WHAT ABOUT READING?

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For quite some time teachers have been concerned about their students ' reading fluency. It's clear there's a need for continually planned instruction in reading throughout a student's school career since many students seem unable to handle the range of materials we'd like them to read. However, improving students reading fluency doesn't rest only with the teaching of English or Language Arts. Instead, it's important that reading instruction be provided throughout the curriculum. We need to consider how we can adapt instruction across the curriculum to foster reading development. We need to examine ways of integrating instruction in reading with subject instruction as well as explore ways of helping, students develop adequate background knowledge so they can read what we want them to read.

Let's start by looking at the reading process. Many people believe reading begins with the print. But consider the example in Figure 9-1. At first glance it's unintelligible. Why is that? Our eyes are receiving information from the page; but something is clearly missing. What's missing is the interpretive information we must supply. If I tell you the example is a word. Some of you will be able to see it. If I add that the word has been written in white against a black background more of you will find it. I might even need to tell you the word in the example is "ART" before you will be able to see it.
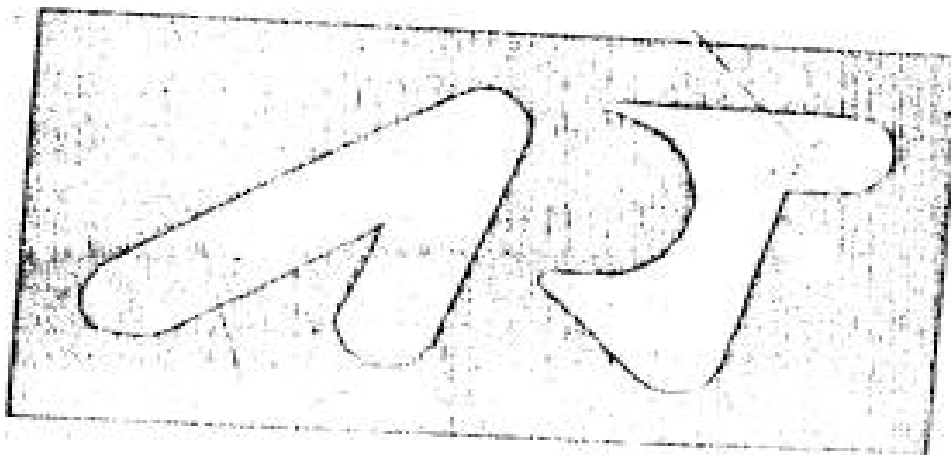

Figure 9-1

This example illustrates a fundamental point about seeing that is seeing is not primarily a visual process (Kolers, 1969). Neither is reading. We gain some information directly from the print though our eyes. Frank Smith (1971) called this "visual information". But this isn't the only source of information we use. We also have considerable information stored in our heads, in memory. Which we need to use when we're reading. Since this information is available, as Smith (1971) says, from behind the eyes, it can be called "nonvisual information". We don't need to identify every print element in order to understand what we're reading. Our nonvisual information (that is, our knowledge of the world together

with what we know about language and how is works) affects the actual perception of print and contributes substantially to our understanding.
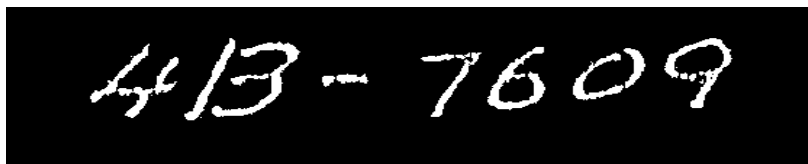
Let me illustrate this, with the following print symbol:

B

How it's perceived depends on the context in which it occurs. When it appears in

BLACK

"we see it as a letter When it occurs in

413 - 7609

We identify it as two numerals. The visual information is the same. What makes the Difference is the non-visual information we've supplied.

The skill that's developed in becoming a fluent reader is learning how to use relevant prior knowledge to select the fewest, but most productive, print cues. The amount of attention we need to give the print will vary from moment to moment. If we have a great deal of no visual information we need to pay relatively little attention to the print. If, on the other hand, we have little prior knowledge to supply, we have to attend more carefully to what's on the page. The more we know in advance, the easier it is to read; the less we know before-hand, the more difficult it is to understand.

The conceptual information we supply is crucial for understanding written language. Many students, both younger and older, have difficulty reading school materials, not because they don't know how to read, but because they lack sufficient nonvisual information, Having insufficient nonvisual information is a common experience for everyone. Consider the following passage.

> *In this example the modulation to E is a passing modulation. The suspension in the inside voice is helpful in avoiding the cadential effect at each final chord of the pattern. The first transposition moves down a major third and the second down a minor third, it being impossible to divide the interval of a perfect fifth (from the initial key, G-sharp, to the desired destination, C-sharp) into two equal parts [Piston, 1962.]*

Just as with the "ART" logo and the print symbol that could be either the number 13 or the letter B. the information we need to understand this passage is not on the page. In order to make sense of the paragraph we need to have some knowledge about harmony before we read. Although we have some clues that we're reading about music, if we lack any knowledge of the terms used in the study of harmony we find the meaning of the text is still largely a mystery.

The point being made is this: whether we are fluent readers or not depends largely on the background knowledge we have available to bring to the print. A fluent reader can have difficulty reading when they have little or no prior knowledge to supply. The opposite is also true; less fluent readers can read more easily if the material they are reading is about something with which they are already familiar.

What does this distinction between visual and nonvisual information mean for instruction?

Because we know reading is easier when we can bring some prior knowledge to the text, we can simplify reading by making sure our students have adequate background knowledge before asking them to read. Since understanding depends on our being able to relate new information to what we already know, we must help students develop the conceptual background necessary for reading.

How can we help students develop background knowledge? There are a variety of ways we can do that. The instructional choices we have available depend on what the students know already. In some situations students general knowledge is adequate for understanding. What is required is that their attention be drawn to what they already know. One useful way of doing that is having students brainstorm the topic before they read to make them aware of what information they possess. This enables hem to read actively; their reading is guided by the information they have considered in the brainstorming discussion. The questions raised during brainstorming lead them to read for answers.

Most teaching, however, is concerned with helping students develop new knowledge. There are many situations in which it's helpful to provide practical experiences. Students will find a text on animal classification easier to read if they have had an opportunity to observe and sort specimens first. Math books make more sense when students have explored concretely the concepts about which they are reading. History is also easier to understand if a novel or a film about a particular period has preceded a difficult chapter form a textbook or if appropriate artifacts are examined and discussed.

Another way of building background knowledge is through reading itself. The information from one selection on a topic can serve to support reading of another selection; what we learn from the first becomes the foundation for subsequent transactions with text. Sometimes reading a brief selection, simply written, can serve to support students' reading of a more complex passage. Where the ideas are complex, and perhaps difficult to grasp, information from several sources can be used to help students build a general understanding of the topic under discussion. The supporting selections can come from books other than the ones we want the students to be able to read and understand, or they can, if necessity, be written by the teacher.

Developing students reading fluency requires more than attention to word identification or word analysis. We can affect our students reading more directly by helping them develop the knowledge they need for understanding and interpreting a text before we ask them to read it. We need to keep in mind it's the amount of no visual information readers have that makes reading, difficult or easy. If we expect our students to read without first ensuring that they have some background knowledge, then we're making reading difficult, if on the other hand, we draw their attention to what they already know, if we discuss previously learned concepts and anticipate where they might lead, if we take the time to provide concrete experiences, as well as a range of reading selections on the same topic, we'll be making reading easier.

We've been discussing no visual information, prior knowledge, in general terms. We need, however, to consider its precise nature. Specifically, we need to examine the language cue systems which contribute to understanding. Let's begin with a sentence:

Jimmy lived in a small

Suppose we'd encountered this part of the sentence at the bottom of a page. Even before turning the page we've some information about the next word. We know, for example, that it is likely to be a noun or an adjective because other types of words such as verbs, adverbs, prepositions, conjunctions, or articles don't usually follow an adjective. We wouldn't expect to find:

Jimmy lived in a small eat

or

Jimmy lived in a small of

We'd expect, instead, the name of a place or a type of dwelling to occur next, although another descriptive word would be possible:

Jimmy lived in a small white

Knowing the next word is a noun or an adjective is part of our knowledge about language. Our ability to anticipate a particular part of speech is based on our syntactic knowledge – what we know intuitively about the grammatical rules which govern how language is used.

We also know the next word won't be *elephant* or *telephone*, and it probably won't be *submarine* because although these words are nouns their meaning is inappropriate; they don't refer to small places in which people usually live. Our semantic knowledge, what we know about meaning, restricts our choice of words.

If I added a bit more to the example:

Jimmy lived in a small c—

We could make some guesses about what the word might actually be. We know the next letter won't be *, b, f*, or *g*. because these letters don't follow *c* in common English words ; after *c* we expect to find either *s* or an *h, l* or *r*. Our intuitive knowledge of the spelling patterns used in English, orthographic knowledge, is acquired through experience with reading and writing and helps us anticipate what specific words would occur next.

Jimmy lived in a small	*cabin* *church* *clearing* *craft*

In other words, we bring to reading our knowledge of language structure --- syntactic knowledge, knowledge of the meaning of words and of how certain meanings fit together, semantic knowledge, and knowledge of spelling patterns commonly found in the language—orthographic knowledge. Syntactic information, by indicating the relationships among words, limits the grammatical choices possible; the semantic cues help us predict

appropriate meanings within the syntactic constraints. The orthographic cues help us predict specific word choices.

These sources of information—the language cue systems—are used interactively with visual information. The more syntactic, semantic, and orthographic knowledge we can supply, the less we have to rely on the print because we already have some sense of what we expect to see. As we read we use the language cue systems to anticipate what is coming next, to confirm our expectations, and to integrate new information into what we already know.

> *It was still dark but there was a faint suggestion of a grey luminosity in the east as we felt our way through the bordering poplar bluffs to the slough.*
> *Through the blurred screen of leafless trees, I behold the living silver of the slough, , miraculously conjured out of the dark mists. The shimmering surface was rippled by the slow, waking movements of the green-winged teal.*
>
> *As the dawn approached, the red glare of the morning sun fell on the immaculate mirror of the slough; and then the ducks came to the pond with a great whoosh. They came in such numbers that it seemed the slough would be too small to hold them* all.

There is a word in this passage—*slough*—which many of us haven't seen before. Using our syntactic knowledge we can tell it's a noun because it's preceded each time by *the*, used to identify a noun. We also can say something about what the word means. We're able to tell it's a place surrounded by trees which for the moment are leafless perhaps because it's winter or early spring. Its surface is being rippled by the movement of the ducks. From the semantic cues we understand the place must be some kind of a pond or small lake.

Many of us won't have ever heard the word used, but we do have some idea now it might be said. It could be like *cough* or *though* or *rough* or *plough*, or *though*. However, being unsure of its pronunciation doesn't prevent our knowing what the word means Pronunciation isn't necessary for understanding the meaning, which we've been able to construct by using syntactic and semantic cues.

What the examples illustrates I think is that an emphasis on pronouncing words detracts from the more important business of understanding them. While it was possible to establish a tentative pronunciation for the word, our semantic and syntactic input contributed substantially more to our understanding.

Yet, instruction is often based on the premise that if we an say a word we'll understand it. That may be true if the word is one we've heard before and we recognize it. However, we meet many words we've never heard used, and being able to say them won't help with understanding. What will is using the syntactic and semantic cues to formulate a tentative meaning. Which we'll revise as we gather further information from reading.

How can we make use of this information about the language cue systems for reading instruction?

I want to emphasize that I'm not advocating we teach our students about the language cue systems in any formal way, because I'm not sure that making this knowledge explicit would be of much use to them. Being able to talk about the language cue systems is not necessary for fluent reading any more than being able to analyze and describe what we do when we talk makes us better talkers. It is important, however, for teachers to

understand what's involved in reading so we can create instructional situations in which students are encouraged to risk using the range of knowledge they have available to them.

In fact, without our realizing it, many of our students have become rather adept at using the syntactic cue system. We've often assumed they've understood the concepts we've waned them to learn when they've been able to answer our questions. By using word order, function words, inflectional endings, and punctuation, they can often supply "answers" and still lack understanding.

For example:

> *In scrangle, wizzets were crailing because most furples were glinking a targ of pranialism. This targ of pranialism was the result of many pranial fwumps wanting their own persts.*
>
> Why were wizzets in Scrangle crailing?
> Because most furples were glinking a targ of pranialism.
> Why was there a targ of pranialism?
> Because many pranial fwumps wanted their own persats.

Is the following situation, in which students are asked to read and answer questions about the text, very different?

> *In Europe, tensions were rising because most countries were experiencing a surge of nationalism. This surge of nationalism was the result of many national groups wanting their own governments (Tait and Mould, 1973. p. 307).*
>
> Why were tensions in Europe rising?
> Because most countries were experiencing a surge of nationalism.
>
> Why was there a surge of nationalism?
> Because many national groups wanted their own governments.

These "answers" may be demonstrating an ability to manipulate syntactic structure and not an understanding of the concepts.

If we shouldn't formally teach students about the language cue systems, how, then, can we help them become more adept readers? We can begin by emphasizing that the goal in all reading situations is understanding. We can help them realize that they don't need to identify every word in order to develop a sense of the passage. We need to help students become aware of how they make use of the language cue systems, how they make decisions for handing what doesn't make sense.

Knowledge about the kinds of decisions readers can make. Another aspect of non visual information, is largely intuitive. That is, we don't actually say to ourselves, "What do I do now?" when we encounter something unfamiliar. But as we read, we're engaged in deciding when to go back and try again and when and how to keep on going. Such decisions are called reading strategies (Goodman and Burke, 1980).

There are three basic types of reading strategies. We predict what is coming next. We confirm our predictions and correct when our expectations are not verified. We integrate new information into existing knowledge.

Predicting strategies consist of generating expectations on the basis of information from any or all of the available cue systems. Confirming strategies are the result of asking ourselves if what we're reading makes sense. Integrating strategies are involved in the complex process of incorporating the meaning we're constructing into the knowledge we bring to the reading situation. We integrate meanings for unfamiliar words; we integrate complex ideas and relationships as well. WE predict, confirm, and integrate on he basis of information from all the cue systems. Try the following passage:

People usually shudder when we mention_____	(snakes, spiders, slugs, murder, war, inflation)
This is unfortunate because most _____ are harmless and interesting creatures.)	(Cross out murder, war, inflation - they're not creatures
The mother ____cares for her baby just as carefully as a human	(Maybe snakes do; slugs and spiders lay eggs and leave.)
The ____ carries her baby with her for the first two weeks of life.	(I don't think snakes carry their young around.)
Like all mammals, she provides it with milk by nursing it.	(Snakes aren't mammals, anyway)
By the time it is two weeks old, its wings are ready for flight.	(Mammals, wings: bats?)
A _____ wing is unusual. It really Is a thin skin that stretches from the arm-like front limb, along the body, to the hind leg. The flying habits of _____ are amazing. Although they fly only at night when it is dark, they never strike an object _____ can not see in the dark, but they have a special sense that warns them before they fly into an object.	(Bats) (I didn't know that.)

The passage demonstrates how we use predicting, confirming, and integrating strategies. Reading such a passage helps us realize that meaning is constructed from the text as a whole. Through a sampling of the print, readers confirm predictions and predict subsequent meaning; tentative meanings are confirmed or disconfirmed depending on information met later in the passage. Having tried a number of different possibilities- snakes, slugs, war, inflation- most of us have realized we are reading about bats with the reference to wings. Knowing bats are the only mammal which can fly allows us to establish a meaning for the missing word. The remainder of the passage provides confirmation, at the same time offering what may also be some new confirming, and integrating- operate both continuously and in concert.

How can we help students develop more fluent reading strategies? One major objective should be to help them overcorne the obstacle of unknown words. Because many nonfluent readers think reading is an exact process, involving the accurate identification of every word, they usually stop when they come to something they don't know. Many of them try at that point to "sound it out" usually with little success. In the meantime they have forgotten what they have been reading about. We need to help students understand that the

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meaning of the whole doesn't depend on being able to identify every word. We can help them realize there are a variety of decisions they can make when encountering something unfamiliar. They can do what fluent readers do:

- They can try reading on to see if what comes later in the passage offers more information.
- They can try substituting a "placeholder"- something which makes sense until some new information makes it necessary to try something else.
- They can choose to reread, to see if they've missed something which would help specify the meaning.
- They could decide to make no decision for the moment, to read on and later return to what's unfamiliar if it seems crucial.

In other words, we want to encourage students to predict, confirm, and integrate.

An activity which is particularly useful for helping students make meaningful substitutions when they encounter something unfamiliar is *Synonym Substitution* (Goodman and Burke. 1980). In this activity, readers are encouraged to substitute something which makes sense for anything in the text they don't know. The emphasis is upon creating meaning from a context. The students are forced to integrate actively both semantic and syntactic information in order to supply a reasonable "placeholder". The activity demonstrates, to students that they possess nonvisual information which can be used for interpreting text. It also encourages the processing of large chunks of language. Students are helped to focus on meaning rather than to rely on the print.

The lesson is used most effectively with small groups. First, each student is asked to read the passage silently. Then each group reads the text together, trying to supply a minimum of two substitutions for each underlined word. The substitutions are written down and discussed later. The most important aspect of the activity is the discussion about meaning which takes place as students try to create an interpretation of the text. This discussion allows them to recognize that there may be a variety of ways of conveying meaning.

For students having considerable difficulty reading, it is useful to begin with an excerpt from a familiar story or fairy tale. With more proficient readers an excerpt from a textbook is appropriate. Let's try a passage ourselves:

> *The sea is our ecosystem of last resort. Destroy or seriously **impair** the oceans and we obliterate not only the diverse and bountiful life harboured there, but, **ultimately**, ourselves as well. A dead ocean portends a dead earth, Most marine experts are **profoundly** disturbed about this possibility.*
>
> *For millennia, man believed that the sea was a bottomless pit into which his offal could be dumped endlessly because the oceans recycled the products of life on earth with ease. However, every time we put something in or take something out, it has **an impact**. Despite its vast self-healing ability, scientists are learning how **vulnerable** the sea really is. (adapted from fisher, 1977).*

Now let's try substituting the words:

> *The sea is our ecosystem of last resort. Destroy or seriously **impair** (spoil, damage, injure) the oceans and we **obliterate** (wipe out, exterminate, destroy) not only the diverse and bountiful life **harboured** (which lives, which is sheltered or protectod) there but, **ultimately** (finally, in the end, eventually), ourselves as*

> *well. A dead ocean portends (means, threatens, foreshadows) a death earth.*
> *Most marine experts are profoundly disturbed about this possibility.*
>
> *For millennia, man believed that the sea was a bottomless pit into which his* **offal**
> *(garbage, waste, rubbish) could be dumped endlessly because the oceans*
> *recycled the products of life on earth with case. However, every time we put*
> *something in or take something out, it has an* **impact** *(an ability, scientists are*
> *learning few* **vulnerable** *(fragile, defenseless, open to damage) the sea really is.*

Notice that the substitutions need not be single words; sometimes we need to substitute whole phrases and rearrange sentences if we try to understand what we're reading. The activity legitimizes the substituting of something meaningful for something unfamiliar in the text. It helps students overcome their fear of unknown words.

Another activity which has the same kind of objective- that is, helping students deal effectively with something (words, sentences, paragraphs, even whole texts) unfamiliar- is *Reader Selected Miscues* developed by Dorothy Watson at the University of Missouri. This activity helps students become aware of the range of options available to them as readers when they encounter something unfamiliar. The students receive a copy of selection and read it silently, marking either with pencils or highlighting pens anything they don't understand or about which they have questions. When they have finished reading and marking the reading material, they take turns discussing what they have marked. They are encouraged to consider which of the items they marked were significant and which were not; which affected their understanding and which didn't. During the discussion the students are encouraged to return to the material for clarification. Either factual or fictional material can be used for the activity.

Again what the activity demonstrates is that reading involves making sense. Through social interaction students are helped to see that not everyone creates the same interpretation from reading: that one's interpretation is determined by what one knows. What the discussion allows is the development of a consensus and a collective working out of what wasn't understood. The activity demonstrates that it isn't necessary to identify every word on a page in order to understand. It also shows students that the meaning of something unfamiliar can be created from understanding the whole. *Reader selected Miscues* makes *"not understanding"* legitimate. It helps develop a willingness to use what is understood for clarifying what is unfamiliar.

Not only are we concerned with helping students overcome the obstacle of unfamiliar words, we also want to help them integrate the complex ideas and relationships they are reading about. *Say something*, developed by Jerome Harste of Indiana University, helps students explore the relationships between what they know and what is offered in a particular reading selection. In this activity, students choose partners. Each students takes a copy of the reading selection. Before reading, students decide how they will read (orally-in turns or in unison or silently) and how much they will read before stopping and reacting. Students then read and stop at the predetermined points to *"say something"*. The *"something"* can be questions they might have which they can discuss: it can be a reaction to what they've read; it might be information they have from other sources which confirms or contradicts what is said in the current selection. After the students have completed reading and discussing the selection they can share their insights and interpretations with other pairs of students.

Say Something allows students to read to the information in a selection and relate it to what they know. The opportunity to discuss what they are understanding as they read permits

students to see how other make sense of written language. The sharing of knowledge facilitates the development of understanding.

Another activity which serves the same purposes was developed by Carol Gillis, a teacher in Columbia, Missouri: *Estimate/Read/Respond/Question*. In this activity, students begin by glancing through the selection and estimating how far they think they will be able to read with some understanding. The reason for this is to let students see they are often able to understand more than they thought they could. Next they read the selection. they can choose to read independently, in pairs, orally, or silently, stopping for discussion or reading straight, through. Now they respond/retell by discussing what they think they've leaned from reading and their reactions to what they've read. At this pint, the students write a general question concerning some aspect of the selection that interested them or where they found the meaning unclear. They exchange questions with a partner and answer the questions either orally or in writing. Once again, the activity helps students see the relationship between what they already know and what they are learning from a particular reading.

What all of these activities I've described have in common is a focus on understanding. It is important, at this point, to raise a question which concerns many teachers. Shouldn't students be able to read accurately? By that, most teachers mean shouldn't students be able to replicate what's on the page. The answer is, however, that an interpretation which approaches what an author has intended comes not from closer attention to the print but from being able to supply appropriate nonvisual information to the transaction with written language. What each of the foregoing activities emphasizes is that reading is an interpretative process. As students become fluent readers they learn to take risks, to ask an essential question: "Is this making sense to me?" They become less and less concerned with getting the words right and more and more concerned with creating meaning. They learn not to depend on the print as their only source of information. Rather, they sample the text on the basis of what they know about language and about the world. The construct meaning which is confirmed or disconfirmed depending on subsequent information. They do a great deal of interpreting and filling in. The social interaction, an integral aspect of each activity, provides the means by which interpretations can be compared and related back to the text itself. The need to understand the author's intent develops from exchanging and comparing interpretations.

As teachers, we must keep in mind that is the students themselves who must construct meaning. No two individuals reading the same passage will arrive at exactly the same interpretation. Our interpretations are influenced by our prior knowledge, which is different for everyone. Our role is not to impose our interpretations on our students, but to help them construct understandings of their own, if we want to help students become more fluent readers, we need to encourage them to deal with unfamiliar words and concepts in a variety of ways. We need to help them become more aware of his contextual cues (both syntactic and semantic can be used to construct a tentative meaning. We need to direct students to constructed a general understanding of what they are reading before we ask them to consider the details. If we emphasize only the detail, we are likely to force them to become overly concerned with identifying words.   We have to create activities in which students are willing to ask being wrong.

The following language story illustrates, I think, the sort of understanding about reading we must help students, develop. I was reading with a fifth grader who was having some difficulty in school. I handed him a passage to read from which several words had been deleted. He took the passage, looked at it, and said, "I can't read this; some words are left out." I suggested he try anyway. He looked at me as though I were foolish; then he began

reading. When he'd finished, I asked him to tell me about what he'd done. With a look of astonishment on his face he said, "The words just came out of my head!"

References:

Fisher, A. "The Living Sea." *International Wildlife, 1977, 7(3), 4-10*

Goodman, Y., and Burke, C. *Reading Strategies: Focus on Comprehension*. New York: Holt, Rinehart and Winston, 1980.

Kolers, P. "Reading is Only Incidentally Visual." In: Goodman, K.S., and Flemming, J. T.)eds.), *Psycholinguistics and the Teaching of Reading.* Newark, Del.: International Reading Association, 1969.

Piston, W. *Harmony*, 3rd ed. New York: W.W. Norton and co., 1962.

Smith, F. *Understanding Reading*. New York: Hold, Rinehart and Winston, 19971.

Tait, G. E., and Mould, V. *One Dominion*, 2ns ed. Toronto: McGraw-Hill Ryerson Ltd., 1973.