RESUMO

Este artigo aborda os processos de leitura *bottom-up* e *top-down*, com ênfase nas abordagens de ensino e aperfeiçoamento da leitura na sala de aula de língua estrangeira, com base nos estudos de Brown (2001), Goodman (1970), Nutall (1996), entre outros. Trata-se de uma pesquisa de cunho bibliográfico que visa a destacar as fases de cada processo de leitura e as habilidades a elas relacionadas.

**Palavras-chave:** processos de leitura; (micro) habilidades; estratégias de leitura.

---

ABSTRACT

This article discusses bottom-up and top-down processes of reading, with emphasis on teaching and enhancement approaches of reading skills in the English classroom as a foreign language, based on studies by Brown (2001), Goodman (1970), Nutall (1996), among others. It is a bibliographic research that emphasizes the phase of each process of reading and the skills related to them.

**Keywords:** processes of reading; (micro) skills; reading strategies.
INTRODUCTION

This article focuses on reading as a component of general second language proficiency, but reading must be considered only in the perspective of the whole picture of interactive language teaching. Significant findings affected the approaches of teaching reading skills. We can emphasize some of them, such as: bottom-up and top-down processing; schema theory and background knowledge; the role of affect and culture and the power of extensive reading.

Goodman’s work (1970) offered us the distinction between bottom-up and top-down processing. In bottom-up processing, readers first recognize a multiplicity of linguistic signals (letters, morphemes, syllables, words, phrases, grammatical cues, discourse markers, etc.) and use their linguistic data-processing mechanisms to impose some sort of order on these signals. These data-driven operations obviously require a sophisticated knowledge of the language itself. From among all the perceived data, the reader selects the signals that make some sense, that cohere, that mean.

When using previous knowledge and assumptions, it is called a top-down strategy, because the reader goes down from more general knowledge and meanings to the specific ones of the text.

Virtually all reading involves a risk – a guessing game, in Goodman’s words (1970), because readers must, through a puzzle-solving process, infer meanings, decide what to retain and not to retain, and move on. This is where the top-down reading process is imperative because the reader draws on his or her intelligence and experience to understand a text. Nuttall (1996) compares bottom-up processes with the image of a scientist with a magnifying glass or microscope examining all the minute details of some phenomenon, while top-down processing is like taking an eagle’s-eye view of a landscape below. The author says that such a picture reminds us that field independent and field dependent cognitive styles are analogous to bottom-up and top-down processing, respectively.

According to Brown (2001), a half-century ago, reading specialists might have argued that the best way to teach reading is through bottom-up methodology: teach symbols, grapheme-phoneme correspondences, syllables and lexical recognition first, then comprehension would derive from the sum of the parts. More recent research, on the other hand, has shown that a combination of top-down and bottom-up processing, or what has come to be called “interactive reading”, is almost always a primary ingredient in successful teaching methodology because both processes are important. In practice, a reader continually shifts from one focus to another, initially adopting a top-down approach to predict probable meaning, then moving on to the bottom-up approach to check whether that is really what the writer says (NUTTALL, 1996).

Research has shown that the reader brings information, knowledge, emotion, experience and culture, that is, schemata to the printed word. Reading is only incidentally visual. More information is contributed by the reader than by the print on the page. That is, readers understand what they read because they are able to take the stimulus beyond its graphic representation and assign it membership to an
appropriate group of concepts already stored in their memories. Skill in reading depends on the efficient interaction between linguistic knowledge and knowledge of the world.

It is important to emphasize that the love for reading has propelled many a learner to successful acquisition of reading skills. Instruction has been found to be effective when students’ self-esteem is high (DOLE, BROWN and TRATHEN, 1996). The autonomy gained through the learning of reading strategies has been shown to be a powerful motivator. Similarly, culture plays an active role in motivating and rewarding people for literacy, especially because literate practices are learned within dynamic cultural systems that structure roles and scripts (alphabetic, pictographic), privilege modes of reasoning, and offer tools through which such practices may be carried out. We cannot simply assume that cognitive factors alone will account for the eventual success of second language readers (FITZGERALD, 1994).

A current issue in pedagogical research on reading is the extent to which learners will learn to read better in an atmosphere of enriched surroundings or in an instructed sequence of direct attention to the strategies of efficient reading. Extensive reading (KRASHEN, 1993) is a key for students to gain in reading ability, linguistic competence, vocabulary, spelling and writing. Reading for pleasure and reading without looking up all the unknown words were both highly correlated with overall language proficiency (GREEN; OXFORD, 1995).

Krashen (1993) says that instructional programs in readings should give strong consideration to the teaching of extensive reading. He does not suggest, of course, that focused approaches to specific strategies for intensive reading ought to be abandoned, but strengthens the notion that an extensive reading component in conjunction with other focused reading instruction is highly warranted.

Language instructors are often frustrated by the fact that students do not automatically transfer the strategies they use when reading in their native language to reading in a language they are learning. Instead, they seem to think reading means starting at the beginning and going word by word, stopping to look up every unknown vocabulary item, until they reach the end. When they do this, students are relying exclusively on their linguistic knowledge, a bottom-up strategy. One of the most important functions of the language instructor, then, is to help students move past this idea and use top-down strategies as they do in their native language. When language learners use reading strategies, they find that they can control the reading experience, and they gain confidence in their ability to read in the foreign language.

THE MICROSKILLS

The use of microskills allows students of English as a foreign language to become efficient readers. Brown (2001) lists some important microskills that learners should use in reading tasks: process writing at an efficient rate of speed to suit purpose; recognize a core of words and interpret word order patterns and their significance; recognize grammatical word classes, pattern, rules and elliptical forms; recognize that a particular meaning may be expressed in different grammatical forms; recognize cohesive devices in written
discourse and their significance for interpretation; recognize communicative functions of written texts, according to form and purpose; infer context that is not explicit by using background knowledge; infer links and connections between events, ideas, etc, deduce causes and effects, and detect such relations as main idea, supporting idea, new information, given information, generalization and exemplification; distinguish between literal and implied meanings; detect culturally specific references and interpret them in a context of the appropriate cultural schemata; develop and use a battery of reading strategies such as scanning, skimming, detecting discourse markers, guessing meaning of words from context and activating schemata for the interpretation of texts.

For most second language learners who are already literate in a previous language, reading comprehension is primarily a matter of developing appropriate, efficient comprehension strategies. Some strategies are related to bottom-up procedures, and others to top-down processes. Following are ten such strategies, each of which can be applied as classroom techniques (BROWN, 2001):

1. identify the purpose of reading (clearly identify the purpose in reading something so you will know what you are looking for);
2. use graphemic rules and patterns to aid bottom-up decoding, especially for beginning level learners;
3. use efficient silent reading techniques for rapid comprehension (for intermediate to advanced levels);
4. skim the text for main ideas (quickly running one’s eyes across whole text for its gist) for prediction;
5. scan the text for specific information (quickly searching for some particular piece or pieces of information in a text);
6. use semantic mapping or clustering (grouping ideas into meaningful clusters, helps readers to provide some order to the chaos);
7. guess when you aren’t certain (guess a meaning of a word, guess a grammatical relationship, guess a discourse relationship, infer implied meaning, guess about a cultural reference and guess content messages);
8. analyze vocabulary (look for prefixes, look for suffixes, look for roots that are familiar, look for grammatical contexts that may signal information, look at semantic context for clues);
9. distinguish between literal and implied meanings;
10. capitalize on discourse markers to process relationships.

According to Brown (2001, p. 315), students should follow some principles for designing interactive reading techniques, such as: don’t overlook the importance of specific instruction in reading skills (balance extensive and silent reading), use techniques that are motivating, balance authentic texts, encourage the development of reading strategies, include both bottom-up and top-down techniques, subdivide the techniques into pre-reading, during-reading and after-reading phases.

He also advises the introduction of the topic before reading the text, the practice of skimming, scanning, predicting and activating schemata. The author emphasizes that students bring the best of their knowledge and skills to a text when they have been given a chance to ease into the passage.

But after reading, besides comprehension questions, it should also be considered to work with vocabulary study, identifying the author’s purpose, discussing the author’s line of reasoning, examining grammatical structures and motivating students to a writing exercise.
CLASSROOM ACTIVITIES

The main goal of English Foreign Language/English Second Language (EFL/ESL) reading teachers is to minimize reading difficulties and to maximize comprehension by providing culturally relevant information. Goodman puts the issue into focus when he says that even highly effective readers are severely limited in comprehension of texts by what they already know before they read. The author may influence the comprehensibility of a text particularly for specific targeted audiences. But no author can completely compensate in writing for the range of differences among all potential readers of a given text. (GOODMAN, 1979, p. 658)

Considering Goodman’s point of view, the role of the teacher in the EFL/ESL reading classroom is to compensate the individual variation among readers, especially readers from different cultural backgrounds. One way to minimize this situation is to manipulate either the text/or the reader, using bottom-up or top down strategies or adopting the microskills proposed by Brown (2001).

THE TEXT

To maximize comprehension for the beginning reader, the Language Experience Approach (LEA) (RIGG, 1981) is an answer to control vocabulary, structure and content. The basic LEA technique uses the students’ ideas and their own words in the preparation of beginning reading materials. Students decide what they want to say and how to say it, and then dictate to the teacher, who acts as a scribe. According to this approach, students read what they have just said and neutralize problems of unfamiliar content by writing their own texts.

Another way to minimize interference from the text is to encourage narrow reading (KRASHEN, 1981). Narrow reading refers to the reading that is confined to a single topic or to texts by a single author. Krashen (1981) suggests that narrow reading and perhaps narrow input in general is more efficient for second language acquisition. Students who read either a single topic or a single author find that the text becomes easier to comprehend. Readers adjust to the repeated vocabulary of a particular topic or to the particular style of a writer. Furthermore, repetitions of vocabulary and structure mean that review is built into the reading.

The third possibility of text facilitation is to develop materials with local settings and specialized low-frequency vocabulary. These materials might be newspapers, pamphlets, brochures, or booklets about places of interest. English travel guides are also good sources for the EFL/ESL reader.

Finally, Sustained Silent Reading (SSR) is a good activity for ESL readers. Through this practice, students become self-directed agents seeking meaning. To be effective, however, an SSR program must be based on selected texts that will be interesting to the readers and facilitated by the teachers. Students select their own reading texts with respect to content, level of difficulty and length. According to this approach, students who choose their own texts are, in effect, also providing their own appropriate background knowledge for understanding the text.
THE READER

In addition to the text control (CARREL; EISTERHOLD, 2000), it is important to consider what can be done with the readers themselves. According to these authors, providing background knowledge and previewing content for the reader seem to be the most obvious strategies for the language teacher. In their opinion, teachers should avoid having students read material "cold". Asking students to manipulate both the linguistic and cultural codes (sometimes linguistically easy but culturally difficult, and vice versa) can make them feel unmotivated to reading or frustrated to the result of comprehending.

These readers need familiar content selections and/or content preview as much as possible because they tend to do word-by-word processing exclusively in a bottom-up processing mode, considering that they need more global, predictive processing in the top-down processing mode.

Carrel and Eisterhold (2000) also suggest that illustrations may be appropriate for students with minimal language skills, especially because they provide the semantic content component for low-level readers, making them free of focusing on vocabulary and structure of the content. These authors advise teachers to carefully listen to what students say about the texts they are asked to read, because this will probably show their hidden comprehension problems.

Teachers should not respond to what the reader does (right/wrong) as much as to what the reader is trying to do (Idem). A teacher who listens carefully and also answers to a student’s effort will become more aware of both the background knowledge and the cultural problems that the readers bring to the reading process and therefore he or she will help students solve them and increase their fluency in reading as a foreign language.

Ur (2001) creates a list of ten items that shows a contrast between the efficient reading process and the inefficient reading process. The author makes a list of reading tips that has a connection to Goodman’s, Brown’s, Carrel’s and Eisterhold’s reading orientation. Each item has an implication for teaching reading in a foreign language classroom and summarizes the reader’s and the text’s role during the reading process.

As listed above, Ur (2001) simplified the aspects teachers should observe to offer their students a variety of materials which increase their interest and fluency in reading as a foreign language.

CONCLUSION

Considering what was pointed out in this article, we can offer students different ways and strategies to increase their reading skills and improve their receptive vocabulary and grammar knowledge. We should not forget to emphasize the use of different genres to sum up to the background knowledge of the learners to better develop their reading skills.

Thus, in achieving immediate goals in the EFL/ESL reading classroom, teachers must balance between the background knowledge presupposed by the texts the students read and the background knowledge the students really possess (CARRELL; EISTERHOLD, 2000). This
<table>
<thead>
<tr>
<th></th>
<th>Efficient</th>
<th>Inefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Language</td>
<td>The language of the text is comprehensible to the learners.</td>
<td>The language of the text is too difficult.</td>
</tr>
<tr>
<td>2. Content</td>
<td>The content of the text is accessible to the learners; they know enough about it to be able to apply their own background knowledge.</td>
<td>The text is too difficult in the sense that the content is too far removed from the knowledge and experience of the learners.</td>
</tr>
<tr>
<td>3. Speed</td>
<td>The reading progresses fairly fast: mainly because the reader has automated recognition of common combinations, and does not waste time working out each word or group of words anew.</td>
<td>The reading is slow: the reader does not have a large vocabulary of automatically recognized items.</td>
</tr>
<tr>
<td>4. Attention</td>
<td>The reader concentrates on the significant bits, and skims the rest; may even skip parts he or she knows to be insignificant.</td>
<td>The reader pays the same amount of attention to all parts of the text.</td>
</tr>
<tr>
<td>5. Incomprehensible vocabulary</td>
<td>The reader takes incomprehensible vocabulary in his or her stride: guesses its meaning from the surrounding text, or ignores it and manages without; uses a dictionary only when these strategies are insufficient.</td>
<td>The reader cannot tolerate incomprehensible vocabulary items: stops to look every one up in a dictionary, and/or feels discouraged from trying to comprehend the text as a whole.</td>
</tr>
<tr>
<td>6. Prediction</td>
<td>The reader thinks ahead, hypothesizes, predicts.</td>
<td>The reader does not think ahead, deals with the text as it comes.</td>
</tr>
<tr>
<td>7. Background information</td>
<td>The reader has and uses background information to help understand the text.</td>
<td>The reader does not have or use background information.</td>
</tr>
<tr>
<td>8. Motivation</td>
<td>The reader is motivated to read: by interesting content or a challenging task.</td>
<td>The reader has no particular interest in reading.</td>
</tr>
<tr>
<td>9. Purpose</td>
<td>The reader is aware of a clear purpose in reading: for example, to find out something, to get pleasure.</td>
<td>The reader has no clear purpose other than to obey the teacher’s instruction.</td>
</tr>
<tr>
<td>10. Strategies</td>
<td>The reader uses different strategies for different kinds of reading.</td>
<td>The reader uses the same strategy for all texts.</td>
</tr>
</tbody>
</table>

balance may be achieved by manipulating either the text and/or the reader variable, but teachers should not forget that the long-term goal should be to develop independent readers outside the EFL/ESL classroom. This will make readers learn from the texts they read for pleasure or not, for academic purposes, reading for survival purposes or for functioning in society at various levels.

In addition, the process of reading is a highly interactive process between the students and their prior background knowledge, on the one hand, and the text itself, on the other (Idem). Therefore, every culture-specific interference dealt with in the classroom presents an opportunity to build new culture-specific schemata and, of course, new background knowledge to the readers that can be used inside or outside the EFL/ESL classroom.

REFERENCES


