Complex Text in ESL Grammar Textbooks: Barriers or Gateways?
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How helpful are ESL grammar textbooks for academic ESL students? Do these textbooks' graphic presentations of content impede students' ability to access that content? We don't know; ESL reading research has been primarily involved in continuous text geared toward content areas rather than the non-continuous, complex text often found in language textbooks.

This article suggests that teachers assess prospective textbooks by comparing real-life users' actual knowledge to authors' assumed student knowledge. Through an examination of charts and page excerpts from two ESL grammar textbooks, it demonstrates that access to the pedagogical knowledge demands sophisticated formal knowledge because of the various graphic devices and discourse forms used. The article concludes by recommending research to learn how students navigate through a grammar textbook's graphic presentation of content.

INTRODUCTION

Academic ESL students want textbooks because they provide content and management for learning both inside and outside the classroom, according to Hutchinson (in preparation, reported in Hutchinson and Hutchinson, 1994/1996). These students depend on homework assignments or self-study from a textbook for extending language learning beyond classroom time. The textbooks often assigned are grammar textbooks, based on a survey of the leading academic ESL textbooks sold by publishers (Leskin, 1995). But are these textbooks helpful?

In order for students to make use of a grammar book with practice activities successfully, there must be a match between: what the author assumes the student knows, and what the student actually knows.

To use the book successfully, first the student must comprehend the grammar explanations and examples. This may be difficult if the student's schemata for content and/or form are different from the author's. (Carroll & Eisterhold, 1983)

Content schemata relate to a person's background knowledge about events, objects and situations; formal or rhetorical schemata relate to a person's knowledge of the rhetorical or discourse structures found in different types of texts. This paper primarily addresses aspects of formal schemata.

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Research into ESL student knowledge in relation to continuous text, whether authentic or simplified, academic or narrative has received attention. Based on these research findings (e.g. Carrell and Wise, 1997; Chen and Graves, 1995; Devine, 1987) and those on strategy use (e.g. Anderson, 1991), experts have been able to make recommendations to help prepare ESL students for academic texts encountered in secondary and post-secondary content classes (e.g. Shih, 1992; O'Malley and Chamot, 1990). But ESL students typically experience ESL textbooks before or simultaneously with content-area textbooks. These ESL textbooks, especially for the study of grammar, contain primarily complex text rather than continuous text to convey pedagogical knowledge to learners.

Information in ESL textbooks, especially grammar textbooks, is presented in a variety of discourse forms:

- individual words
- sentence fragments
- individual sentences
- groups of sentences
- paragraphs

There are also a variety of layout features which make the text visually complex:

- headings
- abbreviations
- charts
- bulleted, enumerated and alphabetized lists
- bold and italicized typefaces

Typical academic content-area textbooks such as those in history, may have text broken by headings, charts and illustrations too, but contain primarily extensive passages of expository text or narrative text. Brown suggests that the complex text found in some ESL textbooks may pose comprehension problems. He says, “Both the production and comprehension of language are a factor of our ability to perceive and process stretches of discourse, to formulate representations of meaning from not just a single sentence but referents in both previous sentences and following sentences.” (Brown, 1994: 235) ESL students may need particular skills and formal schemata to process this type of complex text.

**POTENTIAL GRAPHIC BARRIERS TO LEARNING AND FORMAL SCHEMATA**

Research has shown that some graphic devices and discourse forms typically found in text materials demand skills that are learned and may also be culturally specific. Certain graphic devices may lead to misreading (Levin and Lesgold, 1978; Schallert, 1980) and errors (Conrad and Hull, 1967) for native English speakers and thus decrease comprehension and reading speed for native speakers.

Later research with non-native English speakers suggests that because some graphic devices demand perception and interpretation skills that may be culturally specific (Pettersson, 1982; Travers and Alvarado, 1970), ESL students need to be taught to use them in order to benefit from them (Levin, 1979). Carrell found that teaching ESL students a text’s rhetorical structure prior to reading improves comprehension (Carrell 1985 and Brooks, Dansereau, Spurin and Holley, 1983). This suggests that aspects of complex text are not readily understood by ESL students but can be learned through instruction. Some academic ESL students are poor readers in the L1 because of inadequate schooling and minimal exposure to family literacy, and for this reason also have difficulties reading in the L2 (Carson, Carrell, Silberstein, Kroll, and Kuhn, 1990).

We have seen that complex graphic presentation of content requires perception, interpretation and literacy skills in the mother tongue. Even more so then does the ESL learner need help with texts which utilize unusual layout and text forms. Without these the ESL student will not be able to access the information in the grammar book efficiently. This will affect the student’s ability to learn independently of a teacher. Many hours of engagement are needed to learn a language, especially for academic purposes. A textbook that students cannot use at home for further study may not be the most suitable textbook for ESL.

**SELECTING AN APPROPRIATE TEXTBOOK: ANALYSING A TEXTBOOK’S ASSUMED STUDENT KNOWLEDGE**

When selecting a textbook it might be helpful to view it from the stance of the textbook author: Who are the intended students? What does the author assume they know in terms of formal schemata? This evaluation process can be based on an examination of the variety of discourse forms, typographic features and layouts used in the book. A textbook’s suitability for a particular group of ESL students would depend on the accessibility of its pedagogical knowledge.

While academic ESL students are not homogeneous, coming with disparate educational backgrounds and skills, if the teacher is aware of the students’ learning backgrounds, she/he can help to make the textbook accessible. After this sort of textbook analysis, teachers could assess their students’ actual knowledge and fill in the gaps in their formal schemata, where necessary.

In order to discover what aspects of complex text found in particular ESL textbooks are part of the students’ actual knowledge, as teachers and researchers we might pose the following questions:
Can our students read particular illustrations such as charts and diagrams presented by the author?

Can they understand the relationship between a specific illustration and the accompanying learner task(s) in order to make use of the illustration as a learning tool?

Can students recognize and comprehend explanations presented in particular and limited syntactic chunks in the textbook?

Can students distinguish between examples and explanation in the presentation?

Do students understand the messages implied in the use of particular typographic conventions such as bulleted items, boldface and/or italicized typefaces and of abbreviations such as *e.g.*, "etc." and *i.e.* within specific presentations of content?

Instruction in a textbook's use may need to be part of our syllabuses in order to overcome potential barriers to comprehension. Since there are no industry-wide textbook standards for using particular typographic features, layouts and discourse forms, any one textbook typically and consistently follows its own conventions from one chapter to another. Therefore teachers may only have to instruct students on gaps in their formal knowledge in regard to the particular conventions used in one or two chapters in an adopted textbook.

**COMPLEX TEXT IN CHARTS: A CASE STUDY OF ONE ESL GRAMMAR TEXTBOOK**

Many ESL textbook authors supply charts and diagrams to present, explain and illustrate grammar forms, functions and rules. In order to comprehend the information supplied on a particular chart or to understand the relationship of a chart to its accompanying tasks, students would have to be familiar with similar charts, graphic devices and rhetorical forms. Comprehending a chart's content is based on a student's prior experience of reading similar charts. We will briefly examine two of the charts from the middle chapter in the intermediate-level textbook *Fundamentals of English Grammar* (Azar, 1992) to gain a sense of the potential graphic barriers for students unfamiliar with the manner of presenting content.

**THE CHARTS IN ONE ESL GRAMMAR TEXTBOOK**

A boxed-in chart follows every subtitle in each of the eight sections of the middle chapter and thus demarcates the beginning of each chapter section. Three other boxed-in charts occur elsewhere in the chapter giving a total of eleven charts. Each chart focuses on one language structure related to count/non-count nouns or articles. The charts are different from one another in complexity, layout and in both quantity

18. **glass** Framed paintings are usually covered with __________ to protect them.

19. **iron** __________ (is, are) necessary to animal and plant life.

20. **iron** __________ (is, are) used to make clothes look neat.

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**8-5 USING UNITS OF MEASURE WITH NONCOUNT NOUNS**

*(a) I had some tea.*

*(b) I had two cups of tea.*

*(c) I ate some toast.*

*(d) I ate one piece of toast.*

| (a) I had some tea. | To mention a specific quantity of a noncount noun, speakers use units of measure such as two cups of or one piece of. A unit of measure usually describes the container (e.g., a cup of, a bowl of) the amount (a pound of, a quart of), or the shape (a bar of, a sheet of paper).

| (b) I had two cups of tea. |

| (c) I ate some toast. |

| (d) I ate one piece of toast. |

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**EXERCISE 8:** Use the words in the list to complete the sentences. Use the plural form if necessary. Some sentences have more than one possible completion.

<table>
<thead>
<tr>
<th>bar</th>
<th>bottle</th>
<th>gallon</th>
<th>piece</th>
<th>sheet</th>
<th>spoonful</th>
</tr>
</thead>
<tbody>
<tr>
<td>cup</td>
<td>glass</td>
<td>pound</td>
<td>loaf</td>
<td>quart</td>
<td>tube</td>
</tr>
</tbody>
</table>

1. I drank a __________ of coffee.
2. I bought two __________ of cheese.
3. I bought a __________ of milk at the supermarket.
4. I drank a __________ of orange juice.
5. I had a __________ of toast and an egg for breakfast.
6. I put ten __________ of gas in my car.
7. I had a __________ of soup for lunch.
8. I need a __________ of chalk.
9. I drank a __________ of beer.
10. I bought a __________ of margarine.
11. There are 200 __________ of lined paper in my notebook.
12. There is a __________ of fruit on the table.
13. I used two __________ of bread to make a sandwich.
14. I bought one __________ of bread at the store.

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*Figure 1: Fundamentals of English Grammar: Azar (1992) The Smallest Chart*
and type of language information. Because these charts occur so regularly, are a distinctive pedagogical feature and are linked to the exercises that follow them, they seem important for a student to understand and use. There are no instructions to accompany the charts nor are they presented to students in a preface or guide. We can conclude that the author assumes that teachers instruct students in their use, or that comprehension of these charts is part of the assumed student knowledge i.e. part of the students' formal schemata.

In the next section we will consider some of the underlying skills students may need in order to use this book for self-study purposes. We will discuss the smallest and largest charts in the book. In the smallest chart (see Figure 1), the typographic features are:

- words in bold (e.g. two cups of, line 2, left-hand section of box),
- words in bold and italics (e.g. one piece of, line 5, left-hand section of box)
- words in italics (e.g. tea, line 4, left-hand section of box)
- sentences preceded by letters in parentheses in alphabetical order, each beginning at the same left position (e.g. (a) I had some tea, lines 1-4, left-hand section of box)
- a paragraph (right-hand section of box)

The graphic devices are:

- a boxed-in area on the left containing the list-like sentences
- a boxed-in area on the right containing a paragraph
- an asterisk (*) (line 4) and footnote on the right-hand side of the box

The writing conventions are:

- the abbreviation e.g.
- a word or phrase(s) within parentheses (e.g. line 3, right-hand section of box)
- no e.g. abbreviation to introduce a word or phrase(s) (e.g. line 4, right-hand section of box)

Students must know they have to read across the vertical line dividing the boxed-in area in order to perceive that the bold or bold and italicized words in the sentence examples on the left are the same as words on the right (e.g. two cups of in line 2, on the left = two cups of in line 2, on the right). Students are expected to comprehend that the two language items two cups of and one piece of are highlighted in slightly different ways on the left and that the difference in highlighting indicates their differences as units of measure.

The right side of the chart presents a cup of as describing the container (line 2). Students must see that two cups of, the example on the left (line 2), does likewise. In addition, while the right side also presents two other categories of units of measure, the amount and the shape (line 4), the language item presented on the left side, one piece of (line 6), is not given as an example in either category. Students would have to determine whether one piece of describes the amount or the shape of the non-count noun toast (line 6, left).

- Students must understand that the itemized sentences on the left are language examples that correspond to the information on the right and that the letters of the alphabet preceding each sentence on the left (lines 1, 2, 4, & 5) serve the purpose of itemizing the sentences.
- Students must recognize that the parentheses containing the abbreviation e.g., and a list of expressions are language examples of the word immediately preceding it (line 3, on the right). The parentheses followed by a list of expressions without the abbreviation e.g. serve the same purpose (line 4, on the right).
- Students must know that the asterisk (line 4, on the right) signals a note containing relevant information (lines 7 & 8).
- Finally, students must know that they should look for this information outside the boxed-in area of the chart and are expected to understand the information supplied in the note.

The largest chart in the chapter (see Figure 2) is similar but has a more complex layout and contains examples that use a wider range of layout features:

- top and side headings contain uppercase, bold words (e.g., line 2 & column 1, respectively)
- single and double vertical lines (e.g., columns 3 & 4, respectively)
- single horizontal lines (e.g., between lines 12 & 13) which intersect to create squares and rectangles filled with sentences
- sentences with words in bold italics (e.g., column 2, line 3)
- some words in italics alone (e.g., column 7, line 4)
- a letter in parentheses after the word In (e.g., column 5, line 18)
- letters in parentheses as sentence subjects (e.g., column 3, line 21) or a symbol in parentheses in mid-sentence (e.g., column 3, line 27)
- etc.
### 8-6 GUIDELINES FOR ARTICLE USAGE

#### C1

<table>
<thead>
<tr>
<th>USING A OR Ø (NO ARTICLE)</th>
<th>USING A OR SOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) A dog makes a good pet.</td>
<td>(j) I saw a dog in my yard.</td>
</tr>
<tr>
<td>(b) A banana is yellow.</td>
<td>(k) Mary ate a banana.</td>
</tr>
<tr>
<td>(c) A pencil contains lead.</td>
<td>(l) I need a pencil.</td>
</tr>
</tbody>
</table>

#### SINGULAR COUNT NOUNS

| Ø Dogs make good pets. | A speaker uses no article (Ø) with a plural count noun when s/he is making a generalization. In (d): The speaker is talking about any dog, all dogs, dogs in general. Note: (a) and (d) have the same meaning. |
| Ø Bananas are yellow. | Mary bought some bananas. |
| Ø Pencils contain lead. | Bob has some pencils in his pocket. |

#### PLURAL COUNT NOUNS

| Ø Fruit is good for you. | A speaker uses no article (Ø) with a noncount noun when s/he is making a generalization. In (g): The speaker is talking about any fruit, all fruit, fruit in general. |
| Ø Coffee contains caffeine. | I bought some fruit. |
| I like Ø music. | Bob drank some coffee. |

#### NONCOUNT NOUNS

| Did you feed the dog? | I had a banana and an apple. I gave the bananas to Mary. |
| The pencil on that desk is Jim's. | The sun is shining. |
| Please close the door. | Mary is in the kitchen. |
| Did you feed the dogs? | I had some bananas and some apples. I gave the bananas to Mary. |
| The pencils on that desk are Jim's. | Please turn off the lights. |
| The fruit in this bowl is ripe. | I drank some coffee and some milk. The coffee was hot. |
| (e) I can't hear you. The music is too loud. | (f) The air is cold today. |

*In addition to some, a speaker might use several, a few, a lot of, etc. with a plural count noun, or a little, a lot of, etc. with a noncount noun. (See Chart 8-1.)

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**Figure 2:** Fundamentals of English Grammar: Azar (1992) The Largest Chart
Azar uses these complex graphic presentations to designate different relationships in meaning which students must understand in order to use the chart for learning. For example, the single vertical lines designate areas of information more closely related than areas marked off by double vertical lines. The chart is spread across two pages so that the language examples in column 4 on the left-hand page relate to the explanations in column 5 on the right-hand page.

Students must understand that one vertical line is a weaker boundary than two vertical lines and must ignore the spine. Because the spine of the book is usually a strong boundary, unsavvy students may not read across it to connect the examples on the right-hand side of the left page with the corresponding explanations on the right page.

To summarize, this analysis of the smallest and largest charts in *Fundamentals of English Grammar* suggests that the availability of the information in the charts is dependent on students having the skill to interpret the graphic devices and understand the range of typographic features and writing conventions used. The graphic variations and differences in information from one chart to another create different degrees of complexity in terms of graphic features and accessibility of the subject matter. The more complex the chart, the more knowledge of graphic devices students may need to access the chart's information. In addition, the variations between charts may require students to figure out the conventions of each individual chart. Access to the complete pedagogic knowledge in the text depends on the student's ability to decode these conventions.

A CASE STUDY OF RHETORICAL FORMS AND TYPOGRAPHIC FEATURES IN ONE ESL GRAMMAR TEXTBOOK

Instead of charts or diagrams, some textbook authors provide pages containing explanatory information and illustrations of grammar forms, functions, and rules. Like charts and diagrams, these pages typically consist of non-continuous, complex text containing a variety of graphic devices and rhetorical forms. Understanding the information on these pages is based in part on a student's prior experience with reading these types of graphic presentations of content. These pages, such as the explanation-and-example pages in the intermediate-level textbook *Grammar in Use* (Murphy, 1989), may also have potential barriers for students unfamiliar with these types of complex graphic presentations.

The format of each chapter in *Grammar in Use* is consistent: each contains several units devoted to topics related to a chapter's grammatical focus. These units are marked by a heading and are numbered consecutively from the beginning of the book. Each unit is then subdivided into one explanation-and-example page paired with one facing exercise page.
Each explanation-and-example page as on page 98 from Unit 49 (see Figure 3), is
divided into sections which are prominently marked by a white letter of the alphabet
in a small black square. Adjacent to each section marker is a section heading that
uses a variety of layouts, rhetorical forms and typographic features. Each section
heading is followed by additional explanations and examples which use complex
text.

The layout of an explanation-and-example page is designed to guide a student
through the unit's pedagogical content and is important for students to comprehend.
Although no instructions are provided, Grammar in Use is intended as a classroom
text or for independent study. We can conclude that the author assumes student
comprehension of the layout and text conventions used.

I limit my discussion here to examples from a section on question forms. Through
this discussion, we will see the formal knowledge students need to use the textbook
independently.

The section headings accompanying the section markers, extracted, are:

a. Can you swim? I have lost my key. He might not come.

b. We use auxiliary verbs in short questions:

c. We also use auxiliary verbs with so and neither:

d. I think so / hope so, etc.

The section headings use a variety of short rhetorical forms (individual sentence
forms, clauses and phrases, the abbreviation etc.) and typographic features (bold
typeface, a box, slash). Besides serving as section headings, these headings function
as either examples (a and d) or explanation (b and c).

While both section headings a and d are language examples, their graphic
presentations are different. In section heading a, three unrelated sentences are
presented in a boxed-in chart; whereas, in subheading d, two bold phrases are
connected by a slash (/) and followed by the abbreviation etc. Students must discern
that both are examples, although presented differently.

Section headings b and c, which function as explanations, are sentences ending
with colons. Students must know that a colon indicates that the subsequent
information is linked to a sentence message in a manner distinct from information
following a sentence ending in a period.

Language examples and explanations are also presented within sections and follow
a consistent format. These explanations begin at the left margin while examples
showing question/response or statement/question pairs are indented and follow a
square, black bullet (■). Students must know that each bullet acts as a meaning
separator delimiting the context of each paired example. In section d, though, in
presenting paired examples of a general rule which are not question/response or
statement/question, the bullet is omitted. Instead, the positive form is placed at the
left margin—the same position as explanations—and its pair, the negative form,
follows it but is preceded by a dash (—), thus distinguishing these paired examples
as different types of pairs. It would be helpful for students to recognize this
distinction.

Other typographic forms are used which students must understand such as quotation
marks around sentences used to distinguish a meaningful exchange between two
speakers in contrast to no quotation marks around sentences serving as one speaker’s
utterance, the use of parentheses and equal sign (e.g. = I am working tomorrow) to
explain meaning, sentence examples in boxes without quotation marks which
represent disassociated-in-meaning examples. Understanding the layout and
typographic features employed makes students aware of distinctions.

While the author uses a consistent overall layout for the explanation-and-example
pages throughout the textbook, the rhetorical forms and layout from one section to
another are not consistent, even when similar kinds of content are presented. This
non-systematic correspondence requires students to understand these different
presentations in order to access the information. We can see this if we look at
section a, p. 98 and section a, page 100 (excerpted in Figure 4 below) which both
begin with first lines of disassociated-in-meaning examples similar in rhetorical
form and layout.

<table>
<thead>
<tr>
<th>PAGE 98</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Can you swim? I have lost my key. He might not come.</td>
</tr>
</tbody>
</table>

In these sentences can, have, and might are auxiliary (= helping) verbs.

We often use auxiliary verbs when we don’t want to repeat something:

- "Are you working tomorrow?" "Yes, I am." (= I am working tomorrow)
- He could lend us the money, but he won't. (= he won't lend us the money)

Use do/does/did for simple present and past short answers:

- "Does he smoke?" "He did, but he doesn't anymore."
CONCLUSION

By viewing both textbooks from the stance of each textbook author, we can attempt an answer to the two questions I posed earlier: Who are the intended students? What does the author assume they know in terms of formal schemata?

Without a teacher mediating student use of charts or explanation pages and in the absence of instructions or information in a textbook itself, the presence of a variety of charts and other forms of presentations containing a range of graphic features suggests that students must know how to read these complex graphic presentations of content, that they can figure out a chart’s or page’s content by examining it, that they are familiar with the graphic features and how they function so that students can distinguish between examples and explanation. The intended students must also have the comprehension skills to make connections between sets of explanation and examples and from one set to other sets on a chart or page.

Azar’s Fundamentals of English Grammar focuses primarily on grammatical usage while Murphy’s Grammar in Use focuses on grammatical, social and semantic usage. Both authors seem to expect students to learn usage through examining rule-like information and language examples, and chiefly by slotting correct forms into fill-in-the-blank-type exercises. Both stress accuracy in language production and emphasize an analytical approach to language learning. They assume that the intended students are learners: that they learn English by focusing on the close study of grammatical explanations and not on a communicative use of the language. Hence both authors perceive the intended users of their respective textbooks as having strong analytical, reading and study skills.

Azar’s intended students for Fundamentals of English Grammar are students who are skilled at extracting pertinent information from highly typographically marked charts in order to compare discrete grammatical relationships. They are students who can read with attention to detail, not only because of the complex graphic presentation of the grammatical content, but because of the content itself. They are students who have a sophisticated sense of the fluidity of particular grammar terms.

Murphy’s intended student for Grammar in Use would ideally be a student with an already strong grammatical background because of (1) the presence of a broad range of aspects, modalities and tenses of verbs; (2) the greater focus on what structures look like than how or when to use them; and (3) the undifferentiated presentation of social, semantic and grammar usage.

Each book requires an assortment of different reading skills because of the range of graphic presentations of information, which in each book is distinct. The authors assume different but broad student prior knowledge of complex text, much of it related to highly formal academic reading experience.
Would ESL students of diverse educational backgrounds working alone be able to access the pedagogical knowledge in these textbooks? Observing students using these textbooks in self-study situations may be informative. The use of think-aloud protocols with students from a range of educational and cultural backgrounds could reveal the accessibility of a textbook’s pedagogical knowledge and might supply clues to the kinds of strategies needed to comprehend typographic and linguistic features characteristic of its complex text. In the meantime, I hope this discussion demonstrates the need for ESL teachers to understand the knowledge that may be necessary to carry out tasks in textbooks we intend our students to use without our assistance.

REFERENCES


