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Outline of today's lecture

Activities....

Before,
During,
& After...



Individual reflection



How would you describe yourself as a reader? Strengths? Areas to develop?



How do you usually read a text? Do you go through different stages? Describe the process!



If you would change **one** thing in your reading routine – what would that be and why?



Characteristics of "the passive reader"

I approach all texts the same way.

I read just to get it done, even if I don't understand what I have read.

I forget what I have read almost immediately.

I read word-by-word, concentrating on taking in each one rather than asking what the sentence says or what the main point of a paragraph or section is. I do not anticipate what is coming next.

I do not ask questions to the text or author.

I often use "random" highlighting or transcription as main note-taking methods.

I do not make connections with other texts, information, or experiences.





Take responsibility...

Before,
During,
& After...

Iterative learning

...they encounter the text.



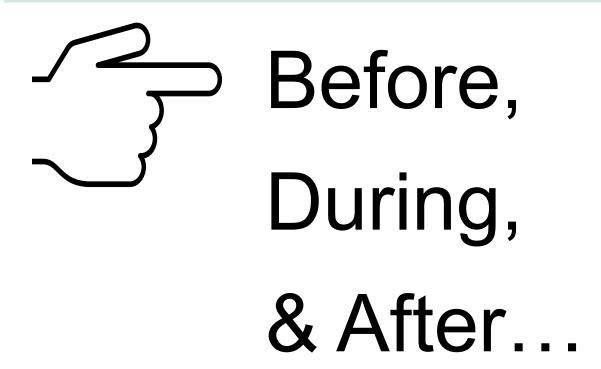


For everything you read, always write something!

...write to think.



Take responsibility...



...they encounter the text.



The one thing you can do to increase reading speed: get some previous knowledge of the thing you're reading BEFORE you read!





Before

1. What type of text is this?

2. Who is the intended audience?

3. What is the purpose of the text?

4. What do I want out of this reading?

(Alt: Why did my professor assign this text?)



Before

- 1. What type of text is this?
- (...and what can I expect from a text like this?)
 - Textbook chapter?
 - Empirical research article?
 - Theoretical research article?
 - Literature review?



- 1. What type of text is this?
- 2. Who is the intended audience?
 - Textbooks: Students?
 - Empirical/Theoretical research articles: Colleagues? Experts in the field?
 - ☐ Literature review: Students?

Before

Are you not the intended audience?

Can you put yourself in the audience's shoes?

The answer helps you become aware of what you don't know.

What could you find out before reading the text?



- 1. What type of text is this?
- 2. Who is the intended audience?
- 3. What is the purpose of the text?
- > **Textbooks**: to teach concepts, facts, and give information
- ➤ **Literature review**: to provide an overview about the state of research in the field (what is known and not known).
- > Research articles: meant to add something new to the conversation in the field.
 Problem-solution text? Question-answer text? Claim driven?
 - **Empirical study**: to test a hypothesis or answer a question by collecting primary data/doing an experiment.
 - Theoretical study: to interpret a phenomenon through a selective lens. To generalize relationships and concepts.

Before

Scan for this information!

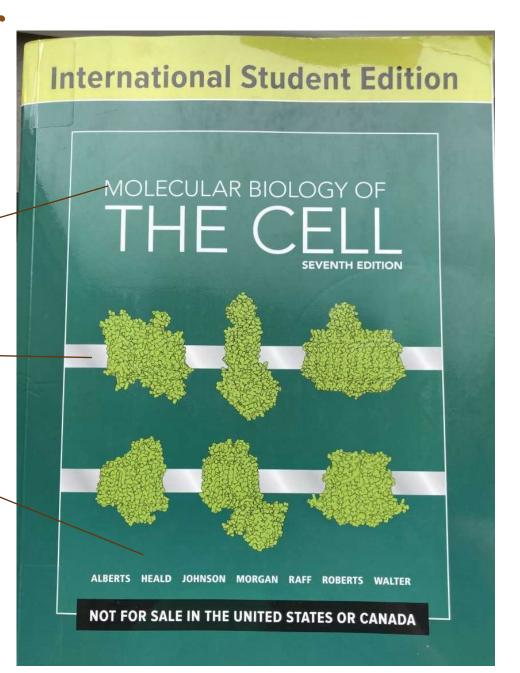
→ Title, author & publication info, pictures/illustrations, abstract, front/back cover, table of contents



Title

Images

Authors



- What type of text is this?
- Who is the intended audience?

What is the purpose of the text?

Table of Contents



Create an overview: table of contents

PART I INTRODUCTION TO THE CELL

PART II BASIC GENETIC MECHANISMS

PART III WAYS OF WORKING WITH CELLS

PART IV INTERNAL ORGANIZATION OF THE CELL

PART V CELLS IN THEIR SOCIAL CONTEXT



Create an overview: table of contents

PART IV INTERNAL ORGANIZATION OF THE CELL

Cell death

Chapter 18

Chapter 10	Membrane structure
Chapter 11	Small-Molecule Transport and Electrical Properties of Membranes
Chapter 12	Intracellular Organization and Protein Sorting
Chapter 13	Intracellular Membrane Traffic
Chapter 14	Energy Conversion and Metabolic Compartmentation: Mitochondria and Chloroplasts
Chapter 15	Cell Signalling
Chapter 16	The Cytoskeleton
Chapter 17	The Cell Cycle

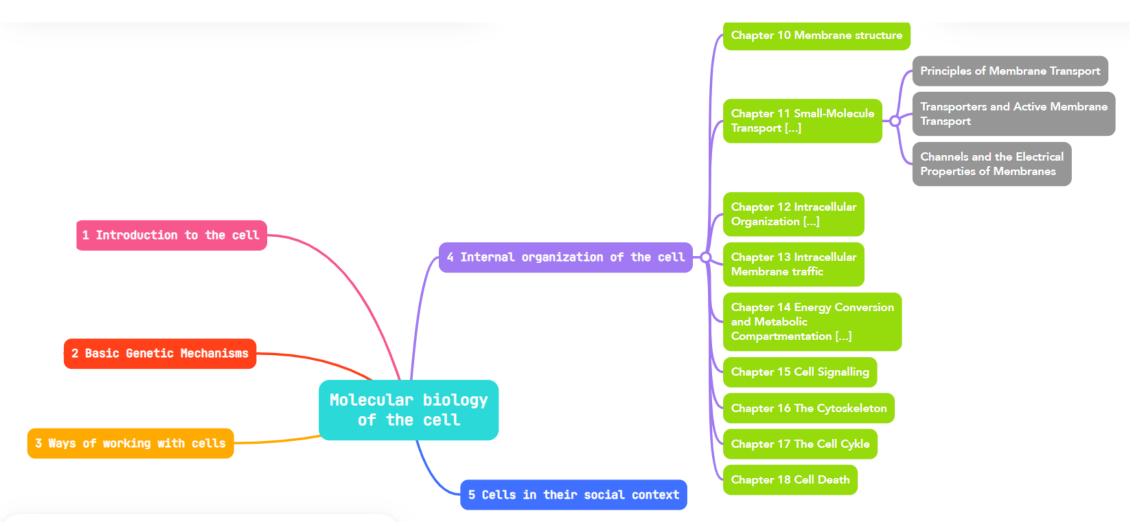
Create an overview: table of contents

Chapter 18

Cell death

PART IV INTERNAL ORGANIZATION OF THE CELL		
	Chapter 10	Membrane structure
	Chapter 11	Small-Molecule Transport and Electrical Properties of Membranes
		Principles of membrane transport
		Transoprters and active membrane transport
		Channels and the electrical properties of membranes
	Chapter 12	Intracellular Organization and Protein Sorting
	Chapter 13	Intracellular Membrane Traffic
	Chapter 14	Energy Conversion and Metabolic Compartmentation: Mitochondria and Chloroplasts
	Chapter 15	Cell Signalling
	Chapter 16	The Cytoskeleton
	Chapter 17	The Cell Cycle

Mind map and key concepts





An article

Before

What type of text is this?

Who is the intended audience?

What is the purpose of the text?

Packaging Technology and Science

PACKAGING TECHNOLOGY AND SCIENCE Packag, Technol. Sci. 2015; 28: 603–620 Published online 9 April 2015 in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/bsc127

Packaging's Role in Minimizing Food Loss and Waste Across the Supply Chain

By Karli Verghese, 1* Helen Lewis, 2 Simon Lockrey and Helén Williams 3

¹Centre for Design, RMIT University, GPO Box 2476, Melbourne 3001 Victoria Australia ²Helen Lewis Research, 14 Railway Ave, Austrianer 2515 New South Wales Australia ³Energy, Environmental and Building Technology, Karlstad University, Universitestgatan 2, Karlstad 65188, Sweden

This paper presents the results of Australian research that explored the role of packaging in minimizing food waste in the supply chain. The economic, social and environmental costs of food waste have been well documented elsewhere. This research contributes to the debate by identifying opportunities to reduce or recover food loss and waste through improved packaging.

In the fresh produce sector, e.g. waste can be reduced through the use of packaging that improves product protection, ventilation and temperature control. Other opportunities include improved design of distribution packaging to reduce damage in transport and handling; design of primary packaging to reduce waste in the home, e.g. through appropriate portion sizes and by reducing confusion over date labels; and the use of retail-ready packaging that minimizes handling and improves stock rotation in stores. An important conclusion of the study is that packaging can have a significant impact on reducing food waste in the food supply chain; and in some cases, a focus on reducing food waste will require more rather than less packaging. Packaging developers must therefore consider the product and its packaging as a complete system to optimize sustainability. Copyright © 2015 John Wiley & Sons, Ltd.

Received 29 May 2014; Revised 9 February 2015; Accepted 10 February 2015

KEY WORDS: food waste; packaging; life-cycle impacts; packaging innovation

INTRODUCTION

The global food supply chain faces significant challenges as a result of population and environmental pressures. ¹⁻¹¹ With the global population predicted to rise from 7 to 9 billion by 2050, ¹² the supply of food will need to increase by an estimated 77% compared with that in 2007. ⁸ This challenge is compounded by the diminishing availability of both productive agricultural land and clean water, which is influenced by salinity, drought, floods, climate change and competing land uses. ¹³ It is estimated that around 40% of all food intended for human consumption in developed countries end up as waste. ³

Food 'loss' occurs during agricultural production, post-harvest handling or processing, whereas food 'waste' occurs at the end of the food chain (during distribution, retail sale and final consumption). ¹⁴ The reasons for food loss and waste are many and complex, e.g. Quested *et al.* ⁹ and Buzby and Hyman ¹⁵ requiring action and cooperation by stakeholders at each stage of the food supply chain. Solutions to this problem include increased efficiency and waste reduction in the food supply chain, better planning by consumers ¹⁶ and improved packaging systems. ¹⁷ Product protection, which is the primary goal for packaging sustainability, sometimes requires more packaging rather than less to reduce food waste. ^{18,19} This paper presents the results of Australian research that explored the opportunities to design packaging to play an even greater role in reducing food waste.

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Year Title Authors

Abstract

Headlines

Flick through the text!



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By Karli Verghese, 14 Helen Lewis, 2 Simon Lockrey 1 and Helén Williams 3

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K. VERGHESE ET AL.

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BACKGROUND - ROLE OF PACKAGING IN FOOD PROTI

Packaging plays a vital role in containing and protecting food as it moves through the consumer. Functions of packaging include²⁰

- · protection, including preventing breakage, spoilage and contamination;
- · promotion, including describing product features, ingredients and brandin
- · information, including product identification, product preparation and end
- · convenience, including preparation and portioning;
- · utilisation and handling, including providing for transport and retailing; a
- · waste reduction, including increasing shelf-life.

With respect to food, the functions of packaging are continually evolving framethods to include aspects such as convenience features, tamper evidence, act tions that extend product shelf life or improve safety or sensory properties whi quality and intelligent technologies that provide stakeholders with the status rounding environment.²¹ According to Grönman et al.²², the main function of I and distribute the right product to the right end-user in a safe, cost-efficient an

In order to supply the increasing demands of consumers for fresh and pr round, a combination of different materials and packaging formats is used to condistribute and sell each food item. Packaging can be divided into the following

- Primary packaging: the retail or consumer pack that contains the sales unit (jar or steel can, or a plastic crate for loose fresh produce).
- Secondary/tertiary packaging: additional layers to protect and contain the distribution (e.g. a corrugated box, plastic or timber pallet, plastic crate stretch wrap).

Packaging designed to effectively contain and protect food, or be 'fit-for-pur ply chain should minimize both food and packaging waste. However, minimiz erally the priority because it accounts for a larger proportion of the life-cycle of the food-packaging system. ^{17,19,22,25,26} As an example, on average, packag count for only 10% of the total energy inputs for one person's weekly consump Packaging plays a critical role in ensuring that the other 90% of energy inputs not wasted.

Product protection needs to be the primary goal for packaging sustainabilit requires trade-offs between the amount of packaging and the amount of food therefore critical to recognize and investigate the potential trade-offs between p and food waste that may be required to produce the best environmental outcom ple, the shift to single-serve formats in some food categories may result in mor but the potential for food waste is reduced, meaning the overall environmental i of food and packaging will decrease. ^{17,18}

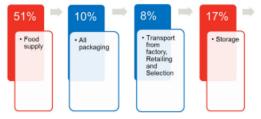


Figure 1. Energy for one person's weekly consumption of food, MJ/person/w from INCPEN and Verghese et al. 69,29

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PACKAGING'S ROLE IN MINIMIZING FOOD WASTE ACROSS THE SUPPLY CHAIN



Figure 2. Trade-offs between food waste and packaging.

In addition to product protection, the decision to use a particular type of packaging is a complex one driven by demands at numerous points along the supply chain (Figure 3) including the intended market for the product/packaging.²⁷

The increasing focus on food waste adds another dimension to the decision-making process. Through a literature review and interviews with stakeholders (as described in the Section on Data and Methods), an understanding of where and why food waste occurs throughout the supply chain was assembled (Section on Where and Why Food Waste is Generated). With the insights gained from the literature review, and also from stakeholder interviews, it was then possible to identify where opportunities exist for packaging to be improved to protect food and reduce food waste (Section on Opportunities to Reduce Food Waste through Improved Packaging).

DATA AND METHODS

There has been little research on the role of packaging in protecting fresh and processed foods at every stage of the supply chain, and in reducing food waste. These important functions are often overlooked in debates about food security and waste. One reason for this is the focus on legislation to minimize packaging because of a perceived waste problem (e.g. Institution of Mechanical Engineers²⁸). The need for further research on these interactions was originally identified in the Australian Food and Grocery Council's Future of Packaging White Paper.²⁹ The research presented in this article makes a unique contribution by focusing on packaging opportunities that may help to reduce food waste along the entire supply chain.

The research presented later in the text drew upon an international literature review and interviews with representatives from 15 organizations in the Australian food and packaging supply chain. It

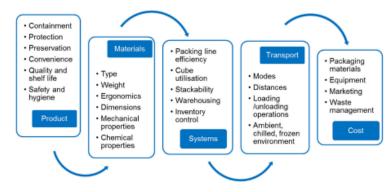


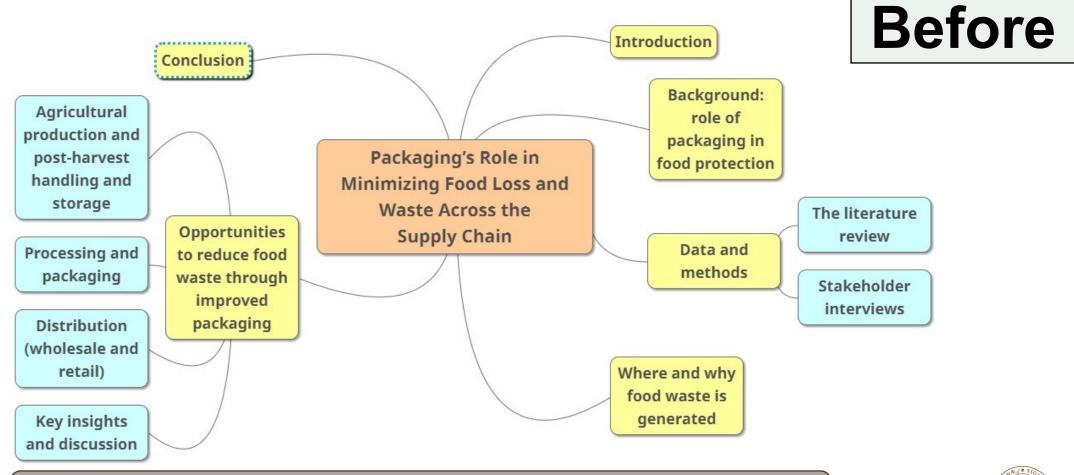
Figure 3. Examples of packaging decisions for fresh and processed foods. Source: Adapted from Olsson et al.; Hellstrom and Saghir; Robertson; and Azzi et al. 70-73

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Packag. Technol. Sci. 2015; 28: 603-620 DOI: 10.1002/pts

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Mind map: structure and key concepts



Note: This is *ONE* strategy to use for "writing to think"!



Before

- 1. What type of text is this?
- 2. Who is the intended audience?
- 3. What is the purpose of the text?
- 4. What do I want out of this reading?

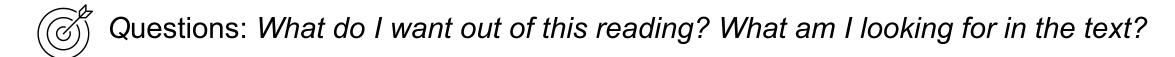
(Alt: Why did my professor assign this text?)

For example:

- To understand basic concepts/definitions
- To understand the current state of research in the field
- > To understand this text's argument to respond to it
- To understand the way this theory interprets the relationship between X and Y
- > To understand some issue in a specific context
- To understand how method choice affected the results
- ...?



Guidelines for working with reading goals

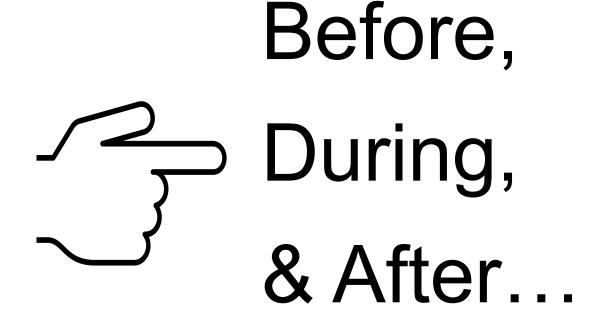




Choose reading strategy based on the purpose for reading.



Take responsibility...



...they encounter the text.



During

An active reader...

"...forms visual images to represent the content being read, connects to emotions, recalls settings and events that are similar to those presented in the reading, predicts what will happen next, asks questions, and thinks about the use of language. One of the most important steps, however, is to connect the manuscript [they] are reading with what [they] already know and to attach the facts, ideas, concepts, or perspectives to that known material."



Reading strategy

During

Active readers vary their speed according to their purpose (Sternberg 1987) and the text genre (Bean 2011).



Reading strategy

During

SKIM: for the gist and logic in sections and paragraphs. To understand how the text is organized and to find parts you can skip and those to read more carefully.

NORMAL: for an overall view of the content. To understand the author's argument, problem formulation, and results. Good for sorting texts you don't need to read more carefully (i.e. when researching for an assignment)

INTENSIVE: for detailed knowledge, precise information. To learn the material deeply and be able to reproduce and analyze the nuances of the text.



Reading in your second language...

...will be slower than in your first language.

Advice:

- Underline and look up words after each section
- Make your own lists of terminology with definitions
- Read to observe language
- Make lists of phrases (and use <u>phrasebanks</u>)
- > Read, read, read...



Reading strategy: paragraphs



Text 2: From Ashforth, B.E & Humphrey, R.H (1993) 'Emotional labor in service roles: the influence of identity', *Academy of Management Review*, 18(1): 88-115.

The Service Context

According to the services management literature, there are several reasons why the concept of emotional labor has particular relevance to service encounters (Bowen, Chase, Cummings, & Associates, 1990; Bowen & Schneider, 1988; Brown, Gummesson, Edvardsson, & Gustavsson, 1991). First, front-line service personnel are situated at the organization-customer interface and, thus, represent the organization to customers. (The generic term *customers* is meant to encompass specific types such as patients, clients, and students.) Second, service transactions often involve face-to-face interactions between service agents and customers. Third, given the uncertainty created by customer participation in the service encounter, such encounters often have a dynamic and emergent quality. Fourth, the services rendered during an encounter are relatively intangible, thus making it difficult for customers to evaluate service quality. These four factors place a premium on the behavior of the service agent during the encounter, and this behavior often strongly affects customers' perceptions of product quality, both of goods and services (Bowen et al., 1989).

Thus, following Hochschild (1983), we focus on organizational members in customer-contact functions. Although our primary focus is on transactions with *external* customers ...



First and last + signposts

During

Text 2: From Ashforth, B.E & Humphrey, R.H (1993) 'Emotional labor in service roles: the influence of identity', *Academy of Management Review*, 18(1): 88-115.

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First sentence (topic sentence)

Sign posts

Last sentence



Thus, following Hochschild (1983), we focus on organizational members in customer-contact functions. Although our primary focus is on transactions with *external* customers ...

Reading strategy: paragraphs

During

Text 3: From Dolin et al. (2002) 'Effectiveness of acute postoperative pain management: I. Evidence from published data', *British Journal of Anaesthesia* 89 (3): 409-23

A number of studies recorded pain both at rest and on movement. It is unclear whether patients distinguish between pain at rest and pain on movement. This may be influenced by such factors as presence of persistent cough, need for physiotherapy, dressing changes, etc. It is probable that, when patients are asked to rate pain over the previous 4 h or at the end of 24 h, they may not distinguish between pain at rest and pain on movement, but may give an overall assessment. It was interesting to note that measurement of pain on movement occurred mostly in studies involving epidural analgesia and seemed of less concern to authors reporting results for other techniques. There were sufficient data to calculate an overall incidence only for pain on movement for moderate-severe pain, but not for severe pain alone. It seems from the literature that pain on movement was reported relatively infrequently and the calculated incidence of pain was associated with wide confidence intervals. For this reason we have limited conclusions and recommendations to pain at rest, which was available for both moderate-severe pain and severe pain, and was associated with narrower confidence intervals.

From the discussion section



First and last and key words /key phrases

Text 3: From Dolin et al. (2002) 'Effectiveness of acute postoperative pain management: I. Evidence from published data', *British Journal of Anaesthesia* 89 (3): 409-23

During

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What to include in your notes: Content + Reflections

- Problem-solution?
 - Main claim and evidence?
 - Keywords
- Clarifying examples
- Quotes (sparingly)
- Page numbers and reference info

- Questions
- Associations, reactions, ideas
- Own examples
- Visualizations
- Connections to previous reading



Questions by article section

During

TITLE

- What is the main idea/are the main concepts?
- Who does it concern?
- What type of study?

ABSTRACT

- What concepts/ideas were discussed/analyzed/compared?
- How?
- Main results and conclusions?

INTRODUCTION

- What is the purpose of the article? (new data, new theory, literature review, etc.)
- What is the problem/question being solved or answered?
- Why should we care about this problem?
- What is the solution/hypothesis?
- What can I expect in the rest of the article?



Questions by article section

During

METHOD (if relevant)

- What data collection method(s) is (are) used?
- Is this method a valid choice? What other ways could the study have been conducted?
- Do similar studies use similar methods?
- Any potential bias? Is it accounted for?

RESULTS

- How do the results relate to the RQ or solution in the intro?
 (Does the evidence fit?)
- Are the results reported clearly and objectively?



Questions by article section

During

DISCUSSION

- Why were the results achieved?
- How does this article contribute to the ongoing conversation in the field?
- What do the findings help us understand better?
- What can we do to change/improve the relevant situation with these findings?

CONCLUSION

- What is the overall summary of this text?
- Is the significance the same as in the introduction or expanded?
- Any future research recommended?
- Were my expectations met?



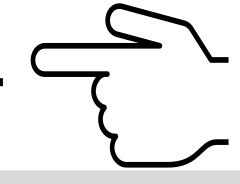
Active readers...

Take responsibility...

Before,

During,

& After...



...they encounter the text.





Recall and review



- 1. Read a section of text then put it away.
- 2. Recite out loud or write down what you remember.
- 3. Get out the text and review, noting what you remembered incorrectly or forgot.

*Study with fact-based material: R & R is more effective than rereading again and again (Roediger and Karpick 2006)

*Possibly just as effective but less time-consuming than heavy note-taking (McDaniel, Howard, & Einstein 2009)



Reflect and summarize

After

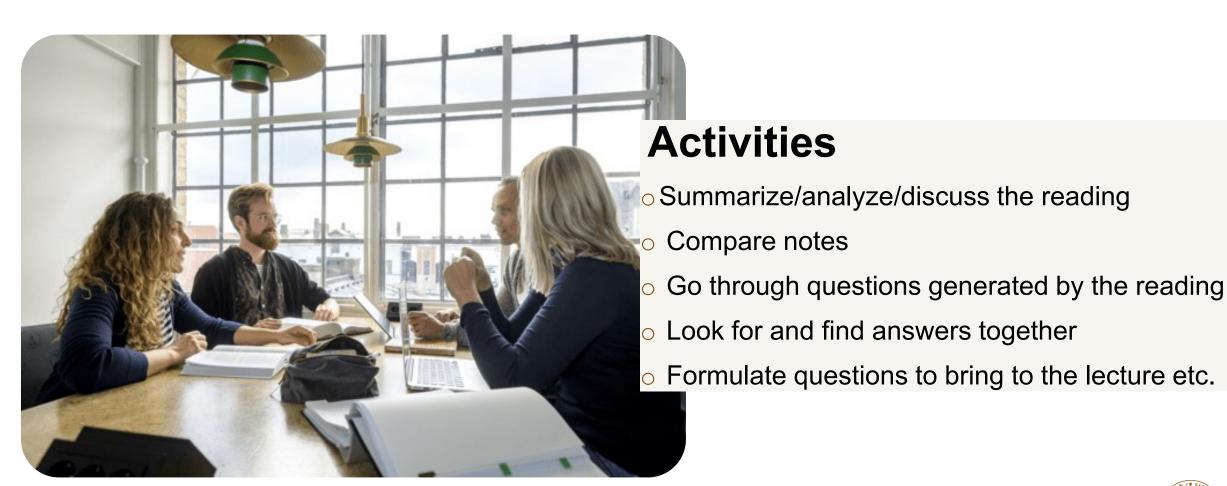
- 1. What was the **main point**?
- 2. What did you find most surprising?
- 3. What did you find most **confusing**, and why did you find it confusing?

*Strong correlation between serious reflections on reading and final course grades has been found. (Wirth 2008)



Meeting with study group







Active Reading

Before...
During...
After...





Example of activities for "active reading"

BEFORE

- Familiarize yourself with the text
- Focus on the big picture first
- Think about and formulate your reading (i.e. learning) goals for the reading session

DURING

- Choose appropriate reading strategy (skimming, normal reading, intensive reading)
- Connect what you are reading with what you already know
- Ask questions to the text
- Take reflective notes

AFTER

- Think about what you have learned; did you reach your goals?
- Choose relevant strategy for revising (e.g. Recall and Review, Reflect and Summarize, Meeting with studyակրծևի

- 1 What did you find most useful in today's lecture?
- 2. How can you implement it in your reading routine?
- 3. When will you start?





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