

Polishing Pearls: The on-going process of schemata activities on reading

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In Mexico, a reading knowledge of English is often important to academic studies, professional success and personal development. In the past, however, reading material and instruction for English as a Foreign Language (EFL) remained controlled by the practices which saw reading as obtaining meaning from print, without recognizing the full importance of the reader's background knowledge. We could compare the schematic view of reading to a pearl. Before a pearl has been polished or even seen in its rough form, it starts as a minute grain of sand or other small object that disturbs an oyster's way of life. The oyster, although annoyed by this new material, continues to cover and use the invading substance to develop successive layers, forming within itself a pearl. The earlier view of reading did not fully consider its complex process. Reading also thrusts new material onto the reader. The new reading material will be less obtrusive if the teacher applies schema theory to the process, allowing the layers of knowledge to build up around existing schemata.

This article presents schema theory or background knowledge of the learner, its relevant importance to reading, and suggests specific reading activities which are firmly based on schema theory. Each new reading is not presented simply to provide students with either how-to-read tools or only new information. Rather, the new information needs to be incorporated into the students' existing schemata. Reading activities which generate schemata are frequently limited to what is done before the actual reading, but the process is continual and holistic. We suggest that you provide schema activation at the beginning of the reading process and then continue with follow-up activities so that the new information solidifies and becomes a part of your student's ever-building schemata. This continuous elaboration resembles that grain of sand whose on-going process produces a smooth, lustrous pearl which started from an incomplete and undeveloped procedure.

Psycholinguistic studies show the importance involved in readers understanding texts by using or triggering the background knowledge or schema of the learners. Carrell states that

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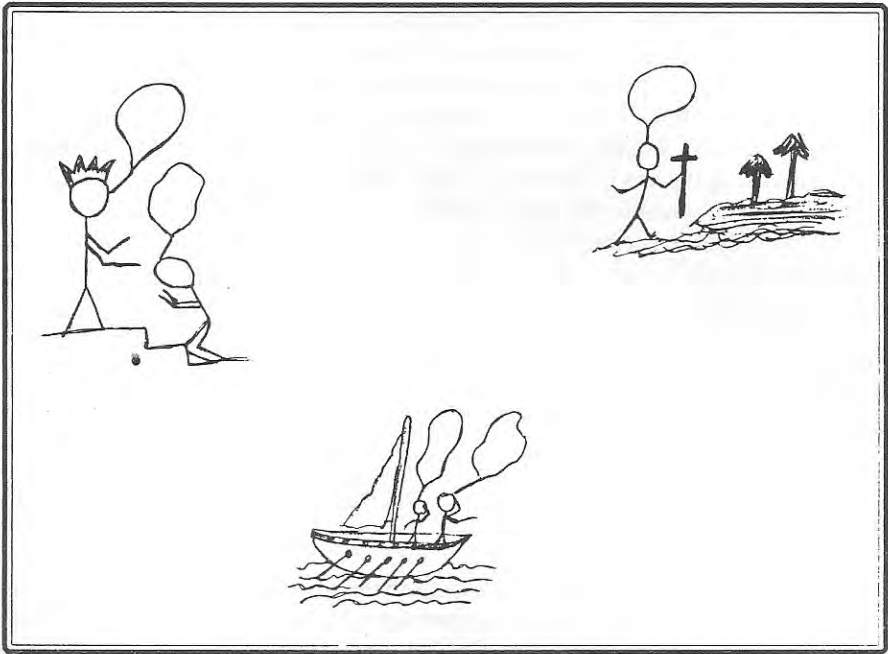
Goodman has described reading as a "psycholinguistic guessing game" (1983: 554) The better the readers are able to bring in appropriate schemata, the less the readers have to depend on the text itself to confirm their assumptions. We would like to briefly explain this schemata or background knowledge and how a person recognizes and applies it. Remember, it is similar to a pearl—the oyster contains the pearl, but it has no useful value unless the pearl undergoes the polishing process. Students have schemata, but we teachers must help our students actively realize the values of their unpolished pearls within.

We chose the topic, Christopher Columbus, because of its cultural richness. Examples to trigger schemata in the accompanying activities can be adapted to all levels of EFL students and may be done in groups or in pairs. These activities, in turn, will provide individuals with both ideas and confidence, which will encourage them to tackle readings on their own. You can choose any text or topic from magazines, newspapers or textbooks.

One important aspect of schema theory is that "schemata provide the basis for 'filling the gaps' in a text: no message is ever completely explicit and schemata permit a coherent interpretation through inferential elaboration of this message." (Steffensen and Joag-Dev 1984: 54) Based on studies done by researchers, such as those by Nelson and Schmid (1989) and Shih (1992), several kinds of activities provide strategies to improve students' interactions with the text. In this article, paragraphs with * at the beginning contain activities for schemata activation. Solutions for two activities are given in Appendix C.

*One of several strategies to trigger schemata is previewing. Previewing helps the reading process because it provides the readers with a glimpse of the essential context. This overview of text organization activates the triggering process. We teachers realize that readers will encounter new information that is unique from their existing schemata. It is important, therefore, to be aware that the more relevant the readers' schemata or background knowledge is to the text, the more prepared they will be to interact with the reading and the more capable the learner will be at narrowing the gaps.

*How can we teachers start triggering schema? One way of allowing readers to bring their background knowledge into the reading is by either you or your students drawing stick figures. Have learners create imaginary dialogues relevant to the topic and place these dialogues into *conversational bubbles* next to each figure.



*A cultural checklist contains categories to trigger students' background and equips them with topics for discussion. We have developed a comprehensive list from which you can select appropriate categories for each of your individual texts.

(Select topics applicable for each text)

Food	Clothing	Weapons
Religion	Dwellings	Livelihood
Recreation	Transportation	Finances
Tools	Government	Music / Art
Use of Land	Entertainment	Authorities
Home Life	Education	Handicrafts

For example, in an article about Columbus, students can choose to talk about these: food, dress, weapons, religions, dwellings and transportation. Teachers probe students to think about how these items were during the time of the reading and then contrast them with their present way of life. Eliciting comments on these items from the students' own cultural background will draw them to the article's content, thereby triggering the readers' existing knowledge and making their schemata the foundation for comprehending the newly introduced topic. This comprehensive list helps teachers effectively prove to students that they already contain a wealth of information in their lives. Studies provide consistent indications that readers understand, remember and enjoy their reading more when they possess relevant cultural knowledge (Joag-Dev and Steffensen 1984).

What about the text that appears to be totally removed from the students' schemata? We, as teachers, still have the awesome task of finding one thin thread which, when united with other threads, will tie the students to the text. Pictures are always a source of sharing, but teachers may have neither access nor time to search for such specific resources. Two convenient resources that teachers frequently overlook are the encyclopedia and the overhead projector.

*Teachers can use the encyclopedia to help students understand the fears of 15th century sailors. For instance, make a transparency of a map of the Old World. Make another map using the same proportions of the world as it is today and place the latter on top of the first. The map overlay impresses students as they contrast with their eyes how much of the world belonged to the fearful unknown in comparison to our knowledge of the world today.

*To help students comprehend the smallness of Columbus' ship, use a whole transparency and draw an outline of one of today's air liners or freighters. Put this on the screen first. Trace or draw onto a piece of paper a small image of one of Columbus' ships and place this paper on top of the transparency. This visual activity allows the students' schemata to correlate the smallness of ocean-going vessels of the past compared to the modes of travel available in today's world.

*Tell students they are members of Columbus' crew. Their ship has hit a reef and they must leave it. Hopefully, they will be rescued by one of the other ships, but they will have to live on a nearby island until then. By themselves, have them quickly list five items that they would want to take from the ship. Follow this with the students forming small groups. Their next task is to limit the list and agree on the eight items the total group will take from the ship. This part of the task requires negotiation. After

a sufficient amount of time, each group reports their eight items to the rest of the class. Several students act as scribes to write down choices and tally results. Initially, you may want to give the class a choice of 20 items if you feel that they need help awakening their schemata on the aspects of culture relevant to the text.

Once schema is awakened, the process of schema accommodation forces readers to restructure their concepts and align them with those of the text. Readers do this process of schema accommodation to incorporate adequately the new information and to reestablish a logical, mental and rational balance between the new information and their experiential interpretation of it. Schema constrains readers' interpretation of an unclear message. When readers possess background information and assumptions different from those of the writer, the readers will be able to reinterpret the text confirming it with their own schemata.

By establishing a correspondence between things known and those given in a text, readers monitor their comprehension and know whether they have understood the text. As Pearson-Casanave in Nelson and Schmid (1984) points out, the text does not carry meaning; it provides cues that enable readers to construct meaning from existing knowledge (539). Reading comprehension requires the ability to activate the appropriate schema into which to integrate the data from the reading passage (Carrell 1984: 332-333).

A wide diversity occurs in much reading, but it seems that this diversity is especially prevalent in cross-cultural settings. Text comprehension depends upon readers' previous knowledge, but when EFL learners do not have this previous, necessary schemata, they are confronted with a lack of comprehension.

Whenever possible, select several activities for one text. A multiple approach activates appropriate schema for your students' variety of learning styles and their own cultural diversity. Ask students to explore issues in writing before they read assigned texts; this empowers readers to approach the text from a position of authority. This position of authority motivates students and fosters a positive attitude toward their reading. Once students' schemata have been triggered, EFL readers can relate to the text. During reading, selective underlining, annotating and self-questioning allow readers to interact with the text as well as to monitor comprehension. Important strategies after reading are note-taking and summarizing both of which are processes useful for organizing and condensing information. This on-going process of schema activation produces the same result: whether polishing a pearl or activating schemata, both enhance their existing value.

*The use of crossword puzzles has multiple benefits. Used first as a pre-reading power activity, the clues should be written in simple language. The purpose of the answers is to introduce students to a new topic and its necessary vocabulary. The crossword puzzle pro-

vides students with common core-words that act as a foundation for understanding the text. The teacher designs the puzzle, using clue words which are not far from the students' comprehension as well as some of the necessary vocabulary.

The making of crossword puzzles applicable for a specific text formerly took hours. Now, inexpensive computer programs arrange the puzzles using your list of words or clues. These crossword-making programs can be bought from commercial companies such as *Crosswords* by Mindplay (800-221-7911) or be acquired through public-domain shareware diskettes usually costing about \$5. (Sources listed with references).

*Students can help design a follow-up crossword puzzle. After reading, students select words they feel are relevant to the text. Have them give you their list of words and definitions. Using the same diskette, enter this information into the computer and develop a "cementing the terms" crossword puzzle. A sample crossword puzzle designed using shareware is shown in Appendix A. The puzzle has been decorated with pictures cut from the newspaper.

Research strongly suggests that when groups of students are given a specific task, they work with more involvement, and incidental learning takes place. An integrated skills task (*Who did it?*) is given in Appendix B. Students must listen to your directions and then use their oral communication skills while working in small groups to solve tasks. Integrated tasks require the use of all communication skills to arrive at answers. Linguistic repetitions, coupled with the non-linguistic element of communication, can also facilitate the unconscious assimilation of certain structures such as prepositions or tenses when the emphasis is involvement in a task. (Widdowson 1990).

*The problem-solving task (*Who did it?*), requires students to use cues to find the culprit who lied. A student will say that he/she saw another person in a certain place at the time of the theft. This student will also indicate his/her own activity. Together, the groups record each answer, using a map of the palace and a symbol chart representing activities. At the end of the task, students deduce that one of them has lied by discovering that he/she was not the person as claimed. This task, using problems that require authentic language for their solution, serves as a preparatory stage for exposing students to content and vocabulary.

*Ask students to use their new knowledge to write their own short story or mystery. The more artistic students may even draw a new scene of the crime and illustrate their writing. You can make an original task for your specific text; just replace the names of people on the chart and re-design a fictional scene of action.

The activities we have presented in this article are techniques that we have found useful in our own classrooms. These practical activities, based on schema theory, have been successful

in the EFL/ESL context. By applying the on-going process of schema activation, you aid the students' polishing process of their pearls within.

REFERENCES

- Carrell, P. 1984. "Schema theory and ESL reading: Classroom implications and applications." *The Modern Language Journal*. 68 (4). 332-342.
- Carrell, P. 1992. "Awareness of text structure: Effects on recall." *Language Learning*. 42 (1). 1-20.
- Carrell, P. and J. C. Eisterhold. 1983. "Schema theory and ESL reading pedagogy." *TESOL Quarterly*. 17 (4). 553-573.
- Dubin, F., D. Eskey and W. Grabe, eds. 1986. *Teaching Second Language Reading for Academic Purposes*. Reading, MA. Addison-Wesley.
- Nelson, G. and T. Schmid. 1989. "ESL reading: Schema theory and standardized tests." *TESOL Quarterly*. 22 (3). September. 539-543.
- Shih, M. 1992. "Beyond comprehension exercises in the ESL academic reading class." *TESOL Quarterly*. 26 (2). 289-318.
- Smith, F. 1988. *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning*. (4th ed.) Hillsdale, NJ. Lawrence Erlbaum Associates, Publishers.
- Steffensen, M. and C. Joag-Dev. 1984. "Cultural knowledge and reading." In J. C. Alderson and A. H. Urquhart, eds. *Reading in a Foreign language*. London. Longman.
- Widdowson, H. G. 1990. *Aspects of Language Teaching*. New York. Oxford University Press.

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APPENDIX B: WHO DID IT?

At 10:00 yesterday morning, Christopher Columbus' log of his last voyage was stolen. The commander of the palace guard asked six suspects:

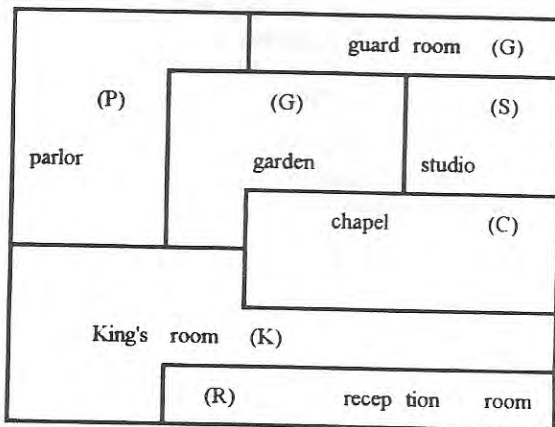
- 1) where they were.
- 2) what they were doing at that time.
- 3) where one other person was at that time.

The commander used symbols to record the answers:

KEY: Activity Symbols

* = sit
□ = rest
△ = eat
< = wait
O = read
> = walk

KEY: Map / Location



The commander's notebook looked like this.

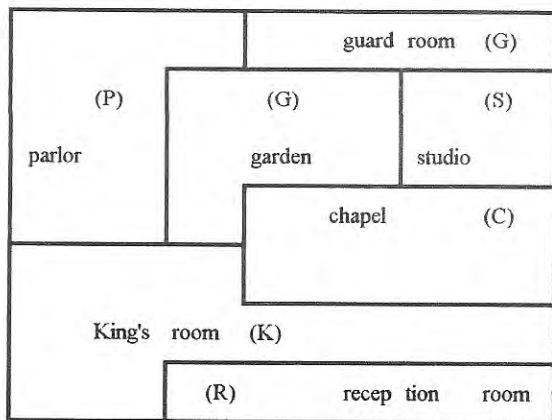
		Where	What
Isabella	I	P	△
	Father Juan	K	>
Ferdinand	I	R	*
	Columbus' son	GR	O
Christopher	I	G	<
	Bahaini	R	□
Father Juan	I	K	>
	Bahaini	C	<
Columbus' son	I	GR	O
	Ferdinand	R	*
Bahaini	I	C	<
	Isabella	P	△

The thief told two lies. Everybody else told the truth which was verified by one other person.
What was each of the 6 doing? Where was each one?

Use the commander's notebook to complete the answer sheet and to solve the mystery of who stole the log:

Isabella: I was eating in the parlor.
She said Father Juan was _____ in the _____.
Ferdinand: I _____ in the _____.
Columbus' son _____ in the _____.
Christopher: I _____ in the _____.
Bahaini _____ in the _____.
Father Juan: I _____ in the _____.
Bahaini _____ in the _____.
Columbus' son: I _____ in the _____.
Ferdinand _____ in the _____.
Bahaini: I _____ in the _____.
Isabella _____ in the _____.

Who told the lies? Read the sentences again to find the room where each person was at 10:00. Then write each name in the room below:



_____ told two lies so he is the thief!

APPENDIX C: ANSWER KEY

1. Answers to crossword puzzle (Appendix A):

ACROSS:

1. Spain
4. Gold
5. Italy
6. Isabella
11. Eclipse
14. West
15. Three

DOWN:

2. Indians
3. Monastery
7. Explorer
8. Farmers
9. Voyage
10. Indies
13. Eighty

2. Answers to Integrated Skills Task (Appendix B):

Columbus kept two logs on his voyage. When one disappeared, he was accused of destroying it, so we designed this integrated skills task to reflect that incident.

- Isabella: I was eating in the parlor.
 She said Father Juan was walking in the King's room.
- Ferdinand: I was sitting in the reception room.
 Columbus' son was reading in the guard room.
- Christopher: I was waiting in the garden.
 Bahaini was resting in the reception room.
- Father Juan: I was walking in the King's room.
 Bahaini was waiting in the chapel.
- Columbus' son: I was reading in the guard room.
 Ferdinand was sitting in the reception room.
- Bahaini: I was waiting in the chapel.
 Isabella was eating in the parlor.

Columbus told two lies so he is the thief!