Assessing Reading: The READ Initiative

March 6th, 2015

Prof Davida S. Smyth

New York City College of Technology


READING IS TO THE MIND WHAT
EXERCISE IS TO THE BODY.
Lifehack

New York City College of Technology

Final Grade Distribution Analysis

Fall 2011

Note: as of Spring 2010, "% Withdrew w/o Penalty" is the sum of grades W and WN. Originally WN grade was added to the "% Withdrew w Penalty" column.

The "Did Not Pass" column includes F, R, W, WN, WF, WU, I and Other grades. "I/Other" indicates course grade not given or incompletes. The "Withdrew w/ Penalty" column includes WU, WF and these grades affect the students' GPA. Courses are sorted by "% Did Not Pass" and Total Enrollment. Courses are grouped by student enrollment: 1000+, 500 to 999, 100 to 499, 50 to 99, 26 to 49, and 1 to 25.

BY Biological Sciences

	Course Code	% Pass D or Better	% Pass C or Better	% Did Not Pass (F/R/W/WN/WF/WU/I/Other)	% Fail	% Withdrew w/ Penalty	%Withdrew w/o Penalty	% I/Other	Total Enrollment
Grouping	**1000+**								
	BIO 1101	76.0%	63.8%	**24.0%**	5.5%	6.5%	9.0%	2.9%	1697
Grouping	**500-999**								
	BIO 2311	84.8%	79.3%	**15.2%**	3.6%	1.9%	8.6%	1.2%	584
Grouping	**100-499**								
	BIO 1201	83.6%	73.5%	**16.4%**	4.5%	2.9%	8.0%	1.1%	377
	BIO 3302	87.9%	84.2%	**12.1%**	0.9%	1.9%	8.8%	0.5%	215
	BIO 2312	89.6%	84.8%	**10.4%**	2.7%	1.9%	5.1%	0.7%	415
	BIO 3524	96.2%	96.2%	**3.8%**	1.5%	0.0%	1.5%	0.8%	130
Grouping	**50-99**								
	BIO 3526	93.1%	93.1%	**6.9%**	0.0%	0.0%	6.9%	0.0%	72
Grouping	**1-25**								
	BIO 3350	91.7%	91.7%	**8.3%**	8.3%	0.0%	0.0%	0.0%	12
	BIO 3601	93.8%	93.8%	**6.3%**	0.0%	0.0%	6.3%	0.0%	16

Student Name: _____ **Course:** _____ **Section Number:** _____

College Wide Reading Rubric (For Spring 2013 Gen Ed Assessment)

Instructions:
- Check in only one box after each of the questions, for example ☑ or ☒.
- Use a No. 2 pencil, blue or black ballpoint pen (not gel pens).

Performance Criteria	*Does not Meet Criterion*	*Approaching Criterion*	*Meets Criterion*	*Surpasses Criterion*
Comprehension	*Unable to comprehend the main points; lacks vocabulary to summarize the information text/reading communicates.* ☐	*Comprehends some main points and major details; draws basic inferences to purpose of text/reading.* ☐	*Comprehends all main points, details, and able to determine meaning of vocabulariy in context* ☐	*Comprehends the text fully and able to articulate the meaning* ☐
Context	*Unable to apply information from the reading to a broader context either within or outside of discipline.* ☐	*Struggles to apply information to a broader context, but aware that it is useful and important.* ☐	*Applies information from the reading to a boarder context, indicating an awareness that it is useful within the discipline.* ☐	*Proficiently applies information to broader contexts, both within and outside of the discipline.* ☐
Analysis	*Unable to identify the progression of the author's ideas or argument; unable to evaluate or compare facts, positions and procedures amongst various texts.* ☐	*Identifies at least one idea or argument but does not provide an evaluation; struggles at comparing or contrast information between different sources.* ☐	*Identifies ideas or arguments but does not provide a complete evaluation; demonstrates increasing ability to compare or contrast ideas or arguments to support the understanding as a whole.* ☐	*Demonstrates an ability to evaluate ideas or arguments and an advanced understanding to compare or contrast information within and beyond the text.* ☐
Interpretation	*Unable to identify implied ideas that are not directly stated in the text* ☐	*Identifies implied ideas but unable to draw meaningfrul conclusions from the text* ☐	*Understands inferences and draw meaningful conclusions* ☐	*Articulates implied meaning and generates critical insight* ☐

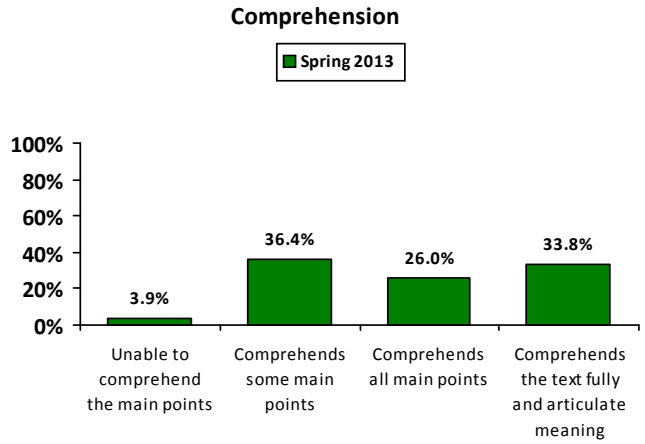
See reverse page for optional performance criteria ⇨

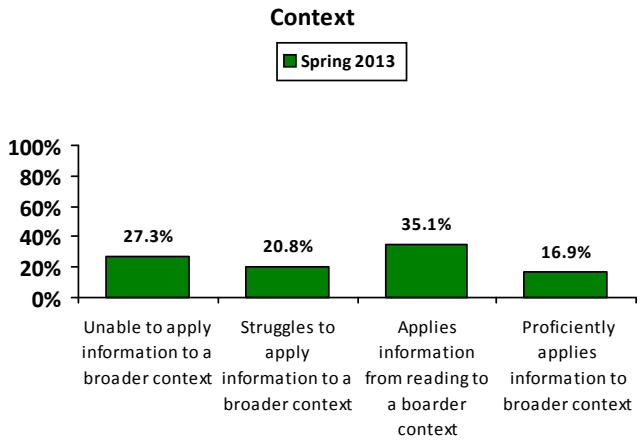
Optional Performance Criteria:
Please use the below performance criteria if they reflect in your assignment.

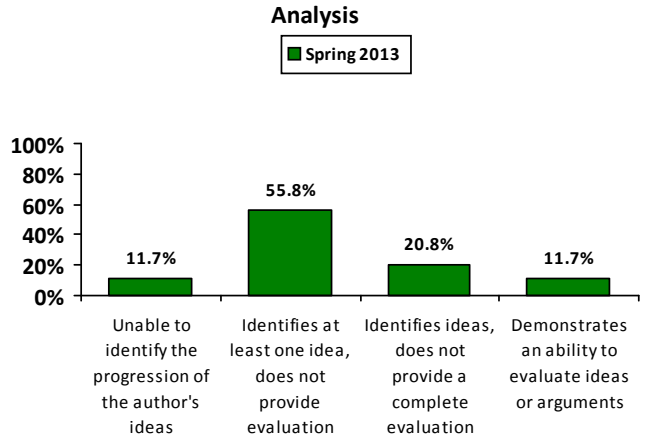
General Education Reading Assessment

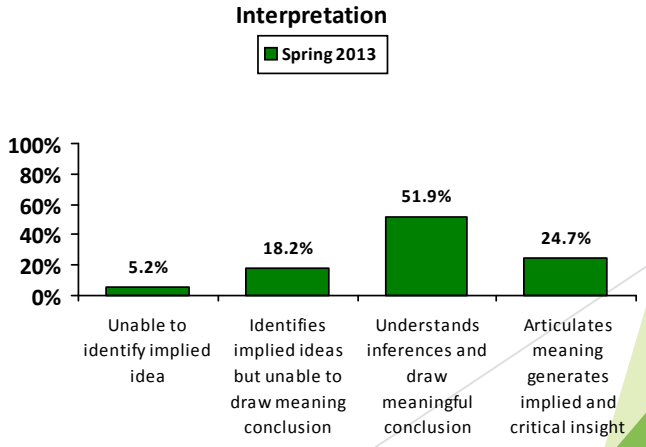
Report by College: New York City College of Technology - Spring 2013
Group(s): Reading Effectively Across Disciplines
Number of Sections: 5
Number of Students: 77

Assessment Results by Performance Criteria









What is READ ?

- Interdisciplinary project involving several departments – Biology, Marketing, CET, Dental Hygiene, EET, RAD Tech will join us this semester
- Assessment demonstrated students lack reading skills
- Founded in Spring 2013 – entering the 3rd year
- Strategies and practices to foster student reading

READ
Reading Effectively Across the Disciplines

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Faculty Development

Peer-led Team Learning

Effective Assessment

Openlab READ sites

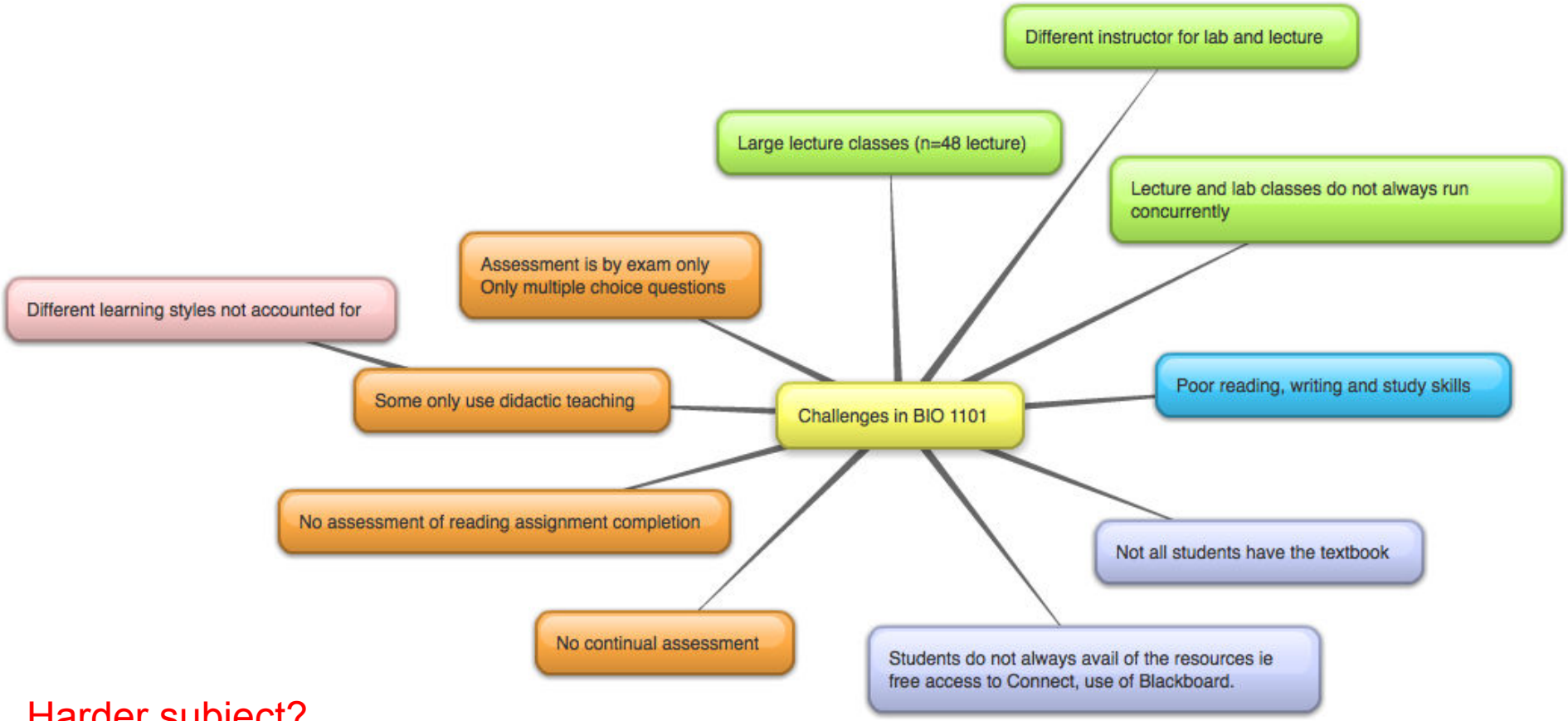
READ
Reading Effectively Across the Disciplines

READ Objectives

- Equip content faculty with reading strategies and teaching approaches to enhance disciplinary literacy.
- Develop content specific assignments to help students read and learn more effectively.
- Evaluate the implementation of strategies.
- Implement READ PLTL student workshops to enhance learning.
- Promote active reading and learning by making reading assignments necessary and relevant.
- Enable students to become responsible and indep readers.

READ
Reading Effectively Across the Disciplines

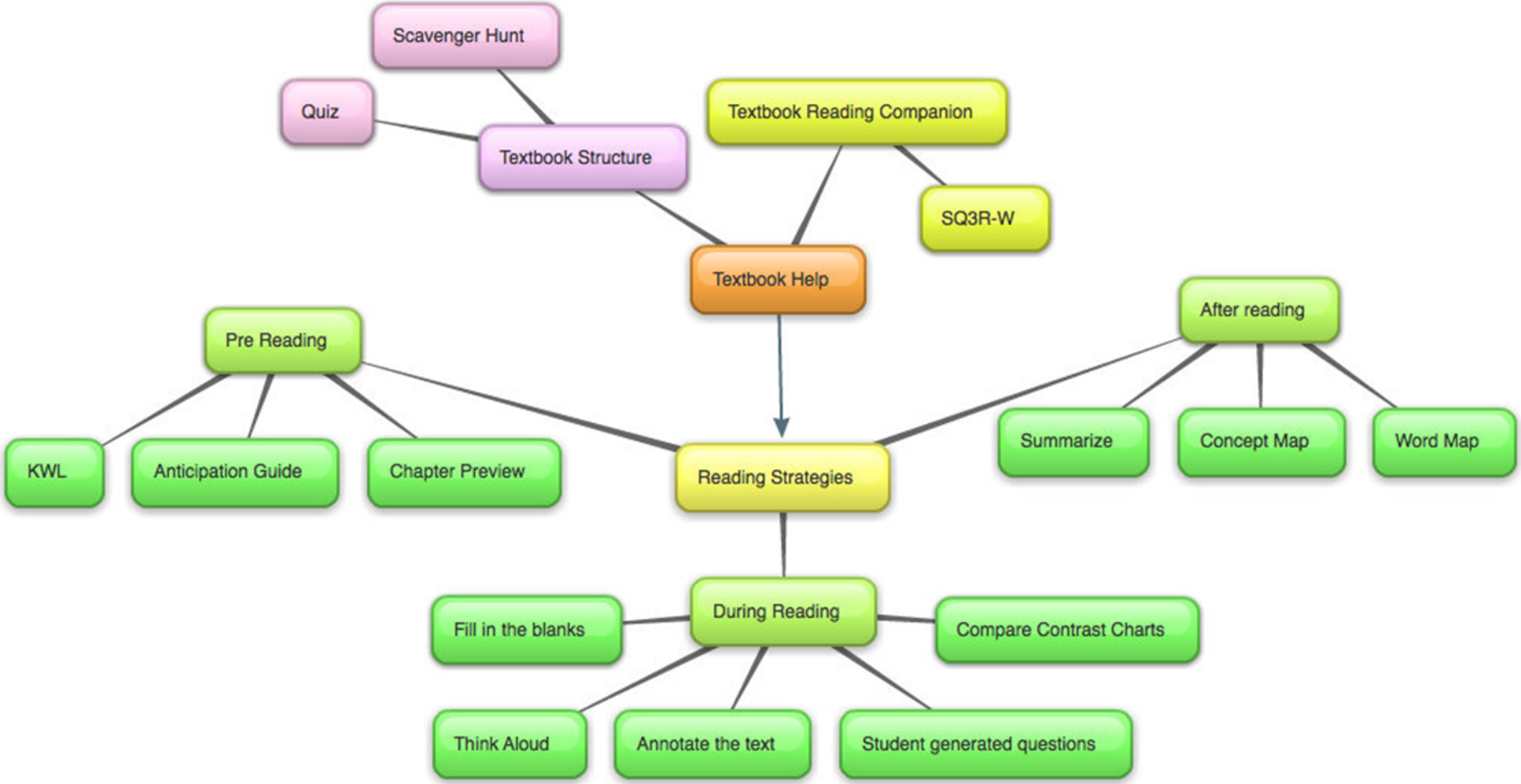
How BIO 1101 fits into the READ Initiative

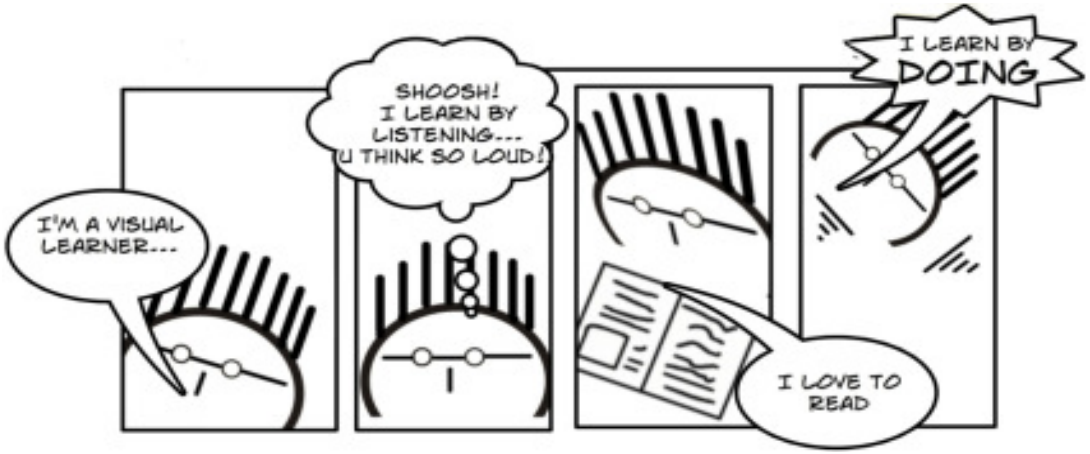


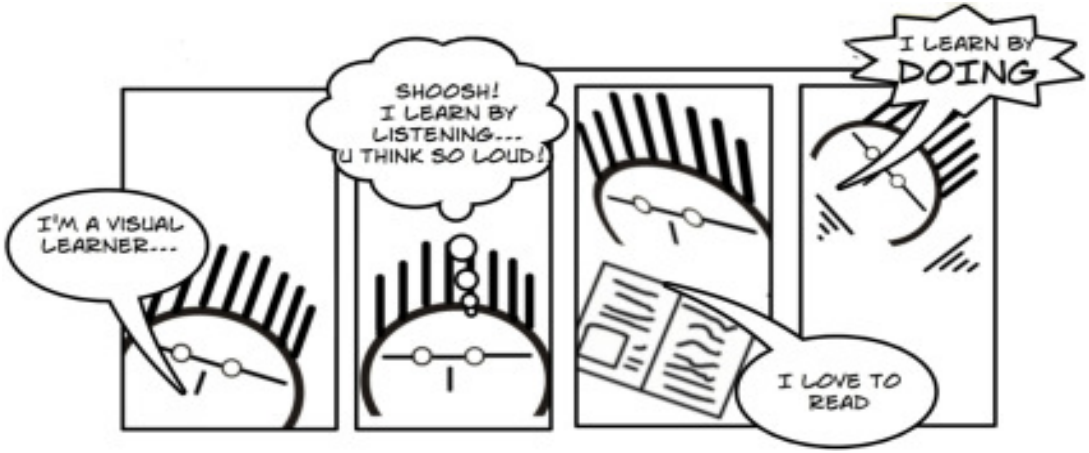
Harder subject?
More reading?
Extensive, difficult vocabulary?

READ
Reading Effectively Across the Disciplines


BIO 1101
Lecture
Laboratory
PLTL
Lecture Slides
Textbook
Manual
Laboratory Slides
Lecture Reading Objectives
Reading Strategies
Lab Reading Objectives
Reading Assignments
Reading Assignments
Improve Student Reading Skills
Improve Student Comprehension
Improve Pass Rates
Improve Student Satisfaction

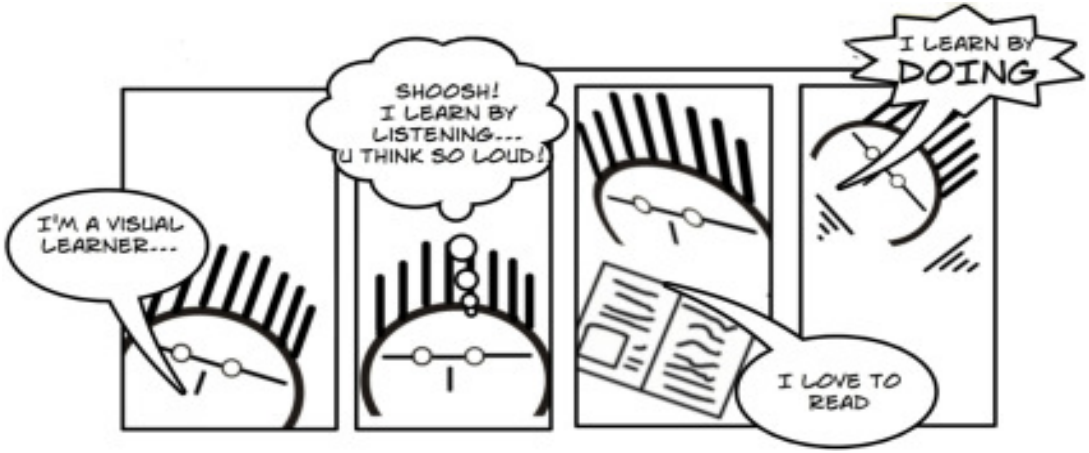

Scavenger Hunt
Quiz
Textbook Structure
Textbook Reading Companion
SQ3R-W
Textbook Help
Pre Reading
KWL
Anticipation Guide
Chapter Preview
Reading Strategies
After reading
Summarize
Concept Map
Word Map
During Reading
Fill in the blanks
Compare Contrast Charts
Think Aloud
Annotate the text
Student generated questions


I'M A VISUAL LEARNER...
SHOOSH! I LEARN BY LISTENING... U THINK SO LOUD!
I LOVE TO READ
I LEARN BY DOING



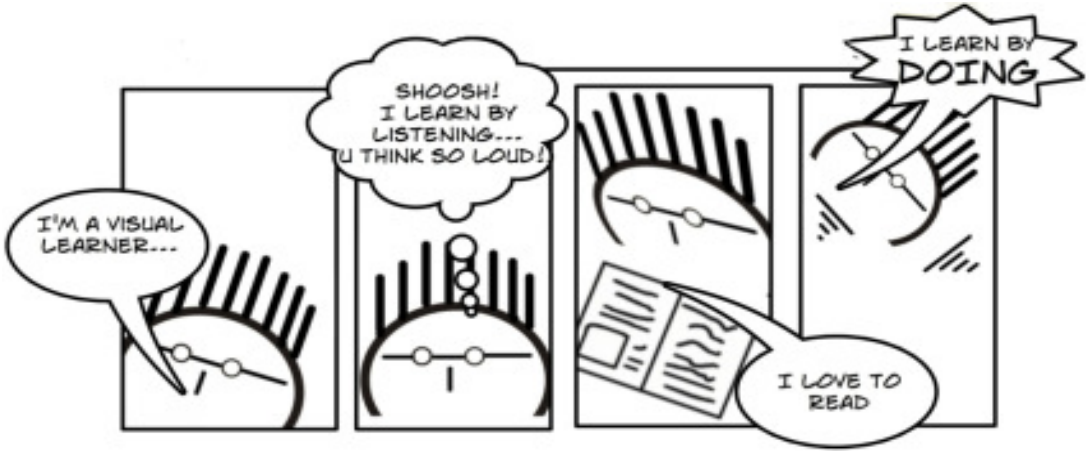
Read/Write Learners- A method that would improve their learning would be to rewrite their notes and textbook.

- Summary writing
- Fill in the blanks
- Compare and contrast
- Chapter preview
- Annotating text
- Anticipation guides
- Word maps



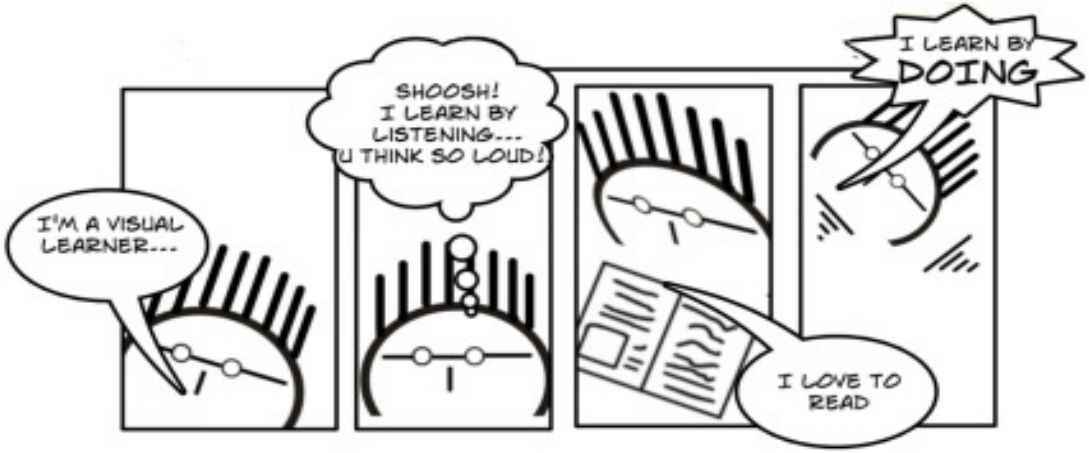
Visual Learners- They utilize certain tools as diagrams, charts, pictures while taking important notes. One strategy that would enhance their knowledge would be to become fully creative with their diagrams by expressing their ideas to a limit amount of words that would allow them to depict a mental imagery; which should be posted on the walls of the classroom.

- Concept maps
- Annotating text
- Labeling diagrams



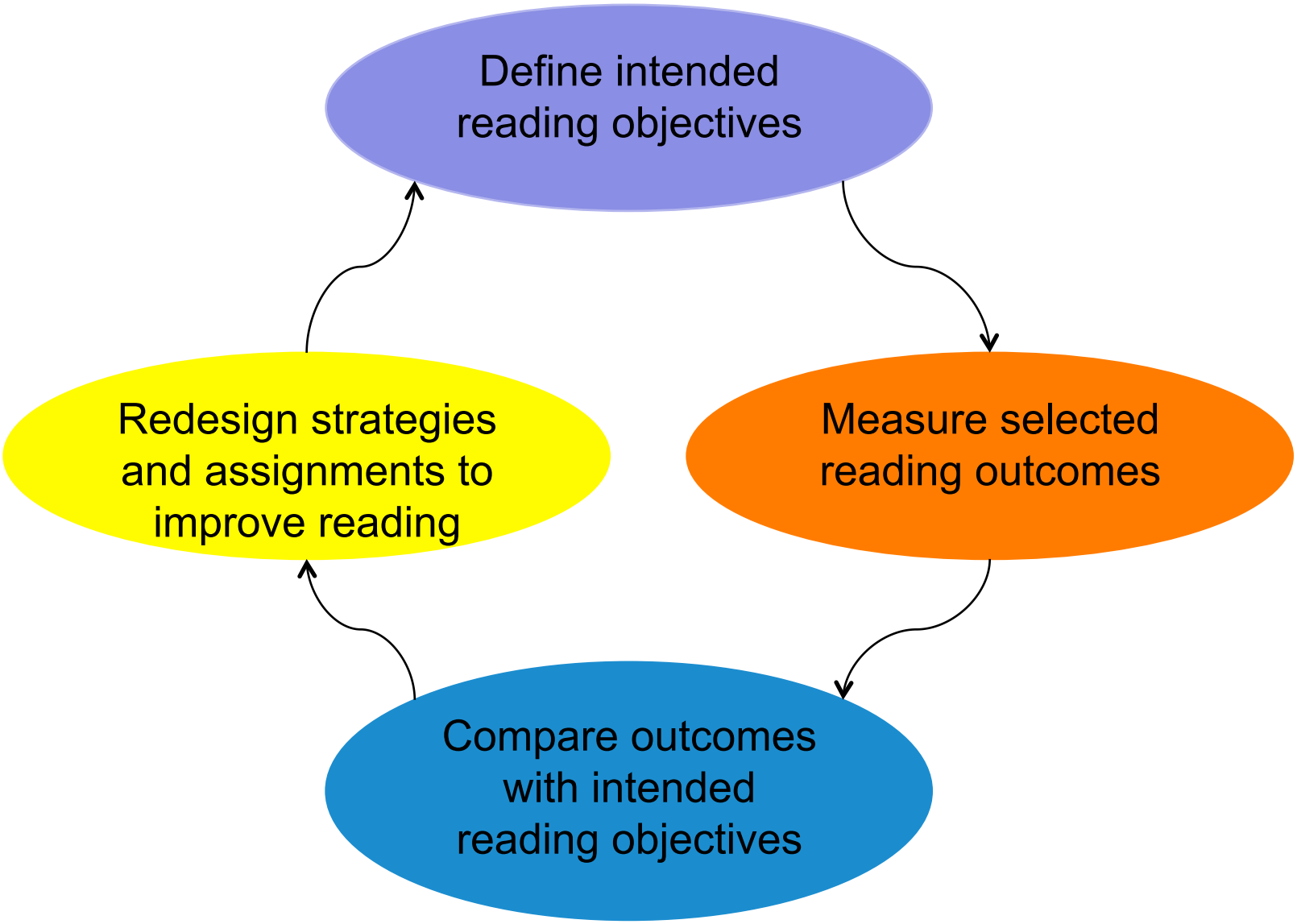
Auditory Learners-They usually work with other peers in a group session because it helps increase their understanding. To improve their technique method, we would allow students to read from the textbook so that they can hear their own voice stating the problem out loud.

- Reciprocal teaching
- Think aloud
- ABC brainstorming
- Carousel brainstorming



Kinesthetic Learners- A strategy to improve these learners would be to record notes and listen to them by exercising. It would help you focus. Students can listen to classical music to help them concentrate by reading.

- Using models in workshop
- Arranging concepts using flash cards
- Acting out scenarios/role play
- Translate information into diagrams or other visual study tools.


Define intended reading objectives
Measure selected reading outcomes
Compare outcomes with intended reading objectives
Redesign strategies and assignments to improve reading

What did we do in Fall 2014?

- Modified slides throughout – blanks, reading, questions, think pair share
- Embedded peer leader – worked with “at risk” students
- Jeopardy – 1st quarter
- 3-2-1s, K-W-L – 2nd quarter
- Concept maps – 3rd quarter
- Team project on diseases – read and present
- Assessment – read versus non-read, at start and end of semester

Chapter 1 – The Microbial World and You

Naming and Classifying Microbes	Nobel Prizes in Microbiology	The Golden Age of Microbiology	Microbes and Human Disease	Microbes and Human Welfare
$100	$100	$100	$100	$100
$200	$200	$200	$200	$200
$300	$300	$300	$300	$300
$400	$400	$400	$400	$400
$500	$500	$500	$500	$500

FINAL ROUND

Topic 1: Naming and Classifying Microbes

$100 Question

- The current system of nomenclature for organisms was established by

a. Pasteur.
b. Jenner.
c. Linnaeus.
d. Koch.

ANSWER

BACK TO GAME

Topic 1: Naming and Classifying Microbes

$100 Answer

- The current system of nomenclature for organisms was established by

a. Pasteur.
b. Jenner.
c. **Linnaeus.**
d. Koch.

BACK TO GAME

Syllabus

6	Microbial Growth	The Requirements for Growth • Physical Requirements • Chemical Requirements Culture Media • General Media • Selective and Differential Media • Enriched Media Growth of Bacterial Culture • Bacterial Division and Generation Time • The Growth Curve and Growth Phases Measurement of Growth • Estimation of Growth by Direct Methods • Estimation of Growth by Indirect Methods	154 154-158 158-160 161 162-165 165 165 168 168-170 170-171 171 171-175 175-177

The Requirements for Growth

- Classify microbes into five groups on the basis of preferred temperature range.
- Identify how and why the pH of culture media is controlled.
- Explain the importance of osmotic pressure to microbial growth.

Read pages 154 - 158

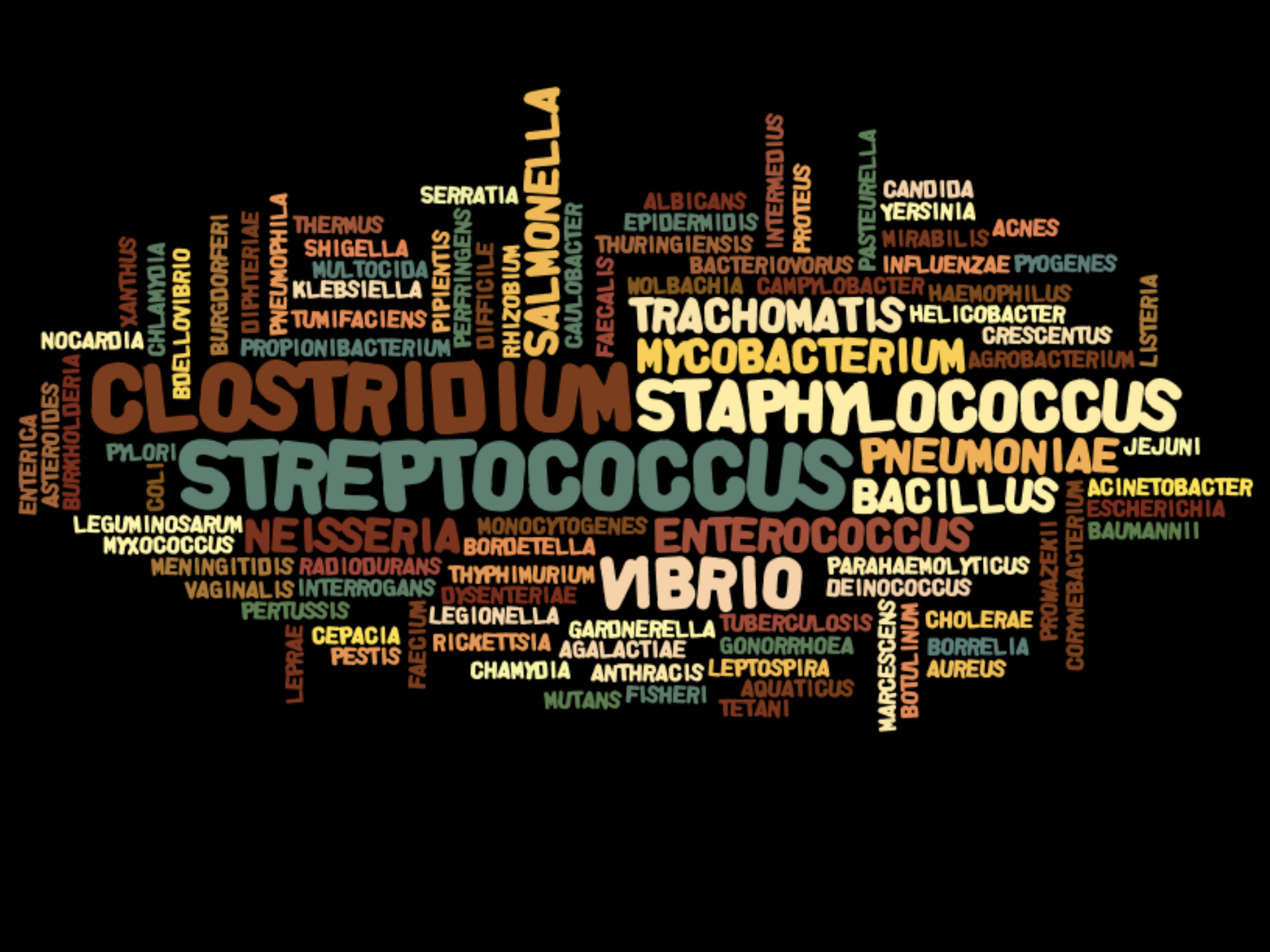
2. pH

- Most bacteria grow between pH 6.5 and 7.5
- _____ and yeasts grow between pH 5 and 6
- _____ grow in acidic environments
- Bacteria drop pH as they grow so buffers are included in the media (peptones/amino acids/phosphate salts)

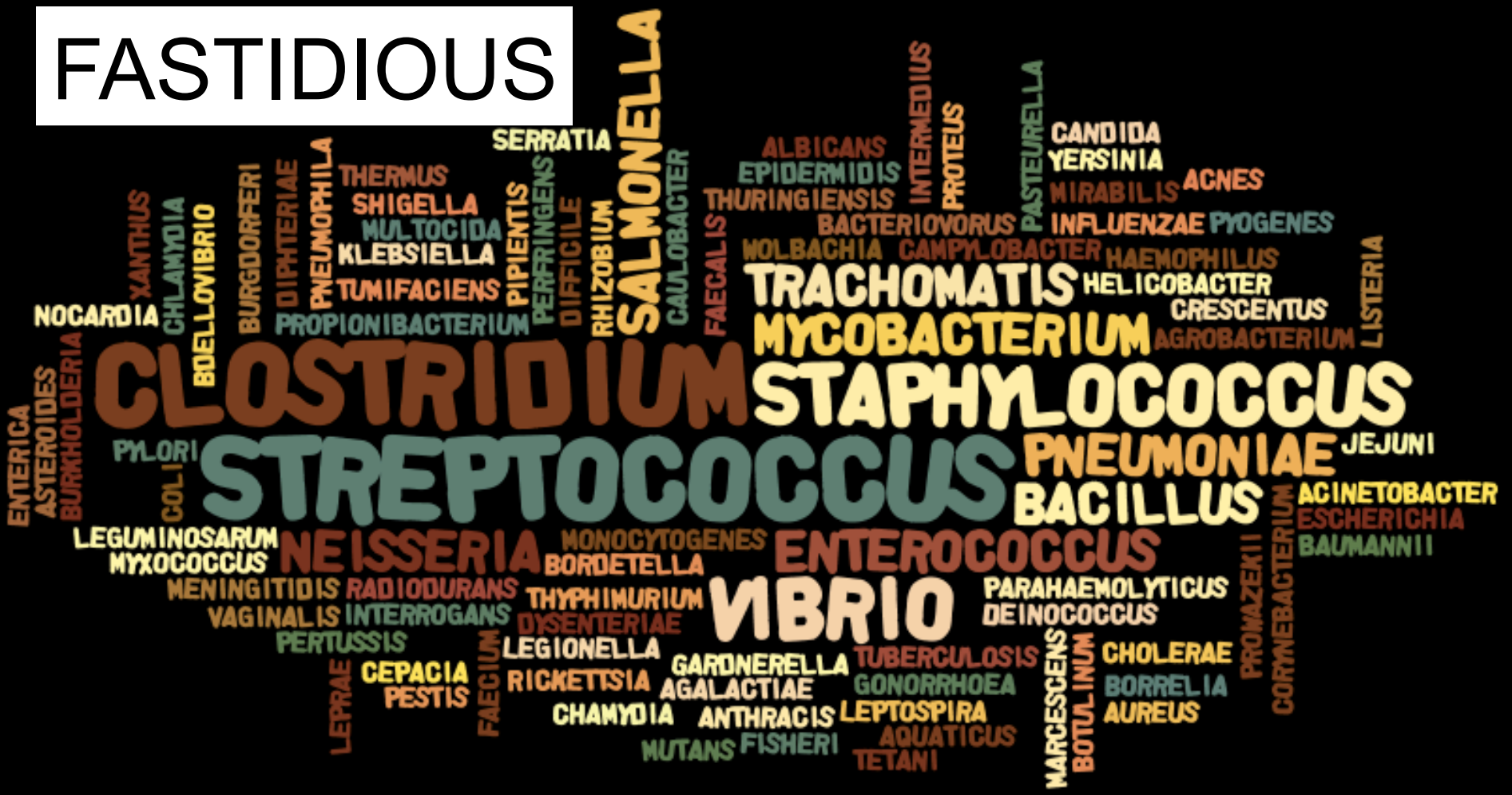
Give me some examples of foods that have been fermented and thus are protected from spoilage?

Think Pair Share

- Why are hyperthermophiles that grow at temperatures above 100°C seemingly limited to oceanic depths?
- Other than controlling acidity, what is an advantage of using phosphate salts as buffers in growth media?
- Why might primitive civilizations have used food preservation techniques that rely on osmotic pressure?


CLOSTRIDIUM
STREPTOCOCCUS
STAPHYLOCOCCUS
PNEUMONIAE
VIBRIO
NEISSERIA
ENTEROCOCCUS
BACILLUS
TRACHOMATIS
MYCOBACTERIUM
SALMONELLA
LEGUMINOSARUM
MYXOCOCCUS
MENINGITIDIS
VAGINALIS
PERTUSSIS
LEPRAE
CEPACIA
PESTIS
FAECIUM
LEGIONELLA
RICKETTSIA
CHAMYDIA
GARDNERELLA
AGALACTIAE
ANTHRACIS
MUTANS
FISHERI
TETANI
LEPTOSPIRA
AQUATICUS
TUBERCULOSIS
GONORRHOEA
CHOLERAE
BORRELIA
AUREUS
MARCESCENS
BOTULINUM
CORYNEBACTERIUM
PROVAZEKII
ACINETOBACTER
ESCHERICHIA
BAUMANNII
JEJUNI
LISTERIA
AGROBACTERIUM
CRESCENTUS
HELICOBACTER
HAEMOPHILUS
PYOGENES
INFLUENZAE
ACNES
MIRABILIS
YERSINIA
CANDIDA
PASTEURELLA
PROTEUS
INTERMEDIUS
BACTERIOVORUS
CAMPYLOBACTER
WOLBACHIA
ALBICANS
EPIDERMIDIS
THURINGIENSIS
SERRATIA
THERMUS
SHIGELLA
MULTOCIDA
KLEBSIELLA
TUMIFACIENS
PROPIONIBACTERIUM
PNEUMOPHILA
DIPHTERIAE
BURGDORFERI
BDELLOVIBRIO
CHLAMYDIA
XANTHUS
NOCARDIA
ENTERICA
ASTEROIDES
BURKHOLDERIA
COLI
PYLORI
PIPIENTIS
PERFRINGENS
DIFFICILE
RHIZOBIUM
CAULOBACTER
FAECALIS
BORDETELLA
MONOCYTOGENES
RADIODURANS
INTERROGANS
DYSENTERIAE
THYPHIMURIUM
PARAHAEMOLYTICUS
DEINOCOCCUS

FASTIDIOUS


SERRATIA
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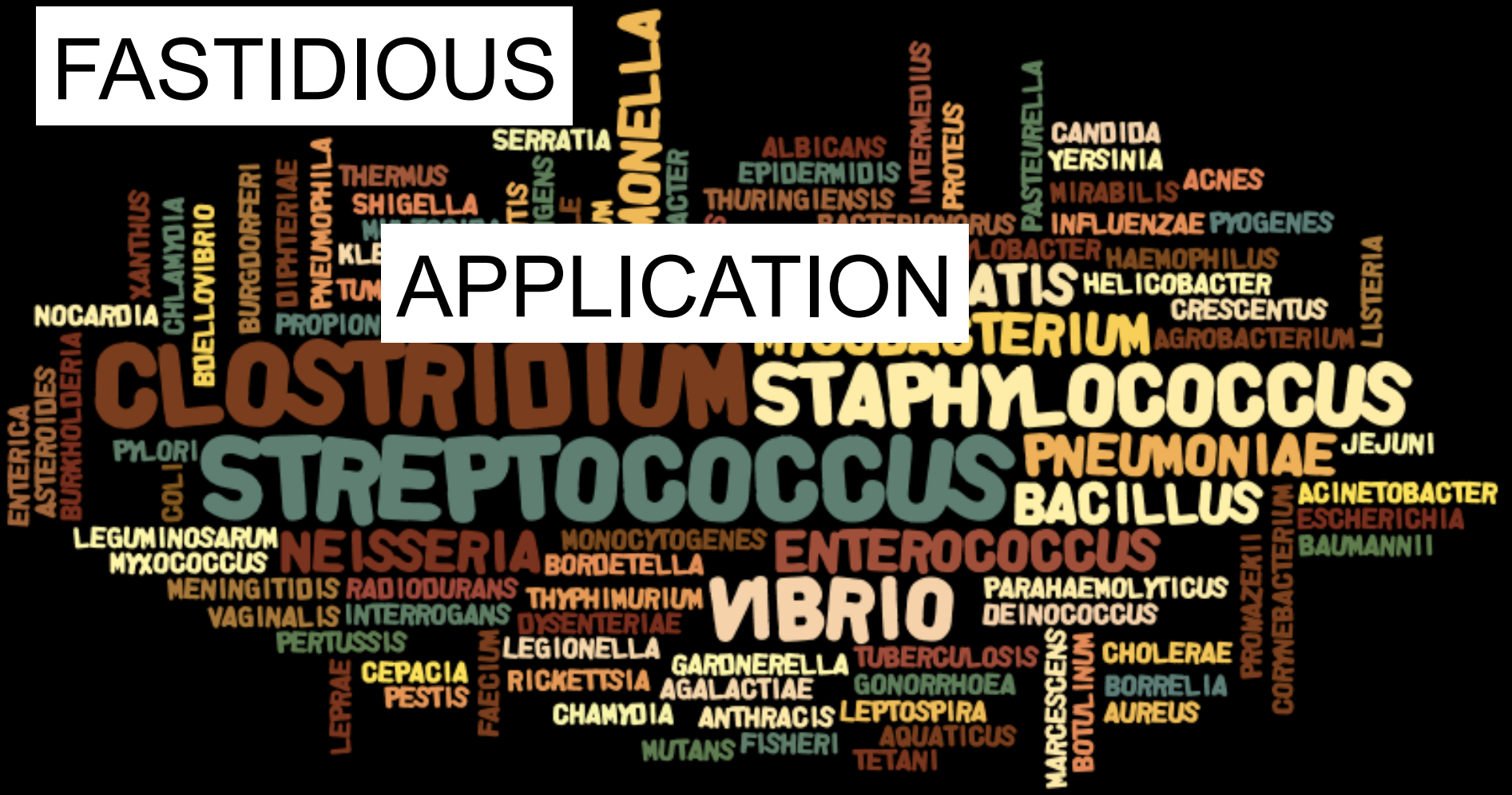
BOTULINUM
MUTANS
FISHERI
AQUATICUS
TETANI

FASTIDIOUS

APPLICATION



FASTIDIOUS

APPLICATION

UBIQUITOUS

FASTIDIOUS

APPLICATION

UBIQUITOUS

CULTURE


FASTIDIOUS
APPLICATION
UBIQUITOUS
MEDIA
CULTURE
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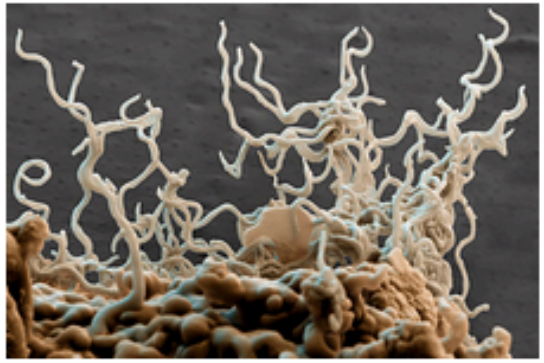
AUREUS
MARCESCENS
BOTULINUM
CORYNEBACTERIUM
PROWAZEKII
PARAHAEMOLYTICUS
DEINOCOCCUS

CONTEXT IS SO IMPORTANT

Borrelia burgdorferi

Read Edit History

Don't put me in a box–I'm not gram negative OR positive. I am a diderm, meaning I have two membranes, like gram negative, but with some different stuff going on. I am a slow-growing (12-18 hour doubling time) microaerophile, with an optimal growth temperature of about 32 C. As for energy, I generate it exclusively from substrate-level phosphorylation. Like many parasites I rely on my hosts–serve me up some N-acetylglucosamine (NAG), please! I'm tiny, 20-30um long but only 0.2-0.3um wide. You can't see me with a light microscope, but dark-field microscopy works, and of course a scanning electron microscope does the trick too.



As you can see in my family portrait above, I'm a spirochete. Which tells you a lot about me. Not really into long walks on the beach–too much air. More into moving around corkscrew fashion. My whole phylum is into it. One theory is that way of moving is an adaptation to viscous environments. I don't remember though, that was before my time. A lot of bacteria just have their flagella waving around as if they are trying to flag down an antibody. Pretty dumb, as flagellar proteins are antigenic. My flagella is endo, it's an inside job. You can call it an axial filament if you like. I'm pretty sure it helps me evade some immune responses. Another potential virulence factor that I'm really proud of is my 21 plasmids! The most of any bacteria. One time, they cultured me in the lab for a long time and I lost some plasmids. It made me less virulent. Coincidence? I think not. You're not impressed? Well, I'm just getting started. I am about to get in your head. Your brain to be specific. I've been known to hang out on the other side of the blood-brain barrier. It's a good hideout. The human immune response isn't top-notch up there. Speaking of immune response, I can also change my surface proteins. That keeps them guessing long enough for me to get a nice chronic infection going. Oh, I've also been witnessed going intracellular in lab cultures. So, I may be doing that *in vivo* too.

Even though I have that impressive CV it wouldn't surprise me if you don't know me by name. I'm actually pretty infamous though. I cause Lyme Disease. In Europe they call it Lyme Borreliosis. I live in mice, but I also live in ticks and deer, and of course humans, and dogs, rats and birds too. Mice and deer are the main reservoirs though. As far as humans are concerned, *Ixodes* ticks are the gun, and the bullet is me.

My reliance on *Ixodes* ticks, who have a complex life cycle involving three different blood meals often from three different animal species, has drawn comparisons to the relationship between malaria causing Plasmodium and Anopheles mosquitos.

NEED HELP WITH READING
YOUR TEXTBOOK IN **BIO1101** ?

WE'RE HERE TO HELP!
COME MEET & WORK WITH THE PEER LEADERS AT

THE BIOLOGY PEER LED TEAM LEARNING WORKSHOPS

THURSDAYS · P311
1 – 2 PM · 5 – 6 PM

CONTACT PROF. DAVIDA SMYTH FOR MORE INFORMATION
DSMYTH@CITYTECH.CUNY.EDU

READ
READING EFFECTIVELY ACROSS THE DISCIPLINES

NEW YORK CITY COLLEGE OF TECHNOLOGY
CITY TECH

PEER LEADER SPOTLIGHT

"We take it for granted and shove it aside but only later do we know that reading is the bridge to the unknown."

– Rimsha Azhar

"Even if labeled as disabled, you can still read."

– Christopher Mason

"Reading, it opens our minds to the possibilities, and allows us to venture into the great beyond, without ever leaving home."

– Manuela Hoyos

READ
READING EFFECTIVELY ACROSS THE DISCIPLINES

NEW YORK CITY COLLEGE OF TECHNOLOGY

Reading Effectively Across The Disciplines – Biology

READ

READING EFFECTIVELY ACROSS THE DISCIPLINES

How words are built: Combining Forms, Prefixes, and Suffixes

Posted on October 2, 2013 by jbut

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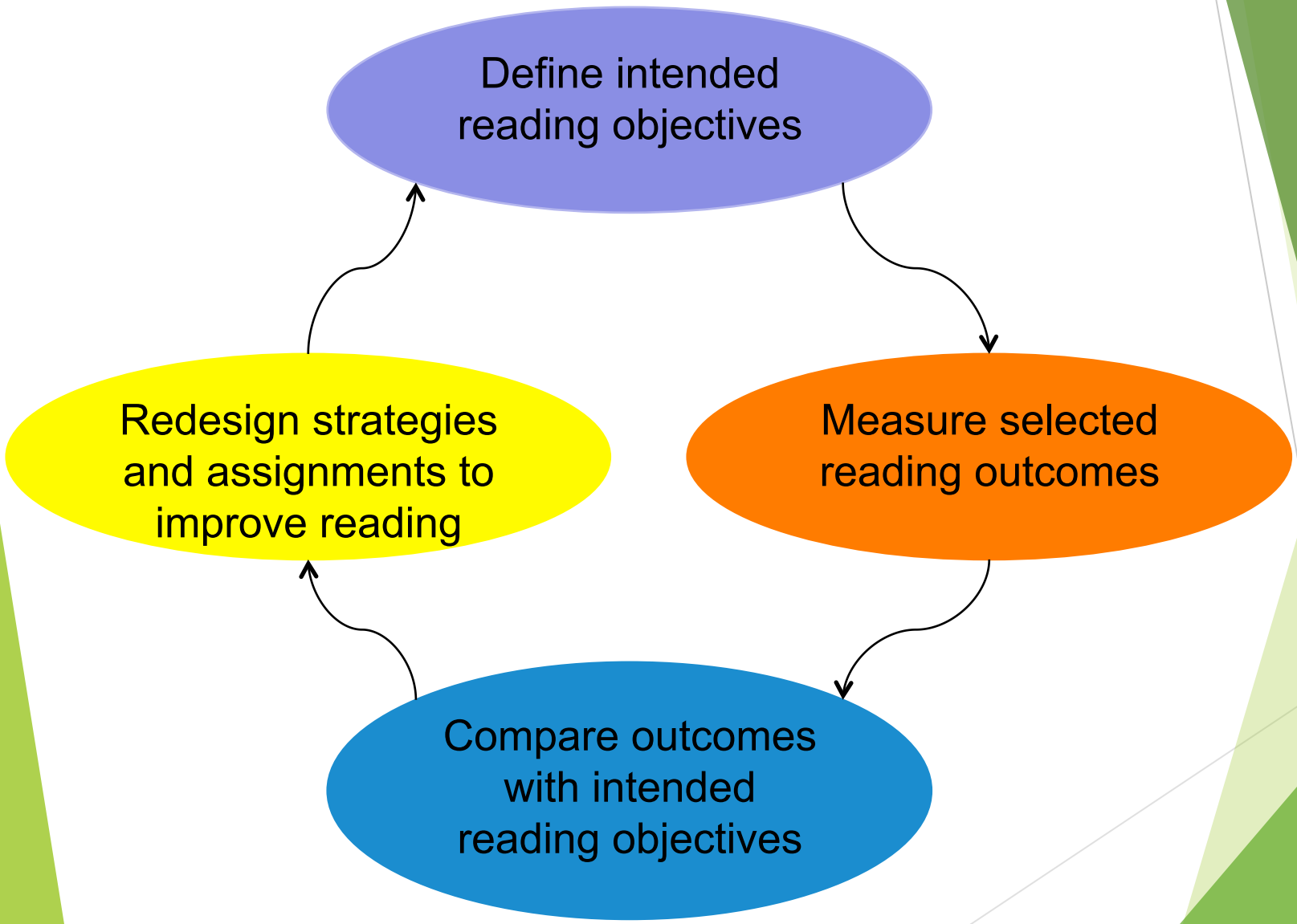
Recent Posts

How are your reading skills?

- Read the assigned text
- Use the reading strategies
  1. Annotate
  2. Word map
  3. Concept map

You have ten minutes for this

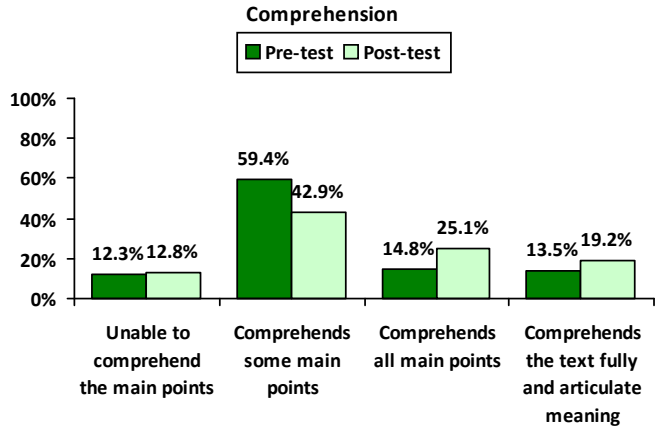

Define intended reading objectives
Measure selected reading outcomes
Compare outcomes with intended reading objectives
Redesign strategies and assignments to improve reading

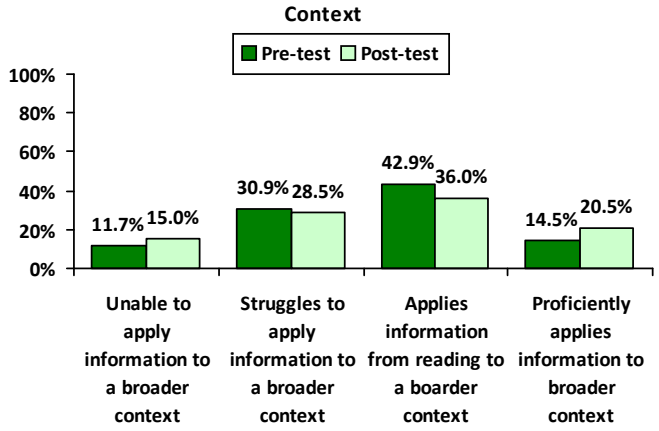
General Education Reading Assessment College Results

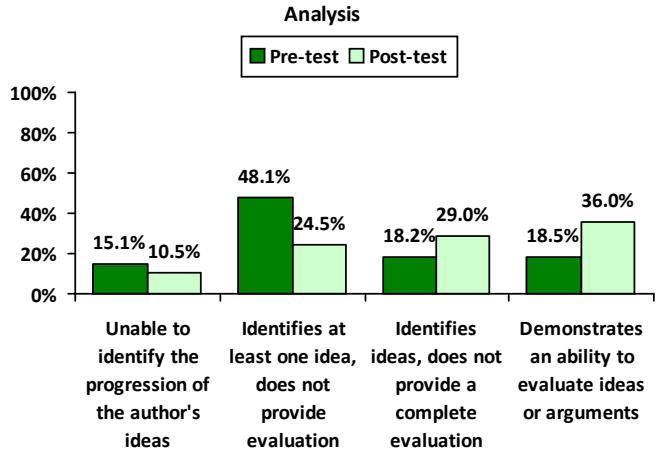
Report by College: New York City College of Technology - Fall 2013
Group(s): Reading Effectively Across Disciplines
Number of Sections: 15
Number of Students: 529

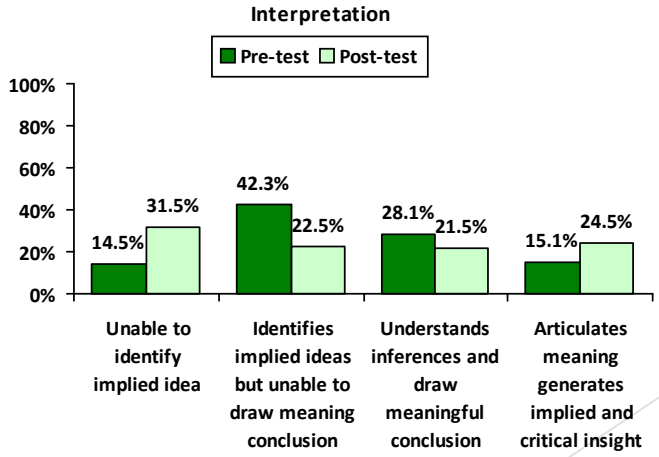
# of Returned Rubric: Pre-test = 326 Post-test = 203

Assessment Results by Performance Criteria









What did the Peer leaders think?

About the faculty

- Increased my appreciation for her position as an instructor
- Involved with the progression of workshops: creative, entertaining suggestions
- Extremely sensitive to educational needs of students
- Encouraged experiences of PLs to make reading textbook more enticing
- Brought out my maturity, punctuality, confidence

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Reading Effectively Across the Disciplines

What did the Peer Leaders notice?

- Students may initially have been motivated (to come) to achieve better grades
- As semester progressed, they started coming prepared with questions on the readings
- Willing to share thoughts and ideas
- Expressed curiosity
- Students began relying on textual resources rather than on the Peer Leader for answers

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What did the students think?

- I personally think that the assignments were very helpful. It wasn't easy because it was a lot of work but it was worthy. I strongly believe that the method you used is one of the best one for students to learn (no memorize) the content of the course.

- I had no idea how to interpret the textbook when we first started, after receiving PLTL, I found it very easy to interpret the text. Also the assignments were helpful as well. I have found the end of chapter assignments in the textbook to be by far the most helpful during last semester. If the PLTL was not available, I really would have been ambiguous about my final grade, Thanks for everything!

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What do the faculty think?

- Overall pretty good experience, presentation, showing how to better approach the students. Motivating , changed my method of teaching [adjusted, dedicating] more time to communicating effectively utilizing team-based learning efficiently, providing and referring to further resources managed to help complete the digital trainer construction.
- As an educator I found READ in biology very effective. It was a collaborative effort in teaching BIO1101. The articles were helping student in comprehending the subject matter, and they were also well informed with the current affairs. The pretest helped me plan my lesson plan, and teach them according to their needs. And most importantly it helped me prepare myself very well. READ in biology was indeed a supportive endeavor.

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What do the faculty think?

- Workshops were well organized. We shared many ideas; different techniques were introduced to help students get involved more. These strategies can be used in and out of the classroom.
- Got the chance to speak to my colleagues in depth about the challenges we face.

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What are our future goals for READ?

1. Expand to other courses in Biology
2. Develop more standalone PLTL modules
3. Target the lab activities and lab manual (pre-lab reading assignments)
4. Develop tools for specialized vocabulary
5. Assess all sections

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Acknowledgments

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- OpenLab
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- Prof. Janet Liou Mark, Prof. AE Dreyfuss
- English – Prof. Nina Bannett
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