Dipartimento di Informatica
Corso di Laurea in Informatica

INSEGNAMENTO: INGLESE 2

Reading Strategies: Critical Reading, Skimming and Scanning

UNIVERSITÀ DI TORINO

CRITICAL READING, SKIMMING & SCANNING

Informatica Inglese

CRITICAL READING

SKIMMING & SCANNING

There are key differences between critical reading and skimming and scanning techniques

In a nutshell:

- **critical reading** involves thoroughly analyzing a text by evaluating its claims, supporting points, and counterarguments. It includes identifying ambiguities and flaws in reasoning, reinterpreting for clarity, and linking evidence to arguments.
  (When the acquisition of information from a written source is involved, critical reading is a fundamental presupposition for activating critical thinking. Critical thinking is the disciplined process of analyzing and evaluating information to guide belief and action, incorporating clarity, accuracy, relevance, and fairness across diverse modes like scientific and philosophical thinking)
- **skimming** is a quick reading technique to grasp the main idea of a text while **scanning** is used to search for specific information. Both S&S maximize reading efficiency without deep comprehension.

In this section, we will look at them both because they are all techniques that must be used if you want to maximize effectiveness (Critical Reading) and efficiency (S&S) in engaging with a text.

By "engaging", we mean here comprehension, analysis, and evaluation, and to some extent, memorization.

CRITICAL READING, SKIMMING & SCANNING

SKIMMING AND SCANNING are two powerful reading strategies widely used to quickly gather information from texts.

- Skimming involves reading swiftly to get a general sense of the material, while scanning is focused on finding specific details. Skimming provides an overview of the content within a section, whereas scanning helps pinpoint precise information.
- Skimming is useful for determining whether something is worth your time or familiar, while scanning helps you locate specific facts without needing to read everything. These two techniques serve different purposes in speed reading: **skimming offers a quick overview, while scanning is more selective**.
- The key distinction is that skimming helps you understand the broader content of a section or document, while scanning directs you to specific information.
- When used together, skimming and scanning allow for faster reading without overlooking essential details.

Informatica Inglese

SKIMMING

Is a reading strategy that enables people to quickly grasp the overall meaning of a text without reading it word for word. This technique is especially helpful when time is short or when determining whether a text is worth a more thorough read. Through skimming, readers can quickly spot key concepts, main points, and important details.
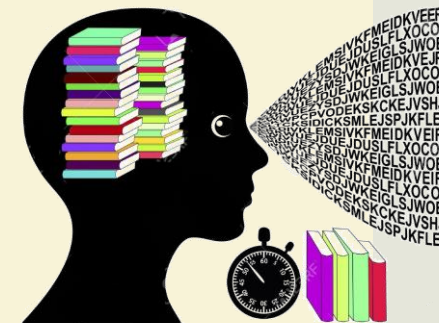
- **Preview:** Start by reading the title, headings, subheadings, and topic sentences. This gives a general idea of the text's structure and key points, helping you build a mental outline for better comprehension.
- **Focus on Bold or Highlighted Text:** Pay attention to bold, italicized, underlined, or highlighted text. These often emphasize important elements like keywords, definitions, or statistics, offering valuable insight into the topic.
- **Review Graphics:** Examine any charts, graphs, tables, or images within the text. These visuals can provide a quick understanding of the data or ideas, often more efficiently than reading lengthy passages.
- **Focus on Opening and Closing Sentences:** Read the first and last sentences of each paragraph, as they often contain the main idea or conclusion. This helps you follow the text's overall argument without reading everything in detail.
- **Scan the Middle:** Quickly glance through the middle sections for specific details or supporting information. Look for keywords, phrases, or familiar concepts that deepen your understanding without needing to read every word.

Informatica
Inglese

SCANNING

Scanning is a reading technique used to swiftly find specific information in a text. It involves quickly moving your eyes over the material to spot keywords, phrases, or numbers that align with what you're looking for. This method is especially helpful for locating details like names, dates, or statistics in lengthy texts.

- **Clarify Your Objective**: Start by clearly defining the specific information you're seeking. This helps narrow your search and keeps you focused while scanning the text.
- **Concentrate on Keywords**: Identify **key words** or phrases relevant to what you're looking for. These terms are most likely to appear where the information you need is found. As you scan, focus on these specific keywords.
- **Use Zigzag Eye Movements**: Move your eyes rapidly in a zigzag pattern, either vertically or horizontally, while scanning. This technique covers more ground quickly, increasing your chances of spotting the relevant information without reading everything.
- **Ignore Unnecessary Words**: Skip over non-essential words and concentrate solely on the relevant keywords. This prevents distractions from unimportant details, allowing you to stay focused on finding what you need.
- **Watch for Formatting Clues**: Pay attention to bold, italicized, or underlined text. These elements often emphasize important points or highlight the keywords you're searching for, serving as visual markers for relevant information.

Informatica
Inglese

MAJOR DIFFERENCES BETWEEN SKIMMING AND SCANNING

Skimming Vs Scanning

ASPECT	SKIMMING	SCANNING
PURPOSE	Grasp the main ideas and general understanding of a text	Find specific information within a text
SPEED	Reading quickly to get a broad overview	Moving the eyes rapidly to locate targeted details
READING DEPTH	Shallow reading approach, focusing on headings, summaries, and visual elements	Focused search for specific keywords or phrases
COMPREHENSION	Provides a basic understanding of text content	May not guarantee comprehension but helps in locating desired information
EYE MOVEMENT	Smooth and continuous eye movement, gliding over the text	Rapid eye movements in a zigzag pattern
TEXT STRUCTURE	Relies on the text's organization, such as headings and subheadings, to navigate and understand the content	Looks for specific words or phrases regardless of the text structure
TIME ALLOCATION	Requires relatively more time than scanning as it involves reading more content	Quick and time-efficient
CONTEXTUAL UNDERSTANDING	Focuses on the context and coherence of the entire text	May disregard the overall context and concentrate solely on specific information
READING PURPOSE	Often used to determine whether a text is worth reading in detail	Employed when specific information is sought
READING MATERIALS	Commonly used for longer texts, such as books or articles	Useful for shorter texts, such as lists or directories

Uses of Skimming and Scanning

Both skimming and scanning techniques have various applications in different scenarios.

- **Research:** Skimming helps researchers quickly evaluate the relevance of articles or books to their study.

- **Reviewing News:** Skimming allows readers to get an overview of news articles or reports without delving into every detail.

- **Studying:** Skimming textbooks or academic papers aids in identifying key concepts and main arguments.

- **Job Search:** Scanning job advertisements helps applicants find specific requirements or qualifications.

- **Reading Emails:** Scanning emails enables users to quickly identify important information or action items.

- **Exam Preparation:** Skimming study materials helps students review important topics before exams.

- **Travel Planning:** Skimming travel guides helps gather essential information about destinations, attractions, or accommodations.

- **Document Verification:** Scanning legal or official documents helps locate specific details or clauses.

- **Catalog Shopping:** Skimming product catalogs allows consumers to quickly compare features or prices.

- **Content Assessment:** Skimming blog posts or online articles assists in determining their quality or relevance.

CRITICAL READING, SKIMMING & SCANNING

Informatica
Inglese

ETYMOLOGY AND ORIGIN OF CRITICAL THINKING

In the term critical thinking, the word critical, (Grk. κριτικός = kritikos = "critic") derives from the word critic and implies a critique; it identifies the intellectual capacity and the means "of judging", "of judgement", "for judging", and of being "able to discern".

Socrates (470-399 BC) established that for an individual man or woman to lead a good life that is worth living, that person must **ask critical questions and possess an interrogative soul**, which seeks evidence and then closely examines the available facts, and then follows the implications of the statement under analysis, thereby tracing the implications of thought and action.
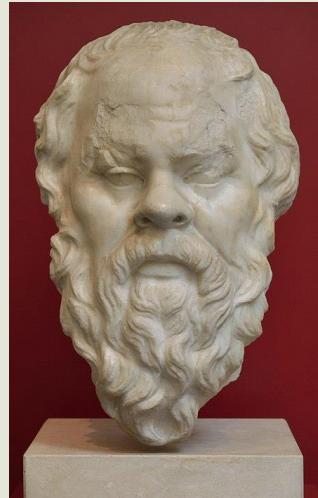
Critical *reading* is a technique for **discovering** information and ideas within a text.

Critical *thinking* is a technique for **evaluating** information and ideas, for deciding what to accept and believe.

CRITICAL READING

represents a more ACTIVE approach to reading, involving a deeper and more intricate interaction with a text.

It encompasses a process of analysis, interpretation, and, at times, evaluation.

Engaging in critical reading prompts us to employ our critical thinking skills to QUESTION not only the text itself but also our interpretation of it.

Various disciplines may exhibit unique methods of critical reading, such as scientific, philosophical, or literary approaches.

COMPARING READING vs CRITICAL READING

	READING	CRITICAL READING
Purpose	To get a basic grasp of the text.	To form judgments about *HOW* a text works.
Activity	Absorbing/Understanding	Analyzing/Interpreting/Evaluating
Focus	What a text *SAYS*	What a text *DOES* and *MEANS*
Questions	What is the text saying? What information can I get out of it?	How does the text work? How is it argued? What are the choices made? The patterns that result? What kinds of reasoning and evidence are used? What are the underlying assumptions? What does the text mean?
Direction	*WITH* the text (taking for granted it is right)	*AGAINST* the text (questioning its assumptions and argument, interpreting meaning in context)
Response	Restatement, Summary	Description, Interpretation, Evaluation

BETTER TO READ FIRST QUESTIONS OR THE FULL TEXT?

Reading Tests

For university-level reading comprehension tests, especially at the B2 level, both approaches have their advantages, but <u>starting with the questions first</u> is often recommended. Here's why:

1. **Reading the Questions First**

•**Focus on Key Information:** By reading the questions first, you'll know what specific information to look for in the text. This can help you focus on <u>particular sections</u> and <u>keywords</u> instead of getting distracted by less relevant details.
•**Efficient Use of Time:** Knowing the questions can guide you to skim or scan the text effectively. You can focus on answering the questions rather than spending extra time on parts of the text that may not be necessary for the answers.
•**Improved Understanding:** When you read the text with the questions in mind, you're more likely to understand and retain relevant information that aligns with the test's demands.

> *Note: In academics as in life, knowing your goals can save you time and energy, thus allowing to fully focus in the search for the right answers*

2. Reading the Full Text First

•**Overall Comprehension:** Reading the entire text first provides a complete picture of the main ideas, tone, and purpose. This can be particularly helpful for complex or dense scientific and academic texts.
•**In-depth Answers:** Some questions require a deeper understanding of the text's structure and arguments. Reading the full text first might help you answer these more interpretative or inference-based questions more accurately.

Best Strategy for University-Level Exams

A **combined approach** can work well. You might start by:
1.**Quickly Skimming the Text:** Skim the passage briefly to get a sense of the main idea and structure, without reading in depth.
2.**Reading the Questions:** Check the questions to see what details you'll need.
3.**Returning to the Text for scanning:** Go back to the text with a more focused approach, looking for answers based on the questions.

This method ensures you don't miss the text's main points while staying focused on key information.
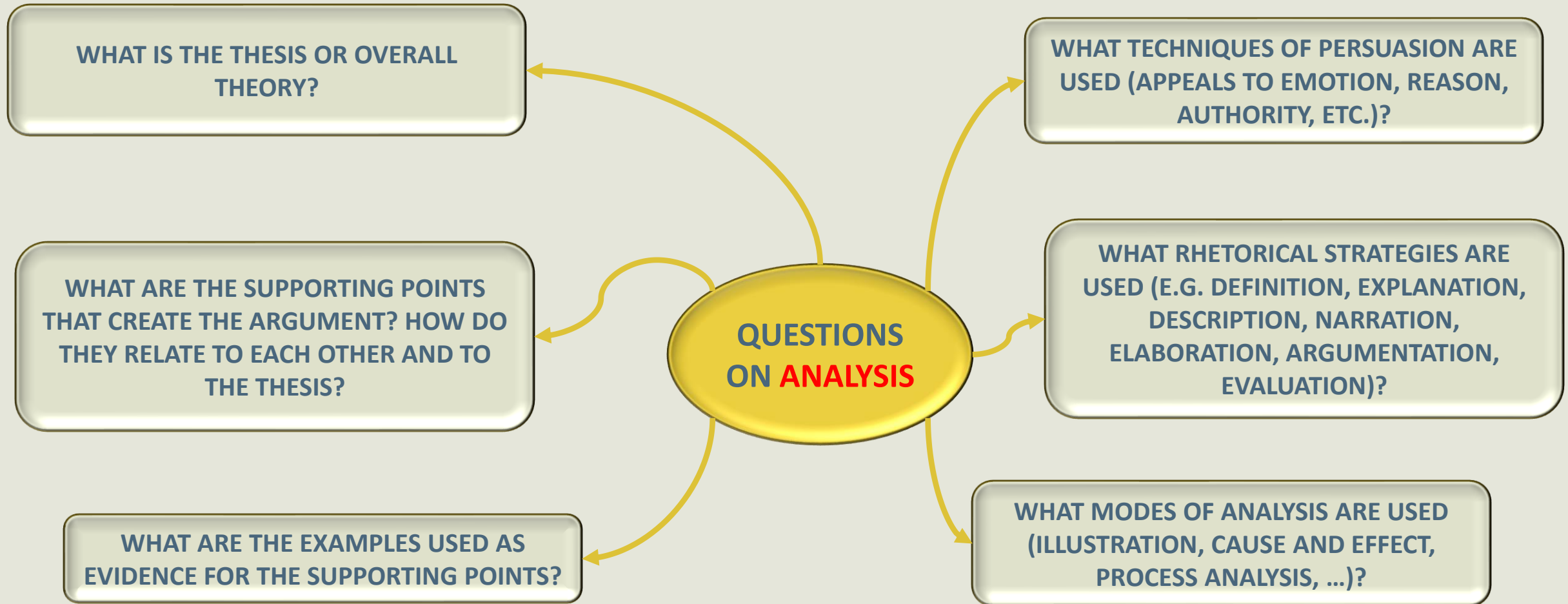
Further Insights

CRITICAL READING, SKIMMING & SCANNING

Informatica
Inglese

Analysis involves examining the components of something to identify patterns.
By observing these patterns, your critical thinking skills will be activated to **evaluate the argument** presented.

WHAT IS THE THESIS OR OVERALL THEORY?

WHAT TECHNIQUES OF PERSUASION ARE USED (APPEALS TO EMOTION, REASON, AUTHORITY, ETC.)?

WHAT ARE THE SUPPORTING POINTS THAT CREATE THE ARGUMENT? HOW DO THEY RELATE TO EACH OTHER AND TO THE THESIS?

QUESTIONS ON ANALYSIS

WHAT RHETORICAL STRATEGIES ARE USED (E.G. DEFINITION, EXPLANATION, DESCRIPTION, NARRATION, ELABORATION, ARGUMENTATION, EVALUATION)?

WHAT ARE THE EXAMPLES USED AS EVIDENCE FOR THE SUPPORTING POINTS?

WHAT MODES OF ANALYSIS ARE USED (ILLUSTRATION, CAUSE AND EFFECT, PROCESS ANALYSIS, …)?

13

This lesson material is exclusively reserved for students enrolled in courses of Computer Science department. UNITO.

Informatica
Inglese

CRITICAL READING, SKIMMING & SCANNING

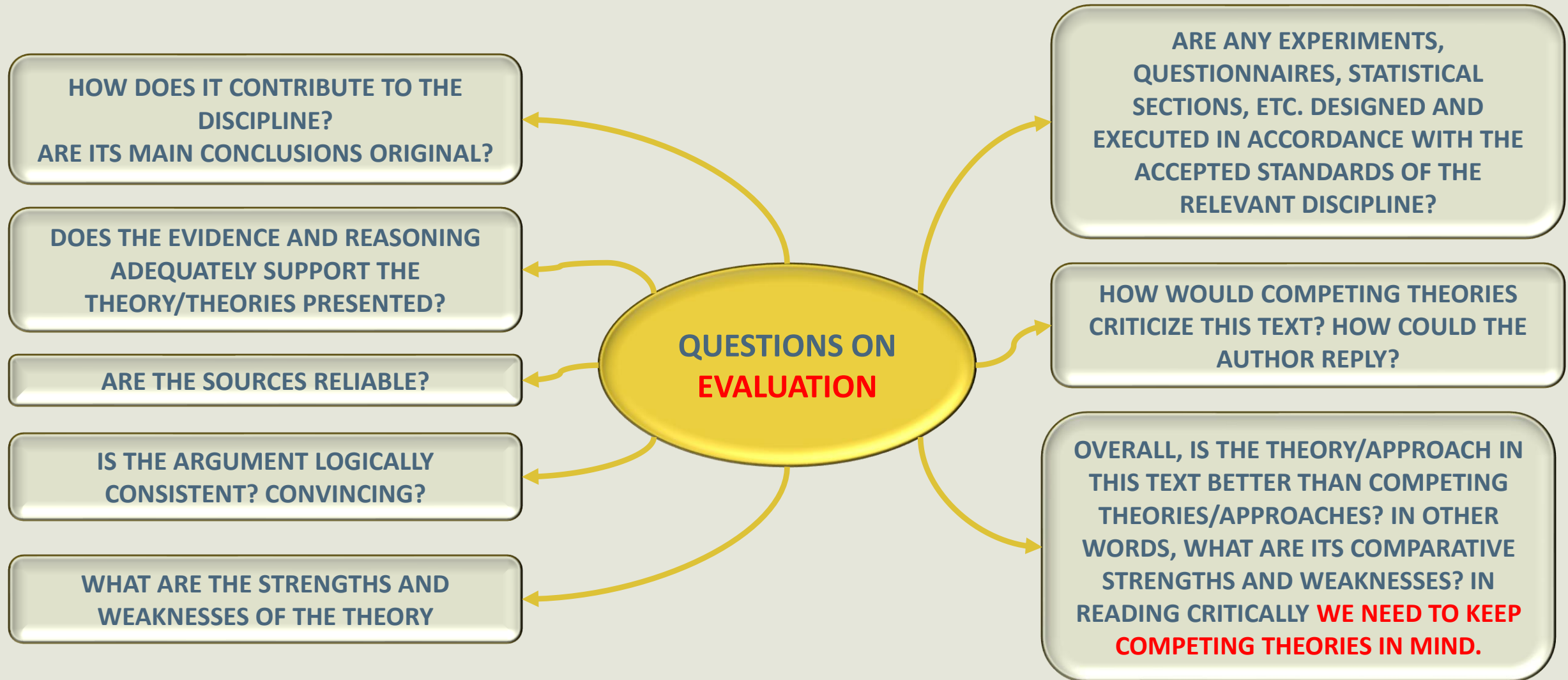Interpretation involves understanding both ideas and sentences. It's essential to consider the cultural and historical context, the debates relevant to the discipline at that time, and the current intellectual discussions within the field.

WHAT METHODOLOGY IS EMPLOYED AND WHAT THEORY IS DEVELOPED?

WHAT DEBATES WERE THE AUTHOR AND THE TEXT ENGAGING WITH AT THAT TIME?

QUESTIONS ON
INTERPRETATION

HOW MIGHT MY READING OF THE TEXT BE BIASED?
AM I IMPOSING PERSONAL PRECONCEPTION ON THE TEXT INTERPRETATION? AM I READING AND INTERPRETING THE TEXT THROUGH THE FILTER OF MY VALUES OR PERSONAL BELIEFS?
IF SO, IS THIS PROBLEMATIC?

WHAT KINDS OF REASONING (HISTORICAL, PSYCHOLOGICAL, POLITICAL, PHILOSOPHICAL, SCIENTIFIC, ETC.) ARE EMPLOYED?

14

CRITICAL READING, SKIMMING & SCANNING

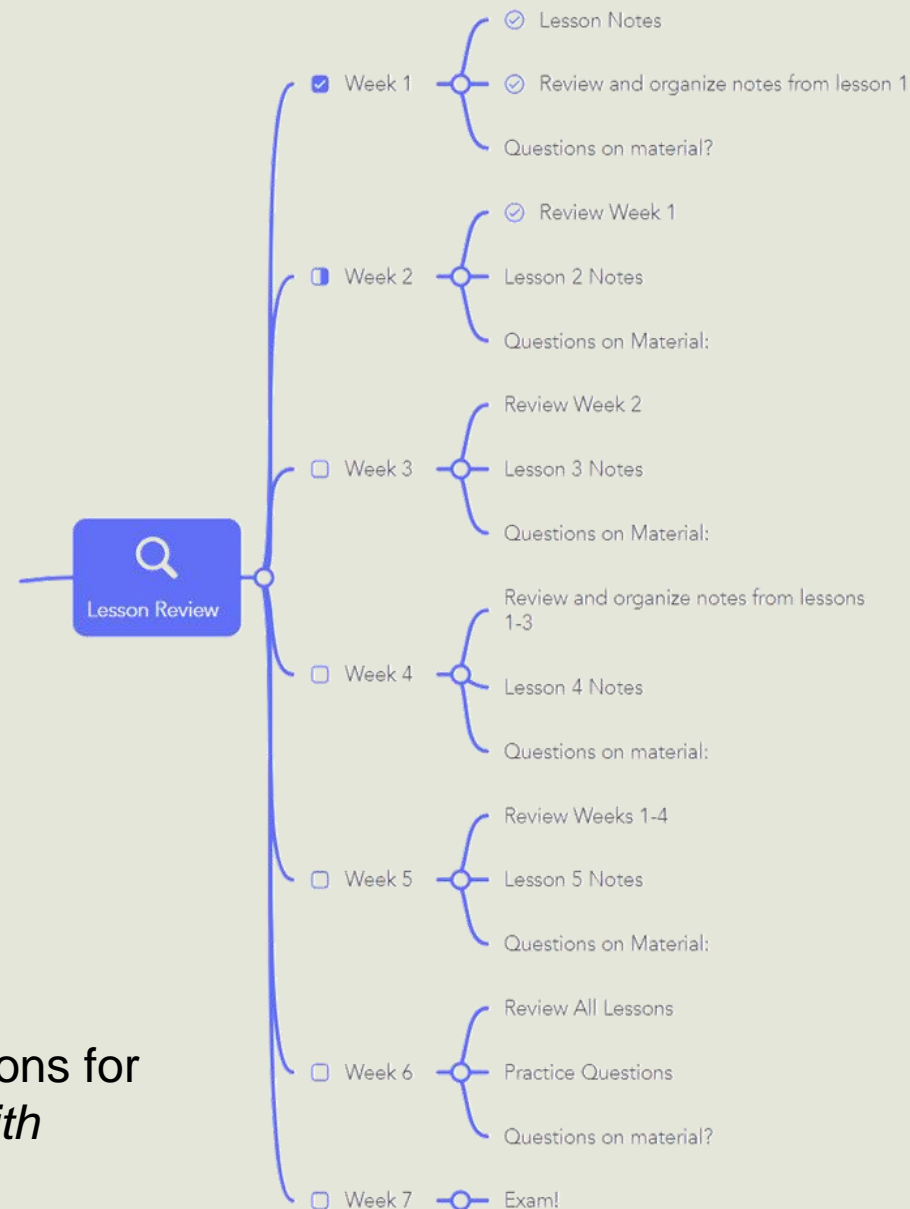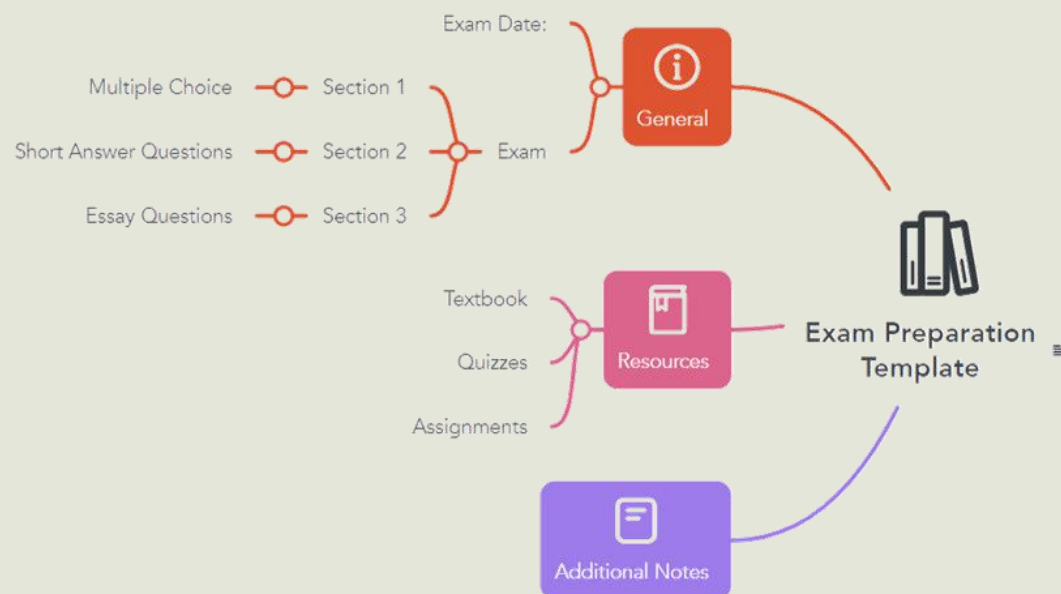Informatica Inglese

Evaluation involves assessing the intellectual, cognitive, aesthetic, moral, or practical worth of a text and examining its **intellectual** or cognitive **value**.

HOW DOES IT CONTRIBUTE TO THE DISCIPLINE?
ARE ITS MAIN CONCLUSIONS ORIGINAL?

DOES THE EVIDENCE AND REASONING ADEQUATELY SUPPORT THE THEORY/THEORIES PRESENTED?

ARE THE SOURCES RELIABLE?

IS THE ARGUMENT LOGICALLY CONSISTENT? CONVINCING?

WHAT ARE THE STRENGTHS AND WEAKNESSES OF THE THEORY

QUESTIONS ON EVALUATION

ARE ANY EXPERIMENTS, QUESTIONNAIRES, STATISTICAL SECTIONS, ETC. DESIGNED AND EXECUTED IN ACCORDANCE WITH THE ACCEPTED STANDARDS OF THE RELEVANT DISCIPLINE?

HOW WOULD COMPETING THEORIES CRITICIZE THIS TEXT? HOW COULD THE AUTHOR REPLY?

OVERALL, IS THE THEORY/APPROACH IN THIS TEXT BETTER THAN COMPETING THEORIES/APPROACHES? IN OTHER WORDS, WHAT ARE ITS COMPARATIVE STRENGTHS AND WEAKNESSES? IN READING CRITICALLY WE NEED TO KEEP COMPETING THEORIES IN MIND.

CRITICAL READING, SKIMMING & SCANNING

Informatica Inglese

AN EXAMPLE OF FRAMEWORK

This mindmap, is a classic outline of timing, contents, and actions for exam preparation in terms of planning and control. (*created with https://www.mindmeister.com*)

Informatica
Inglese

CONSOLIDATION EXERCISE

Create a mind map that represents the concepts expressed in the following text

What's Critical Reading ?

Critical reading is an essential skill for students in any academic discipline, particularly in fields like computer science where understanding complex texts, theories, and methodologies is crucial. This skill goes beyond merely reading for comprehension; it involves analyzing, interpreting, and evaluating texts to engage deeply with the material. Here, we will explore several critical reading techniques that can enhance the academic performance of computer science students.

1. Previewing the Text

Before diving into a text, students should take time to preview it. This includes skimming headings, subheadings, abstracts, and conclusions to gain a general understanding of the content and structure. In computer science, where texts can be dense with technical jargon and complex concepts, this technique can help students identify key topics and areas of focus. By recognizing the main ideas before fully engaging with the text, students can formulate questions and anticipate the information that will be relevant to their studies.

2. Annotating the Text

As students read, annotating the text can significantly enhance understanding. This involves highlighting key points, making notes in the margins, and summarizing sections in their own words. For computer science students, this could mean marking important algorithms, programming concepts, or theoretical frameworks. Annotations not only help in comprehension but also serve as useful reference points when reviewing the material later.

3. Questioning the Material

A critical reader does not passively accept information; instead, they actively question it. Students should ask themselves questions such as: What is the author's main argument? What evidence supports this argument? Are there any assumptions that the author makes? How does this information relate to my understanding of the subject? In computer science, this questioning can lead to deeper insights into programming paradigms, system designs, or research methodologies.

Informatica Inglese

4. Identifying Arguments and Evidence

Understanding the structure of an argument is vital in critical reading. Students should learn to identify the main claim made by the author and the evidence that supports it. In technical texts, this may involve dissecting research findings, analyzing code snippets, or evaluating case studies. Students should also be aware of counterarguments or limitations presented, as this will enrich their understanding of the topic and foster critical thinking.

5. Connecting to Existing Knowledge

Critical reading also involves making connections between the new information and existing knowledge. Computer science students should strive to relate the concepts they are reading about to their prior learning, whether it's linking a new programming technique to a previously studied one or connecting theoretical principles to real-world applications. This integrative approach not only deepens understanding but also enhances retention of information.

6. Evaluating the Source

Assessing the credibility of the source is another crucial aspect of critical reading. Computer science students should consider the author's qualifications, the publication's reputation, and the date of publication to determine the reliability of the information. Peer-reviewed journals and respected conferences in the field often provide high-quality content, while informal sources may lack rigor and reliability. This evaluation helps students discern which materials are worth their time and attention.

7. Reflecting on the Reading

Finally, reflection is an essential part of the critical reading process. After engaging with the text, students should take a moment to summarize what they have learned, consider how it fits into their overall understanding of computer science, and identify areas for further inquiry. This reflective practice encourages deeper engagement with the material and promotes a lifelong learning attitude.

Conclusion

In conclusion, critical reading techniques are invaluable for computer science students navigating complex texts in their academic journey. By employing strategies such as previewing, annotating, questioning, identifying arguments, connecting to prior knowledge, evaluating sources, and reflecting on their reading, students can develop a more profound understanding of the material. This skill not only enhances academic performance but also prepares students for real-world problem-solving and critical thinking in their future careers.

CRITICAL READING, SKIMMING & SCANNING

EXPLANATION OF THE MENTAL MAP
(ONE OF THE MANY POSSIBLE)

Critical Reading Techniques: The central concept is the **importance of critical reading techniques** in the academic context, specifically for computer science students.

1. **Importance of Critical Reading for Computer Science**: This branch emphasizes why critical reading is essential in this field, especially for understanding complex texts.

2. **Techniques**: This main branch includes several key techniques:

   o **Previewing**: Skimming headings and key parts of the text to gain an overview.

   o **Annotating**: Highlighting and making notes to enhance comprehension.

   o **Questioning**: Actively questioning the material to foster engagement.

   o **Identifying Arguments**: Understanding the structure of arguments presented in the text.

   o **Connecting Knowledge**: Relating new information to prior knowledge.

   o **Evaluating Sources**: Assessing the credibility and reliability of the sources.

   o **Reflecting on Reading**: Summarizing and considering the implications of what was read.

3. **Benefits**: The final branch illustrates the outcomes of employing these techniques, such as enhanced understanding and retention of information.
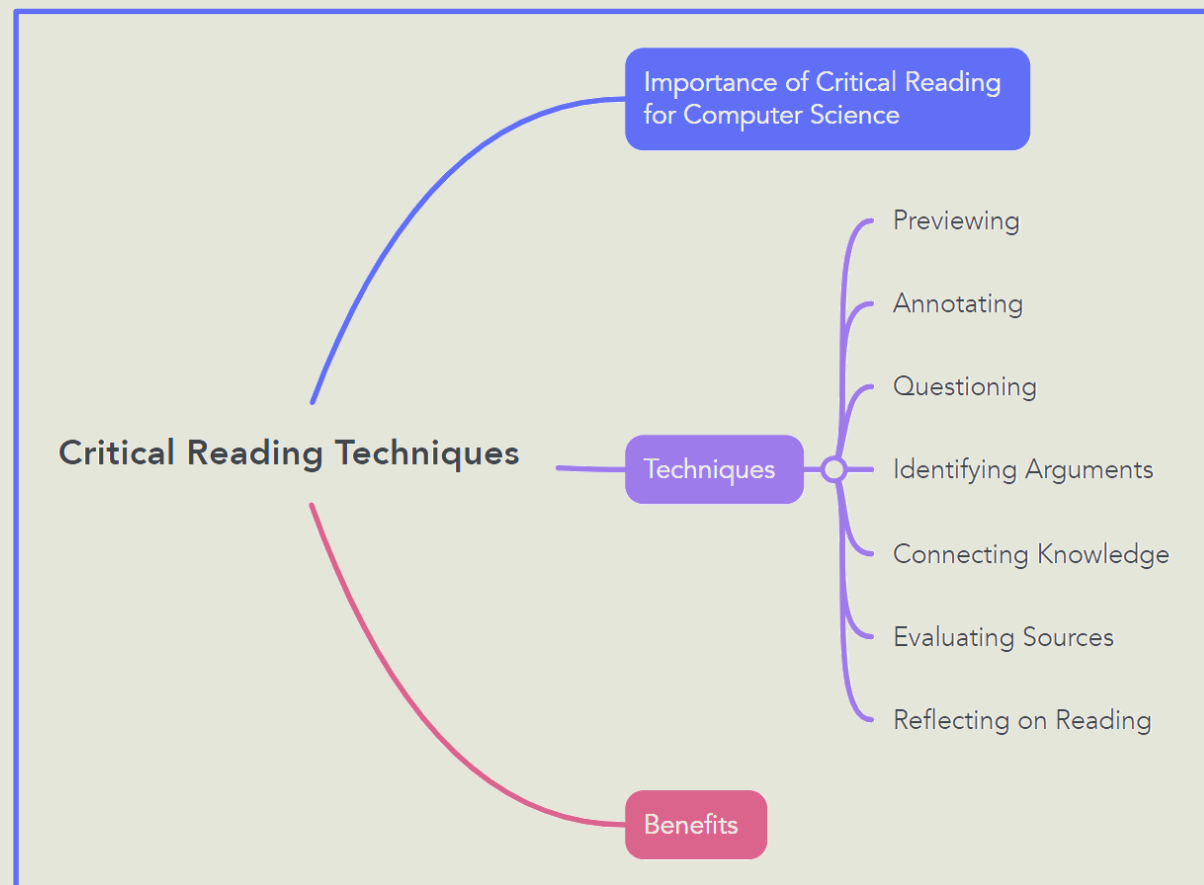
This mental map provides a clear and organized overview of the key concepts related to critical reading for computer science students, making it easier to visualize and remember.

19

CRITICAL READING, SKIMMING & SCANNING

[https://www.stetson.edu/other/writing-program/media/CRITICAL%20READING.pdf]

[Dan Kurland's   www.criticalreading.com]