Symposium:

Developing Instructional Approaches to Improve Discourse Comprehension in Struggling Adult Readers

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Georgia State University

UNIVERSITY OF TORONTO

THE UNIVERSITY OF MEMPHIS
Institute for Intelligent Systems

IES
Institute of Education Sciences

Brock University

OVERVIEW

Overview of the Center for the Study of Adult Literacy
Daphne Greenberg (10 minutes)
Lovett's Adult PACES Intervention to Deepen Comprehension
Art Graesser (10 minutes)
AutoTutor Reading Strategy Tutor for Adults
Art Graesser (10 minutes)
Examples and Usability of AutoTutor
Whitney Baer and Haiying Li (18 minutes)
Survey of Adult Literacy Teachers' Instructional Practices
Daphne Greenberg (10 minutes)
Motivation among Adult Struggling Readers
Jan Frijters (10 minutes)
Final thoughts
Daphne Greenberg (5 minutes)
Discussion (15 minutes)

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Introduction to the
Center for the Study of Adult Literacy

Daphne Greenberg
24th Annual Meeting of the Society for Text & Discourse
Chicago, Illinois

August 4, 2014

Funding Source

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Investigators

- **Principal Investigator**
  - **Daphne Greenberg, Ph.D., Associate Professor, Educational Psychology, Georgia State University (GSU)**

- **Co-Principal Investigators**
  - **Lee Branum-Martin, Ph.D., Associate Professor, Psychology, GSU**
  - **Maureen Lovett, Ph.D., C.Psych., Senior Scientist, The Hospital for Sick Children and Professor, Pediatrics and Medical Sciences, University of Toronto**
  - **Art Graesser, Ph.D., Professor, Psychology and Institute for Intelligent Systems (IIS), University of Memphis (UM)**
  - **Jan Frijters, Ph.D., Associate Professor, Child and Youth Studies, Brock University**

- **Co-Investigators**
  - **Hongli Li, Ph.D., Assistant Professor, Research, Measurement, and Statistics GSU**
  - **Robin Morris, Ph.D., Associate Provost, Regents Professor of Psychology, GSU**
  - **Xiangen Hu, Ph.D., Professor, Psychology/IIS, UM**
  - **Mark Conley, Ph.D., Professor, Leadership and Curriculum/IIS, UM**
  - **Andrew Onley Ph.D., Assistant Professor and Associate Director of IIS, UM**

Advisors and Other Partners

Advisors

- **Dr. Marcia Barnes, University of Texas—Houston Health Sciences**
- **Dr. Donald Compton, Vanderbilt University**
- **Ms. Courtnee Hill, Literacy Action, Inc.**
- **Dr. Stephen Reder, Portland State University**
- **Dr. David Rosen, President, Newsome Associates, Jamaica Plain, Massachusetts**
- **Mr. Glen McLeod and Ms. Léa Lacerenza, Toronto Catholic District School Board**
- **Karen Kimball, Cobb County Adult Education Center**
- **Ryan Hall, Literacy Action, Inc.**

Partners

- **Texas Institute for Measurement and Evaluation Statistics (TIMES)**
- **American Institutes for Research (AIR)**

Mission

CSAL is committed to understanding the reading-related characteristics that are critical to helping adult learners reach their reading goals and to developing instructional approaches that are tailored to adult learners' needs and interests.

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CSAL Projects

- ❑ Explore the reading skills as well as the underlying motivational and cognitive attributes of adult learners.

- ❑ Refinement and development of a multiple-component reading intervention that includes a web-based, animated, e-tutor.

- ❑ Pilot testing of the reading intervention.

- ❑ Supplemental studies.

- ❑ Dissemination activities.

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Motivation

- Motivation plays a critical role in literacy learning.

- Not heavily studied.

- We focus on three motivational constructs:
  1. Self-reported motivation for reading
     - Interest, avoidance, task value, perceived difficulty and goal orientation
  2. Attributions for success and failure with reading
     - What reasons do adult readers give for successes and failures in reading?
  3. Affective episodes
     - What role do the memories and emotions of past reading experiences play in the present?

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Testing

❑ **To clarify the appropriateness of the use of a wide array of standardized reading, motivational, and cognitive assessments with adult literacy learners.**

❑ **To provide clarity on the cognitive and motivational profiles of adult literacy learners.**

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Testing

500 Adult Literacy Students

- ❑ **250 in Toronto, 250 in Atlanta**
- ❑ **Reading between 3rd and 8th grade levels**
- ❑ **Non-native speakers and native speakers**

Testing of Components of Reading

- Phonological Awareness
- Morphological Awareness
- Decoding
- Irregular Word Reading
- General Word Reading Accuracy
- Vocabulary
- Word Reading Fluency
- Connected Text Fluency

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Testing of Components of Reading

- Written Comprehension

- Oral Comprehension

- General Knowledge/Background Information

- Reasoning
  - Nonliteral Language
  - Meaning from Context
  - Inference
  - Ambiguous Sentences

- Memory
  - Long-Term Memory Retrieval
  - Short-Term Memory Retrieval
  - Working Memory/Division of Memory/Attentional Control

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Cognitive and Motivational Functioning

Motivation and Other Influences

- ❑ **Expectancy Value Questionnaire (EVQ: Eccles & Wigfield, 1995; 2002)**

- ❑ **Intrinsic Motivation Inventory (IMI: Ryan, 2002)**

- ❑ **Reading Motivation Scale (RMS: Guthrie & Wigfield, 2009)**

- ❑ **Affective Episode Interview (Gorges & Kandler, 2012)**

- ❑ **Demographic Questionnaire**

- ❑ **Reading Practices Questionnaire**

- ❑ **Computer Familiarity**

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Components of the Instructional Framework

- **Word attack skills and decoding strategies**
- **Vocabulary knowledge**
- **Knowledge of text structures and conventions**
- **Reading comprehension strategies**
- **Individualization of instruction through the use of intelligent tutoring technology**
- **Motivation and engagement in literacy learning activities**
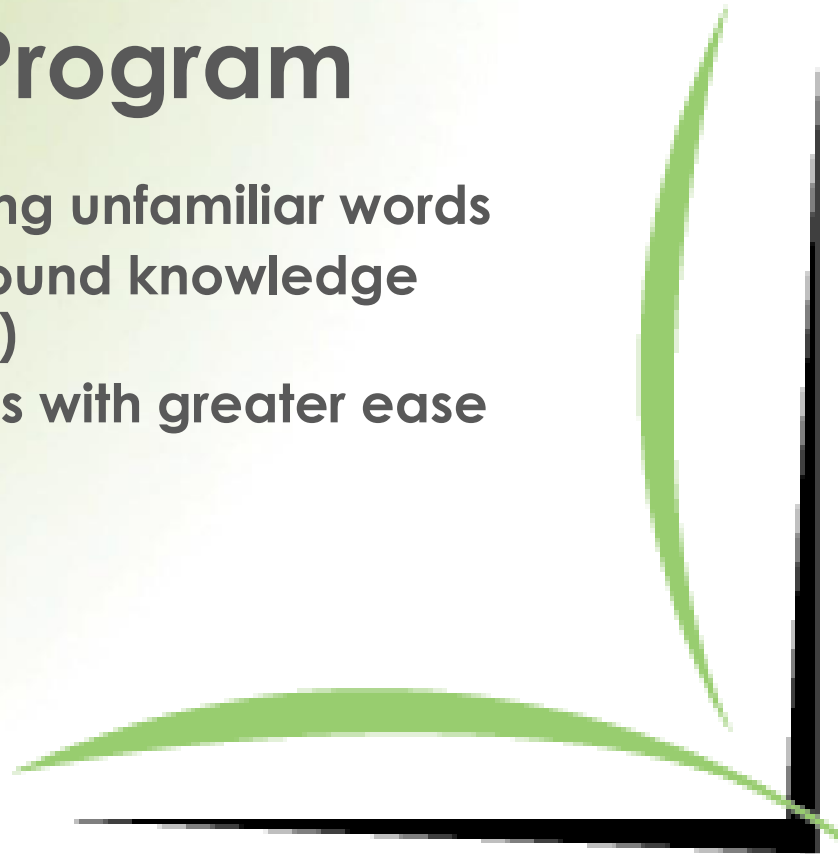- **Choice in text and topic selection**

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Adult PHAST Program

Flexible strategies for decoding unfamiliar words

Addresses gaps in letter-sound knowledge
(*igh*, *ea*, *ie*)

Identifying multisyllabic words with greater ease

Adult PACES Comprehension Program

P Predicting Purpose with Text Signals and Key Information.

A Acquiring Vocabulary with Context Clues.

C Clarifying Common Sources of Confusion with Clarifying Questions.
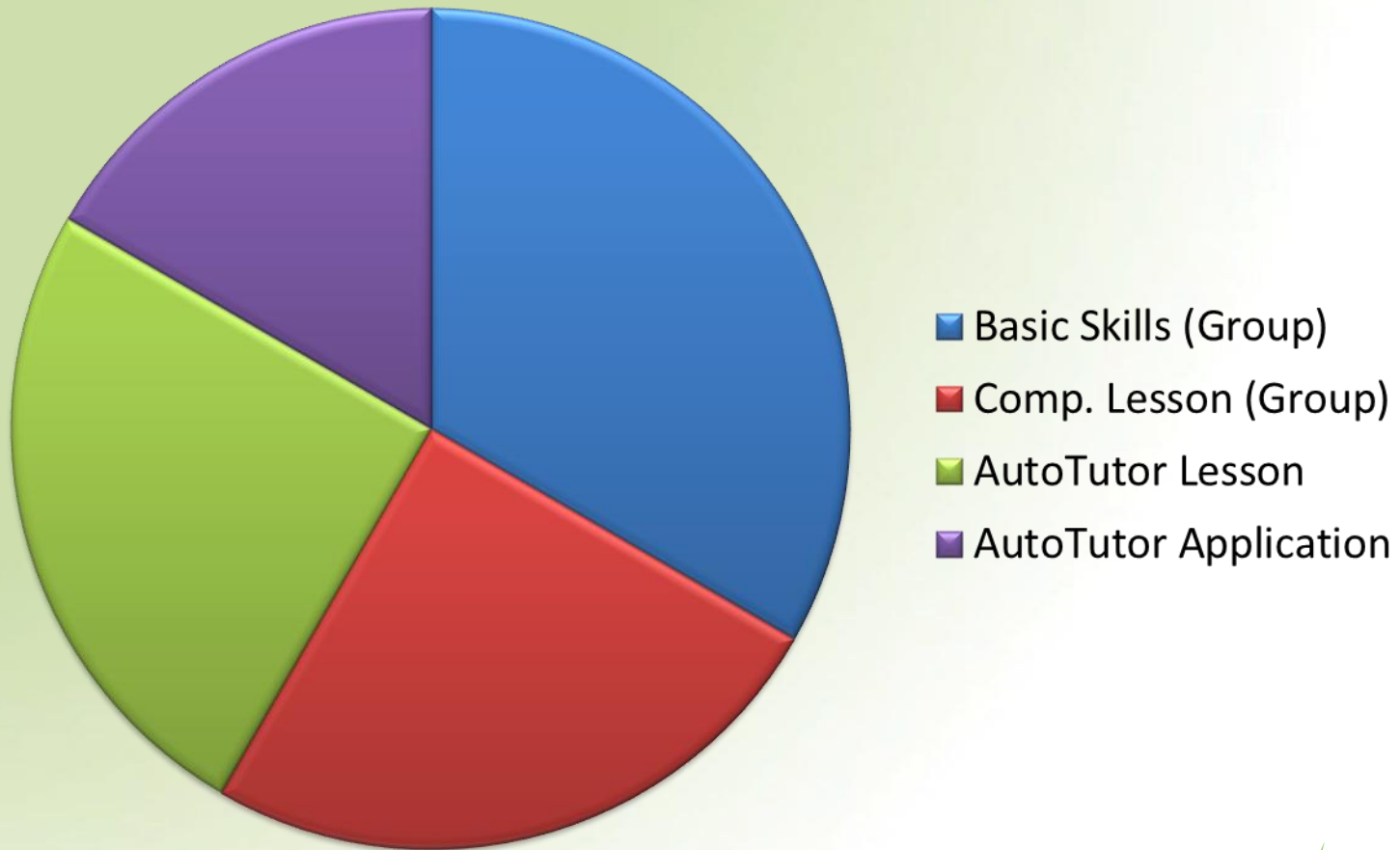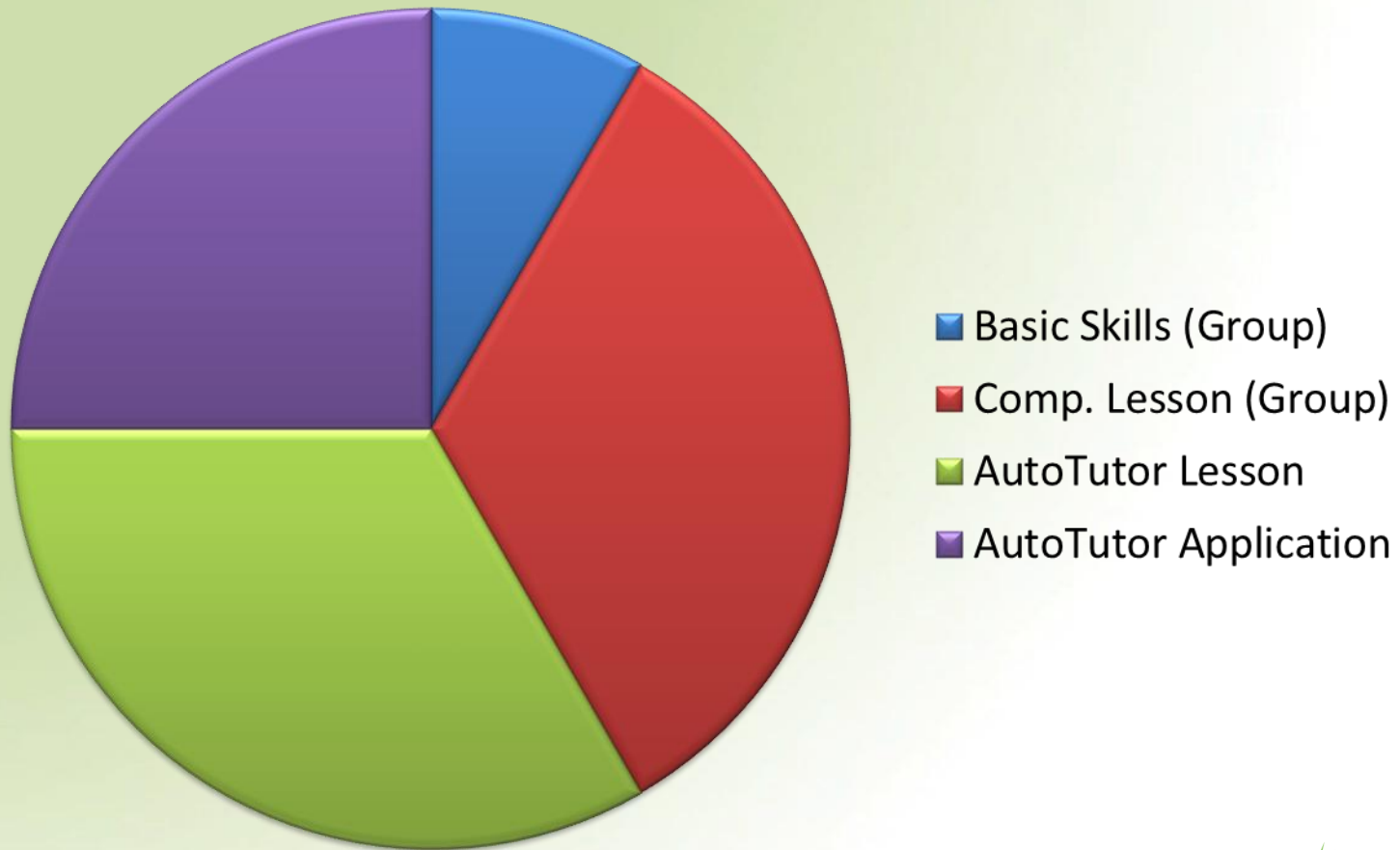
E Evaluating and Elaborating through Questioning.

S Summarizing with Text Maps.

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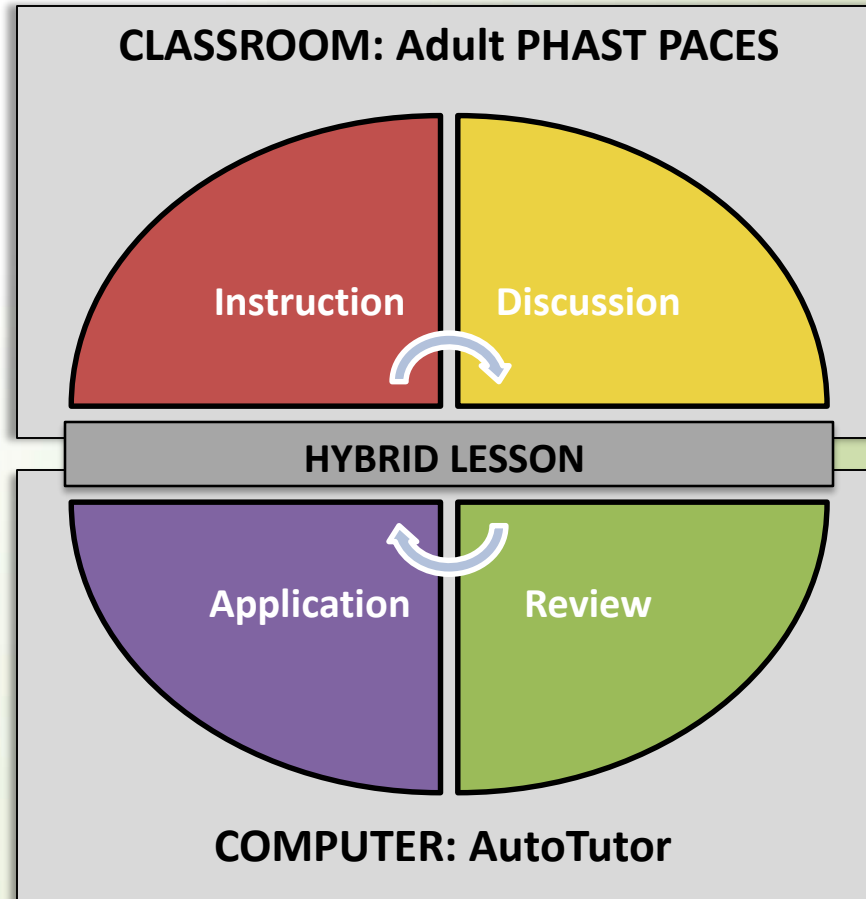
Instructional Framework for Weaker Decoders

- Basic Skills (Group)
- Comp. Lesson (Group)
- AutoTutor Lesson
- AutoTutor Application

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Instructional Framework for Stronger Decoders

- Basic Skills (Group)
- Comp. Lesson (Group)
- AutoTutor Lesson
- AutoTutor Application

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Text Selection

- **Critical to good instruction**
- **Related to both cognition and motivation**
    - **Interesting**
    - **Relevant to adult lives**
    - **Multiple purposes**
    - **Not too easy or too difficult**
- **Different genres, media, and technologies**

Steps to Build Repository

❑ Administer adult literacy text survey.

❑ Solicit ideas and examples from publishers, government agencies, other centers, and adult literacy programs.

❑ Create an annotated list of resources.

❑ Develop analysis categories.
   ❑ Topics
   ❑ Text difficulty/characteristics with Coh-Metrix-TEA

CSAL Library Entries by Category

CATEGORY	# Easier	% Easier	# Medium	% Medium	# Harder	% Harder	TOTAL #
Health	60	16%	168	44%	157	41%	385
Food	10	15%	28	43%	27	42%	65
Babies	19	23%	35	43%	27	33%	81
Children Ages 2-12	34	9%	170	47%	159	44%	363
Children Ages 3-18	15	8%	72	40%	93	52%	180
Family	19	4%	226	46%	250	51%	495
Real Stories	202	19%	420	39%	451	42%	1073
Made Up Stories	4	100%	0	0%	0	0%	4
Advice	49	7%	310	47%	297	45%	656
Jobs	16	31%	12	23%	24	46%	52
Money	17	17%	39	40%	42	43%	98
History	6	10%	31	50%	25	40%	62
Science	30	38%	29	37%	19	24%	78
Other	11	37%	12	40%	7	23%	30
TOTAL # of ENTRIES	492		1552		1578		3622
Percent of Total Entries	14%		43%		44%		

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Examples of HealthTopics

- abuse
- ADHD
- AIDS
- autism
- [bee stings](bee%20stings)
- [breast cancer](breast%20cancer)
- caffeine

Our Website

csal.gsu.edu

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Adult PACES: Adapting an Evidence-based Intervention to Deepen Reading Comprehension in Struggling Adult Readers

Lovett, Rodgerson, Pedace, Frijters, & Lacerenza

Findings from Our High School Study

- **Significant gains on standardized word attack, word reading, and passage comprehension tests following PHAST PACES intervention (relative to controls)**

- **Significant gains in letter-sound knowledge and multisyllabic word identification**

- **Average effect size of .68 across outcomes**

- **At one year follow-up, passage comprehension showed continued growth**

- **Variability of outcomes among high school participants**

(Lovett, Lacerenza, De Palma, & Frijters, *JLD*, 2012)

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Adult PACES Comprehension Program

P Predicting Purpose using Text Signals.

A Acquiring Vocabulary using Context Clues and Affix Knowledge.

C Clarifying Common Sources of Confusion using Clarifying Questions.

E Evaluating and Elaborating through Questioning.

S Summarizing using Text Maps.

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Predicting Purpose Using Text Signals

HELP WANTED

Part-time Retail Sales Associate needed for CSAL SPORTS STORE (weekday, evenings, up to 24 hours per week)

3 years experience in retail sales, good **communication skills**, and demonstrated **interest in sports**.

- All employees receive an **hourly rate** plus **commissions**.

Interested candidates should submit their **resume** and **cover letter** to: csalsportsstore@gmail.com

CSAL NEWS

Driving   Rampage

Danger in CSAL Superstore parking lot

Be alert for **Text Signals** and
gather information to make good predictions.

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The Goal of Predicting Writer's Purpose

Writer's Purpose

To Entertain · To Teach · To Convince

To Enjoy · To Learn · To Choose

Our Purpose

Acquiring Vocabulary from Context

Acquiring Vocabulary means learning *new words* as I read.

Look AT the word

Do I see a *Root Word* and *Affixes*?

Look NEAR the word

Do I see any *Punctuation Definition Signals* or *Word Types* I recognize?

Look AROUND the word

Do I see *Context Clues*?

FIGURE OUT what the word means

REPLACE your meaning into the original sentence and CHECK to see whether it makes sense.

Use dictionary to confirm meaning (if needed)

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I abhor housework, paying taxes, and going to the dentist.

Look AT the word

Are there parts in the word that you are familiar with? Look for the <u>biggest word</u> that you are familiar with. (Accept learner responses. E.g. No)

Look NEAR the word

Are there *punctuation definition signals* near this word 'abhor'?
(Accept learner responses. E.g. yes – commas.)

What does it indicate?
(Accept learner responses. E.g. a list.)

Look AROUND the word

What words are you familiar with that can help you determine the definition of the word 'abhor'?
(Accept learner responses. E.g. housework, taxes, dentist.)

Are these examples usually activities that people like or dislike?
(Accept learner responses. E.g. dislike.)

FIGURE OUT what the word means

Yes. Housework, paying taxes, and visiting the dentist are all examples of activities that most people dislike or hate. So what do you think we can replace 'abhor' with?
(Accept learner responses. E.g. dislike or hate)

REPLACE and CHECK

Let's *replace* this meaning in the original sentence to *check* if it makes sense.

*I **hate** housework, paying taxes, and going to the dentist.*

Does this make sense? (Accept learner responses. E.g. yes.)

Great. We used context clues to acquire the meaning of this word!

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Clarifying Confusion with Questions

SEE the source of confusion.

Pronouns	Multiple Meaning Words	Nonliteral Language

CLARIFY the confusion with questions exclusive to each source.

REPLACE the confusing word or phrase

with answers to the clarifying questions.

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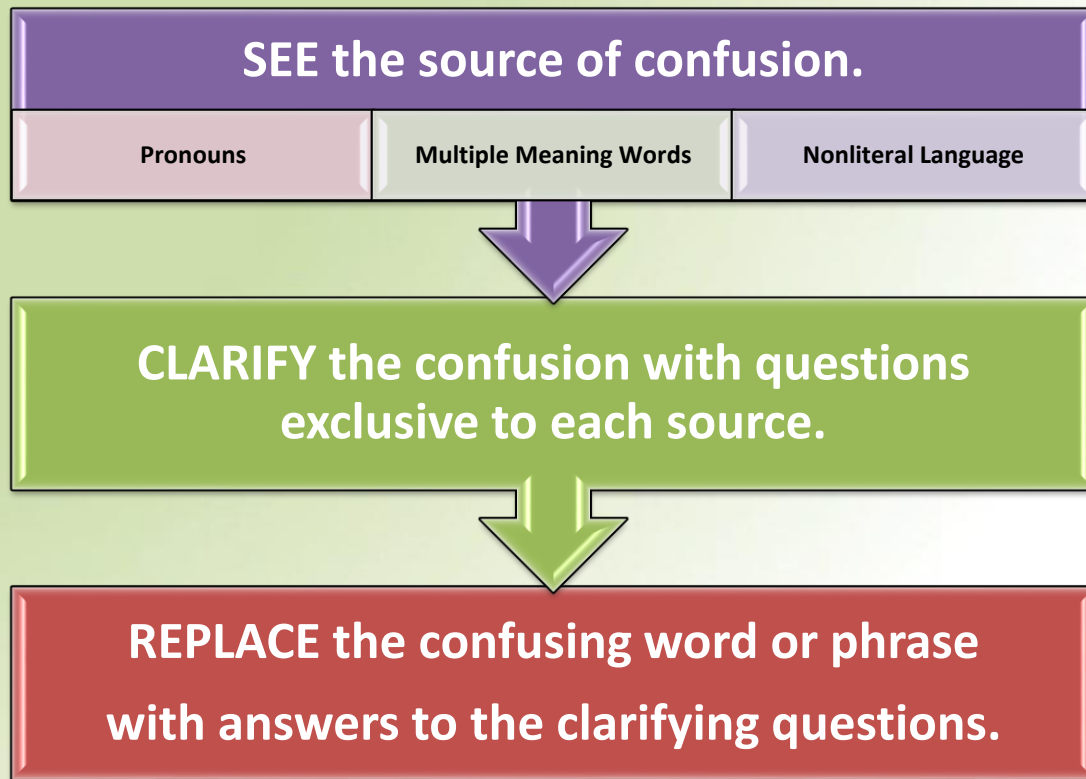
Sources of Confusion

- **Pronouns**
- **Ambiguous words**
- **Vagueness and imprecision**
- **Nonliteral language**
- **Contradictions**

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Evaluating and Elaborating through Questioning

Evaluating means asking ourselves good questions to monitor our understanding of a text.
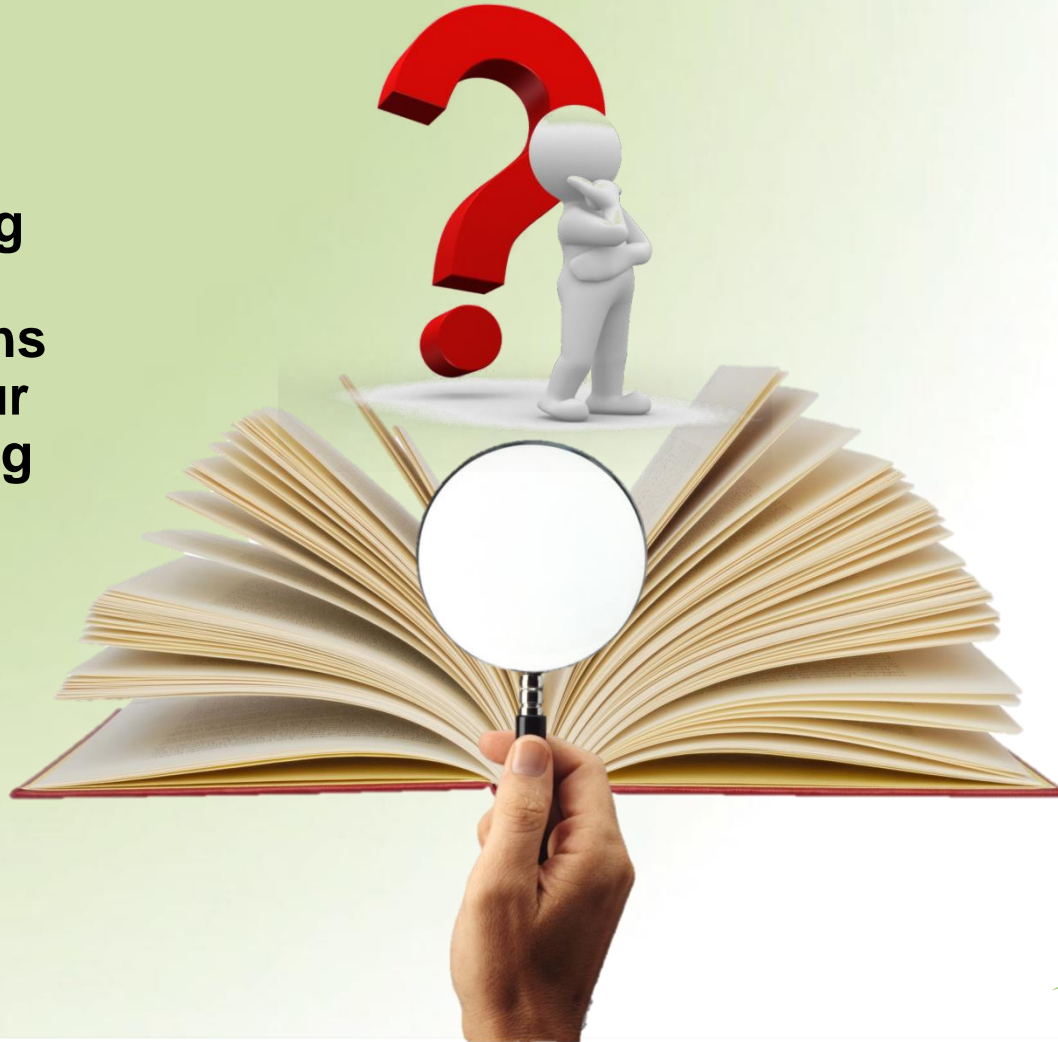
Informational, Persuasive, vs. Narrative Text

Ways to determine text type:

1. Ask yourself 'Is this...

'...telling me a story?'
'...giving me information?',
'...stating an argument?'

2. Look for Key information.

◆ Informative texts will be packed with *facts*.
◆ Persuasive texts will have both *facts* and *opinions*.
◆ Narrative texts will contain many *emotion triggers*.

Key Information	Writer's Purpose	Reader's Purpose
Facts	Inform	To learn
Opinions	Convince	To choose
Emotion Triggers	Entertain	To enjoy

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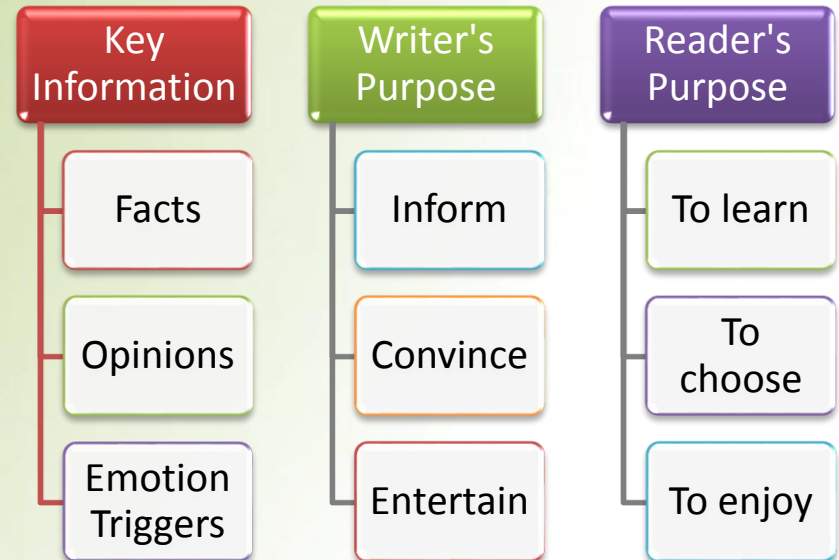
Building Bridges

Evaluating the Author through Questioning

Reading is a conversation between the reader and writer. It is up to the writer to pass on information in a clear way, and it is up to the reader to engage with the writer's ideas and make sense of the information.
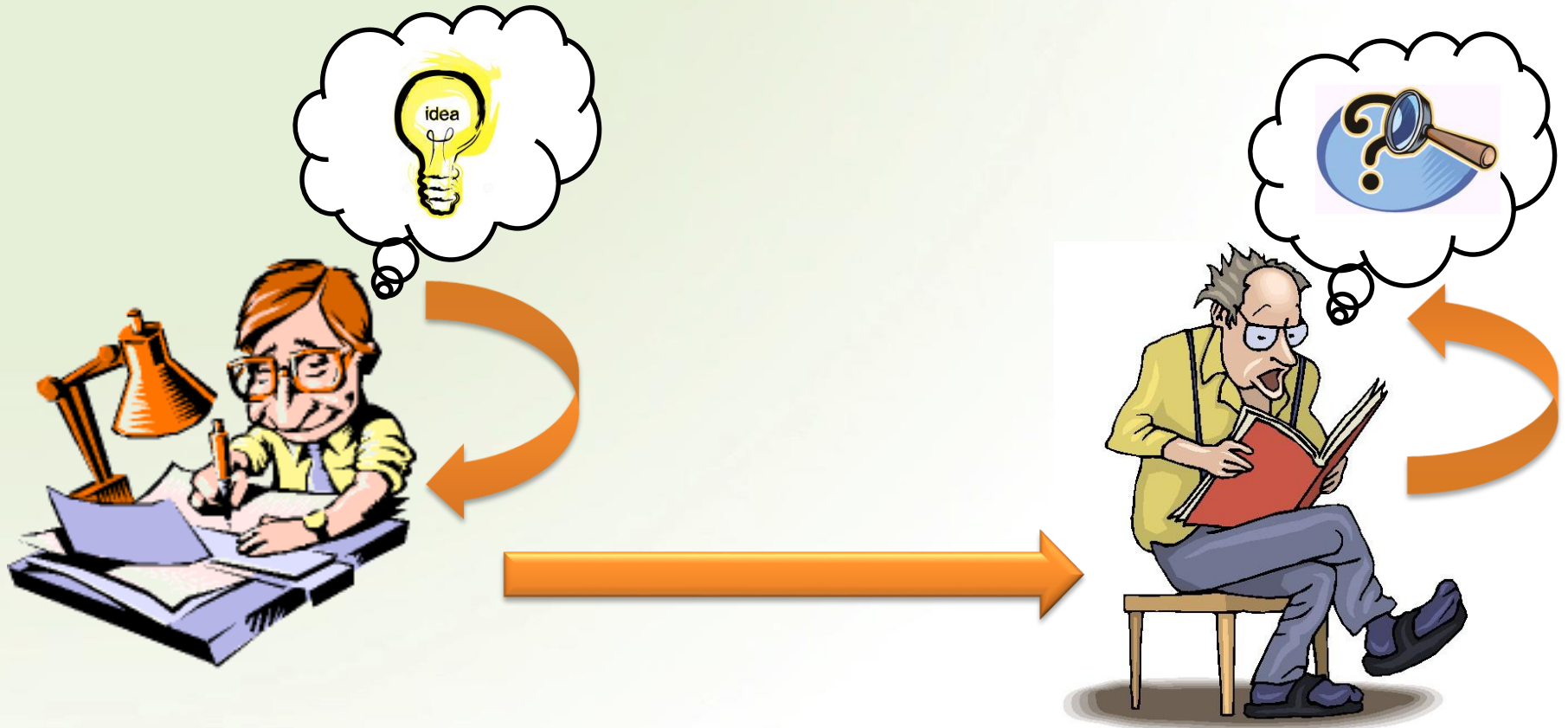
Evaluating the Author through Questioning

Sometimes, writers do a good job of explaining something, but other times not.

We should Question the Writer for clarity, quality, and credibility

Check for Clarity and Quality	Check the Writer	Check the Source	Check the Date	Check for Bias
Does the writer explain this information or argument clearly?	Who is the writer?	Where does the writer work?	When was the text written?	Is there bias?
How could the writer have explained things more clearly?	What is the writer's credentials/educational background?	Who published the text?		What is the bias?
What are the flaws in this text?	Is the writer an expert in their field?			
How could the writer improve this text?				

Elaborating Inferences Through Questioning

Elaborating our understanding involves generating inferences based on a strong understanding of the text.

Work It Out

- *What is the writer suggesting here?*
- *Why is the writing telling me this?*

Uncover the Message

- *What are we supposed to learn from this text?*
- *What main messages is the writer trying to get across?*

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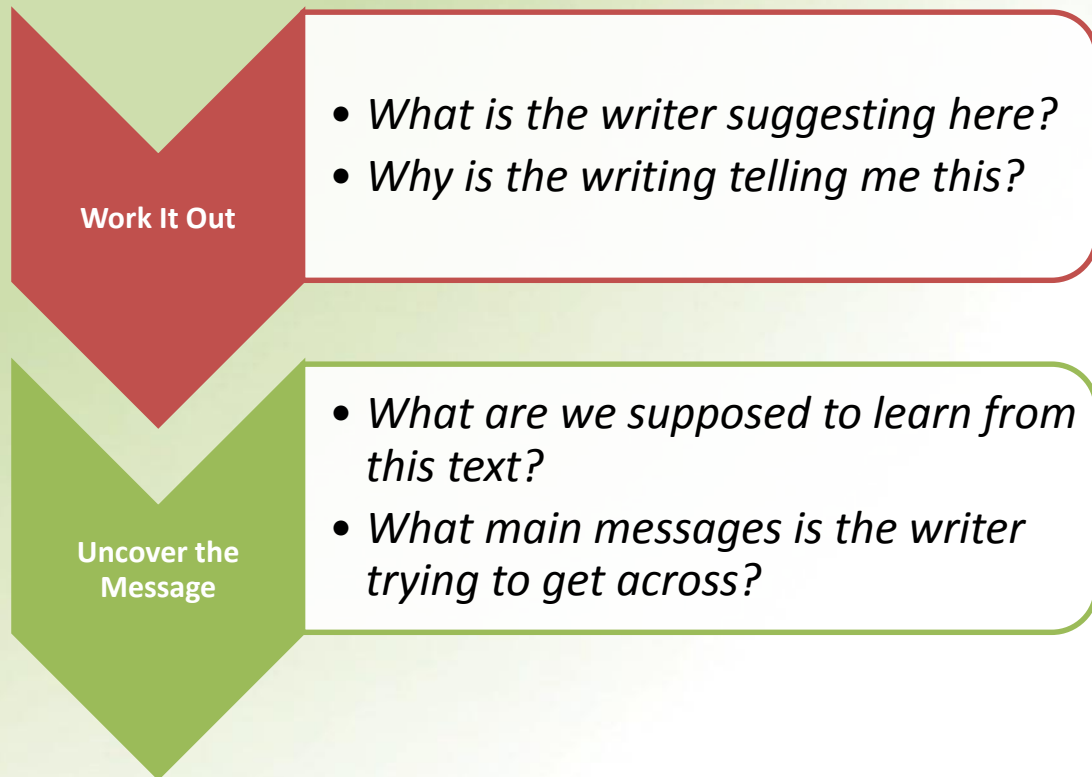
Explaining Rhetorical Structure with Questions

Text Types

Narrative   Informative   Persuasive   Documents/ Forms

Fairytales   Statement/ Explanation

Suspense   Problem & Solution

Cause & Effect

Description/ Spatial   **Text Structures**

Compare/ Contrast

Order: Time/ Importance

Procedural
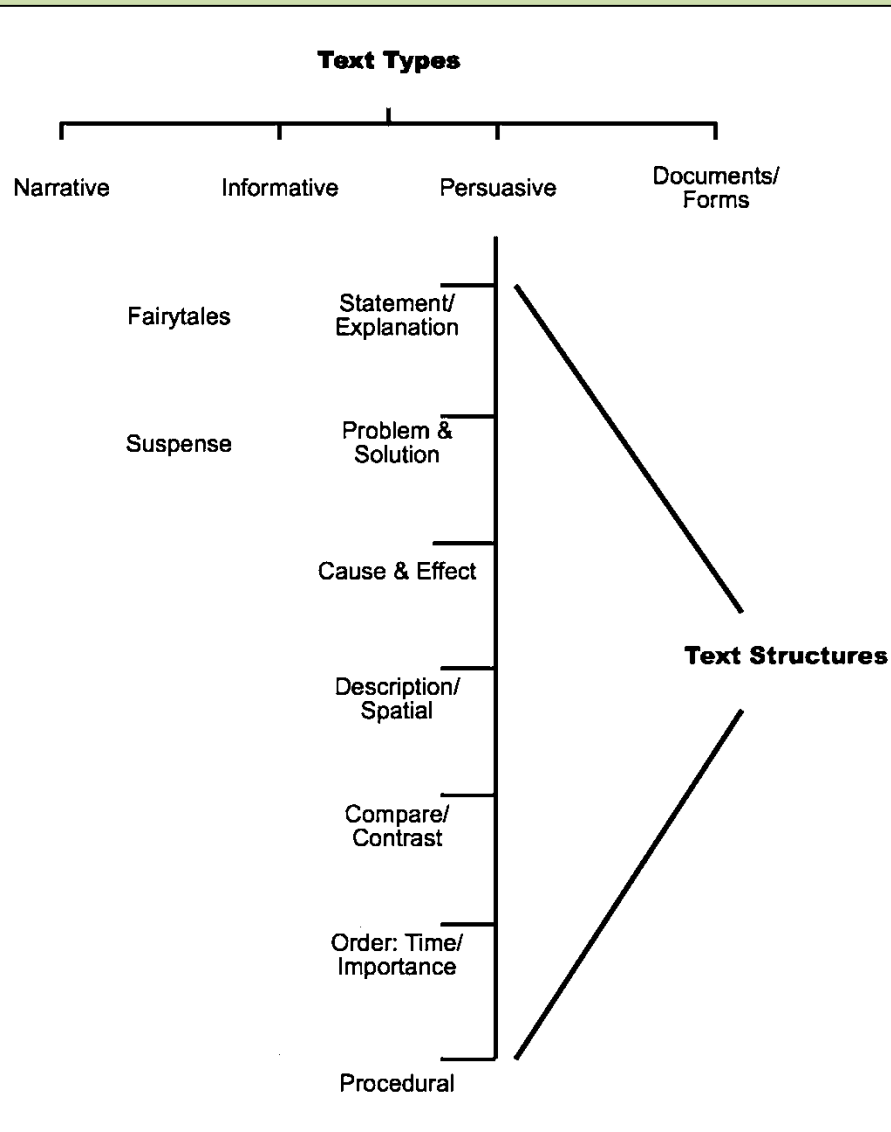
The Adult PACES Literacy Program covers a variety of Text Types and Text Structures.

Learners are taught how text maps can help develop a strong summary, void of unimportant information.

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Developing Reading Comprehension Lessons for Adults in AutoTutor

Graesser, Baer, Cai, Hays, Hu, & Olney

Adult PACES Comprehension Program

P Predicting Purpose using Text Signals.

A Acquiring Vocabulary using Context Clues and Affix Knowledge.

C Clarifying Common Sources of Confusion using Clarifying Questions.

E Evaluating and Elaborating through Questioning.

S Summarizing using Text Maps.

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Multilevel framework of discourse comprehension

1. **Words**
2. **Syntax**
3. **Textbase**
   Explicit ideas (propositions)
   Referential cohesion
4. **Situation model**
   Causal, intentional, temporal, spatial logical relationships
   Connectives
5. **Genre and rhetorical structure**
6. **Pragmatic communication**

Graesser & McNamara (2011). *Topics in Cognitive Science.*

Reading Framework Proposed by Perfetti (1999)
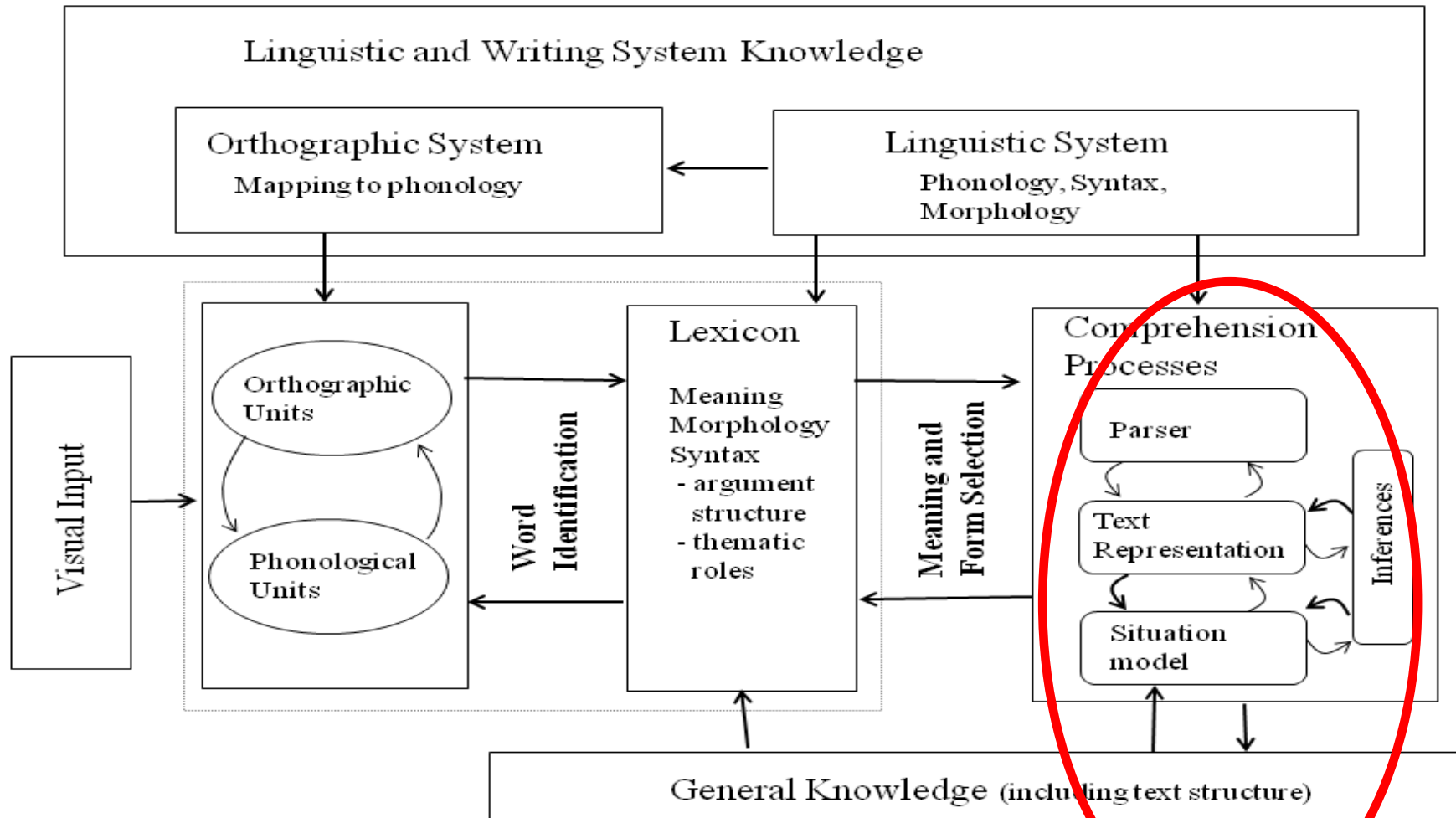
PROJECT READi

Reading, Evidence, and Argumentation in Disciplinary Instruction

Goldman, Brown, Britt, Magliano, Greenleaf, Lee, Griffin, Hastings, Lawless, Pellegrino, Radinsky, Raphael, Shanahan, Wiley

Text Representation

Situation
Textbase
Surface
Source 1

SN

Situation
Textbase
Surface
Source 2

SN

INTEGRATED MODEL

Situation
Textbase
Surface
Source 3

SN

Text Processes During Multiple Source Inquiry
Decoding and word recognition; Sentence parsing; Resonance; Inferencing (simple and explanatory); Reasoning; Analysis within and across sources; Synthesis within and across sources; Sourcing; Interpretation; Critique & evaluation

Language Learning is Multidimensional and Changes over Time (Scarborough, 2003)
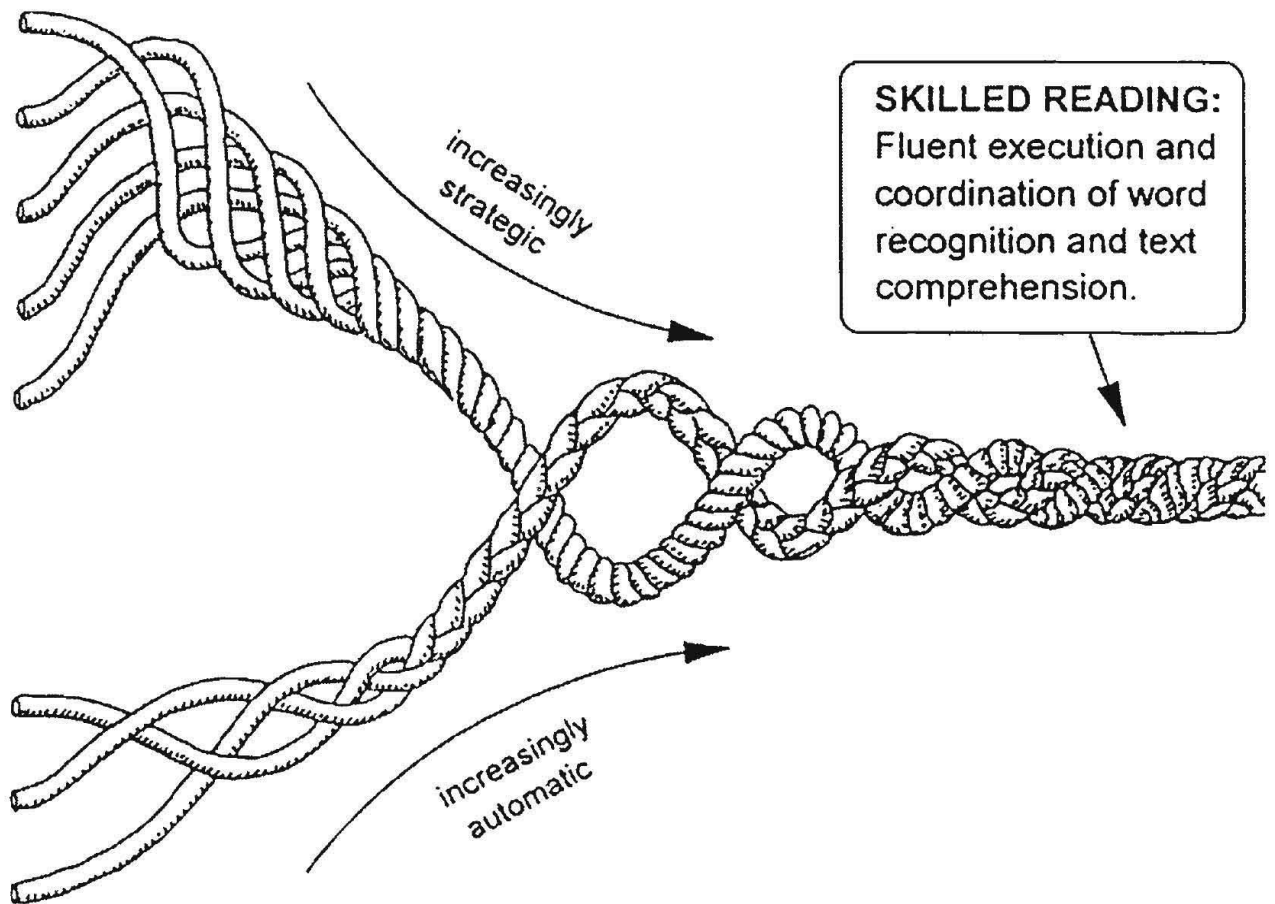
Memphis Agent Environments

AutoTutor
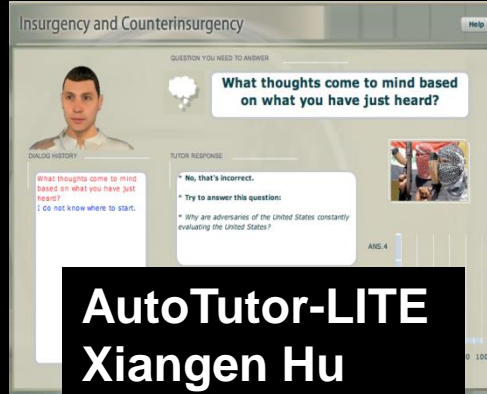
AutoTutor-LITE
Xiangen Hu

iSTART
Danielle McNamara
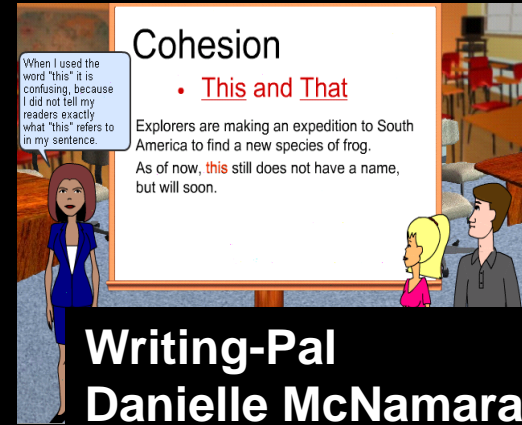
Writing-Pal
Danielle McNamara
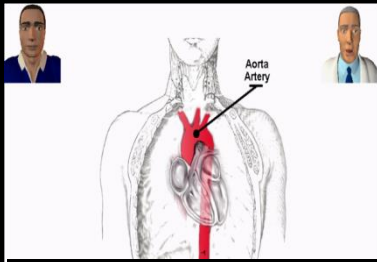
iDRIVE
Barry Gholson
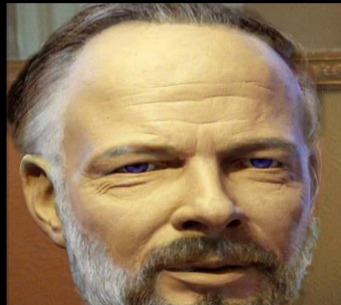
PKD Android
Andrew Olney
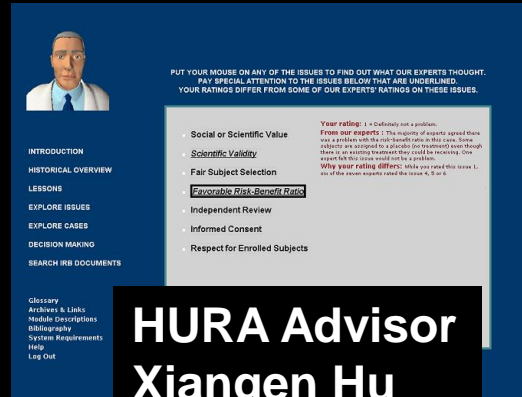
HURA Advisor
Xiangen Hu

iMAP
Max Louwerse
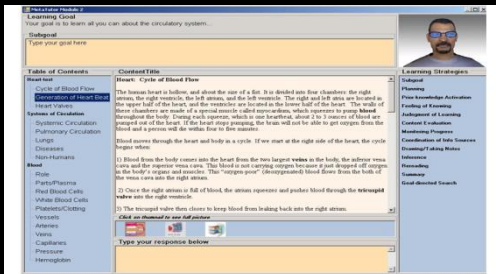
Meta-Tutor
Roger Azevedo
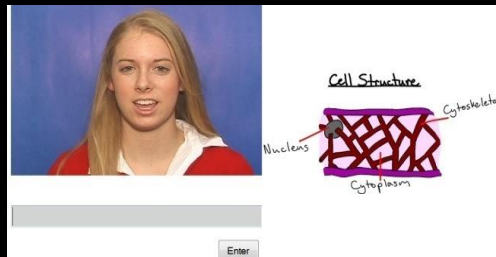
Guru
Andrew Olney
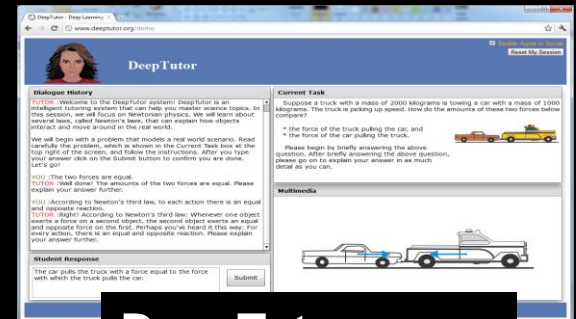
DeepTutor
Vasile Rus

Functions of Conversational Agents

- Help when initiated by the user
- Navigational guide
- Modeling action, thought, and social interaction
- Adaptive intelligent conversational dialog
- Many roles: peers, tutor, mentor
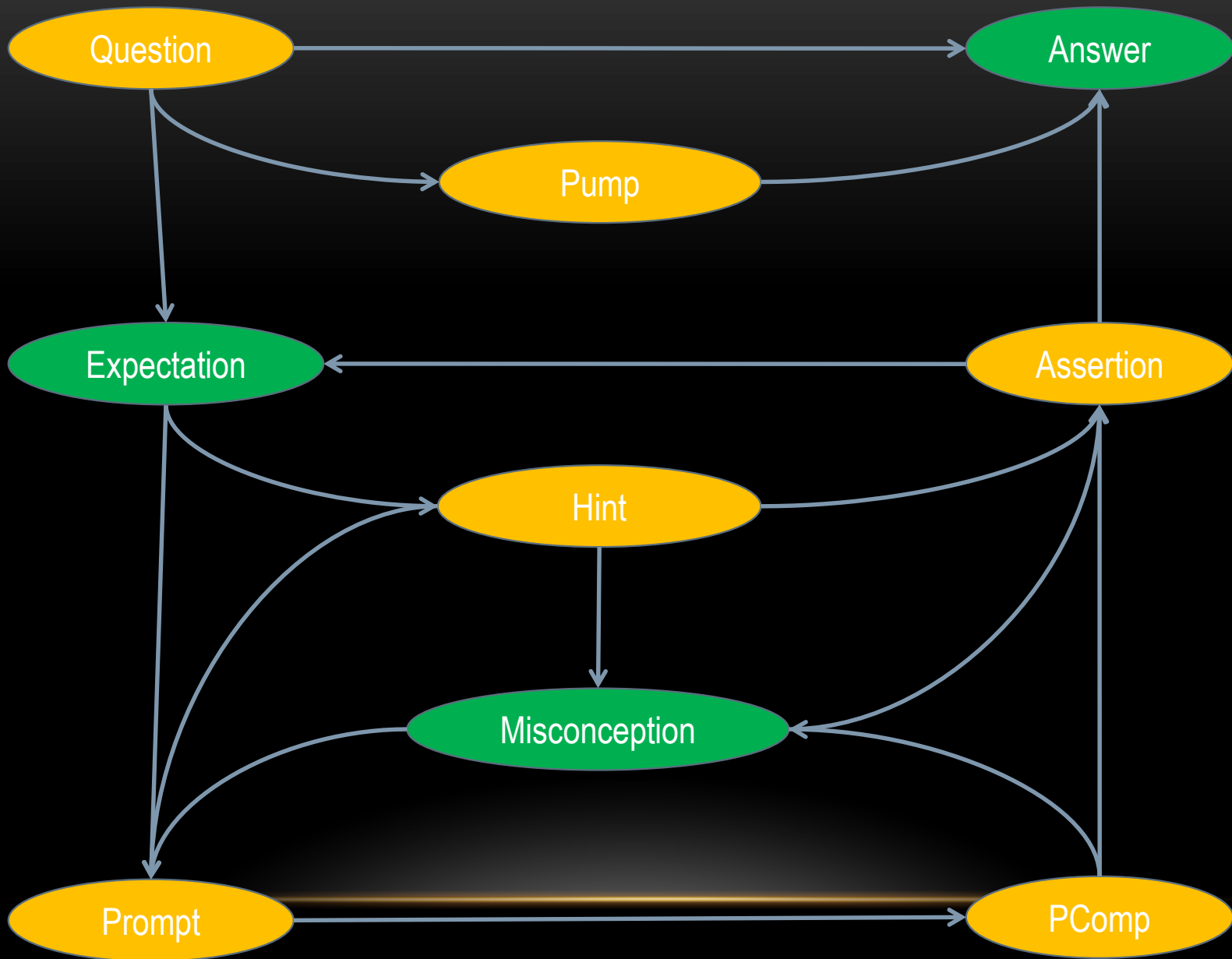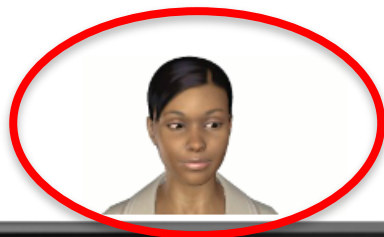
Click on the highlighted word and replace it with a similar word.

Louisiana Creole cuisine is a style of cooking originating ⌄ in Louisiana, United States. It blends French, Spanish, Portuguese, Italian, Native American, and African influences, as well as general Southern cuisine. It is similar to Cajun cuisine in ingredients, but the important difference is that Cajun cuisine came from another place.

The lion **tracks** the zebra.

to follow or pursue a series of marks

parallel lines of rail for a train

Whitney

3

Jordan

3

Simple Guidelines for Cashing Checks

Make sure you trust the person who wrote you the check. Do not accept checks from people you do not know. This may result in a bounced check that can cost you money and fees.

Endorse the check at the bank before you cash it. To endorse a check, flip it over and sign on the line with the "x." Never endorse a check outside of a bank. If the check is lost or stolen, the bank is not responsible for your lost funds.

Do you think this article is informational, persuasive, or narrative?

| Informational | Persuasive | Narrative |

Having my GED would mean a lot to me. I believe I could accomplish a lot of things in my life. I could further my education. I could get into a career I've wanted since I was 12 years old. That career is working with computers. I used to dream about computers all of the time. I wanted to program and fix them. I wanted to know everything about them. When I got to high school, I didn't pay much attention to computers. I cut or was late for many of my classes. I

Click on the sentence above that supports the statement, "The writer did not learn about computers in high school."

Which of the following is the most helpful description?

She was playing with a white terrier.

She was wearing a pink collar with a blue tag that says Lola.

She was trying to get into a grocery store.

Lost Dog, Lola
($10 Reward)

Lola is a 6-year old lab. She is about 60 pounds with short, black hair and a white spot on her front left paw.

| Title | How to Assess a Burn | Topic | Medical Treatments |

Title: How to Assess a Burn

Topic: Medical Treatments

Main Idea: Proper assessment and treatment of burns can ensure you heal quickly and with minimal pain.

Hold the burned area under cool (not cold) running water for 10 or 15 minutes or until the pain subsides.

Bandaging keeps air off the burn, reduces pain and protects blistered skin.
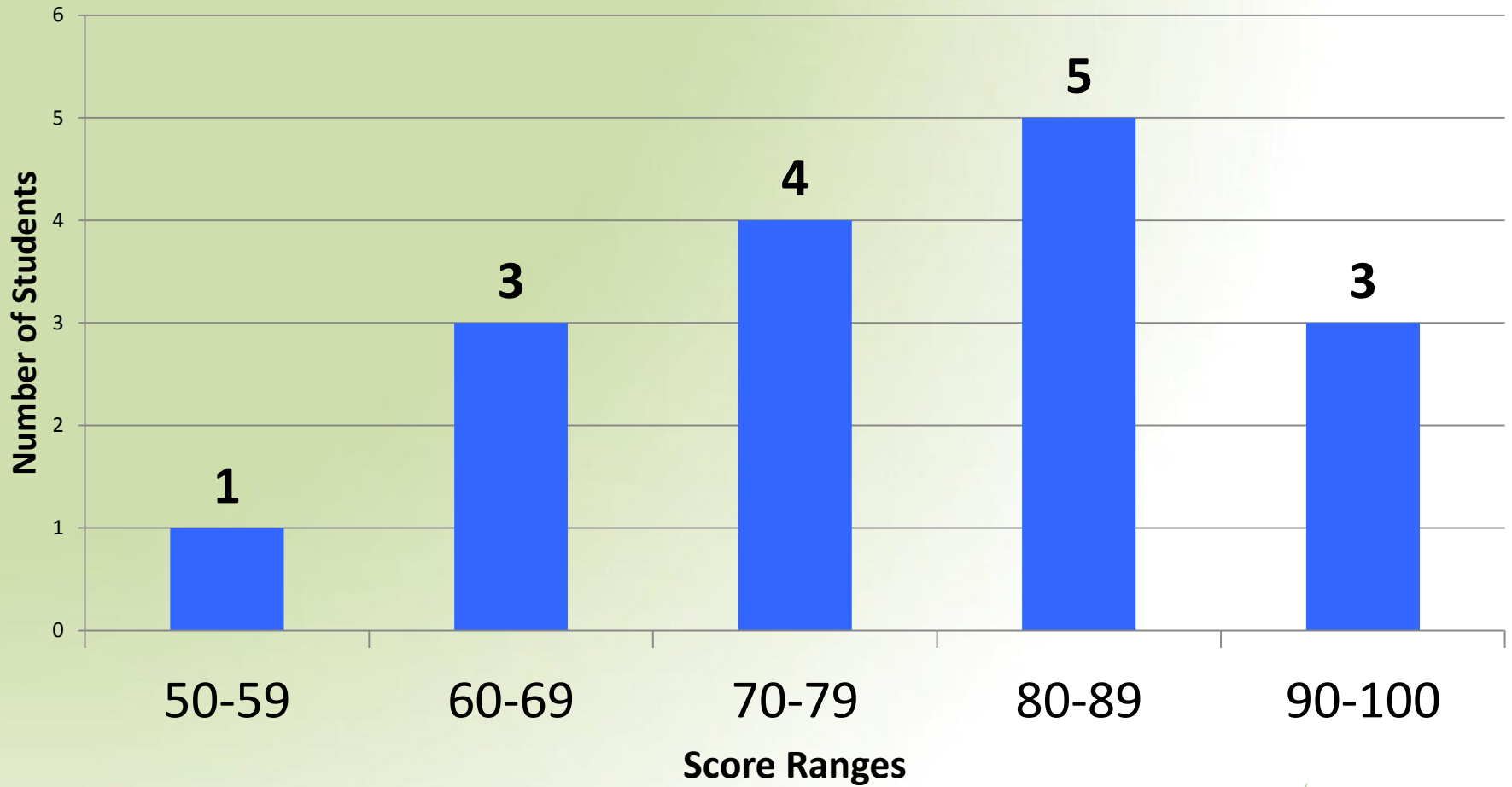
Don't break blisters because they are more vulnerable to infection.

Iterative Development

- **Toronto creates scripts of lessons**
- **Memphis and Georgia gives feedback**
- **Toronto revises**
- **Memphis creates AutoTutor lessons in storyboard**
- **Toronto and Georgia gives feedback**
- **Memphis creates AutoTutor lessons with the AutoTutor Script Authoring Tool (ASAT)**
- **Toronto and Georgia gives feedback**
- **Cycles of revisions until folks are happy or wear out**
- **Data collected on college students and adult learners**
- **Cycles of revisions until folks are happy or wear out**
- **Eventually a beta version is ready for field testing**

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Pilot Data Collected on 16 Adult Learners in Atlanta

- **16 participants on one lesson**
- **Reading Time on Text**
  - **Mean = 93 words per minute [57-198]**
  - **Typical adult reader = 250-300 WPM**
- **Lesson completion time**
  - **Mean = 24.3 minutes [20.1 – 33.4]**
- **Assistance needed in a lesson**
  - **Mean = 1.3 [0 – 4]**
- **Performance on Items**
  - **Mean = 78% [55% to 95%]**

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Examples and Usability of the AutoTutor Reading Strategies Tutor

Whitney Baer and Haiying Li

Lesson Interactions

Lesson 3: **Predicting Purpose**
Lesson 8: **Replace and Check to Clarify Pronouns**
Lesson 9: **Repetitive Activity on Multiple Meaning Words with Competition**
Lesson 11: **Quiz Game for Review of Skills**
Lesson13: **Drag and Drop to Fill in the Blank**
Lesson 14: **Visual Hover Cues and Drag and Drop Icons**
Lesson 15: **Modeling Video and Answer Animation**
Lesson 17: **Persuasive Texts and User Generated Typing**
Lesson 19: **Summarizing Descriptive Texts**
Lesson 23: **Compare and Contrast with Sentence Clicks and Summary Chart**
Lesson 25: **Procedural Texts with User Click Animation for Ordering**

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Usability Study

Li, Feng, Mintz, Clewley, Walker, Ankney, Cheng, Roychowdhury, Bao, Delong, Cai, Graesser

ASAT

Conversational Agents

- Providing instant scaffolding

- Providing instant feedback

- *Modeling learning*

- *Competing in learning*

- …

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Research Question

Which learning environment do adult readers prefer, vicarious learning or competitive learning?

Contents

Method:
Participants & Fixed Effects

Gender	Condition	N
Female	Vicarious	68
	Competitive	51
	Total	119
Male	Vicarious	38
	Competitive	31
	Total	69
Total	Vicarious	106
	Competitive	82
	Total	188

Method:
Procedures & Analyses

1. Procedures

    ➤ CSAL lessons

    ➤ Surveys

2. Analyses

    ➤ Reliability (Items)

    ➤ Factor Analysis (Items)

    ➤ UNIANOVA

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Results:
Correlation Matrix for System Evaluation

Items	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11
System improves reading.	1.00										
I like the interface.	.46	1.00									
Conversation is natural.	.55	.53	1.00								
Recommend this system.	.66	.53	.57	1.00							
System runs smoothly.	.42	.53	.63	.55	1.00						
Use this system again.	.65	.64	.63	.57	.64	1.00					
Activities are engaging.	.55	.63	.59	.61	.54	.73	1.00				
Activities are suitable for adult.	.58	.42	.45	.69	.44	.62	.58	1.00			
Agents are helpful in reading.	.56	.58	.52	.65	.57	.69	.69	.70	1.00		
Strategies improve reading.	.60	.62	.60	.74	.56	.58	.62	.67	.81	1.00	
System is easy to use.	.40	.52	.40	.55	.50	.42	.45	.50	.49	.57	1.00

Cronbach's α = .935

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Factor Analysis
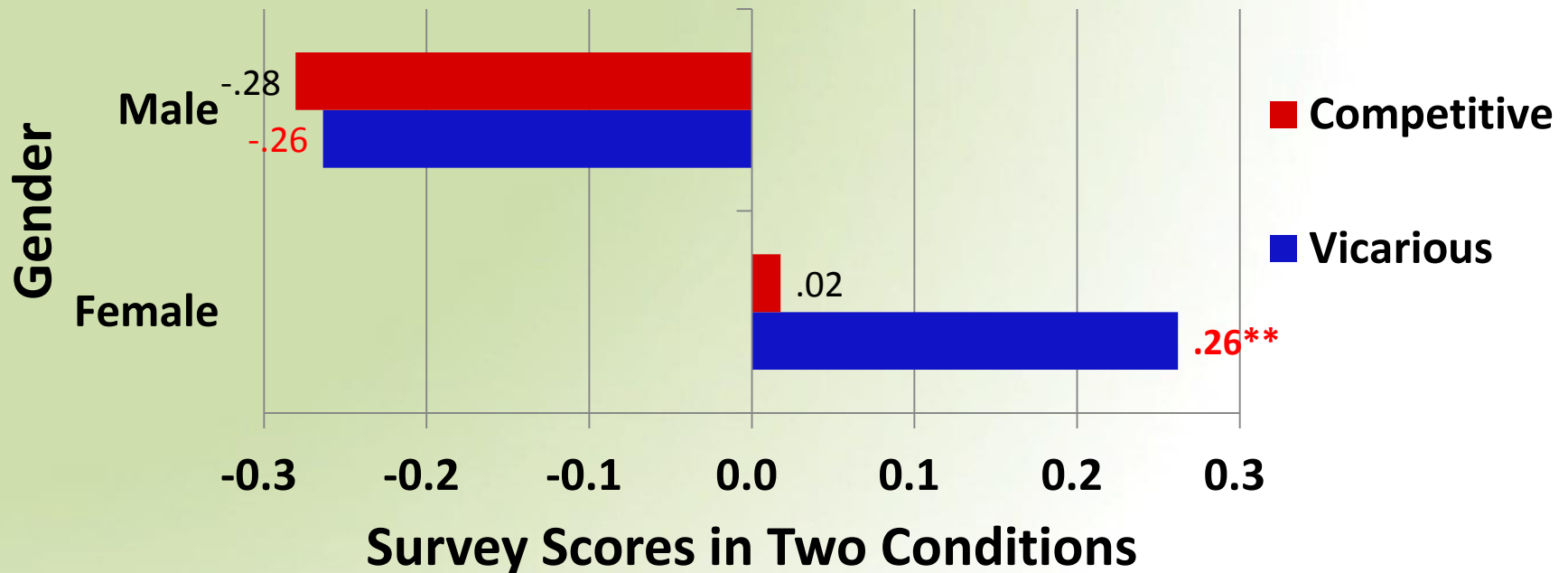
- One factor extracted

  As Dependent Variable

  – Total explained variance: 61.55%

  – Loading: > .66

  – Eigenvalue: 6.77

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Evaluation of Tutoring System

Interaction: $F (1,184) = .579$, $p = .448$
Condition: $F (1,184) = .762$, $p = .384$
Gender: $F (1,184) = 7.587$, $p = .006$

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More results for these two studies will be presented at the main conference!

A Survey of Adult Literacy Teachers' Instructional Practices Associated with Various Texts, Tasks and Social Conditions

Conley and Greenberg

Constructing the Survey

- **Based on:**
  - **Purcell-Gates study (2002).**
  - **Added questions to address media and other digital possibilities.**
- **35 questions:**
  - **instructor demographics,**
  - **training**
  - **preferred texts**
  - **instructional practices**
- **Survey used "skip logic"**

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Distributing the Survey

- **Qualtrics Survey software**

- **Distributed to:**
  - **Adult literacy organizations**
  - **Adult literacy directors**
  - **CSAL website**

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Demographics of the Sample

- N = 838
- Gender: 83% female
- Status:
  - Part-time: 48% and paid
  - Full-time: 34% and paid
  - Volunteer: 18%
- Location:
  - Northeast: 40%
  - Urban: 59%; Rural: 21%; Suburban: 20%
- Agency:
  - Community Based Organization: 35%
  - State Run Organization: 27%

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Results of the Survey

- Instructor Demographics and Training
- Four Themes:
  - ✓Using texts to engage with the authentic world, personal exploration
  - ✓Using Information and documents to accomplish personal goals
  - ✓Using digital texts to accomplish tasks
  - ✓Emphasis on comprehension "to do" and critical reading
  - ✓Instructor direction but also collaboration with adult learners

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Theme:

Engaging Adults with the Authentic World: Current News and Events and Pleasure Reading

- Newspaper articles with news, current events and general interest (e.g., how-to's, recipes, personal interest stories)
- Character studies, true stories written by other adult learners
- Biographies of famous people, historical figures, autobiographies
- Poems that tell stories
- Popular magazines about people (like People Magazine)

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Theme:
Informational Materials and Documents: Achieving Personal Goals

- Job applications, health, medical and exercise, financial information

- General applications (for renting an apartment, for example), checking accounts, bus and train schedules

Theme:
Digital Texts:
Researching and Accomplishing Tasks

- Researching and information gathering
- Computer based instruction
- Email
- YouTube
- Government documents like drivers' license applications, paying taxes

Theme
Social Organization of Lessons: Instructor and Adult Learner

- Predominantly, instructors select materials and skills.

- A large percentage of instructors collaborate with adult learners on goals, materials selection, tasks and skills.

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Conclusions

- Adult educators are using digital materials to an overwhelming degree to plan lessons and to engage adult learners in research and accomplishing tasks.

- Digital media are important for adults engaging with the world and for personal exploration

- Informational materials and documents are critical for accomplishing personal goals.

- Digital media has opened a whole new world for researching and accomplishing important tasks but also teaching critical reading

- Adult educators direct but also collaborate with adult learners in these new textual worlds.

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Elements of Motivation among Adult Struggling Readers: Interfaces with Intervention Architectures, Construct Coverage, and Factorial Validity

Frijters, Tsujimoto, Tekok-Kilic, Pedace, Rodgerson, & Greenberg

Theoretical Guidance

- Competence motivation (Elliot & Dweck, 2005)
- Goal/interest compatibility of instruction (Hidi & Reninger, 2000)
- Engagement, persistence, & autonomy (Vansteenkiste, 2004)
- Cognitive attributions and language mediated self-reflection (Weiner, 2005)

A Description of the Motivational Landscape of Struggling Adult Readers

- Interest/Enjoyment/Value
  - Orientation toward particular activities; anticipation of enjoyment when engaged in those activities. Emotional valence attached to activity, etc.
  - Value: anticipated reward (varying in concreteness/abstraction) individual will receive with behaviour
  - "I think reading is enjoyable."/"Reading is useful to me."
- Sense of Competence/Self-Efficacy
  - Post-engagement self-beliefs of capacity to engage in an activity
  - Beliefs about self- or own-capacity to accomplish a reading task/challenge
 - "I am good at reading."
- Pressure/Tension/Difficulty
  - Self-report of the negative affect experienced while reading
  - Perceptions of the complexity of the task, and beliefs that reading is hard, or will cause problems when engaged in.
 - "I feel tense when I read."

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A Description of the Motivational Landscape of Struggling Adult Readers

- Main sample
  - 226 struggling adult readers
  - 3rd to 8th Grade level
  - Recruited from two urban/suburban centres
  - Ethnically and racially diverse
- Reference sample
  - 167 higher education at-risk, but normal readers
  - WJ Reading Fluency SS = 102.1
  - Ethnically and racially diverse
- 10 Motivation constructs derived from three existing measures

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Learning Motivation
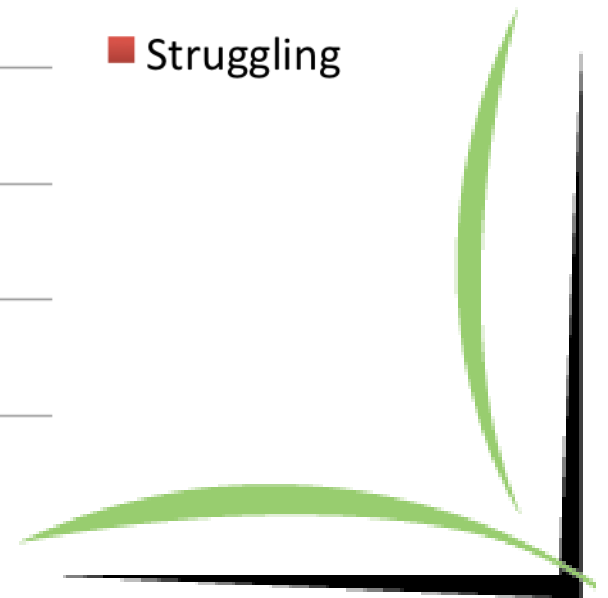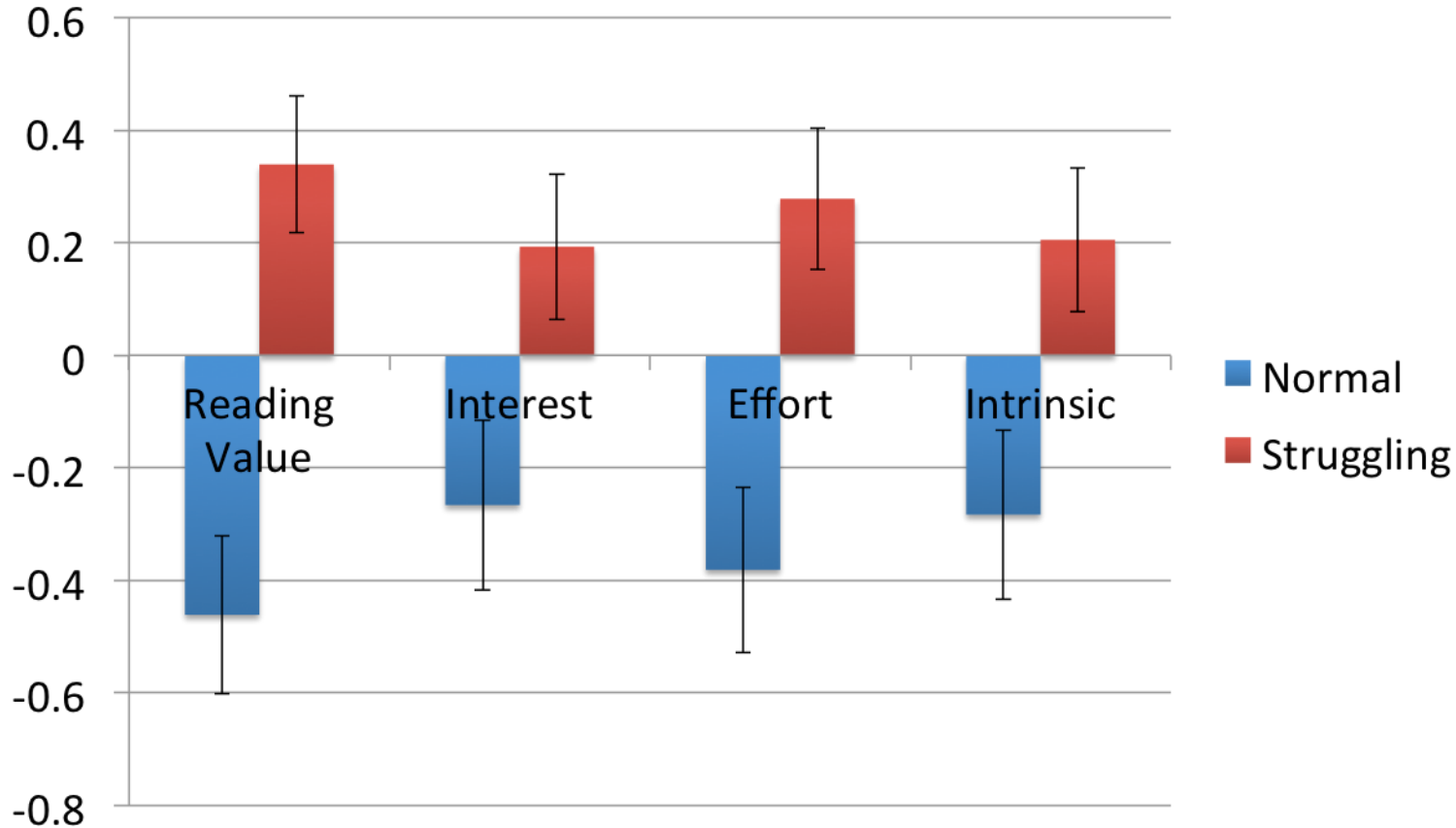
Performance Motivation
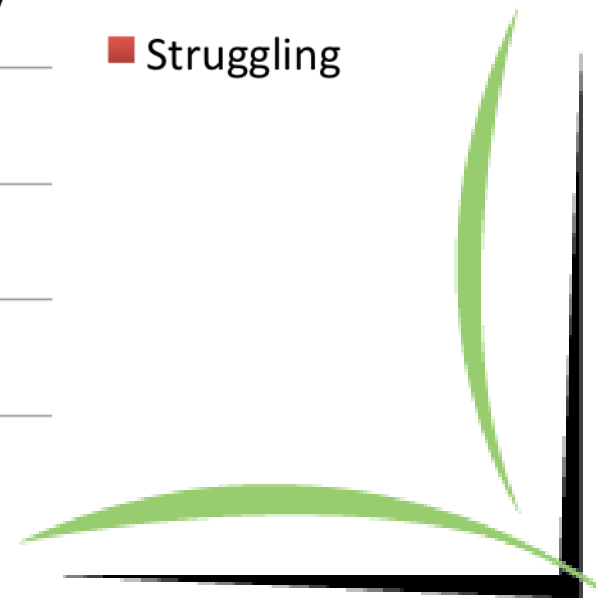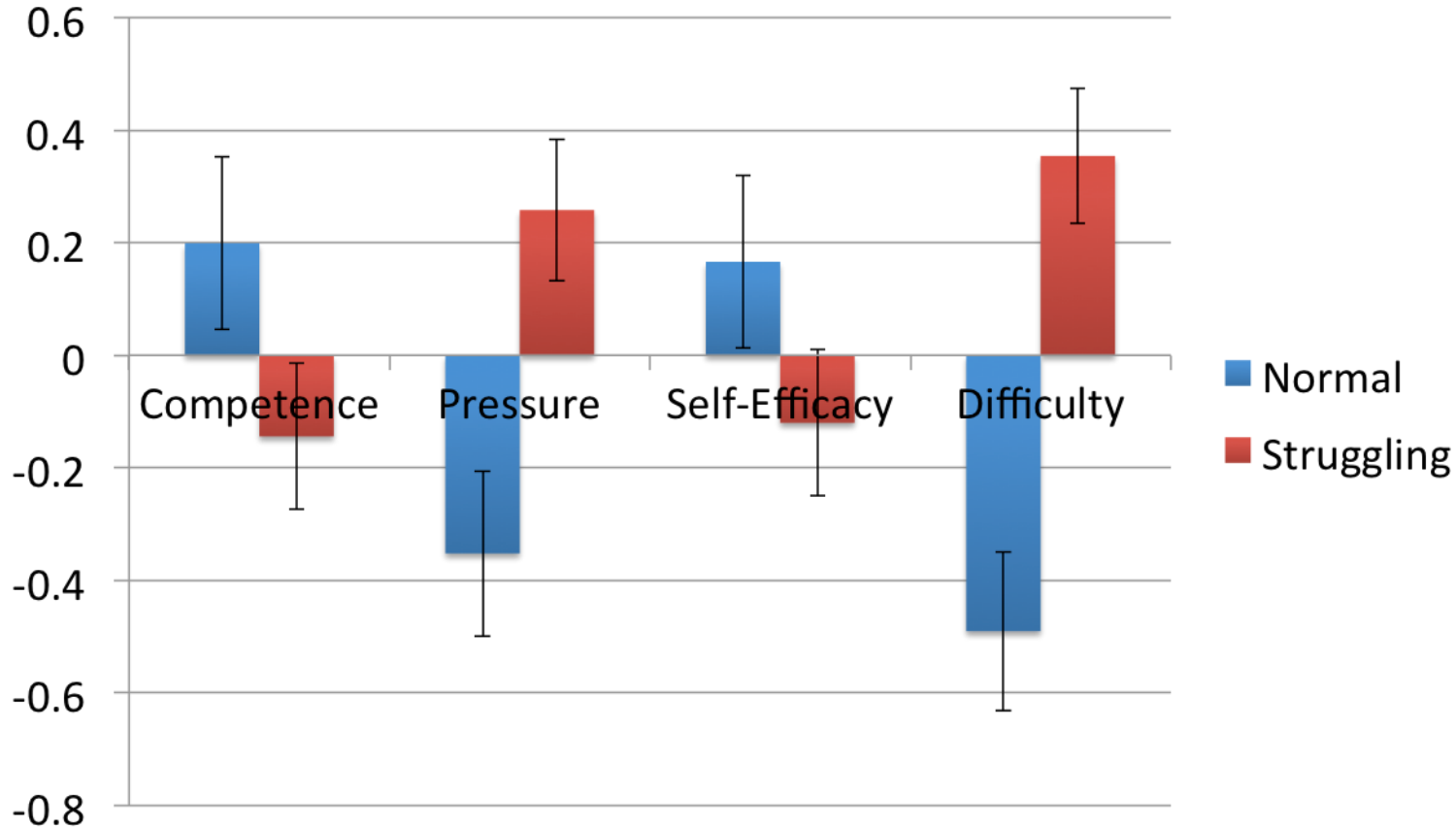
Motivation Principle #1

Autonomy and control lead to adaptive engagement with material (SDT).

Adaptive attributions and control beliefs motivate learners (Pintrich, 2003).

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Lesson Anatomy: Utilizing Gradual Release of Responsibility Principles

EXPLANATION
- Clear discussion as to the skills and strategies that will be taught in the lesson.

JUSTIFICATION
- Discussing the utility and benefits of the skills and strategies taught.

MODEL EXAMPLE(S)
- Instructor lead demonstrations of the skills and strategies.

GROUP EXAMPLES(S)
- Instructor guided demonstrations where the instructor encourages correct responses and interjects as needed.

INDIVIDUAL PRACTICE
- Independent applications of the skills and strategies taught on a computer running the AutoTutor adult literacy computer program.

Motivation Principle #2

Adaptive self-efficacy and competence beliefs motivate learners.

Motivation Principle #3

Goals motivate and direct students (Pintrich, 2003).

Proximal goals vs. distal goals need different treatments.

Final Thoughts

Daphne Greenberg

DISCUSSION