



Introduction to the **Center for the Study of Adult Literacy**

Daphne Greenberg
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Advisors

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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.

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.

Learning that is multidimensional and a focus that changes over time

LANGUAGE
COMPREHENSION

BACKGROUND KNOWLEDGE
(facts, concepts, etc.)

VOCABULARY
(breadth, precision, links,
etc.)

LANGUAGE STRUCTURES
(syntax, semantics, etc.)

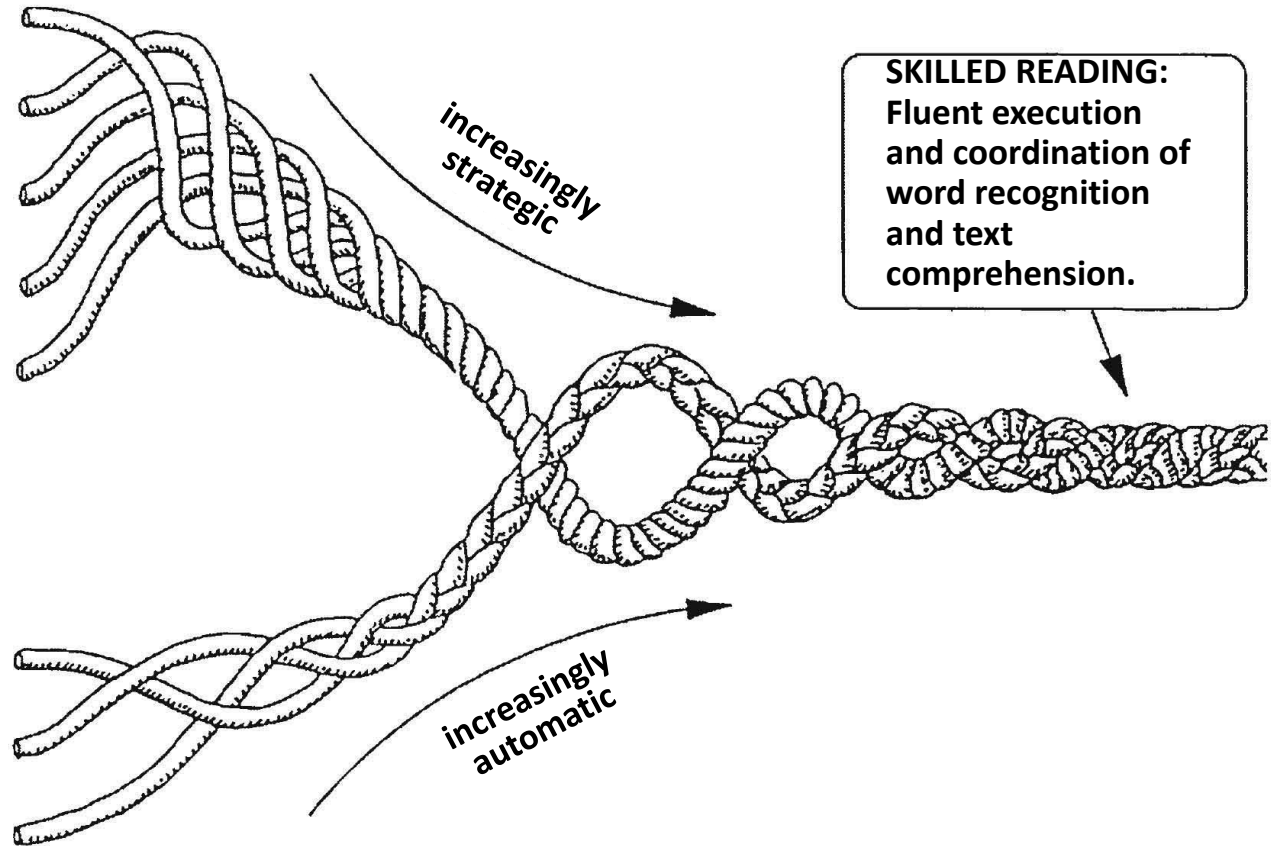
VERBAL REASONING
(inference, metaphor, etc.)

LITERACY KNOWLEDGE
(print concepts, genres, etc.)

WORD RECOGNITION
PHONOLOGICAL AWARENESS
(syllables, phonemes, etc.)

DECODING (alphabetic
principle, spelling-sound
correspondences)

SIGHT RECOGNITION
(of familiar words)



Hollis Scarborough (2003)

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?

Testing

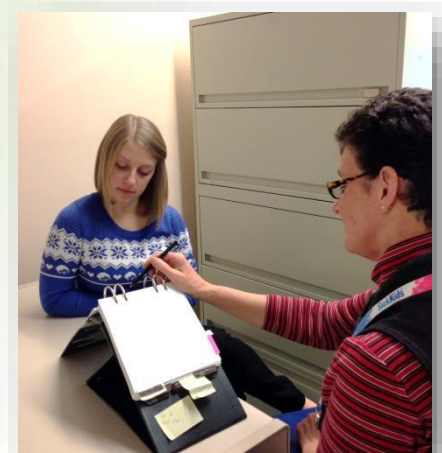
- ❑ To clarify the appropriateness of the use of a wide array of standardized reading, motivational, and cognitive assessments with adult literacy learners.
- ❑ To provide clarity on the cognitive and motivational profiles of adult literacy learners.



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 Lower-Level Components of Reading

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

Testing of Higher-Level 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

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

Our Philosophy

- ❑ Guided by Competence Motivation (Elliot & Dweck, 2005) and Self-Determination Theory (Deci & Ryan, 2002)
 - ❑ Goals/interests
 - ❑ Engagement in, and persistence with reading tasks
 - ❑ Cognitive attributions for success and failure
- ❑ All learners should feel that:
 - ❑ The instructional experience meets their own needs, interests, and goals
 - ❑ Is a worthwhile investment of personal time and energy, which are often limited by competing demands in their lives
- ❑ Therefore, we plan on:
 - ❑ Providing the learner control over approaches to difficult reading tasks and what he/she reads and works on
 - ❑ Supporting autonomy by ensuring that the learner sees progress in their own skills
- ❑ Each learner will meet with the instructor at regular intervals to:
 - ❑ Review testing results
 - ❑ State their interests and needs
 - ❑ Formulate personal goals

Developing instruction to meet the needs of adult struggling readers

The starting point

- ❑ Effective instruction starts with an evidence-based model of what is involved in becoming a skilled reader. What must be learned?
- ❑ Effective instruction builds upon research on what helps adults better learn new skills and knowledge.
- ❑ Effective instruction meets the needs and goals of the learners, and is tailored when possible to their different goals and profiles.

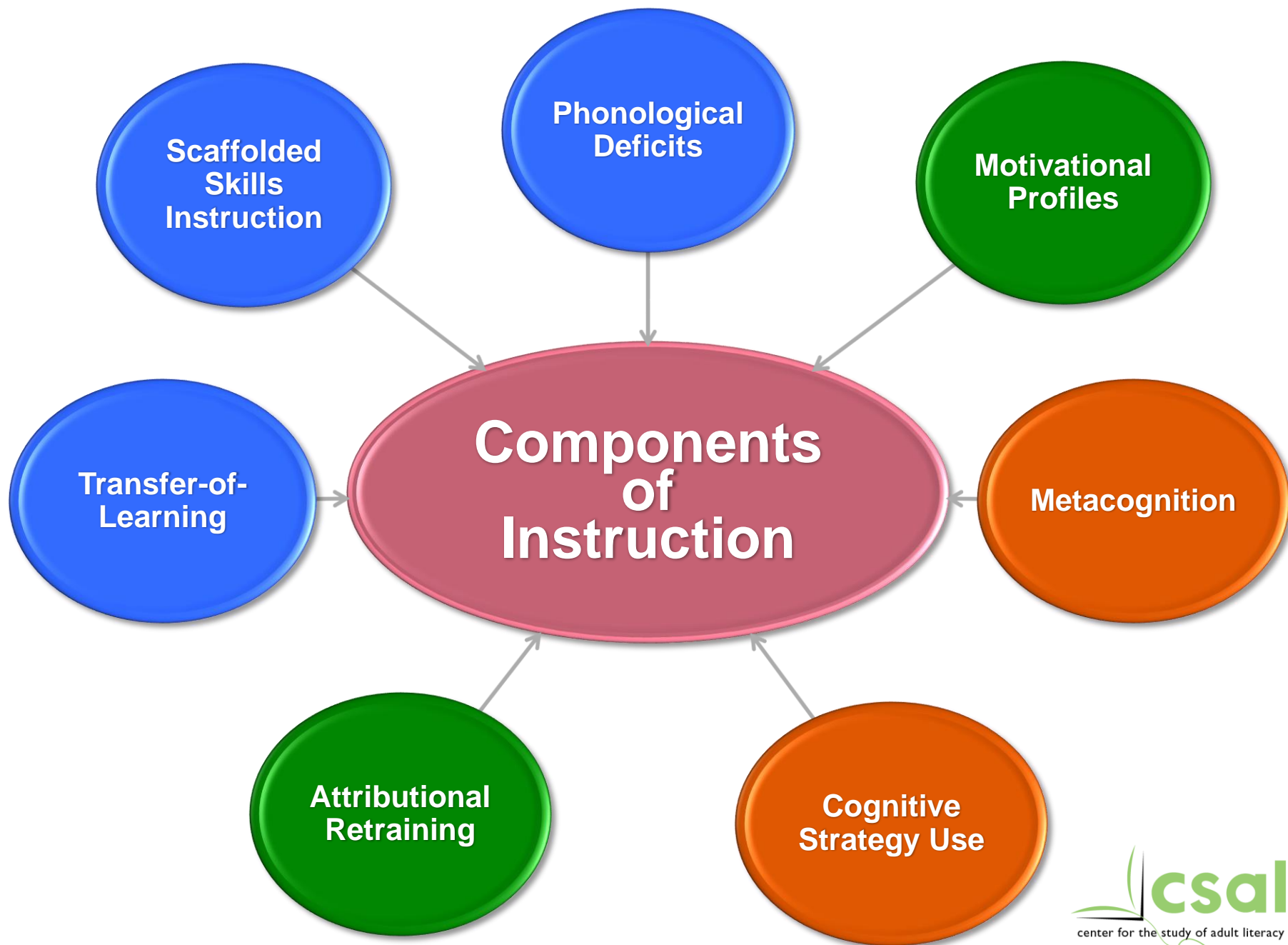
Developing instruction to meet the needs of adult struggling readers

The many challenges

- ❑ Making instruction relevant to their goals
- ❑ Designing and using materials of interest
- ❑ Addressing gaps in foundational skills, strategies, and knowledge
- ❑ Structuring learning tasks that will generate motivation to engage and maintain effort
- ❑ Celebrating tangible success and providing a cognitive framework for failures
- ❑ Maximizing outcomes from whatever time the adult learner can devote to instruction and practice

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





Reading Intervention in High School

A reading program for teens
who are struggling readers



Designed to specifically address
literacy learning problems in adolescents

To date, more than 3000 students have
received instruction in high schools
across Ontario

PHAST PACES is the research version of Empower™ Reading High School

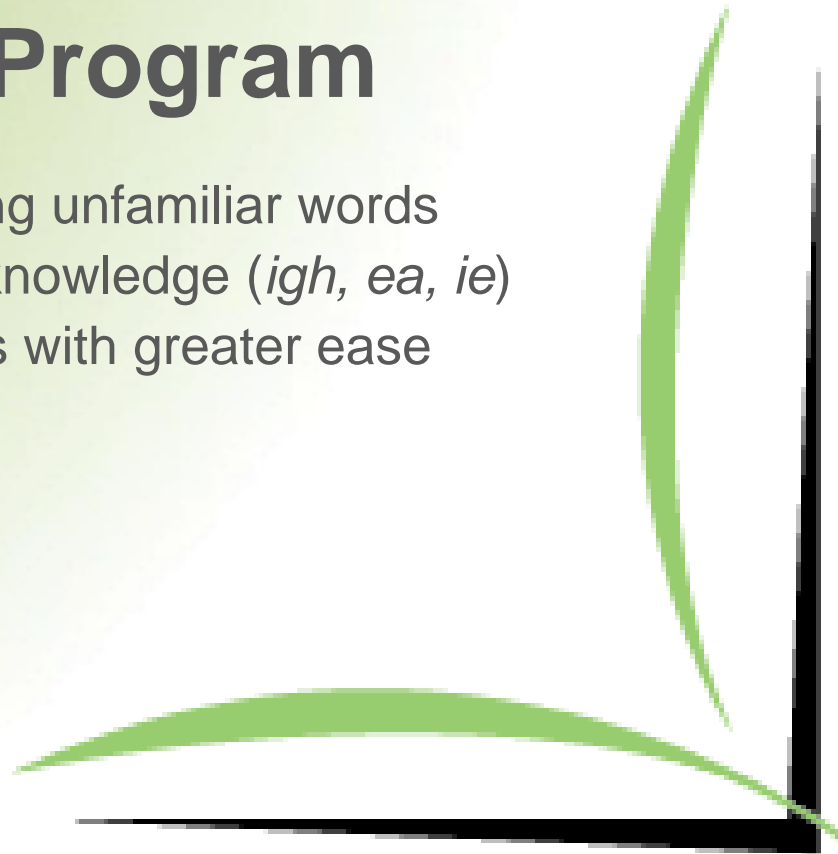
Empower™ © The Hospital for Sick Children 2006





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 PHAST Decoding Skills Program

SOUNDING OUT

Filling gaps in letter-sound knowledge and basic decoding skills

PEELING OFF

Learning affixes and how to deal with multisyllabic words

VOWEL ALERT

Learning variable vowel pronunciations and vowel combinations

Adult PACES Comprehension Program

P

Predicting Purpose with Text Signals and Key Information.

A

Acquiring Vocabulary with Context Clues.

C

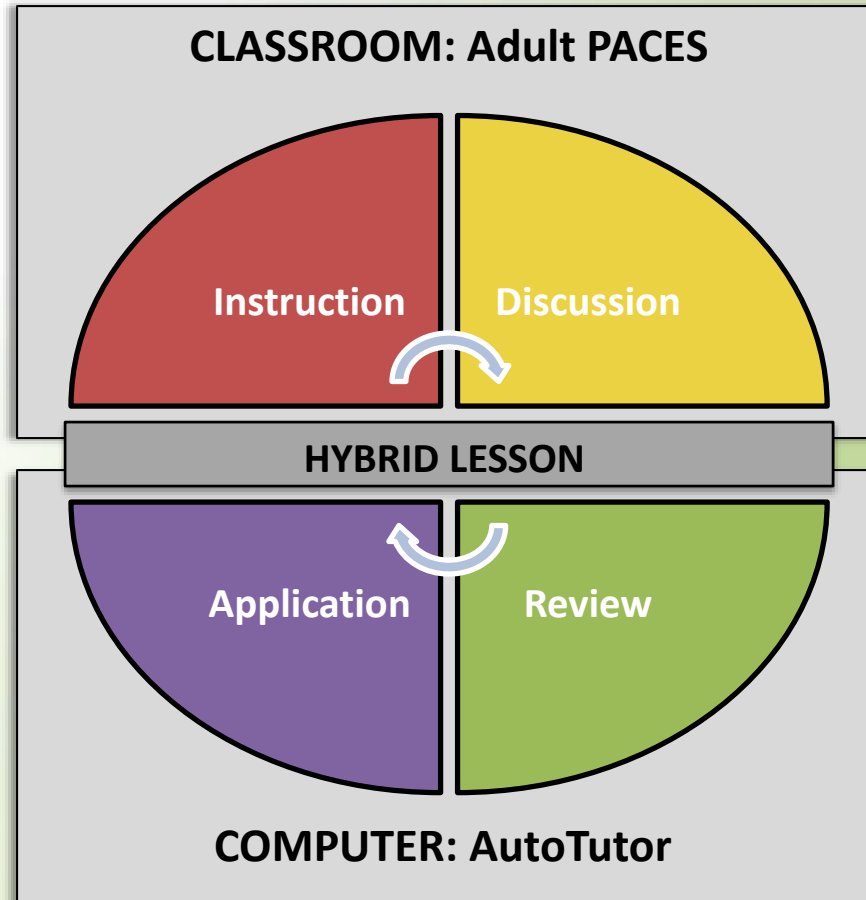
Clarifying Common Sources of Confusion with Clarifying Questions.

E

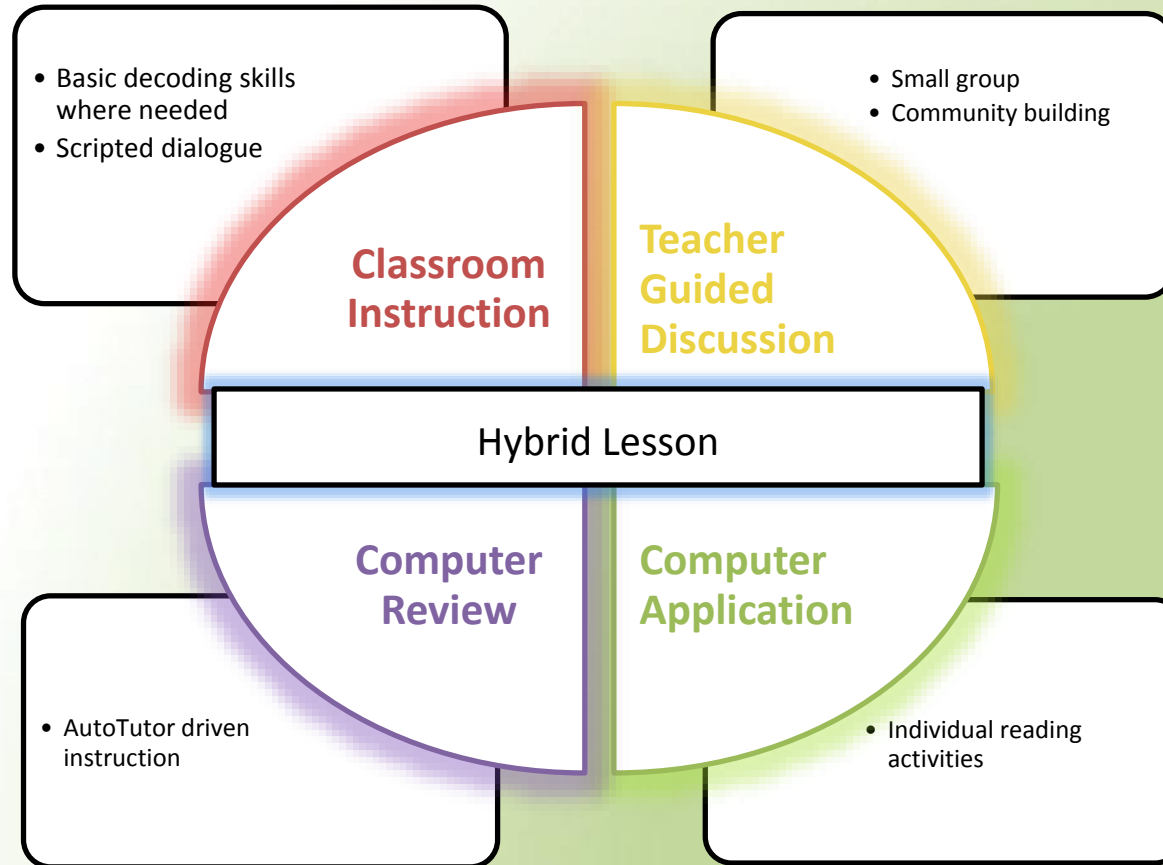
Evaluating and Elaborating through Questioning.

S

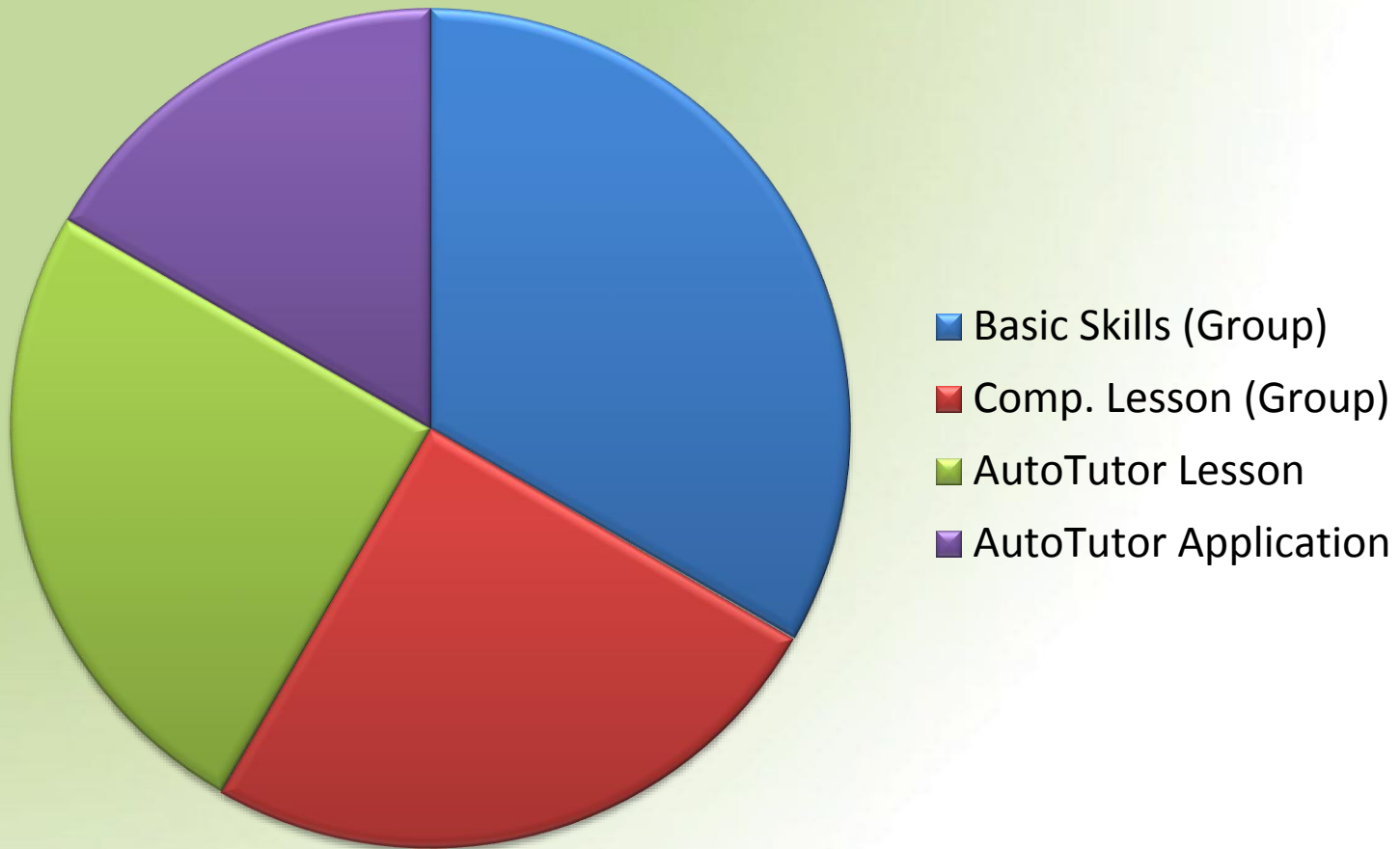
Summarizing with Text Maps.



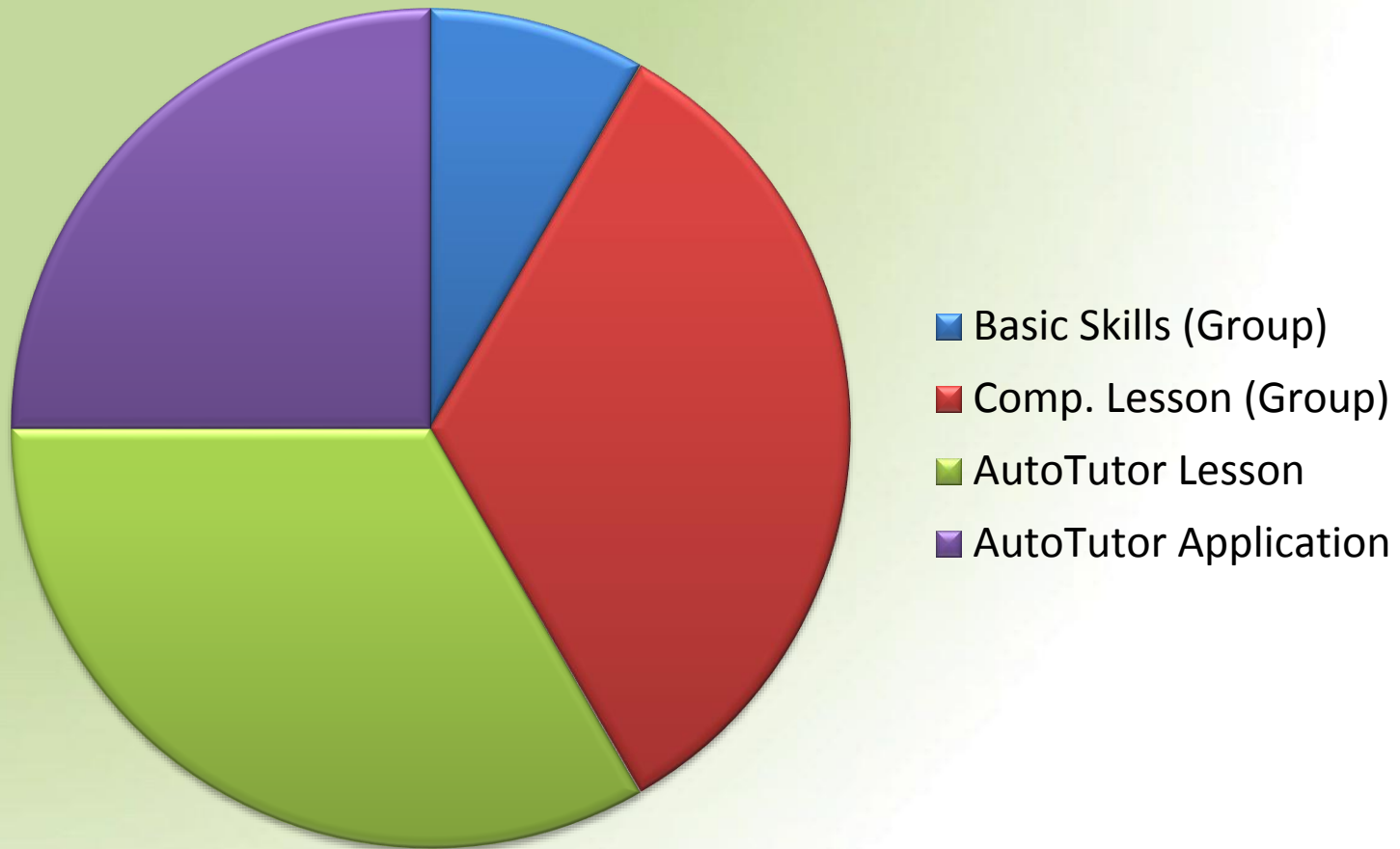
How We Incorporate the Four Key Components



Instructional Framework for Weaker Decoders



Instructional Framework for Stronger Decoders





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



Questions about Text Selection

- ❑ What texts are in use for various purposes in adult literacy centers?
- ❑ What web-based texts are available through various commercial, government and adapted resources?
- ❑ How should texts be rated for relevance and level?
- ❑ How do we establish a repository and make it accessible to motivated students?

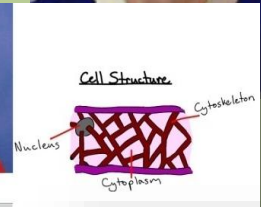
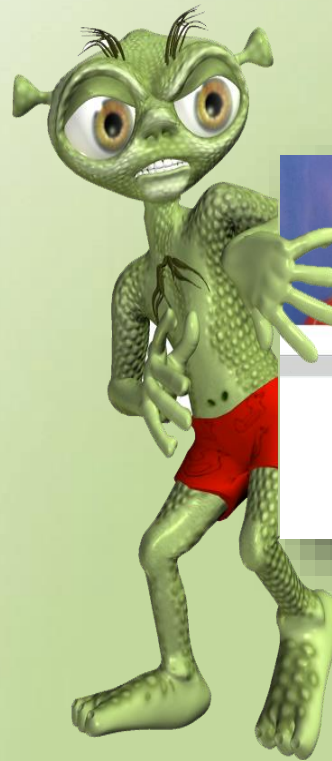
Steps to Build Repository

- ❑ Administer adult literacy text survey.
 - ❑ Embedded categories related to topic and genre
 - ❑ Skills and center practices
- ❑ Solicit ideas and examples from publishers, government agencies, other centers, and local adult literacy centers.
- ❑ Create an annotated list of resources.
- ❑ Develop analysis categories.
 - ❑ Topics (such as health, employment, parenting, hobbies)
 - ❑ Tasks (including filling out forms)
 - ❑ Text difficulty and characteristics with Coh-Metrix-TEA

Intervention with AutoTutor

(Graesser, D'Mello, Hu, Cai, Olney, & Morgan, 2012)

- ❑ Conversational agents
- ❑ Intelligent Tutoring System
- ❑ Online through browser
- ❑ Media include texts, diagrams, videos, quizzes, games, and social media
- ❑ Adults communicate by typing, speaking, or pointing/clicking



Trialogs

Two or more agents
are often better than one agent

The screenshot displays a software interface for a trialog system. The top section features two avatars, Ron and Lisa, with a control panel on the right. The control panel includes dropdown menus for 'Ron' (Speechify Solo Tom (qua)), 'Lisa' (Microsoft Anna), and 'User' (Tim). It also has radio buttons for 'Local' and 'Server' (selected), and a 'Stop' button. The bottom section shows a video player with a man pointing at a blue screen. The screen displays the following text:

The sum of two numbers is 32. One number is 3 times as large as the other.
What are the numbers?

Larger number = ?

Smaller number = ?

At the bottom of the interface is a 'User Input' field with the text: We need to find two numbers.

How AutoTutor Works

- ❑ Evaluating and Responding to Student Contributions
 - ❑ Advances in computational linguistics
 - ❑ Content knowledge, skills, strategy use, emotions, motivation
 - ❑ Individualized instruction by responding to the student's answers adaptively
- ❑ Conversation Patterns
 - ❑ Interacts with students by questioning, hinting, eliciting information, filling in gaps, correcting the student
 - ❑ Indirect feedback
 - ❑ Intelligent conversational scaffolding
- ❑ Multiple Agents (Trials)
 - ❑ Human, student agent, and teacher agent
 - ❑ Vicarious learning
 - ❑ Teacher interacts with human and student agent
 - ❑ Human teaches student agent, with teacher agent intervening
- ❑ Multiple Media

AutoTutor Script Authoring Tool (ASAT)

- ❑ Define agents
- ❑ Define types of student inputs
- ❑ Create rigid conversation scripts between agents
- ❑ Create adaptive conversation scripts that include human interaction
- ❑ Create conversation rules
- ❑ Link to Media

ASAT - The University of Memphis

File Tool Help

Script 1.xml

Agents SAC RigidPack TutoringPack Rule Xml Media

Agent: Lisa

Lisa

First name: Lisa Last name: Brown

Gender: Female Title: Ms.

Display name: Lisa

Canned expressions

	Name	Text	Speech
▶ 1	PositiveFeedback	I agree!	I agree!
2	PositiveFeedback	I agree!	I agree!
3	PositiveFeedback	Yeah!	Yeah!
4	MetaComRsp	Once again.	Once again.
5	MetaComRsp	Once more.	Once more.
6	MetaComRsp	Let me say that again.	Let me say that again.
7	MetaComRsp	Let me repeat.	Let me repeat.
8	MetaComRsp	Okay.	Okay.
9	PromptStart	I bet you know this.	I bet you know this.
10	PromptStart	I don't get this.	I don't get this.
11	PromptStart	I bet you can get this.	I bet you can get this.
12	PromptStart	See if you know the answer to this.	See if you know the answer to this.
13	PromptStart	I bet you know the answer to this.	I bet you know the answer to this.
14	PromptStart	I think you can get this.	I think you can get this.

Our Website

csal.gsu.edu



[Enter here](#)



The research reported here is supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305C120001 Georgia State University. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.



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CSAL HOME

Mission Statement

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.

CSAL General Overview

Each year, nearly 3 million Americans enroll in adult literacy programs to improve their basic skills, and some estimates suggest the need is even greater. Adults in these programs want to increase their literacy skills to improve aspects of their work, family, social, and civic lives. However, we do not completely understand their underlying reading-related strengths and weaknesses, nor do we know the best curricula and teaching approaches to help them reach their reading goals. The focus of our center is to address these areas by conducting research that will: (1) explore individual differences in reading-related abilities and motivations for learning so that we can better tailor instruction to adult learners, (2) design a reading program and an interactive online reading tutor that, can more effectively meet adult learners' needs, and (3) conduct pilot studies to assess the potential of our instructional programs in helping adults improve their literacy skills. More information is available on our [project overview page](#).



On October 4, 2013, Jaleh Behrooz Soroui will present on the **Program for the International Assessment of Adult Competencies (PIAAC)**. This survey provides a comparison of the adult workforce (ages 16–65) in 24 countries and regions in the areas of literacy, reading components (for assessing low literacy levels), numeracy, and problem-solving in technology rich environments. [Read more...](#)



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[Overview](#) | [Scientific Abstract](#) | [Assessment Battery](#) | [Year One Summary](#) | [Publications](#)

Project Overview

Our center has two major goals:

1. To research the underlying processes that help or hinder the reading development of adults who struggle with reading.
2. To develop and evaluate a reading curriculum to address adult learners' needs.



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About Us

Many hard working individuals collaborate to develop and maintain this center. Please click the links above to learn more about the individuals that work behind the scenes.



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CSAL Researchers

Georgia State University

[Daphne Greenberg - Principal Investigator](#)

[Lee Branum-Martin - Co-Principal Investigator](#)

[Robin Morris](#)

[Hongli Li](#)



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[Introduction](#) | [Basic Overview](#) | [Advanced Overview](#) | [Quick Reference Guide](#)

Readability

Teachers of effective adult literacy instruction need to pay close attention to the difficulty level of texts. The difficulty level of text should be at the zone of proximal development (ZPD) which is not too difficult nor too easy, but at an intermediate level that slightly pushes the learners' reading proficiency (Graesser, McNamara, & Kulikowich, 2011^[a]). We know that working with younger learners that their competence, motivation, and persistence decline dramatically when reading a text that is too difficult (Fulmer & Frijters, 2011^[b]). To aid us in selecting appropriate texts, we rely on a computer system called Coh-Metrix (Graesser & McNamara, 2011^[c]; Graesser, McNamara, & Kulikowich, 2011^[d]). Graesser and his colleagues developed Coh-Metrix so that researchers and teachers have a way to scale texts on dozens of aspects of language and discourse. Access the Coh-Metrix tool [here](#). If you want to learn more about Coh-Metrix, follow these links: [Basic Overview](#), [Advanced Overview](#), and [Quick Reference Guide](#).



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General Adult Literacy Websites | [Computer Skills](#)

General Adult Literacy Websites

You may find the following adult literacy related websites helpful and informative:

- ABC Life Literacy Canada: <http://www.abclifeliteracy.ca/>

The goal of ABC Life Literacy Canada is to help Canadians improve their literacy skills by promoting learning throughout the lifespan. This non-profit organization achieves its goal by promoting partnerships between individuals, businesses, governmental agencies and community organizations.

- Adult Literacy Education Wiki: http://wiki.literacytent.org/index.php/Main_Page

The Adult Literacy Education Wiki provides information about different aspects of adult literacy education including basic and secondary education, English language learning, and numeracy. The content targets practitioners, researchers, learners, and others who may be interested in adult literacy. As with other wikis, visitors can also contribute their own knowledge and experience to any of the listed topics.

- American Association for Adult and Continuing Education: <http://www.aaace.org/>

The American Association for Adult and Continuing Education (AAACE) is a non-profit organization dedicated to extending adult knowledge growth and development. AAACE targets adult learners, educators, and researchers and focuses on developing theory, research, information, and best practices in order for adult learners to have more fulfilling lives.



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[General Adult Literacy Websites](#) | [Computer Skills](#)

Computer Skills

[Basic Computer Skills](#) | [World Wide Web](#) | [Windows](#) | [Email](#)

We have compiled a list of computer skills which we feel are important for adults to know how to do. The list of skills comes from the Northstar Online Digital Literacy Assessment (<http://www.digitalliteracyassessment.org/index.php>) and the websites were taken from David Rosen's list of computer and other digital literacy lessons (<http://home.comcast.net/~djrosen/newsome/litlist/complit.html>). Please click the links above to explore websites which teach various computer skills to adults who have difficulty reading.



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Contact Us

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We appreciate all of your feedback.

Your name *

Your e-mail address *

Subject *

Message *