

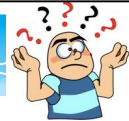


Dokuz Eylül University
ELT Department Seminar

The impact of
schematic knowledge on
reading comprehension



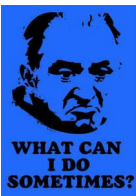
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SOMETIMES,
you know all words in a text and
you seem to be familiar with its grammar

BUT
you cannot understand
the writer's message!


WHY?



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Outline

- * Definition of reading
- * Meaning types
- * Background knowledge
- * Schema theory
- * Reading models
- * Categories of schema
- * Cultural knowledge
- * Nativization
- * Conclusion



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What is reading?




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Definition

“[T]he ability to draw meaning from the printed page and interpret this information appropriately.”


(Grabe & Stoller, 2002, p. 9)



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Literal vs. Implied-Meaning

- * Achieve either **literal** or **implied** meaning.
- * Not possible to interpret all language properly with reference to its literal and surface structure (Brown, 2001).
- * Specific demands from the reader.
- * Implied meaning:
 - * derives from processing pragmatic information.



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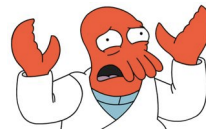
Knowledge types

- * Six types of knowledge assist readers to achieve the meaning (Hedge, 2000).
- * **Syntactic** and **morphological** knowledge: related with the knowledge of English language.
- * **General world** knowledge, **sociocultural** knowledge, **topic** knowledge, and **genre** knowledge: schematic knowledge.
- * Such knowledge assists readers to constitute the dialogue with the text or the author.

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Why do people read?



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Reasons of reading

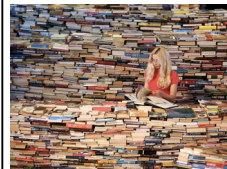
- * To learn something.
- * Just for pleasure.



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Do you ever read the same text more than once?



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Reading the same text several times

- * Mainly read; simply to receive information.
- * The reason to read the same story for several times:
 - * More than gathering information.
- * Each time, we integrate the story with our experiences.
 - * Experiences change.
 - * Then our interpretation of the text in different times can be different.
- * **Social dialog:** readers interact with the text individually by considering their background knowledge (Mori, 1995).
- * "Texts do not 'contain' meaning; rather they 'have potential for' meaning" (Wallace, 1992, p. 39).¹²

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Reading the same text several times: Social-dialogue



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Background knowledge

- * Enables readers to make predictions for more successful interactions with the text.
- * Successful interpretation depends to a large extent on shared schemata (Alderson, 2000).
- * Readers recreate the writer's intended meaning by activating their background and linguistic knowledge (Chastain, 1988).
- * Readers go beyond the text with the help of a variety of clues:
 - * See beyond the literal meaning of the words (Harmer, 2001).

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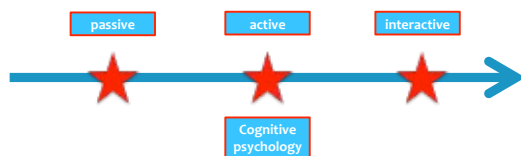
4-types of meaning

- * Even a single sentence may have at least four kinds of meaning (Nuttall, 1996, p. 21):
- * **Conceptual:** a word can have on its own,
- * **Propositional:** a sentence can have on its own,
- * **Contextual:** a sentence can have only when in a context, and
- * **Pragmatic:** a sentence has only as part of the interaction between writer and reader.
- * Remember!!!
 - * Readers should achieve either *literal* or *implied* meaning.
 - * **Implied meaning:** derived from processing pragmatic information (Brown, 2001).

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Historical perspective



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Impact of cognitive psychology

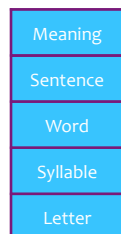
- * Waldman (1958) examined the physical factors such as hyperopia, myopia, presbyopia, and astigmatism.
- * Blamed them for the lack of reading comprehension along with tired eyes.
- * Cognitive psychology researchers re-evaluated reading process (Samuels & Kamil, 1988).
- * Developed reading models after the 1960s.

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Bottom-up Models

- * Go through a mechanical pattern by creating a piece-by-piece mental translation of the information in the text.
- * The interaction between the reader and the text: little or no interference from the reader's own background knowledge.
- * Readers need to succeed in each step.



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Bottom-up processing



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To understand how readers recognize words, try to read the following text.

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LaPec of etLster

- * eseRarcsher at amebriCg nyiversUit ondducte a tsuyd in rdreo to neveistigat the mtpiac of rorde of esttelr in orswd. heTri ersulst ndicidate itltel mipatc for the ettelsr in the idmedl of the orswd; ovrheve, it is uqiet mpotirtan to lapec nitiisal and last etlster in hreit orrcetc lpacse. lthAouhg the rest emraissn to be ropblemcati, the orwsd are ecorgnizeabl insec eardesr denityif a word as a hwoel iwthotu eadglin iwht veyre ndiviidlua etltre in it.

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Pacle of Leterts

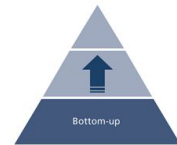
- * Rsearhecers at Cabmdrige Uniervitsy endocuted a sudty in oderr to inesvtiagte the imcpact of oderr of letrets in wrdos. Teihr rsutels indctaied ltilte imacpt for the lttrees in the mdilde of the wrdos; however, it is qitue impartont to pacle intiillas and last letrets in teihr concert palecs. Altohguh the rest reanims to be prolebamtic, the wrdos are regcnoibzale snie redares idneitfy a word as a wolhe wihtuot deanilg with eervy inidiual lteetr in it.

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Bottom-up strategies

- * Dependent on **orthographical functions** of language
- * recognizing and analyzing symbols, words, and grammatical functions for comprehension.



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Top-down models

- * Opposed to bottom-up models.
- * Bringing background knowledge to the text is essential.
- * One of the essential characteristics of efficient readers (Quinn, 2003).
- * To succeed, readers ...
 - * need to be good at grammar and
 - * know a large quantity of vocabulary.

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Top-down processing




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What is missing?

‘The captain
ordered the mate
to drop the an____’

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Reducing uncertainty in a text (Smith, 1971)

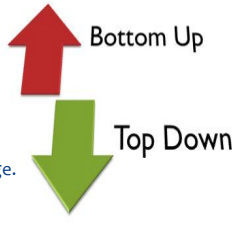


- * **Graphic information:** knowledge of English spelling which directs readers with limited possibilities.
- * **Phonetic information:** the limited possibilities of sound.
- * **Syntactic information:** restricts that ‘the’ can be proceeded merely by an adjective or a noun phrase.
- * **Semantic information:** focuses readers on the items that can be dropped and they find the missing vocabulary *anchor*.

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Top-down strategies

- * Integrate **cognitive** behaviours of readers:
 - * hypothesizing about the text,
 - * predicting the forthcoming information,
 - * inferring meaning, and
 - * combining background knowledge.



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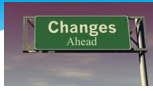
Interactive models



- * Combination of bottom-up and top-down models (Nara, 2003).
- * Background knowledge is a major contributor to text understanding.
- * Readers should be fast to recognise the letters.
- * Not only should the word recognition be fast, but also efficient.

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Changing existing knowledge





- * **Reading:**
 - * a dialogue between the reader and the text (Ur, 1996).
- * **Reading process:**
 - * not simply a matter of extracting information from the text (Grabe, 1988).
- * New information comes from the text:
 - * may result in a change in readers' activated background knowledge.
- * That is why reading is **interactive** rather than active or passive.

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An example

- * *The bus careered along and ended up in the hedge.*
- * *Several passengers were hurt.*
- * *The driver was questioned by the police.*

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An example

***What might have happened next?**



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Changing existing schema

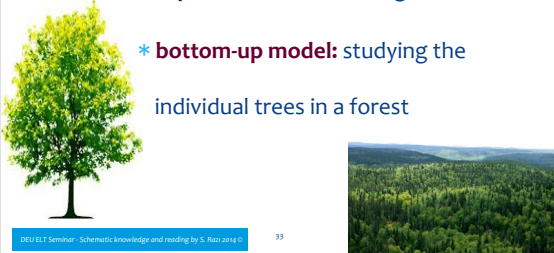


- * “She was later congratulated on her quick thinking and skilful handling of the bus when the brakes failed.”**
- * If you had not considered this possibility previously:**
 - * the bus driver schema will change.**

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Comparison

- * top-down model:** looking at a forest
- * bottom-up model:** studying the individual trees in a forest




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Reading models and background knowledge

- * Consensus:**
 - * Background knowledge is essential for reading comprehension.**

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Do different people get exactly the same message when they read the same text?




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Background knowledge

- * Accounts for the storage of previous information in mind.**
- * Any text does not itself carry meaning since “a text only provides directions for ... readers as to how they should retrieve or construct meaning from their own, previously acquired knowledge” (Carrell & Eisterhold, 1983, p. 556).**
- * Readers better comprehend if they have background knowledge about the text (Alderson, 2000).**

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Schema theory

- * Developed by the gestalt psychologist Barlett “who observed how people, when asked to repeat a story from memory, filled in details which did not occur in the original but conformed to their cultural norms” (Cook, 1997, p. 86).
- * Assists to explain readers’ comprehension problems.
- * Suggests the kind of background knowledge they need.

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Definition of schema

- * **Schemata:**
 - * **interlocking mental structures representing readers’ knowledge** (Perkins, 1983; Zaher, 1987; Anderson & Pearson, 1988; Cook, 1997; Alderson, 2000; Brown, 2001; Harmer, 2001) **of ordinary events** (Nassaji, 2002).
- * Readers integrate the new information from the text into their pre-existing schemata.
- * Schemata enable readers to interact the existing knowledge with the new one coming from the text.

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Pre-existing knowledge

- * life experiences,
- * educational experiences,
- * knowledge of how texts can be organized rhetorically,
- * knowledge of how one’s first language works,
- * knowledge of how the second language works, and
- * cultural background and knowledge.

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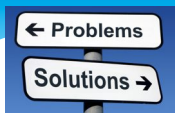
What happens in case of not having relevant background knowledge about the topic?

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Provide background knowledge

- * If readers do not have relevant background knowledge:
 - * Cannot cross the borders of the printed material.
- * Provide relevant background knowledge:
 - * Make the cultural cues clear before reading.

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Comprehension problems

- * Reading exists in the process of idea transfer between minds (Fry, 1977).
- * Comprehension problems:
 - * **Author’s responsibility:** ill-formed ideas.
 - * **Reader’s responsibility:** difficulties in interpreting the ideas in the text due to different thinking style from the author.

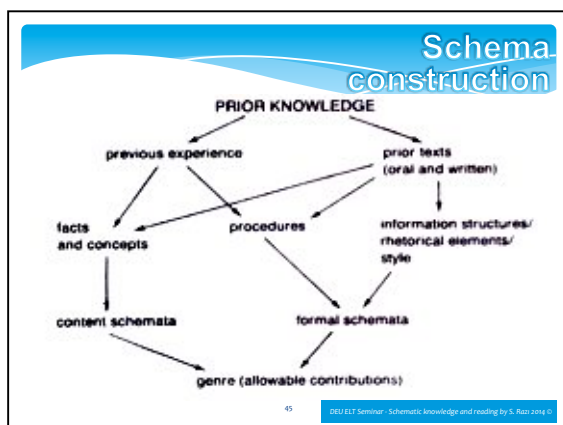
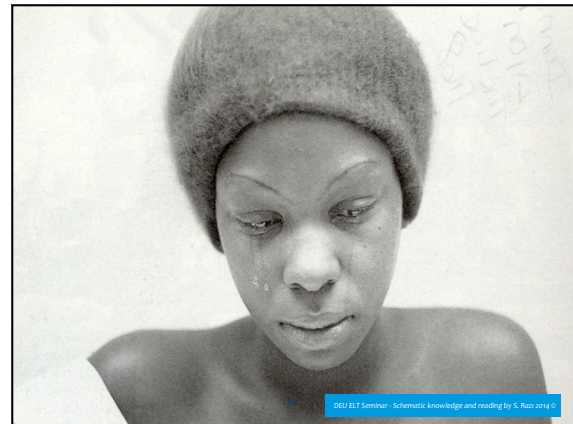
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Visualize the scene



Too tired to erase the tears that fall against her darkened face, she stares into open space; her eyes are too sad to focus. Will the hat upon her head be the only warmth she feels?

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Formal schema vs. Content schema

- * **Formal schema:**
 - * related to formal and rhetorical organisational structures of different types of texts.
- * Reader's formal schemata:
 - * interacts with the rhetorical organisation of a text and
 - * affects reading comprehension.
- * Difficulties in processing the text in case of not knowing its language.

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Formal schema vs. Content schema

- * **Content schema:**
 - * Background knowledge of the content area of the text that a reader brings to a text (Alptekin, 1993, 2002, 2003; Carrell & Eisterhold, 1983; Carrell, 1987; Singhal, 1998; Stott, 2001) such as knowledge about people, the world, culture, and the universe (Brown, 2001).
 - * Appropriate content schema is accessed through textual cues.
 - * Readers need content knowledge to understand it (Alderson, 2000).
 - * This knowledge needs to be activated.
 - * As a result of cultural differences, readers should work twice as hard to understand what they read.

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Content and formal schematic items

A fifteen-year-old boy got up the nerve one day to try out for the school chorus, despite the potential ridicule from his classmates. His audition time made him a good fifteen minutes late to the next class. His hall permit clutched nervously in hand, he nevertheless tried surreptitiously to slip into his seat, but his entrance didn't go unnoticed.

"And where were you?" bellowed the teacher.

Caught off guard by the sudden attention, a red-faced Harold replied meekly, "Oh, ur, er, somewhere between tenor and bass, sir."

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Content and formal schematic items

Content schema:	Formal schema:
<ul style="list-style-type: none"> ■ Fifteen-year-old boys might be embarrassed about singing in a choir. ■ Hall permits allow students to be outside a classroom during the class hour. ■ Teenagers often find it embarrassing to be singled out in a class. ■ Something about voice ranges. 	<ul style="list-style-type: none"> ■ The chorus tryout was the cause of potential ridicule. ■ The audition occurred just before the class period. ■ Continuing to "clutch" the permit means he did not give it to the teacher. ■ The teacher did indeed notice his entry. ■ The teacher's question referred to location, not a musical part.

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Types of knowledge

- * Readers use a variety of clues to achieve the meaning.
- * Three types of knowledge essential in comprehension (Hadley, 2003, p. 131):
 - * linguistic information,
 - * knowledge of the world, and
 - * knowledge of discourse structure.
- * Activating background and linguistic knowledge in the pre-reading stage to recreate the writer's intended meaning is essential (Chastain, 1988).

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Johnson's (1982) study

- * The impact of prior cultural background knowledge: provided strong evidence for schema theory research.
- * Johnson's most important conclusion:
 - * background knowledge is more important than vocabulary in reading comprehension.

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"It was necessarily a Registry Office Wedding."

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Short and Candlin's (1986) example

- * **"It was necessarily a Registry Office Wedding."**
- * Taken from David Lodge's 'How far can you go' novel.
- * A Turkish reader is hardly aware that a divorced British couple is not allowed to remarry in a church.
- * Provide such cultural background knowledge to your learners.

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A Turkish newspaper title

- * **Şile???**
- * What/Who is Şile?
- * What might be the reason of death?



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Nativization

- * The identification of foreign cultural elements in any text and then changing them to native cultural elements.
- * Assists readers to comprehend better.
- * No structural differences between original and nativized versions.
- * Should be limited with cultural elements.

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Text with foreign cultural elements

Piyango çekilişini, Noel şenliklerini, Paskalya yortusunu ve Halloween kutlamalarını da idare eden, halk etkinliklerine ayıracak bol zamanı ve enerjisi olan Bay Summers yürütecekti. Yuvarlak çehreli, neşeli bir insandı. Devon Eyaletinin en büyük domuz çiftliğinde çalışıyordu. İnsanlar onun için üzülüyordu çünkü Falkland Adalarında savaşın sakatlanmıştı. Otuz yıldır evli olduğu kansı Mary de dirdirci kadının tekiydi. Bay Summers siyah tahta bir kutuyla Aziz John meydanındaki Anglikan kilisenin gölgesindeki köy meydanına geldiğinde köylüler kendi aralarında sessizce konuşmaktaydı. Çok geçmeden Bay Summers ellerini sallayıp kalabalığa seslendi: "Bugün biraz geciktim sanırım." Bay Summers'ın sesi Exeter ve Bristol'ü birbirine bağlayan M1 otobanın hemen kenarında kurulu olan bu küçük Ottery St. Mary köyünde hiç aralıksız yankılanıp duran araç seslerine karıştı. Swans Nest Bar'ı işleten Bay Graves elindeki üçayakla Bay Summers'ın peşinden geldi ve üçayağı meydanın ortasına bıraktı. Bay Summers da elindeki kutuyu üçayağın üstüne yerleştirdi. Köylüler kutuyla aralarında mesafe bulunmasına dikkat ederek duruyorlardı. Bay Summers "Arkadaşlarım acaba bana bir yardım ederler mi?" diye sordu. Önce bir duraksama yaşandı sonra Bay Martin ve en büyük oğlu John ileri çıkarak kutunun üçayağın üzerinde sallanmadan durmasını sağladılar.

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Text with native cultural elements

Piyango çekilişini, Bayram Kutlamalarını, Hidrellez şenliklerini ve kiraz festivalini de idare eden, halk etkinliklerine ayıracak bol zamanı ve enerjisi olan Mehmet Bey yürütecekti. Yuvarlak çehreli, neşeli bir insandı. Çanakkale'nin en büyük besi çiftliğinde çalışıyordu. İnsanlar onun için üzülüyordu çünkü Kıbrıs Çıkartmasında savaşın sakatlanmıştı. Otuz yıldır evli olduğu kansı Müzeyyen de dirdirci kadının tekiydi. Mehmet Bey siyah tahta bir kutuyla Cumhuriyet meydanında Orta Camii'nin gölgesindeki köy meydanına geldiğinde köylüler kendi aralarında sessizce konuşmaktaydı. Çok geçmeden Mehmet Bey ellerini sallayıp kalabalığa seslendi: "Bugün biraz geciktim sanırım." Mehmet Bey'in sesi Çanakkale ve İzmir'i birbirine bağlayan ana yolun hemen kenarında kurulu olan bu küçük Gökçalı köyünde hiç aralıksız yankılanıp duran araç seslerine karıştı. Köy Kahvesinin işleten Halil Karadağ elindeki üçayakla Mehmet Beyin peşinden geldi ve üçayağı meydanın ortasına bıraktı. Mehmet Bey de elindeki kutuyu üçayağın üstüne yerleştirdi. Köylüler kutuyla aralarında mesafe bulunmasına dikkat ederek duruyorlardı. Mehmet Bey "Arkadaşlarım acaba bana bir yardım ederler mi?" diye sordu. Önce bir duraksama yaşandı sonra Hacı Dayı ve en büyük oğlu Sedat ileri çıkarak kutunun üçayağın üzerinde sallanmadan durmasını sağladılar.

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Original story

The girls in their summer dresses by Irwin Shaw

Fifth Avenue was shining in the sun when they left the Brevoort and started walking toward Washington Square. The sun was warm, even though it was November, and everything looked like Sunday morning—the buses, and the well-dressed people walking slowly in couples and the quiet buildings with the windows closed.

Michael held Frances' arm tightly as they walked downtown in the sunlight. They walked lightly, almost smiling, because they had slept late and had a good breakfast and it was Sunday. Michael unbuttoned his coat and let it flap around him in the mild wind. They walked, without saying anything, among the young and pleasant-looking people who somehow seem to make up most of the population of that section of New York City.

"Look out," Frances said, as they crossed Eighth Street. "You'll break your neck."

Michael laughed and Frances laughed with him.

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Nativized story

The girls in their summer dresses by Irwin Shaw

Kordonboyu was shining in the sun when they left **Banşkent** and started walking toward **Republic Square**. The sun was warm, even though it was November, and everything looked like Sunday morning—the buses, and the well-dressed people walking slowly in couples and the quiet buildings with the windows closed.

Coşkun held **Özlem**'s arm tightly as they walked downtown in the sunlight. They walked lightly, almost smiling, because they had slept late and had a good breakfast and it was Sunday. **Coşkun** unbuttoned his coat and let it flap around him in the mild wind. They walked, without saying anything, among the young and pleasant-looking people who somehow seem to make up most of the population of that section of **Çanakkale**.

"Look out," **Özlem** said, as they walked past **the Golf Tea Garden**. "You'll break your neck."

Coşkun laughed and **Özlem** laughed with him.

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STM and LTM

- * STM is limited in terms of its capacity.
- * Nativization provides extra free space in STM.
- * Enables processing more new information that comes from the text.

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Schema activation

- * Activating readers' relevant background knowledge before reading fosters reading comprehension (Alderson & Urquhart, 1984; Carrell & Eisterhold, 1983; Grabe, 1991; Steffenson & Joag-Dev, 1984; Ur, 1996).
- * In case of lack of relevant background knowledge, the teacher should provide it before reading.

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Pre-reading activities

- * Brainstorming
- * Previewing
- * Pre-questioning
- * Semantic mapping
- * Talking about pictures
- * Predicting from the title
- * Agreeing or disagreeing with a set of proposals about the topic
- * Answering a set of questions or a quiz
- * Listing information already known about the topic
- * Discussing the topic

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So What?



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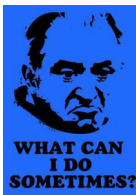
SOMETIMES,

you know all words in a text and you seem to be familiar with its grammar

BUT

you cannot understand the writer's message!

WHY?

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Because...

- * Linguistic information is not enough to achieve the author's intended meaning.
- * **Linguistic information:** Lexis and grammar
- * In order the message to be meaningful, relate it with existing knowledge in your mind, **background knowledge**.
- * If you do not have relevant schematic knowledge, then the author's message becomes incomprehensible.

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Conclusion

- * Vital impact of relevant background knowledge on reading comprehension.
- * To avoid comprehension problems, at pre-reading stage:
 - * Activate relevant schemata OR
 - * Familiarize yourself with the topic (background knowledge support).

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