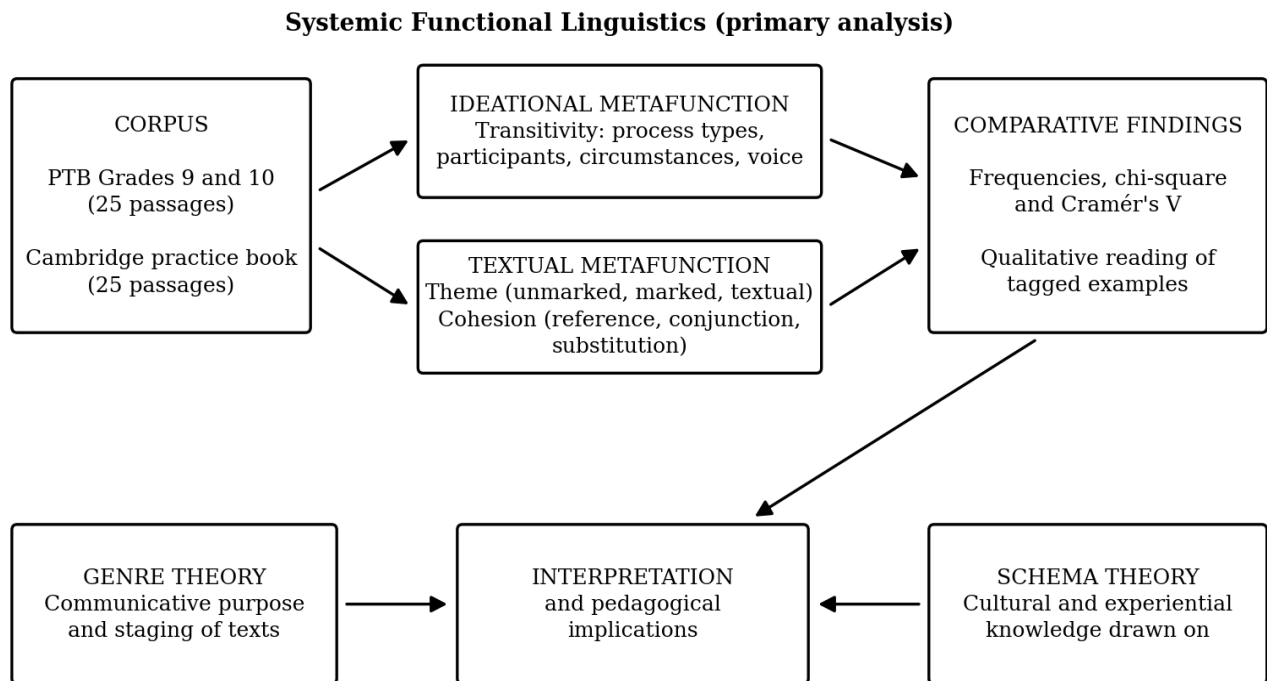
Genre Theory is employed to support the interpretation of communicative purpose and textual organisation. Genre is described by Martin and Rose (2008) as a staged, goal-oriented social process, so that texts of a given genre exhibit

recognisable organisational patterns. In the present study, Genre Theory is used to relate the linguistic patterns identified through SFL to the types and purposes of the texts, and it is not used as a separate quantitative coding system.

On the other hand, the role of prior and experiential knowledge in reading comprehension is considered through Schema Theory. Comprehension is explained by Carrell and Eisterhold (1983) as an interaction between textual information and the background knowledge that readers bring to the reading process. In this study, Schema Theory is used to interpret the culturally referenced information, the experiential content of the texts and the background knowledge that may be activated by them. It is pertinent to note that, since no learner data were collected, actual schema activation and reader response could not be measured.

In a nut shell, each of these perspectives is suggested to contribute to the interpretation of the SFL findings: SFL provides the primary linguistic analysis, Genre Theory connects linguistic patterns to communicative purpose and textual staging (Martin & Rose, 2008), and Schema Theory offers a perspective on the experiential and cultural knowledge represented or potentially evoked by the texts (Carrell & Eisterhold, 1983).

The conceptual framework, therefore, integrates these perspectives into a single analytical sequence (Halliday & Matthiessen, 2014). SFL analysis is first applied to the PTB and Cambridge O Level reading comprehension texts; at the ideational level, transitivity is used to examine the representation of experience, whereas at the textual level, Theme and cohesion are used to examine information flow and the links that bind the text. The results are then interpreted through Genre Theory, which relates linguistic patterns to text type and communicative purpose, and through Schema Theory, which offers a view of the experiential and cultural knowledge on which comprehension may draw. This relationship is represented in Figure 1.

Figure 1: Conceptual Framework of the Study

Consequently, SFL, Genre Theory and Schema Theory are not treated as three distinct analytical systems; instead, SFL furnishes the principal linguistic analysis, while Genre Theory and Schema Theory assist the interpretation of its results (Martin & Rose, 2008; Carrell & Eisterhold, 1983). This integrated approach is suggested to enable the analysis to proceed from linguistic patterns to their interpretation in relation to textual organisation, communicative function and experiential context.

3. Research Methodology

3.1 Research Design

A sequential mixed methods design was adopted, in which quantitative frequency analysis was combined with qualitative textual interpretation (Creswell & Plano Clark, 2018). The design comprised three interrelated stages, namely the compilation and preparation of the corpus, the systematic annotation of the corpus according to the SFL framework, and integrated comparative interpretation. This sequence enabled linguistic patterns to be established systematically before they were interpreted in context across the two corpora.

Furthermore, the study was guided by a pragmatic orientation, since the research questions were both

distributional and functional (Creswell & Plano Clark, 2018). The selected linguistic features were quantified in both corpora, and their textual functions were explored qualitatively. Neither strand was treated as sufficient on its own; the numerical patterns provided evidence of corpus-level tendencies, whereas close textual analysis was used to describe the meanings and discourse functions of those tendencies.

3.2 Corpus and Sampling

The corpus comprised 50 reading comprehension texts, 25 from each curriculum. The PTB texts were taken from *English Grammar and Composition* for Classes IX and X (Punjab Curriculum and Textbook Board, n.d.), whereas the Cambridge texts were taken from the *Cambridge IGCSE First Language English: Language and Skills Practice Book* (Cox, 2018), published by Cambridge University Press and used as the Cambridge reading material in the present study. It is pertinent to note that this book is written for the Cambridge IGCSE First Language English syllabus rather than for the Cambridge O Level English Language syllabus (1123); consequently, the Cambridge corpus is to be understood as representing Cambridge secondary English reading material of the kind used in O Level classrooms, and not as a sample

of O Level examination passages. Only connected passages of continuous prose were selected, since the analysis required continuous prose, and labeling, matching and gap-filling exercises were excluded. One book was used from each curriculum, so that the full range of materials in either system is not represented.

All 25 usable passages in the PTB book were included. The Cambridge book contained 27 usable passages, of which two were excluded to equalize the number of texts; both belonged to the largest genre group in the Cambridge pool. Since Cambridge passages were on average longer than PTB passages, long Cambridge passages were shortened to approximately the average PTB length, so that the Cambridge corpus would not yield more clauses merely because of length. It is

pertinent to note that this balancing procedure resulted in some Cambridge passages being analysed as extracts rather than as complete texts.

Each text was labelled as narrative or informative (Martin & Rose, 2008). In the Cambridge book, the informative group comprised information reports, expositions, persuasive texts, arguments and historical reports, whereas the informative texts in the PTB book were not differentiated into subtypes. Initial genre labels were generated with the assistance of an artificial intelligence tool and were subsequently reviewed by the researcher against the same criteria for both corpora; each label was confirmed or revised after close reading of the text. The genre mix was treated as a characteristic of each set of materials and was not equalised (Table 1).

Table 1: *Corpus Composition and Annotated Data*

Category	PTB	Cambridge O Level
Texts	25	25
Narrative texts	15	9
Informative texts	10	16
Process tags	336	328
Participant role tags	433	409
Circumstance tags	429	516
Voice tags	237	218
Theme tags	338	362
Cohesive device tags	530	532

3.3 Analytical Framework

The analysis drew on SFL and examined two kinds of meaning, namely ideational and textual (Halliday & Matthiessen, 2014); interpersonal meaning was not included.

Transitivity. Ideational meaning was examined through transitivity (Halliday & Matthiessen, 2014). Processes were classified as material, mental, relational, verbal, behavioural or existential, and each was assigned a subtype, for example attributive, identifying or possessive for relational processes and transitive or intransitive for material processes. Participant roles, circumstances and voice (active or passive) were also tagged.

Theme. Following Halliday and Matthiessen (2014), the clause was analysed from its beginning up to and including the first experiential element, which was taken as the topical Theme. Topical Themes were classified as unmarked, where the Theme conflated with the Subject, or marked, where a non-Subject element was fronted. Textual Themes, such as *and*, *but* and *however*, were recorded where they preceded the topical Theme. It is pertinent to note that, in SFL, textual Themes co-occur with topical Themes rather than replacing them, so that the three categories were treated as Theme observations rather than as mutually exclusive clause types, and percentages were calculated over all Theme observations in each corpus.

Cohesion. Reference, conjunction and

substitution were counted following Halliday and Hasan (1976). Reference was divided into personal, demonstrative and comparative, while conjunction was divided into additive, adversative, causal, temporal and conditional. Ellipsis was observed but not recorded, and lexical cohesion was examined only through the most frequently repeated content words.

Genre and schema. Genre Theory and Schema Theory were used to interpret the results and were not coded as separate variables (Martin & Rose, 2008; Carrell & Eisterhold, 1983). Narrative texts were identified through the stages of orientation, complication and resolution, whereas informative texts were identified through a general statement followed by description, explanation or support. Schema-related content was judged through three criteria, namely topic vocabulary, structural signals and the likely familiarity of the topic to the

target learners.

3.4 Data Annotation

The printed books served as source texts; passages were typed into digital files and checked against the printed originals. The texts were then coded according to coding schemes developed by the researcher on the basis of established SFL categories (Halliday & Matthiessen, 2014). Separate written decision rules were formulated for each layer, namely process types, participant roles, circumstances, voice, Theme and cohesive devices, and the same rules were applied to both corpora. Transitivity was tagged first, followed by Theme and cohesion, at the relevant level of word, group or clause element. Separate passes were used so that the coding of one layer would not influence another, and each tag was stored with a brief written justification. An example is given in Table 2.

Table 2: Annotation Example from the PTB Corpus

Item	Layer	Tag	Reason
<i>felt</i>	Process	Mental: perception	Inner sensation requiring a conscious Senser
<i>a fox</i>	Participant	Senser	The one who feels
<i>On a hot summer day</i>	Circumstance	Location: time	Temporal setting of the process
<i>felt</i>	Voice	Active	The Senser is the Subject

Furthermore, a Python-based script was used to apply the researcher's coding decisions consistently across the corpus and to store the tags for counting; it was not used to interpret the coding rules. Ambiguous cases were resolved through written decision rules based on process type, participant structure and clausal context (Halliday & Matthiessen, 2014). For example, a process was classified as mental only where a conscious Senser was involved, so that *feel* in *She felt afraid of the dark* was treated as mental where a conscious participant experienced the feeling, and as relational where it ascribed a state to a non-conscious entity. The reason for each such decision was recorded.

3.5 Data Analysis

The analysis comprised quantitative and qualitative components (Creswell & Plano Clark, 2018). In the quantitative component, process types, participant roles, circumstances, voice, Theme types and cohesive devices were tallied

separately for the PTB and Cambridge O Level corpora, and each layer was converted to percentages, since the two corpora were not identical in size. Chi-square tests of independence were used to compare the distribution of each layer across the two corpora, with significance set at $p < .05$; Yates' continuity correction was applied to the two by two tests of voice and Theme markedness, and only marked and unmarked topical Themes were entered into the markedness test. Cramér's V was reported as a measure of effect size and interpreted following Cohen (1988), with .10, .30 and .50 indicating small, medium and large effects. The tests were run in Python, and subtypes too small for separate tests were reported only as counts and percentages.

It is pertinent to note that the tags within each corpus are not fully independent, since all tests are based on tags drawn from 25 texts per corpus (Cohen, 1988). Moreover, expected frequencies fell below five in some cells, notably existential

processes and conditional conjunction, and possibly in the more finely divided participant role categories. Consequently, significant results are interpreted as indications of a pattern rather than as proof, whereas non-significant results are described as tendencies.

In the qualitative component, selected tagged examples were read closely in order to explain the patterns observed in the counts (Halliday & Matthiessen, 2014). Examples were selected because they illustrated a quantitative pattern and not for convenience.

3.6 Methodological Rigour

The same coding schemes and decision rules, derived from established SFL categories, were applied to both corpora (Halliday & Matthiessen, 2014). Approximately 25% of the coded data were re-examined to verify consistency, particularly in relation to relational, mental and material processes and to marked and unmarked Themes, and discrepancies were corrected according to the coding rules. Since the coding was carried out by

a single researcher, inter-rater reliability could not be calculated; consistency was instead supported by explicit coding rules and repeated checks of the data. Consequently, the results are not to be generalised to all PTB or Cambridge texts, and, since learner responses were not examined, no claims are made about how learners process or comprehend the texts.

4. Results and Discussion

The comparative analysis of the 50 reading comprehension texts indicates that PTB and Cambridge O Level materials share broadly the same linguistic resources but differ in the manner in which these resources are used and combined (Halliday & Matthiessen, 2014). In the sections that follow, the Cambridge O Level corpus is abbreviated as OL.

4.1 Overview of Statistical Results

The analysis was conducted on two balanced corpora of 25 reading comprehension texts each, and the results of the chi-square tests are summarised in Table 3 (Cohen, 1988).

Table 3: *Chi-Square and Cramér's V Results*

Layer	χ^2	df	p	V	Significant
Process types	5.594	5	.348	.092	No
Participant roles	17.602	16	.348	.145	No
Circumstance types	11.641	8	.168	.111	No
Voice ^a	0.207	1	.649	.021	No
Theme types	6.973	2	.031	.100	Yes
Theme markedness ^a	4.618	1	.032	.106	Yes
Cohesive devices (nine subtypes)	17.400	8	.026	.128	Yes

Note. ^a Yates' continuity correction applied. Without correction, voice yields $\chi^2(1) = 0.372$, $p = .542$, and Theme markedness yields $\chi^2(1) = 5.431$, $p = .020$.

Three layers reached the conventional level of significance, namely Theme types, Theme markedness and cohesive subtypes, and all three effects were small, with V ranging from .10 to .13 (Cohen, 1988). These results are to be read with caution, since the tags are not entirely independent, being drawn from the same 25 texts in each corpus. Therefore, significant results are considered indications of a pattern rather than proof, whereas non-significant layers are discussed as tendencies through percentages and examples. In general, it is suggested that both

corpora use the same linguistic resources but distribute them differently.

4.2 Representation of Experience: Transitivity (RQ1)

4.2.1 Process Types

Relational processes constitute the largest group in both corpora, followed by material processes (Table 4), and the overall difference is not significant, $\chi^2(5) = 5.594$, $p = .348$ (Halliday & Matthiessen, 2014). OL contains a higher

proportion of relational processes (55.18% against 48.21%), whereas PTB contains slightly higher

proportions of mental, verbal and behavioural processes.

Table 4: Process Types and Main Subtypes

Process type and subtype	PTB <i>n</i>	PTB %	OL <i>n</i>	OL %
Relational	162	48.21	181	55.18
<i>Attributive</i>	118		142	
<i>Possessive</i>	38		38	
<i>Identifying</i>	6		1	
Material	94	27.98	87	26.52
<i>Intransitive</i>	36		20	
<i>Transitive</i>	29		32	
<i>Creative</i>	12		20	
Mental	47	13.99	41	12.50
<i>Perception</i>	19		18	
<i>Reaction</i>	19		12	
<i>Cognition</i>	6		10	
Verbal	17	5.06	10	3.05
Behavioural	12	3.57	6	1.83
Existential	4	1.19	3	0.91
Total	336	100	328	100

Note. Only the main subtypes are shown. The remaining subtypes are ditransitive (15 PTB, 11 OL) and transformative (2, 4) material processes; desiderative (3, 1) mental processes; addressee-oriented (4, 0) and non-addressee (13, 10) verbal processes; and physiological (11, 4) and psychological (1, 2) behavioural processes.

This pattern differs from many textbook studies in which material processes predominate, for example 51.85% in an Indonesian EFL textbook (Jayanti et al., 2025) and a dominant share in the PTB Grade 9 textbook (Samreen et al., 2025), since material processes account for only about 27% in the present corpora. It is pertinent to note that this is only a general comparison, since the studies differ in their units of analysis and texts. One possible explanation is that comprehension passages contain substantial description and information, which may favour relational processes alongside material action.

Relational processes. Most relational clauses are attributive in both corpora, accounting for 73% in PTB and 78% in OL (Halliday & Matthiessen, 2014). The difference is suggested to lie in the kind of Attribute: PTB Attributes are typically plain, as in *Early rising is a good habit*, whereas

OL Attributes are often figurative or stacked, as in *The big trees were kings* and *The air was warm, thick, heavy, sluggish*. Moreover, this pattern is not confined to narrative texts, since a passage classed as a report and a passage on caving (*Caving is a madness*) also employ figurative Attributes. It is, therefore, argued that these choices serve not only to describe entities but also to create particular qualities and images.

Material processes. Material processes are roughly equal in number but differ in subtype (Halliday & Matthiessen, 2014). Intransitive clauses constitute 38.3% of PTB material processes and 23.0% of OL material processes, whereas OL has higher proportions of transitive (36.8% against 30.9%) and creative (23.0% against 12.8%) clauses. Initially, this suggests that PTB represents more actions without a Goal; the examples, however, indicate that the more useful

distinction concerns who or what is represented as acting. PTB intransitive clauses usually have a named, often human, Actor, and PTB transitive clauses similarly present a named participant acting upon a Goal, as in *The Sultan sent agents everywhere in the East*. In contrast, OL intransitive clauses more often have a non-human Actor drawn from the setting, as in *The broadening waters flowed through wooded islands*. Consequently, it is suggested that material processes in the two corpora differ in the agency assigned to participants, even though their overall frequencies are similar.

Mental, verbal and behavioural processes. PTB contains more reaction processes (19 against 12), whereas OL contains more cognition processes

(10 against 6) (Halliday & Matthiessen, 2014). In PTB, the Sensor, the process and the Phenomenon are usually all stated, as in *The Muslims soon realized the importance of the demand*; likewise, verbal clauses make the participants in communication explicit, as in *He told them, "We have nothing to fight for"*, and verbal clauses with a Receiver occur only in PTB (4 against 0). In OL, on the other hand, mental processes are sometimes used for literary effect, including personification, as in *Every winter Venice fears the acqua alta*. Furthermore, PTB behavioural processes are mostly physiological (11 of 12), which indicates that even less frequent process types contribute to different forms of experiential representation (Table 5).

Table 5: Examples of Tagged Clauses

Process type	PTB example	OL example	What the example shows
Relational	<i>Early rising is a good habit</i>	<i>The big trees were kings</i>	Plain Attribute against figurative Attribute
Material	<i>The Sultan sent agents to all parts of the East</i>	<i>The broadening waters flowed through wooded islands</i>	Named person acting on a Goal against setting as Actor without a Goal
Mental	<i>The Muslims soon realized the importance of the demand</i>	<i>Every winter Venice fears the acqua alta</i>	Stated cognition against personified Sensor

4.2.2 Participants, Circumstances and Voice

Participant roles. Participant roles do not differ significantly, $\chi^2(16) = 17.602$, $p = .348$, although the direction of difference mirrors the process results (Halliday & Matthiessen, 2014). OL contains more Carriers and Attributes (26.2% each against 21.2%), whereas PTB contains more Actors (13.6% against 11.0%), Sensors, Sayers (2.8% against 1.2%) and Verbiage. It is pertinent to note that an Actor need not be human, since some texts contain non-human or personified participants.

Circumstances. OL contains approximately 1.57 circumstance tags per process, compared with 1.28 in PTB (516 against 429 tags), although the distribution across circumstance types is not significant, $\chi^2(8) = 11.641$, $p = .168$ (Halliday & Matthiessen, 2014). The percentages nonetheless indicate that Manner is more frequent in OL (19.8% against 14.7%), whereas Cause is more frequent in PTB (21.4% against 15.7%). Location

and Matter have similar shares, so that their higher OL counts reflect only the larger OL total. Since circumstances of Cause make reasons explicit, they may assist readers in following the logic of a text (Schleppegrell, 2004); this is, however, to be regarded as a tendency rather than an established finding.

Voice. The active voice predominated in both corpora, with 215 active clauses (90.72%) against 22 passive clauses (9.28%) in PTB, and 194 active clauses (88.99%) against 24 passive clauses (11.01%) in OL (Halliday & Matthiessen, 2014). Although OL showed a slightly higher proportion of passive constructions, the difference was not significant, $\chi^2(1) = 0.207$, $p = .649$, $V = .021$. The negligible effect size further indicates that the two corpora were broadly similar in their use of voice, so that no curriculum-level difference in voice choice is suggested.

Answer to RQ1. Both corpora use the same principal process types, and none of the

transitivity differences is statistically significant (Halliday & Matthiessen, 2014). The tendencies, nonetheless, point consistently in the same direction: PTB contains slightly more named participants who act, sense and speak, together with more circumstances of Cause, whereas OL contains more attributive and often figurative description, more settings functioning as Actors and more circumstantial detail, especially of Manner. In a nut shell, it is suggested that experience is construed in PTB chiefly through recognisable individuals and in OL chiefly through described scenes.

4.3 Theme and Information Flow (RQ2)

Theme types differ significantly, $\chi^2(2) = 6.973$, $p = .031$, $V = .100$ (Table 6), and unmarked topical Themes, the default clause opening, account for

Table 6: Theme Distribution

Theme type	PTB <i>n</i>	PTB %	OL <i>n</i>	OL %
Unmarked topical	184	54.44	195	53.87
Marked topical	23	6.80	10	2.76
Textual	131	38.76	157	43.37
Total	338	100	362	100

In the PTB passages examined, marked Themes frequently place a temporal expression first, as in *In December, 1930, Dr. Muhammad Iqbal was invited to preside...*, *About sixty years ago, the question of choosing a profession was not taken up seriously* and *One day a girl found a coin* (Halliday & Matthiessen, 2014). Such openings establish a temporal frame before the main participant is introduced, thereby providing a contextual frame for the event (Martin & Rose, 2008), and they may also cue relevant background knowledge, although this was not tested with readers (Carrell & Eisterhold, 1983). In OL, on the other hand, clauses more often open by linking back to the preceding clause, as in *The air was warm... and the big trees were kings*, where *and* connects the new information to the preceding description and thereby extends the description across consecutive clauses.

Likewise, the unmarked topical Theme serves as the default clause opening in both corpora, which is consistent with previous studies of educational texts (Nguyen & Nguyen, 2025; Aulia et al.,

almost identical proportions in the two corpora (54.44% against 53.87%) (Halliday & Matthiessen, 2014). The difference, therefore, lies in the other two categories. PTB contains more than twice the proportion of marked topical Themes (6.80% against 2.76%), and this difference is significant when marked and unmarked topical Themes are compared directly, $\chi^2(1) = 4.618$, $p = .032$, $V = .106$, whereas OL contains more textual Themes (43.37% against 38.76%). It is pertinent to note that the effect sizes are small and that the number of marked Themes is low (23 in PTB and 10 in OL). Moreover, since textual Themes co-occur with topical Themes, the three-category test is interpreted with caution, and the markedness test is considered the more defensible comparison.

2025). The key point is that the two corpora share this default but differ in the manner in which additional information is positioned and connected.

Answer to RQ2. Thematic organisation differs significantly, although the effect is small (Cohen, 1988). Both corpora mostly begin clauses with an unmarked topical Theme; PTB, however, more often places contextual information, usually temporal, at the start of the clause through marked Themes (6.80% against 2.76%), whereas OL more often connects a clause to the preceding one through textual Themes (43.37% against 38.76%). It is, therefore, suggested that OL tends to build links between successive clauses, whereas PTB tends to set the time or place first and then present the main information. It is pertinent to note that the results provide no indication that either pattern is easier for readers to follow.

4.4 Cohesion and Textual Continuity (RQ3)

The number of cohesive ties is almost identical in the two corpora (530 against 532), and the same set of devices is used in both (Halliday & Hasan,

1976). The distribution across subtypes, however, differs significantly, $\chi^2(8) = 17.400$, $p = .026$, $V = .128$ (Table 7). This result requires care, since the difference is not significant when the ties are grouped into reference, conjunction and

substitution, $\chi^2(2) = 5.387$, $p = .068$, $V = .071$. Consequently, it is suggested that the result does not reflect a general shift from reference to conjunction.

Table 7: Cohesive Devices by Subtype

Device	PTB <i>n</i>	PTB %	OL <i>n</i>	OL %
Personal reference	261	49.2	234	44.0
Demonstrative reference	46	8.7	59	11.1
Comparative reference	23	4.3	18	3.4
Additive conjunction	85	16.0	127	23.9
Adversative conjunction	28	5.3	20	3.8
Temporal conjunction	33	6.2	25	4.7
Causal conjunction	15	2.8	19	3.6
Conditional conjunction	3	0.6	5	0.9
Substitution	36	6.8	25	4.7
Total	530	100	532	100

The remaining differences are descriptive only (Halliday & Hasan, 1976). PTB contains more personal reference, substitution and adversative and temporal conjunction, whereas OL contains more demonstrative reference, additive conjunction and slightly more causal conjunction. Personal reference is the most frequent cohesive device in both corpora, and PTB uses it somewhat more, tracking participants through pronoun chains such as *Hazrat Khalid Bin Waleed... His army... They...*; this pattern is consistent with the frequent personal reference reported in a PTB Grade 9 textbook (Parveen et al., 2025). Furthermore, PTB explicitly signals sequence and contrast, as in *Therefore, one of the most important things to do is to get up early*. OL, on the other hand, more frequently extends the text one element at a time, as in the *and* chains discussed in Section 4.3, thereby building chains of description. OL also features demonstratives that refer back to a stretch of text rather than to a person, as in *Any sensible person can see this...*, which refers to an earlier description of caving, so that the cohesive tie links the present clause to material that must be retrieved from the preceding

text. Whether this affects readers cannot, however, be determined from these data.

Three cautions are, moreover, to be noted (Halliday & Hasan, 1976). First, cohesion is not coherence, since ties are visible links in the text, whereas coherence is constructed by the reader, which was not observed in this study. Second, textual Themes and conjunctions overlap, since clause-initial *and* and *but* are counted in both layers, so that the higher OL values in both partly derive from the same words and do not independently corroborate each other. Third, ellipsis was not counted, and lexical cohesion was examined only through repeated content words.

Answer to RQ3. The two corpora contain a similar number of cohesive devices, 530 and 532, but distribute them differently (Halliday & Hasan, 1976). Personal reference, substitution and adversative and temporal conjunction are more frequent in PTB, whereas additive conjunction and demonstrative reference are more frequent in OL. It is suggested that the difference derives primarily from additive conjunction and that its effect is limited. In a nut shell, these results

describe the visible cohesive organisation of the texts and not the manner in which learners understand them.

4.5 Cultural Resources, Genre and Schema (RQ4)

Schema Theory and Genre Theory were used to interpret the results (Carrell & Eisterhold, 1983; Martin & Rose, 2008). Since this section is not based on coded variables, it is qualitative, and its claims are tentative.

Topics and repeated words. PTB passages are drawn largely from Islamic history, Pakistani social life and everyday situations, such as Iqbal's presidential address, the agents of the Sultan and early rising, whereas many OL passages concern journeys, rivers, unfamiliar places, flooding in Venice and the story of the blind men and the elephant (Carrell & Eisterhold, 1983). These topics were identified through close reading and were not counted; they are, however, supported by the most frequently repeated content words. PTB repeats *milk* (14), *food* (8), *time* (8) and *Muslims* (7), whereas OL repeats *world* (13), *river* (10), *year* (8) and *elephant* (6), and both repeat *water* (8). Since lexical cohesion was not tagged or tested, these counts serve only as supporting evidence. Moreover, the religious and national orientation of PTB content is in line with previous studies of Pakistani textbooks (Afzal et al., 2021).

Schema. According to Schema Theory, these topics call upon different kinds of background knowledge (Carrell & Eisterhold, 1983). It is pertinent to note, however, that familiarity is relative to the reader and that learners were not tested. Consequently, the findings indicate only that cultural cues are provided differently in the two sets of texts, and they offer no evidence that one set is easier or more familiar.

Genre. PTB contains 15 narratives and 10 informative texts, whereas OL contains 9 narratives and 16 informative texts, and this mix corresponds to some of the linguistic patterns (Martin & Rose, 2008). OL contains more informative texts and more relational and descriptive language, whereas PTB contains more narrative texts and slightly more Actors, Sensors and Sayers. Genre labels do not, however, fully

capture textual texture, since some OL informative passages, such as the report and the caving text, employ figurative Attributes in the manner of OL narrative passages. Furthermore, since the linguistic features were not analysed separately by genre, curriculum effects cannot be fully distinguished from genre effects, and since the PTB informative texts were not divided into subtypes, sub-genre variety could not be compared.

Answer to RQ4. The two sets of texts draw on different cultural resources and background knowledge (Carrell & Eisterhold, 1983). PTB passages are drawn mainly from local social, historical, religious and everyday matters, such as Islamic history and social life in Pakistan, whereas OL passages rely more on geographical and literary settings, such as travel, rivers, Venice and the blind men and the elephant. Some of these differences are related to genre and some are not: PTB contains more narrative texts than OL (15 against 9), whereas OL contains more informative texts than PTB (16 against 10) (Martin & Rose, 2008). This distribution is consistent with the named participants and temporal openings of PTB and with the description and attribution of OL. Genre does not, however, account for all the differences, since figurative description also occurs in some OL informative passages, although features were not counted by genre. This answer is, therefore, tentative, since it was derived from close reading rather than counting.

4.6 Discussion

No single layer clearly separates the two corpora: transitivity largely overlaps, whereas the significant differences lie in Theme and cohesion, all with small effects (Cohen, 1988). Across the layers, however, the tendencies point in the same direction (Table 8). PTB combines more named participants and speech, more temporal or locative openings, and continuity through personal reference and explicitly signalled sequence or contrast, whereas OL combines attributive and often figurative description, settings as Actors, more circumstantial detail, more textual linking, and more additive conjunction and demonstrative reference.

Table 8: *Summary of Tendencies Across Layers*

Layer	PTB	OL
Transitivity	Named Actors, Sensors and Sayers; more Cause circumstances	Attributive, often figurative, description; settings as Actors; more Manner circumstances
Theme	More marked topical Themes (6.80%)	More textual Themes (43.37%)
Cohesion	More personal reference; more adversative and temporal conjunction	More additive conjunction and demonstrative reference
Genre and content	15 narrative, 10 informative; local social and religious topics	9 narrative, 16 informative; geographical and literary settings

Contribution of the study. The study compares the comprehension passages of a local curriculum (PTB) and an international curriculum (Cambridge O Level) within the same Pakistani setting and examines three linguistic layers in the same texts (Halliday & Matthiessen, 2014). Although each individual layer shows only slight variation, a pattern emerges when the layers are considered together. Furthermore, attention to subtypes reveals detail that broad counts would conceal; for instance, PTB contains more intransitive clauses, but the Actor is typically a named person, whereas in OL it is typically an element of the setting. Likewise, the cohesive difference is largely attributable to additive conjunction rather than to a contrast between reference and conjunction.

A caution on “explicit” and “implicit”. It might be tempting to characterise PTB as explicit and OL as implicit, and this characterisation fits participant tracking, temporal or locative openings and circumstances of Cause (Halliday & Hasan, 1976). It does not, however, hold for conjunction, since OL shows a higher proportion of conjunctions overall (36.8% against 30.9%) and slightly more causal conjunction (19 against 15). It is, therefore, more accurate to state that the two corpora deploy the same resources differently. Moreover, since clause-initial *and* and *but* are counted in both the Theme and cohesion layers, the agreement between these layers is only partial.

Schema Theory and Genre Theory. The outcome is partly in line with Schema Theory (Carrell & Eisterhold, 1983). PTB texts offer local topics, temporal frames at the start of clauses and pronoun chains to follow, whereas OL texts offer more settings, more description and more additively linked clauses. It may be suggested that

readers whose schemata have been built largely on PTB texts could find OL texts less familiar, although this was not tested, since no learners participated. Similarly, the results fit Genre Theory (Martin & Rose, 2008), since the linguistic choices correspond to the purposes of the texts: named participants and temporal openings occur in narrative and moral passages, whereas attribution and additive linking occur in descriptive and informative passages. Genre labels did not, however, capture all the complexity, since some OL informative texts used figurative Attributes in the manner of OL narrative texts.

Possible reasons for the differences. It is suggested that the differences may partly arise from the different purposes of the two books (Schleppegrell, 2004). The PTB book is a grammar and composition book in which passages are used primarily for language instruction, whereas the Cambridge book is a language and skills practice book that includes a wider range of genres. In addition, PTB content is related to the local culture, whereas Cambridge content is not. These are, however, to be regarded as possible explanations only.

Limitations and implications. The results reflect textual content and not what readers do with the texts, so that the study cannot establish how these differences relate to comprehension, since learners did not participate (Carrell & Eisterhold, 1983). Moreover, the differences are slight, some are not significant, the tags are not fully independent and the genre mix differs between the corpora. Nonetheless, some practical steps are suggested. Teachers may use PTB passages to draw attention to temporal or locative openings and pronoun chains as organising devices, and OL

passages to develop the reading of figurative Attributes and clauses linked by *and*. Learners moving from PTB-style materials to OL-based texts may require explicit support with these features, together with pre-reading activities that elicit background knowledge. Likewise, textbook writers might enrich PTB materials with more descriptive and diversified texts, and provide more pre-reading support for OL texts used in local classrooms. These suggestions are based on textual patterns and remain to be tested with learners.

5. Conclusion

This study compared 50 reading comprehension texts, 25 from PTB Grades 9 and 10 and 25 from Cambridge O Level materials, in order to explore how meaning is constructed and organised through selected SFL resources (Halliday & Matthiessen, 2014), with Genre Theory and Schema Theory supporting the interpretation.

The transitivity findings indicate that the patterns in the two corpora are very similar (Halliday & Matthiessen, 2014). Relational processes were the most frequent in both, and differences in process types, participant roles, circumstances and voice did not reach conventional significance. PTB texts contained slightly more named Actors, Sensers and Sayers and more circumstances of Cause, whereas Cambridge O Level texts featured more attributive and sometimes figurative description, more circumstantial detail, especially of Manner, and in some instances settings functioning as participants.

Significant differences were, however, observed in thematic organisation (Halliday & Matthiessen, 2014). Both corpora relied mainly on unmarked topical Themes, but PTB texts used marked topical Themes more frequently, particularly through temporal expressions, whereas Cambridge O Level texts contained a higher proportion of textual Themes. The differences in Theme types and Theme markedness were significant at conventional levels, although the effects were small. Likewise, the number of cohesive ties was almost equal in the two corpora, and the same general set of cohesive resources was employed (Halliday & Hasan, 1976). The distribution of cohesive subtypes, however,

differed: personal reference and, to a lesser extent, adversative and temporal conjunction were used more in PTB, whereas additive conjunction and demonstrative reference were used more in Cambridge O Level texts.

Furthermore, the qualitative analysis revealed variation in the cultural and experiential resources drawn upon by the texts (Carrell & Eisterhold, 1983). Cambridge O Level passages tended to provide a wider variety of geographical, literary and global contexts, whereas PTB passages tended to focus on local social, historical, religious and everyday contexts. In addition, narrative texts were more frequent in PTB, whereas informative texts were more prevalent in the Cambridge O Level materials.

In a nut shell, it is suggested that the two sets of reading materials share a common linguistic repertoire but differ in the placement and arrangement of specific resources (Martin & Rose, 2008). The results carry implications for reading pedagogy and textbook design: teachers may draw learners' attention to the ways in which texts introduce participants, set time and place, link clauses and convey information, whereas textbook designers might include a greater variety of genres and cultural contexts, together with adequate background information for unfamiliar topics.

The results are, however, to be viewed in the light of several limitations (Cohen, 1988). One book was selected from each curriculum, the Cambridge book was designed for the IGCSE First Language English syllabus rather than for O Level English Language, the genres were not equalised, some Cambridge passages were shortened for comparison and the coding was carried out by a single researcher. Moreover, no learner data were gathered, so that the effect of the textual differences on actual comprehension cannot be evaluated. Future studies might, therefore, employ larger and more varied corpora, analyse linguistic features by genre, use complete texts where available, establish inter-coder reliability and adopt learner-based methods such as think-aloud protocols, comprehension tasks or interviews.

Conflict of Interest

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