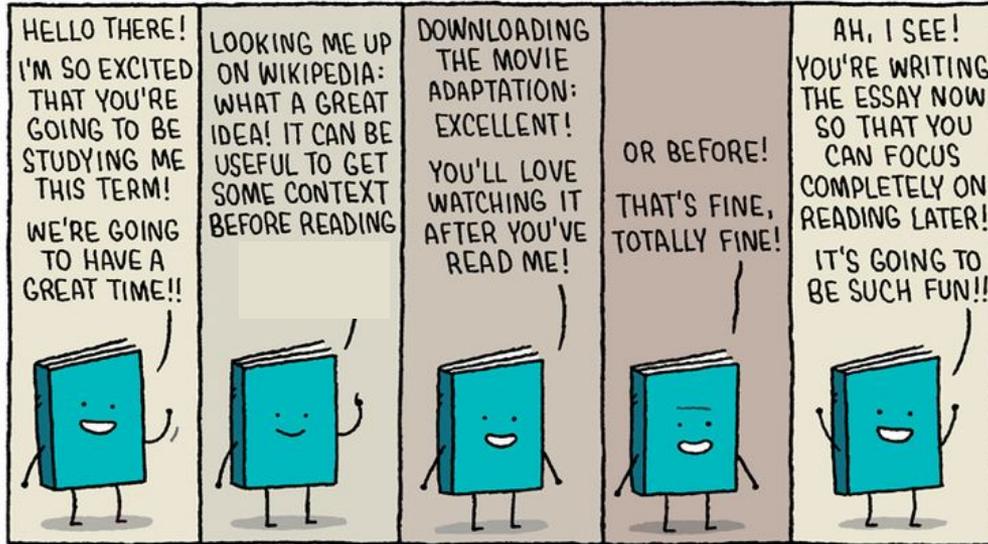
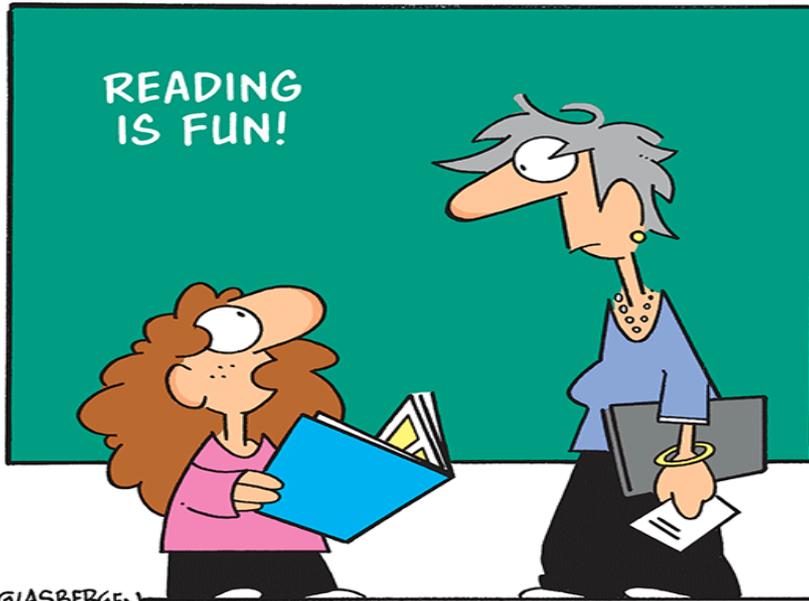
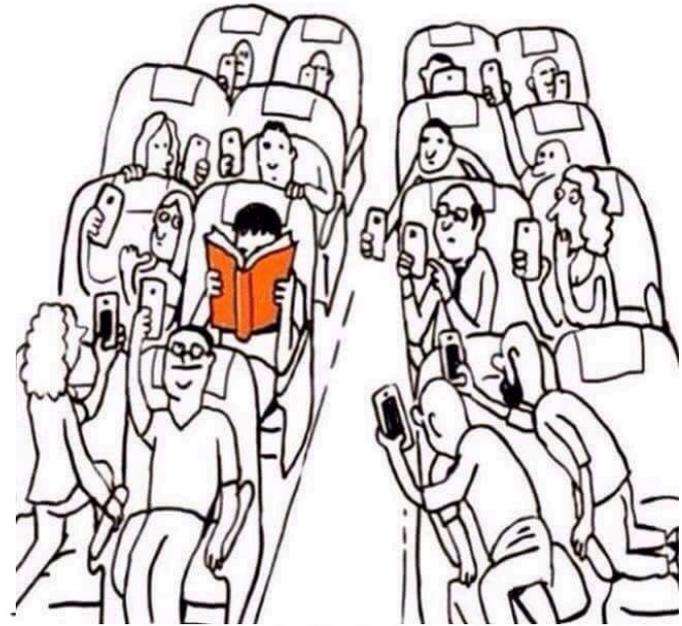


THE SET TEXT



TOM GAULD



"I tapped the page, but nothing happened!"



"Just think of it as if you're reading a long text message."

Scaffolding academic reading for a more fluid learning experience

TESL Nova Scotia Fall Conference 2016

Jody Shimoda



Overview

- 1. Context and project rationale**
- 2. What is strategic reading?**
- 3. Teaching considerations**
- 4. Implementation**

UNIVERSITY OF CALGARY IN QATAR

Master of Nursing

Bachelor of Nursing

TOEFL iBT – 80
IELTS – 6.0

TOEFL iBT – 40
IELTS – 4.0

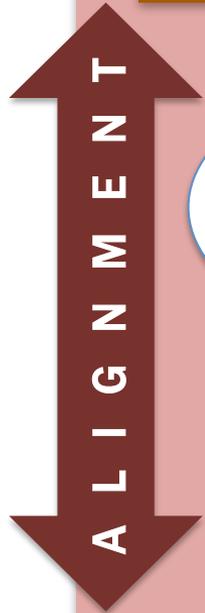
→ *identify* → *address*

Nursing Foundation Program

*English for
Academic
Purposes*

*Math
Biology
Chemistry*

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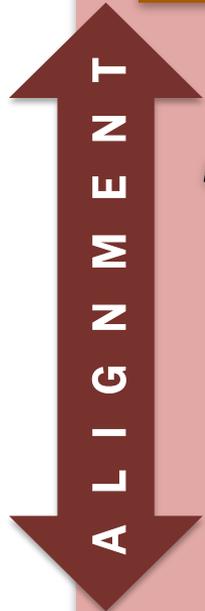
reading gaps → identify → address

Nursing Foundation Program

**English for
Academic
Purposes**

**Math
Biology
Chemistry**

**A
L
I
G
N
M
E
N
T**



Therapeutic Interventions (pharmacology)

- GPA destroyer
- approaches

bio-chem, systems, diseases, stand-alone seminars

- adjustments

case studies, anecdotes, open book exams, assignment-based

- result: knowledge gaps remained, textbook use low

Student struggles:

- ~~sequencing: mid 1st year~~
- pre: anatomy & physiology, pathophysiology
- can't apply what don't know
- **textbook** access

Metabolism is a process whereby drugs are made less or more active.

CORE CONCEPT 4.4

Metabolism is the next step in pharmacokinetics. It is often described as the total of all chemical reactions in the body. Metabolism occurs in almost every cell and organ—including the intestinal tract and kidneys—but the liver is the primary site. The individual chemical reactions of metabolism are called **biotransformation** reactions: They are the chemical conversion of drugs from one form to another that may result in increased or decreased activity. Metabolism is important to drug therapy because these chemical reactions deactivate most drugs. For this reason, patients with liver disease usually receive much lower doses than normal because their liver is unable to metabolize the drug to a safe, active form.

Certain drugs called **prodrugs** require metabolism to make them active. In these cases, as the drug is broken down by chemical reactions of metabolism, the products formed by the breakdown produce a more intense response than does the original drug. An example of such a prodrug is sulfasalazine (Azulfidine), which is not active in its original form taken orally. Azulfidine is taken for the condition of ulcerative colitis. It is broken down by bacteria in the colon into two products that become active. Such cases of prodrugs are infrequent. Usually, metabolism is affected by the use of other drugs or the presence of other diseases.

An important mechanism that affects metabolism and drug action is the **first-pass effect**. Substances absorbed across the intestinal wall enter blood vessels known as the *hepatic portal circulation*, which carries blood directly to the liver (Figure 4.2 ■). Drugs administered orally are absorbed into the hepatic portal circulation and are taken directly to the liver for metabolism. The liver may then metabolize the drug to a less active form before it is distributed to the rest of the body and target organs. In some cases, this first-pass effect can inactivate more than 90% of an orally administered drug before it can reach the general circulation.

Many patients differ in how efficiently their metabolic enzymes work to metabolize drugs. Age, kidney and liver disease, genetics, and other factors can dramatically affect metabolism. Some patients metabolize drugs very slowly, others very quickly.

bio = biologic
transformation = changing process

pro = before
drug = medication form

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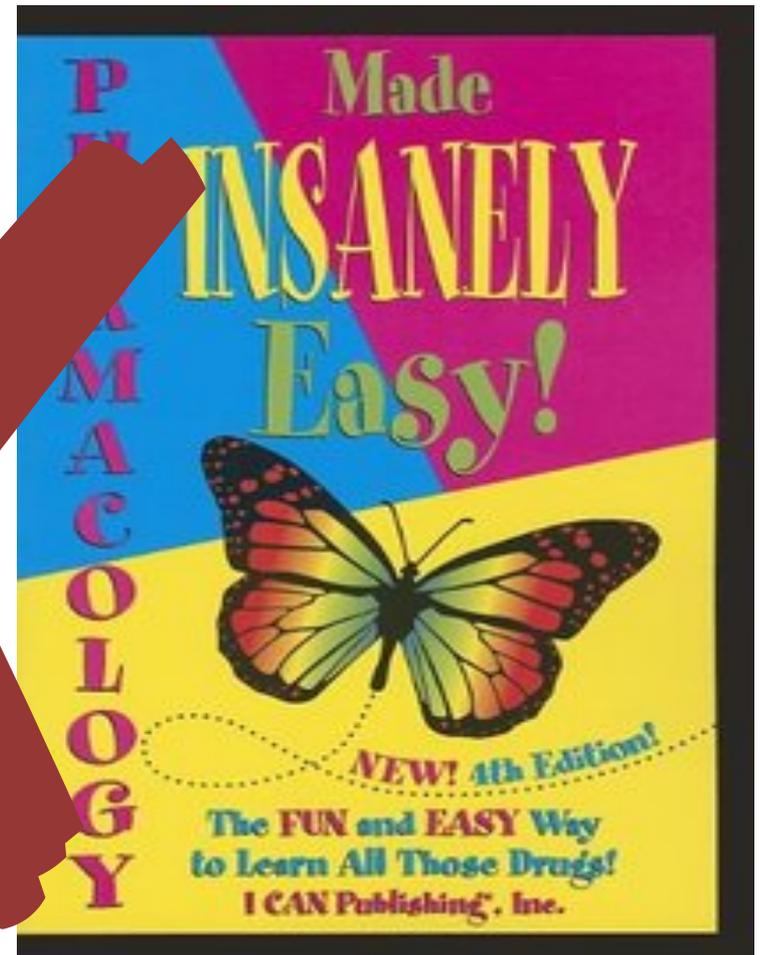
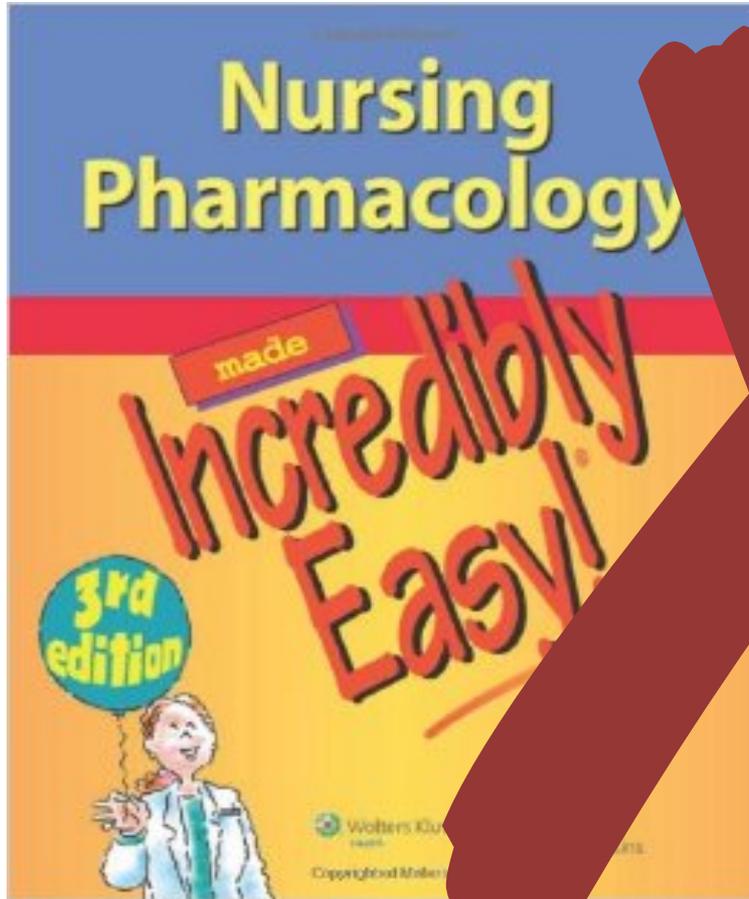
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vocabulary levels: 67% 1-1000 3% 1001-2000 8% academic 22% off-list

passive structures: 28% (> 15% problem) readability score (across indexes = college, graduate)



Strategic Reading:

- locate and construct meaning using **cognitive strategies**

Strategic Readers:

- read to learn → transfer
- read with purpose

Strategies:

- systematically teach
- embed

activate – prior knowledge, experience

infer – connect written/unwritten

clarify – how/what reading

question – generate, answer

search – define words, gather information

summarize – restating

visualize/organize – extract + construct meaning

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Getting learners to engage with text is . . .

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CORE CONCEPT 4.4

- **When I look at this text, I feel** _____
- **Get meaning = reading** _____ **times**
- **Reading experience = 1 (smooth) 2 3 (jumpy)**
- **Establishing takeaway = 1 (easy) 2 3 (difficult)**

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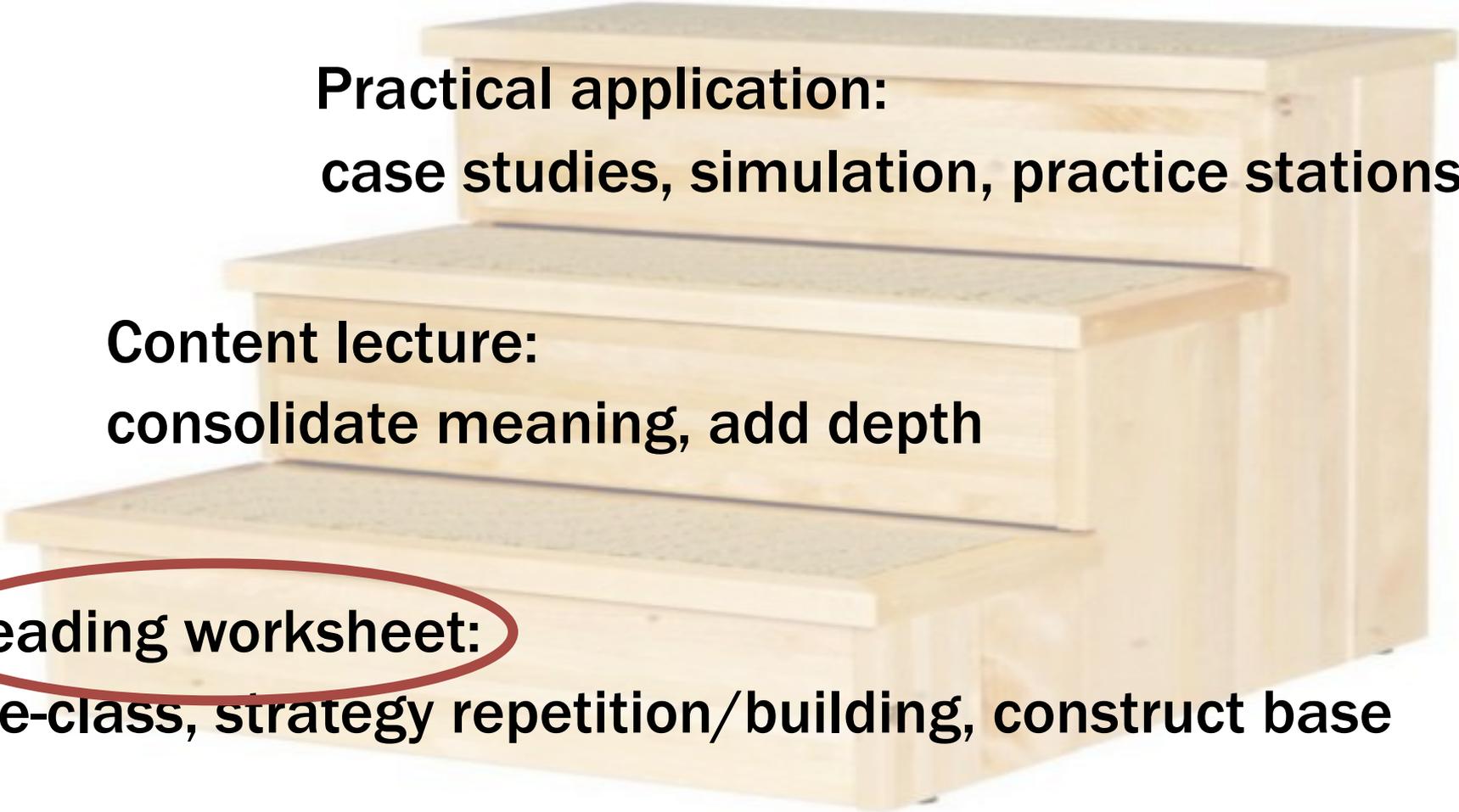
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- **Layout/design/textual elements?**
 - **Nice to know vs. need to know?**
 - **Activities to support cognitive strategies?**
- (activate, infer, clarify, question, search, summarize, visualize/organize)



Practical application:
case studies, simulation, practice stations

Content lecture:
consolidate meaning, add depth

Reading worksheet:

pre-class, strategy repetition/building, construct base

Chapter 4: What Happens After a Drug Has Been Administered

A. Background Knowledge - What do you already know?

Are these sentences true (T) or false (F)?

1. ___ Drugs aff
2. ___ It is equa **nice to know vs. need to know**
to the bo
3. ___ Sometimes, something already in a patient's body can affect how a drug works.

B. Core Vocabulary - What words do you need to know?

Match the words and their meanings:

<u>pharmacokinetics</u>	<u>chemical</u> reactions in the body that affect drugs
<u>absorption</u>	<u>the</u> drug concentration between minimum and toxic ranges

C. Core Concepts - What do you need to understand about this topic?

Core Concept 4.1

1. What are 2 things you will understand about drugs if you study pharmacokinetics?
-

2. Number the processes from 1 (first) to 4 (last):

___ metabolism ___ absorption ___ distribution ___ excretion

Core Concept 4.2

3. Drugs are absorbed into the _____. (look at figure 4.1)
4. Food in the digestive tract prevents the absorption of orally administered drugs. T / F (*if your answer is F, change the sentence to make it T)

Direct strategy practice

repeated

changing question formats

awareness building

(linked purpose – what did you use, what helped)

automaticity

A. Background Knowledge - What do you already know?

Are these sentences true (T) or false (F)?

activate

1. ____ Drugs affect all people in the same way.
2. ____ It is equally important to know what the body does to a drug and what a drug does to the body.
3. ____ Sometimes, something already in a patient's body can affect how a drug works.

B. Core Vocabulary - What words do you need to know?

Match the words and their meanings:

search

pharmacokinetics	chemical reactions in the body that affect drugs
absorption	the drug concentration between minimum and toxic ranges
distribution	how drugs are removed from the body

C. Core Concepts - What do you need to understand about this topic?

Core Concept 4.1

infer

1. What are 2 things you will understand about drugs if you study pharmacokinetics?

2. Number the processes from 1 (first) to 4 (last): **visualize/organize**

___ metabolism ___ absorption ___ distribution ___ excretion

Core Concept 4.2

3. Drugs are absorbed into the _____. (look at figure 4.1)

4. Food in the digestive tract prevents the absorption of orally administered drugs. T / F
(*if your answer is F, change the sentence to make it T)

clarify

summarize

24. "**Enterohepatic recirculation**" happens when _____ are spread back to the _____. This is important to know _____.

25. Why do breastfeeding mothers need to be careful about drugs or using natural therapies? _____

26. What are three questions you would ask a breastfeeding mother? Why?

a. _____

b. _____

c. _____

I would ask these questions because . . . |

question

Basic Concepts in Pharmacology

Chapter 4: What happens after a drug has been administered

1	pharmacokinetics	what the body does to drugs
2	absorption	how drugs are moved into or across <i>membranes</i>
3	distribution	how drugs are moved through the body
4	metabolism	drugs change from one form to another in the body
5	bio transformation	chemical reactions in the body that affect drugs
6	prodrugs	drugs that require <i>metabolism</i> to make them active
7	excretion	how drugs are removed from the body
8	rate of elimination	how much drug the body removes during a specific time
9	half-life	the amount of time needed for a drug concentration to decrease by half
10	minimum effective concentration	the amount of drug required to produce a <i>therapeutic</i> effect
11	toxic concentration	the level of a drug that produces bad effects
12	therapeutic range	the drug concentration between minimum and toxic ranges
13	pharmacodynamics	what drugs do to the body

systematic, spaced-repetition
200 core words, 20/week, cumulative
revisit in definitions, content

Instructor

- assign reading and worksheet
- complete to understand content class

Student

- worksheets optional, ungraded
- answers via content class or answer key given

→ content builds on worksheet reading base

→ no answer key

→ prepares for practical application

**build collaborative support for
content teachers to integrate
ESL pedagogy**

**more deeply embed strategic
reading practice in Foundation
Program**