The Importance of Context in Reading on the Job

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Abstract:
This article analyzes literacy on the job by means of in-depth interviews held with fourteen workers. Their contrasting schooling and occupations show that the context provides a series of extra-textual resources that facilitate workers' literacy tasks.

One of these resources is the training workers receive through the repetition of tasks and texts. The basis of this uniformity produces an economy of time and effort in which time is indispensable for the order and productivity inherent in an economic activity.

Key words: Reading on the job, context, function, time, training, reading skills and strategies

Introduction
This article will present some of the components of reading on the job and the skills developed, with the aid of contexts, that assist workers in efficiently performing text-associated tasks. The article’s content is based on a study of fourteen adults with contrasting occupational profiles and schooling. Through in-depth interviews, self-reporting and the logs of texts read, twelve to fourteen hours of recordings were obtained for each reader. Once the tapes had been carefully transcribed, the information was systematized and interpreted through an analysis of discourse. Due to space limitations, a selection was made of those cases believed to be representative and sufficient in illustrating the hypothesis.

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Theoretical Discussion

In industrialized society, it seems plausible to believe that individuals who work in a formal entity (public or private sector) are able to read and write; i.e., are literate. In fact, one form of exclusion from employment can be an individual's low ability to interact with the written materials necessary to perform a task. Or, an individual may need to be re-taught literacy, a fact that has socioeconomic repercussions in highly developed nations like the United States (Kosol, 1985). Some employees do not have the basic skills necessary for carrying out the most elementary tasks, and employers are obligated to train them. Often employees are incapable of reading the manuals required to fill their position or comply with safety standards.

Reading on the job refers to practices of literacy that occur in a physical space such as the workplace. Necessarily included are the written materials related to carrying out tasks in different occupations. We are reminded of the existence of different settings, hierarchies and functions that probably demand different reading skills.

In other words, the practices of reading on the job are not homogeneous. It is possible to assume that some job duties demand a larger amount of reading than others, and that tasks are associated with texts of different lengths, structures, topics and purposes, but it can be affirmed that reading on the job is based on what is done with what is read (Phillipi, 1993). In this sense, we shall see that the results of this study show that there is a tendency to locate information that serves to comply efficiently with assigned functions. When we refer to location, we mean the complex skill developed by competent readers, to be explained in greater detail in the following pages. The point of interest is that there are studies (Phillipi, 1993; Mikulecky y Drew, 1996; Peredo, 1999) that show important difference between the skills of reading on the job and those learned in the academic and scholastic world, and that there is no direct transfer of what a reader does between one text and another.

For example, a reader may know how to locate information in a newspaper but not necessarily in a memorandum or in a procedures manual. We can assume that each reader accumulates experience with a type of texts, and is skillful in handling these texts--among other reasons, because of the strong individual tendency towards a type of routine reading. In other words, the material that must be read is the same and is related to the activity to be performed. Therefore, according to Diehl and Mikulecky (1988), there is a loss of skills for reading or writing texts different from the usual. As a result, it is of interest to observe if reading skills can be associated with tasks and hierarchies, or perhaps with function-related texts.
This paper will attempt to prove that in a stratified society, practices of reading on the job respond to this stratification, and that each context offers a range of extra-textual resources that help the reader be efficient in performing text-associated work duties. Relating the context with some reading skills permits the identification of certain components, such as function, time and entertainment—elements of influence on reading that is guided by objectives.

**Employment Contexts and their Relation to Reading Skills**

To demonstrate the form that contexts are of influence, I shall begin by identifying them. In the employment context, there is a major division: on one hand, those who work in the government sector (in this study, health workers and academics and professors at the university and non-university levels), and on the other hand, self-employed workers or employees in the private sector.

Some examples will show how these contexts 1) help readers to manipulate certain documents in order to prevent social conflict, and 2) influence to a certain degree the development of reading skills. We shall begin with hospitals.

**Reading at Hospitals**

The texts recorded by health workers (a nurse, two physicians and a genetics researcher) are normally clinical files, laboratory reports, leaves of absence, anesthesia reports and medical journals. In this context, readers have the tendency to search for data in texts that contain more written information than they require to fulfill their duties. Given the presence of a hierarchical structure, the same text may be utilized by persons with different tasks and thus with different reading intentions.

Such is the case of the clinical file. The nurse locates data on different sheets. He recognizes that the structure of this text is always the same and that treatments are routine, like his functions. Because of the number of admissions (24 to 25 each day), he expresses the impossibility of sufficient time to read the entire file. However, hospital authorities do not expect this employee to read all file data, since it is not necessary for him to perform his function efficiently. He receives a salary for his efficiency in distributing and controlling the medication ordered by the acting physician; most importantly, he must read efficiently in order to distinguish one patient from another and
associate patients with beds. He locates concrete data by using previous knowledge (Kintsch, 1998; Paris, et al., 1994). He has a mental representation of the text because he is already familiar with it. This representation is not simple, but the nurse knows which data he needs and is familiar with the structure of the text, and anticipates the usual location of data (Anderson, 1987; Kintsch, 1998; Kosslyn, 1992). Since these elements are always equal, something like an economy of effort occurs in searching for information, and skill in locating information is developed. The use of previous knowledge is derived fundamentally from experience, and it is even possible to believe that someone trained this nurse to find the data he should read in files. But it is easier to assume that the general structure of the micro-society that functions in a hospital has designed the files in such a manner that a nurse need not read all the information each time he requires data, as would occur if each physician were arbitrarily and individually to determine a file's organization. What happens is that all those responsible for producing the texts that must be read in a hospital agree to do so in the same manner at all times. Thus, each reader knows where to find the information he needs.

The physician also locates and discriminates among information, based on a representation of text similar to the mental operations carried out by the nurse. In other words, the physician is familiar with the structure of files and recognizes the location of data because of its correspondence to uniform formats. She also uses previous knowledge, but of a more educated type, acquired from training in both schools of higher education and hospitals. She formulates questions that orient and direct the location of information, and makes a series of extra-textual links (Hartman, 1994); i.e., this reader has a mental referent outside of the text, which in this case is the patient, in addition to a series of questions she needs answered. These two strategies can be utilized jointly or separately. Based on the above, the physician is able to reach a synthesis and make professional decisions. Since her function is precisely to decide and evaluate patients' medical histories, she affirms having developed this skill due to the volume of patients and files she must handle daily. Therefore, we can say that both the physician and the nurse locate information based on:

1) Their mental representation of the text: a) structure and b) macrostructure.

2) Their previous knowledge obtained from training or experience, given that the text has a uniform basis in terms of structure as well as content.

3) Their defined interests, which are the basis for their search.
In addition, the physician:
4) Incorporates knowledge gained from education.
5) Establishes extra-textual links.
6) Asks the text questions.
7) Analyzes and synthesizes information.

Also present in this hospital is the physician specialized in genetics, who reads files, yet only for medical treatment or research purposes. If an interesting piece of data appears, she is familiar with the patient's clinical situation, and does not locate information like the previous readers. Rather, she strategically monitors her thinking by using her memories of the text and her own notes, which she wrote as memory aids. It is as if she rewound her thinking and strategically read inter-textual links, making chains and connections among text fragments, producing mental images and recalling information already located in previous searches. On one hand, this physician produces the file and is undoubtedly familiar with its structure and macrostructure, of which she has a mental picture; however, this is not the main strategy she uses. Rather, through long-term memory she makes a synthesis and establishes inter-textual links, associates concepts and produces new questions.

The primary difference in the mental processes these readers report using when they read a file, responds fundamentally to the functions they develop, to their training and to their previous experience. While the nurse and first physician require information to obtain precise data and locate it in the text, the geneticist, although in search of information, does not limit herself to content. Since her questions go beyond what is merely textual, and she looks for "what is missing" in her thinking and not for what "is in the text", she makes links and is able to think outside of the text, while based on the text. It is possible to identify this mental process, but in a more incipient form, when the physician thinks about the diagnoses she considers adequate according to patient symptoms and the information contained in files.

In sum, it can be stated that readers approach the same text--clinical files--based on two types of fundamental representations: a mental representation of the text, and another model of the situation where reading occurs. In other words, the hospital is a micro-society that makes the presentation of information uniform and provides its users with training--an aid for workers in rationing their efforts and time. A sort of social memory is formed for readers to perfect their strategies and reach higher levels in certain reading skills. Such skills are not necessarily equal, nor do readers attain equal levels of development. More importantly, it is necessary to observe that it is
precisely the employment context that demands, to a certain degree, that readers read in precisely that manner; otherwise, the institution's organization could suffer from conflict. It is also possible to observe that reading is guided by objectives that are associated with functions. For example, the nurse follows orders and on reading, locates indispensable data for administering medication, while the physician makes decisions based on what she reads, and the researcher produces new ideas. It is also possible to believe that texts must be read in a certain length of time in order for reading to be efficient and pertinent. For example, the nurse cannot read a file at his leisure, but must read it exactly when necessary for the timely administering of medication to each patient; similarly, a physician must read a file at the right moment to prevent death, and so on for each reader.

In the same context, each worker reads texts other than the files. The nurse reads medicine labels and carries out the same mental operations as with the files. The physician has the function of supervising and authorizing paperwork, such as passes to see a specialist, leaves of absence, etc., and operating public health programs. This series of functions has encouraged the development of discriminating skills and strategies such as scanning, in order to read "everything that should be read in the insufficient eight-hour time slot".

Another interesting piece of data is that the nurse and physician read words that they use as indicators to avoid reading the rest of the text. In contrast, the geneticist and less frequently, the physician, read according to objectives that go beyond the isolated identification of words: they identify ideas. This difference is very important in mental processes and in developing the skills necessary for reading complex texts.

In brief, we have seen the importance of the mental representation of texts. If a mental representation is present, it is because of previous contact and the possibility of remembering various structural components and even the macrostructure. There is also a "model situation" (Kintsch, 1994; Van Dijk, 1993-1994; Zwaan y Radvanasky, 1998; Budd, et al., 1995) of the reading event; i.e., there is a social representation that characterizes the use of the text and the context where it is read, as if it were part of a social and cultural memory which, according to Orr (1992), forms a collective memory of work in which the same type of information is recognized and shared. This is very clear when we see that the texts in the hospital are structured to be read as indicated by their readers, who have learned to operate strategies and develop sufficient skills to contribute to maintaining the typical situation. This means that there are scripts that sustain the connections between previous
knowledge of a paradigmatic type (Brunner, 1996) and usage experiences in context.

Although the context and institutional order impose the form of reading, this does not mean that the reader is a passive receptor, but that he produces complex cognitive elaborations that establish a series of links between the situation in which he reads, the text, and the context that a standardized text gives him. These elaborations are individual since each reader has different previous experience and knowledge, as well as particular objectives.

The Academic Context

These participants (a Ph.D. in economics, Ph.D. in history and a geneticist) work for the public sector, normally universities and research centers. The three belong to the national research system, which obligates them to produce texts derived from their research. Specialized scientific texts are basic for performing their functions.

The fact that all three are quite explicit in their responses, much more than other participants, makes us assume that they are readers with greater explanatory abilities, and that they also possess greater meta-cognitive skills. We shall examine what they report.

The geneticist comments that she reads the scientific articles that pertain to her area. She very clearly mentions that she does not read complete articles, but that she locates a certain section, such as the discussion, and uses that section to elaborate a series of mental operations that enable her to create new ideas. Intervening in this reconstruction of the text is a series of strategies and skills that we shall see below.

The geneticist has a mental representation of the text to locate the structure, which she uses as a strategy to alter the order of the reading and decide which parts to read and which parts to discard. In this manner, she anticipates a criteria of discrimination. Since this representation is based on the unchanging sections of the text (introduction, discussion, methodology, results, conclusions), she can anticipate the parts of interest.

It is feasible to believe that, just as in the hospitals that function with a homogeneous structure of text presentation, this group of academics seems to have a sort of consensus for standardization in academic production. Such standardization causes the readers of scientific articles to develop the skill to locate the precise information desired, which regulates, to a certain degree, the pertinence of the search.
It is very important to observe that the information researchers locate, as previously mentioned, regards ideas and not precise data already known. They search for something new, and do so by scanning different sections, which may be authors, titles, or indexes; they undoubtedly use their previous knowledge of a conceptual nature.

They have also developed the skill to read paragraphs at a glance. This skill is a type of expert cognitive vision (Kosslyn and Koening, 1992; Smith, 1990), which serves to read fragments that support a mental scheme and establish a series of inter-textual links. The geneticist, for example, keeps data from different texts and creates a new text; she compares and integrates information not only by making a synthesis but by producing a new version with her own ideas. She is also capable of passing abstract concepts to empirical referents and vice versa, by developing the skill of abstraction and the elaboration of analogies.

Reading scientific texts is part of the geneticist's job duties. But as a researcher, she must produce new texts, and not simply give an account of what she reads. This activity forms part of the context in which the scientific community hopes to be read by scientists, who in turn will produce other texts that will modify, adjust and increase knowledge. In this sense, the geneticist creates a series of mental images that she uses to reflect on and analyze information. The strategy based on mental images is no longer used solely to have a mental representation of the text's structure and macrostructure, but to produce ideas, not contained in the text, that are developed by analyzing the text. Therefore, the geneticist's reading probably adheres to ideas rather to words.

In sum, the geneticist locates information and produces new information, in accordance with her training and terms of employment. In other words, she has been trained to read texts in order to use them as a basis for creating new ideas. Society and the academic community expect for her to be skillful in handling scientific texts; thus she is able to interpret abstract language and transform such language into more concrete language that can be read by educated people who do not necessarily do so to produce additional scientific explanations.

The doctor in economics emphasizes that locating data is fundamental for a researcher, and reading an entire book or journal in search of information is unnecessary. Scanning is therefore the ideal strategy, while undoubtedly supported by thematic knowledge; like the genetic researcher, the economist recognizes that knowledge is cumulative. He also has expert cognitive vision that enables him to monitor how much time he spends on the paragraph of a text, as well as the applicability of the information contained
in it. He recognizes that in certain areas of knowledge, such as economics, abundant information is produced, in such a manner that discrimination, synthesis and abstraction are indispensable.

The economist follows a process of conceptualization and establishes a series of inter-textual links among his thinking, the written arguments in previously read texts, and the new article. This association allows him to produce new ideas and create his own texts.

The doctor in history usually reads books of a social and biographical nature. Underlying her intent to write is a series of personal ideas that she uses to confront texts, as if her ideas preceded the questions she asks the text. This information is of interest because it is exactly the inverse of the other two researchers, who while reading produce new ideas derived from other researchers.

This researcher has a social fact in mind, such as the exhaustion of socialist systems in a world that has favored free economies. Based on that idea, she begins a process of search that, in this case, will probably not be based on precise data but on concepts that she needs in order to clarify her ideas. In this search, she has questions to ask the text, but they do not regard clinical information or an experimental demonstration, or an economic tendency or figure: her questions involve complex relations among her preconceived ideas. These relations are based on a series of inter-textual links that help her move from information to an abstract concept, and to a degree, to extrapolate and produce theoretical explanations.

The historian's use of previous knowledge is clear, but it is less sure if she has a mental structure of the place where certain data will be found: texts in the sociological area may not have as standardized a structure as those in the natural sciences or economics. This fact is of interest because it assumes that the academics in her discipline have not reached a level of consensus to standardize the presentation of new knowledge. At the least, the level of homogeneity is lower. For this reason, the historian uses other reading strategies.

In synthesis, we can outline the actions of these three readers/producers:

1) They have a mental representation of the text's structure as well as macrostructure.

2) They utilize previous knowledge according to their discipline.

3) They ask the text questions, based on their own ideas, and locate other ideas in the text.

4) They establish inter-textual links.
5) They associate concepts, analyze and elaborate syntheses among different texts.

6) They make abstractions.

We can notice that there are important differences between the nurse and the physician. Although there are similarities in their mental representation of the text, this representation is not limited to locating data; it also has more intentional actions, such as monitoring the pace of reading. It is as if they make the decision to read each part of the text differently. This is very fine discrimination, since these readers are no longer limited to taking data of interest from the place where they assume or know it is written, but are capable of determining the relevance of information and its degree of pertinence in their search. The monitoring refers to a cognitive process through which readers regulate the meaning of the information they read (Zwaan, Magliano y Graesser, 1995). In addition, these skills become more refined when readers develop a sort of expert cognitive vision: what is seen in the text is integrated into previous knowledge of a paradigmatic type, and readers locate"at a glance" the words or concepts that form the basis of disciplinary relationships (Smith, 1990).

The most significant difference I have been able to find among these readers is the skill to elaborate inter-textual links (Hartman, 1994) that are not limited exclusively to the use of knowledge present "before" reading, but involve knowledge that is permanently present during and even after reading. It is as if visits are made to remembered texts by means of conceptual links. The reader will evidently not be able to remember literally all the words, sentences or propositions that he has read previously, but we can see that while he reads, he will be recovering a series of knowledge that fits in with new knowledge.

The hospital readers depend to a large degree on the situation where they read, which is in agreement with the context. They locate information and use previous knowledge from the standardized text as well as from the prototypical situation in which the text is used; in contrast, the academics depend less on the situation since their context is more of a disciplinary type. The aspect that regulates their reading is their use of inter-textual links, which largely depend on their thematic mastery of the area of knowledge in which they research and produce texts. They read in this manner to produce texts that pertain to their conceptual domain, while the reading in the hospital corresponds to the way the institution operates. There is a great difference between reading functionally to perform, and reading to produce new conceptual relationships through abstract reasoning.
These inter-textual links serve as a basis for complex skills such as abstraction, analysis and synthesis. We can state that such skills are integrated and are necessary for the functions these readers carry out as researchers. For Kintsch (1998: 18) “abstract representations are necessary to form the categories, logical thinking, argumentation and deduction" that are part of the motives for reading scientific articles. If we agree that these researchers produce articles based on processes of logical thinking, then they need to elaborate abstract categories, relate concepts, and even perform synthesis. Abstraction and synthesis are indispensable skills for academics. Abstraction can be understood as the possibility of isolating an object or concept from others related to it, and synthesis is the ability to provide disperse data with unity. Both require complex mental organization to decompose a discourse and then integrate its properties into a new text.

Profound interpretation of a text means that the reader decomposes it mentally into partial components, and then re-articulates the components to clarify the implied elements; i.e., through analysis implicit relationships are discovered. The information read is organized with these mental mechanisms.

It is possible to believe that if researchers did not produce ideas and new texts, science would not advance and society would transform with difficulty.

**The Business Context**

Having analyzed workers in the government sector, it is now appropriate to identify those from the private sector. One of these contexts is business: interviews were conducted with a businessman, a factory employee and a radio newscaster. Another context is that of self-employed professionals: a lawyer was interviewed. What distinguishes these workers from the government sector is principally the mercantile or economic function that moves business. Reading is influenced by profits. Businesses expect to earn money, and otherwise are unable to subsist.

How does the mercantile context of business develop certain reading skills? These readers, as those in the government sector, are familiar with their work environment, the tasks they perform, hierarchies, and the purposes of the business.

The factory employee reads invoices and product lists. In these texts, she locates information. Like others, she has a mental representation of the text because it is a very standardized document, and because she has been trained to read invoices. Invoices and product lists are always the same, regardless of their company of origin. Each party recognizes the invoices
received and issued, which to a certain degree have the same standardized structure. The factory employee utilizes her previous knowledge and training, and does not require much of investment in time to identify data.

The businessman offers and studies financing for corporations and individuals. Files are the basic input for performing his functions. In order to locate the financial issues they contain, he uses previous knowledge of a professional type; he describes such knowledge as routine because there is a certain level of document standardization. Training is achieved by what he calls a critical eye.

Locating a financial problem, however, is not as simple as he assumes. For this end, he employs various strategies and has developed very complex skills. Before looking at the text, he uses extra-textual information; i.e., what the client tells him verbally. He then begins a more focused search, with the use of two types of strategies: he sometimes scans and at other times monitors in determining what to read and how long to spend on the information he is seeking. In this more specific location, he utilizes the strategy of asking the text questions, which helps him locate data that he conceptualizes in order to identify a specific problem and support the decisions he makes. Lastly, he affirms that he always reaches conclusions, implying that he seems to have developed the skill of synthesis. In other words, he needs to integrate information to identify financial problems. In sum:

1) He has a mental representation of the text's structure as well as macrostructure.
2) He utilizes previous knowledge of a disciplinary type.
3) He utilizes extra-textual information.
4) He asks the text questions.
5) He locates data and elaborates abstractions.
6) He elaborates a synthesis.

In this case, we can confirm that if the businessman is unable to identify his clients' financial statements and translate them into concepts and arguments, then he will probably not be successful. The context makes him be efficient; otherwise, his investment will be affected. But we must not forget that this businessman competes in society with many other similar businesses, and that individuals have the freedom of choice. Therefore, open competition obligates this reader to be efficient in his decisions.

The newscaster works at a radio station that sells time for all sorts of advertising. Its programming includes newscasts, which must be transmitted
exactly in the allotted time. A good part of the success of radio stations lies in the organization of time slots. We cannot imagine a newscaster’s arbitrary use of time in broadcasting the news. Since he must read news items in the exact amount of time, he must be efficient in regulating speed—a mechanical ability acquired with training. Neither can we imagine a newscaster with poor diction; reading must be clear with proper intonation for comprehension. The newscaster must read exactly in this manner in order to be employed by the radio station.

An important strategy used by this newscaster is based on the standardization of the normal text of news and the way the news is communicated. Previous knowledge of structure as well as macrostructure has led to his development of two major skills: speed and the ability to anticipate. Such action, which for him is mechanical, allows him to locate errors and avoid reading them into the microphone. In sum, we can say that he uses the following process:

1) He bases his reading on text standardization and the format of communication.
2) He utilizes prior knowledge.
3) He anticipates and locates errors in the text.
4) He makes reading mechanical and monitors speed, diction and intonation.

Also included in the private sector are self-employed professionals. Such is the case of an attorney who is a notary public and handles some litigation. In both activities he is a professional with a portfolio of clients; although he receives an economic benefit, his product is professional services rather than the goods offered by companies.

As an attorney, he reads a series of documents that pertain to his client's legal defense. He turns to the law and compares it with the case he must support: he elaborates inter-textual links between the document that explains the case and what is established by law. To make such links, he is supported by his mental representation of the text and his previous knowledge. For example, he knows what type of law or code is needed for each issue, given that he is familiar with the structure of laws and the items they regulate; i.e., the macrostructure. He knows when he must consult a code of civil or penal procedures because he has trained to do so; his schooling prepared him to distinguish between different codes and legal uses. As a reader, he also asks the text questions before locating an article in a code. In addition, he manifests the need to interpret and argue; e.g., he must interpret the law and argue his client's case before the judge. His
interpretation and argumentation skills are linked to a very interesting strategy since he is supported by the ambiguity of the law's phrasing and in a very personal manner interprets the law's content, always to his client's benefit. Because of the structure of the phrasing of legal texts, this reader may offer different interpretations. A single text is interpreted by the defense and by the prosecution, and the judge analyzes the arguments of both to emit a verdict according to the reading that he considers the best interpretation of the law.

In this professional context, it is logical to assume that to the degree the attorney is able to win cases, he acquires professional prestige and a greater demand for his services. It can also be assumed that if laws were written without the possibility of varying interpretation, there would be no cases brought to trial. But given the phrasing of written law, and the fact that almost all that is related to language has a symbolic basis, then society ensures compliance with the law by means of individuals trained to aid in its interpretation. It is also possible to believe that laws have vacuums since society determines different needs for legislation. In other words, since some laws are subject to interpretative doubt, but unwritten standards also exist, then the imperfection or insufficiency is elements that require interpretation as well as argumentation. In sum:

1) This reader has a mental representation of the text's structure as well as macrostructure.

2) He utilizes previous knowledge of a disciplinary type.

3) He establishes extra-textual links.

4) He asks the text questions.

5) He utilizes grammatical structure (syntax and punctuation) to locate and interpret data.

Conclusions

In synthesis, reading in these employment contexts is due to objectives that are undoubtedly related to the function performed and the training received in reading. The context of texts usage models the strategies that make reading as well as the product of reading efficient. Therefore, different reading skills are developed. The time available for reading is a factor that also influences the form of reading.

Each culture and probably each context has different reading practices and even forms a catalog of texts that it gradually generalizes and standardizes, permitting economy of time and effort. The economic basis assumed by the
employment function is associated with the speed of reading, which seems to be influenced by the size of the text, its standardization and individual training. Workers read efficiently because they have been trained to do so by means of homogeneous texts that are utilized in prototypical situations.

The reader's previous knowledge on approaching the text and his motives for reading are an important influence on his mental operations. Since many texts used in the employment context have a stable structure, we can affirm that to the degree experience is accumulated in a given context, skills will be developed for efficient reading.

The main differences in mental processes respond fundamentally to diverse employment functions, to levels of training, and to the amount of time invested in reading to meet objectives. There is a difference between a nurse's or an employee's reading of brief texts to carry out required tasks, and the reading of more complex and extensive texts such as the scientific texts used by researchers. Researchers spend more time on reading because it represents the basis of their recreation of knowledge.

Notes

1 The mental representation of the text has been the subject of multiple discussions based primarily on the possibility of proof, and on the flexibility of the explanatory scheme. In principle, we can talk about two different types of representations: the representation of the text's structure and the representation derived from the information or proposals contained in it. There is evidently no catalog of mental representations, but some authors such as Anderson (1987; quoted by Kintsch, 1998) mention at least three mental forms of representations: linear, spatial and propositional. Kosslyn and Koening (1992) added to the debate the concept of mental images and related perceptual processes to the mental operations contained in images or representations of worldly objects and their spatial shapes. We can state that mental representations seem to be related to the text as well as to the situation that encompasses reading. This occurs because of associations the reader makes while reading or even before reading, as a form of mental anticipation or prediction. These representations are like mental models of work that contain as much abstract as well as spatial information.

2 This participant works in a hospital where she sees patients, but since she is also a researcher, I analyze her in both contexts.

3 In the opinion of Paris et al., (1991) monitoring aids anticipation and increases skills involving inference. This action marks an important difference between good and bad readers. According to Zwaan, Magliano, and Graesser (1995) good readers are able to monitor simultaneously more
than one dimension, such as time, space, causal relationships, different conceptualizations in alternative theories, etc.

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4 Smith (1990) sustains there is "episodic" vision, in which the eyes are able to point at the part of information needed, especially when the reader is skillful and does not require information other than that provided by known sources; therefore, he is able to locate works at a glance. This means that words and information used frequently by the reader are easier to identify.

5 The study by Hartman (1994), which identifies three types of links: intra-textual, inter-textual and extra-textual, is based on competent adult readers considered experts for having obtained the highest results on standardized tests.

6 For philosophers like Perelman, the theory of argumentation refers to the ancient and Renaissance tradition of rhetoric. Linguistic procedures are utilized to generate persuasion (cfr. *Enciclopedia de la Filosofía*, 1992).

The theory of legal argumentation sustains that since the mid-20th century, legal reasoning has been based on the dialog and discussion of individuals struggling to make valid their interpretation. The argumentative technique taken from Perelman turns to rhetoric aimed at adhesion through argumentative skills. Argumentative skills are measured by means of the attainment of adhesion in the desired direction (García A., 1999 www.geocities./CollegePark/Unioin/3939/bogotaart.html)

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