

Supplemental Appendix

Metacognitive Awareness and Academic Performance

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First in the World Instructor Training Module Fall 2016



Welcome to the FITW Instructor Training Module

- *Thank you for participating in the Spelman College FITW Project in ADW.*
- *You have been randomly selected to serve as a “**treatment**” instructor!*
- *The training module consists of 3 sections. At the end of each section you will be asked to complete a short activity. You may break the module up over time but **all activities should be completed prior to attending the training workshop on August 8th.***

*If you have any questions please contact
Dr. Jimmeka Guillory, FITW Co-PI at jguillo1@spelman.edu*



Section 1: Background Information

Table of Contents

- I. What is the First in the World Grant?
- II. Why ADW?
- III. Why is Experimental Design Important?
- IV. Section 1 Activity: Questions



First in the World (FITW) Grant Funded by the U.S. Department of Education



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As part of the Obama Administration's agenda to drive innovation & keep a higher education within reach for all Americans, the focus of the FITW program is to build evidence for what works in postsecondary education by testing the effectiveness of various strategies in improving student persistence and completion outcomes.

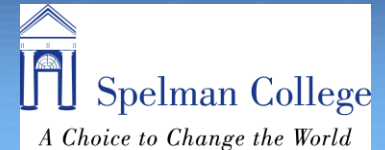
The Spelman College FITW project addresses the following priorities:

- **Absolute priorities**
 1. Improving Teaching and Learning
 2. Developing and Using Assessments of Learning
- **Competitive preference priority:**
 1. Implementing Low Cost-High Impact Strategies to Improve Student Outcomes



The Spelman College FITW Project

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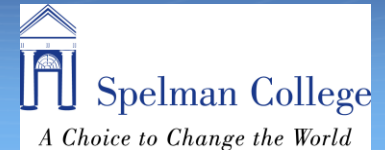
- **Project Title:** *Metacognitive Awareness and Academic Performance Among Female African-American Undergraduate Students*
 - **Awarded \$2.6 million**
- **Goal:** Test the effectiveness of student metacognitive (MC) training in the classroom (1st phase 2016-2018) & peer-tutoring (2nd phase 2018-2020) settings

This is where you
come in 😊



The Spelman College FITW Project

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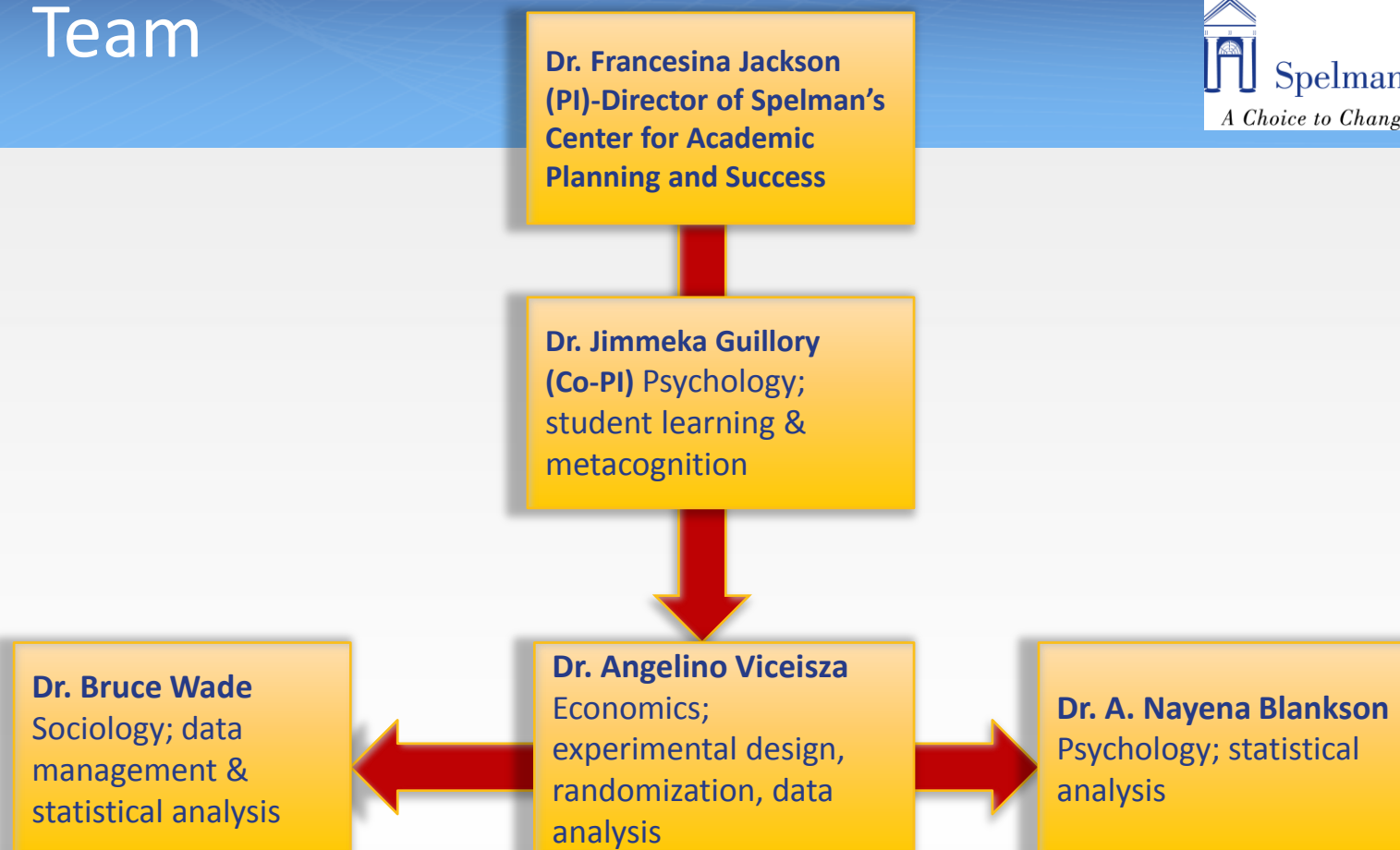
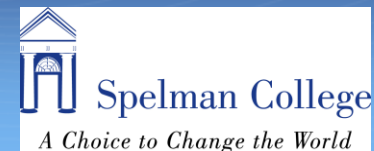


- **Phase 1 General Activities:**
 - **Training** faculty in Metacognitive instruction
 - **Application** of instructional technique in ADW
 - **Development** of a rubric & procedure to detect Metacognitive awareness in student writing samples (2017-2018)
 - **Dissemination** of project findings through 2 regional conferences on metacognitive awareness in college teaching (2018 & 2020)
- **Approximately 2,200 first-year students will be impacted!**



The Spelman College FITW Leadership Team

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The Course: Why ADW?

- ✓ Involves all 1st year students
- ✓ Common syllabus- with structured course outline
- ✓ Focus on college-level content and complex concepts
- ✓ Focus on developing critical thinking skills
- ✓ Prepares students for college-level reading & writing
- ✓ Year-long course
- ✓ Frequent assessment of student learning
- ✓ Allows researchers to track cohorts over time
- ✓ Class meets twice weekly



Your role as an ADW instructor

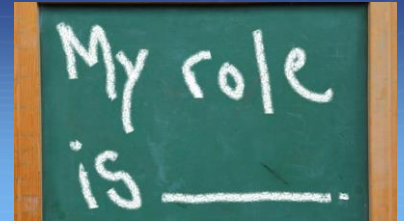


As an ADW instructor participating in the FITW project you will be required to:

- ✧ Complete all 3 sections of this training module prior to attending the training workshop (Including the 3 Section Activities)
- ✧ Participate in the day-long training workshop on August 8th
- ✧ Assist with the preparation of instructional materials (See Section 2 Activity)
- ✧ Attend ADW Orientation on August 9th
- ✧ Complete a pre/post survey instrument
- ✧ Support the collection of data
- ✧ Allow evaluators to observe your ADW course
- ✧ Participate in end of the semester debriefing/focus group sessions



Your role as an ADW instructor



As an ADW instructor participating in the FITW project you will be required to:

- ✧ Attend monthly faculty meetings
- ✧ Take attendance
- ✧ Be vigilant about not allowing students to sit in your class (unless you receive written clearance from the FITW Leadership Team)
- ✧ Submit grades during mid-term and at end of semester



The Importance of Experimental Design

- ✧ The purpose of the First in the World project is to provide evidence for what works in higher education.
- ✧ The goal is to disseminate the project findings nationwide to provide educators, administrators, and policymakers with the information they need to make evidence-based decisions.
- ✧ Not all education research is equal. The U.S. Department of Education is providing funding to conduct **well-designed studies and trustworthy research** to inform decisions and improve student outcomes.



The Importance of Experimental Design: Random Assignment



Why are we using “Random Assignment”?

- ✧ As you know you were randomly assigned to the **control** or the **treatment** condition.
- ✧ The Spelman College FITW study is utilizing random assignment because it is considered the gold standard for measuring an intervention’s impact.
- ✧ **The unique advantage of random assignment:** It enables us to assess whether the intervention itself, as opposed to other factors, caused the observed outcomes.



The Importance of Experimental Design: Random Assignment

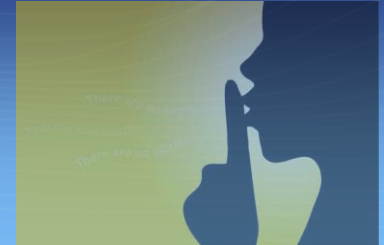


Why are we using “Random Assignment”?

- Specifically, the process of randomly assigning faculty into either a treatment group or a control group ensures, to a high degree of confidence, that there are no systematic differences between the groups in any characteristics (observed and unobserved) except one – namely, the intervention group participates in the intervention, and the control group does not.
- Therefore, the resulting difference in outcomes between the two groups can confidently be attributed to the intervention alone and **not to other factors**.



The Importance of Experimental Design: The Risk of Spillover

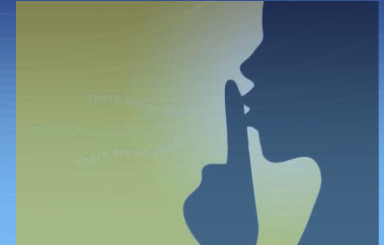


Please note: Innovations are being tested and should not be discussed

- As an ADW instructor participating in the FITW project we ask that you please refrain from discussing the project details and training information with others. This includes:
 - ✧ Colleagues at Spelman (*especially* ADW faculty and staff)
 - ✧ Colleagues at other institutions
 - ✧ Students
 - ✧ Parents



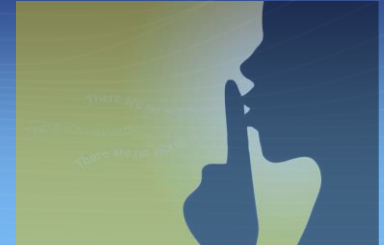
The Importance of Experimental Design: The Risk of Spillover



- **Discussing the project details could introduce contamination into the project, and threaten the credibility of the study.**
- Remember, when we analyze the outcome data we want to be sure that any differences that we see across students receiving the treatment and students in the control condition is due to the intervention and not any other cause.
- Please see the next slide for what to do when approached with questions...



The Importance of Experimental Design: Fielding Questions



- Throughout your participation in the FITW project you may be asked questions by colleagues, students or parents.
- While students (and others) should not know who is in each of the experimental conditions (treatment or control), they may express concerns. It is also possible that you may have concerns.
- When in doubt please direct others to the Spelman FITW Website where they can find additional project information as well as FAQs:
<http://www.spelman.edu/academics/caps/first-in-the-world-grant>

*****It is important to remember that this is an experimental study to test the impact of a specific instructional strategy on student learning. Students randomly assigned to the control condition are not being denied any privileges because we are testing the effectiveness of the intervention. Those students in the control condition are getting the same high quality instruction that is the norm at Spelman College.*****



Section 1 Activity: Questions!

- In Section 1 you learned about the Spelman College First in the World Project, the importance of experimental design, and other relevant background information.
- Before proceeding to Section 2 on “Instructional Strategies” please click the link below where you will have the opportunity to ask any questions that you may have regarding the content in Section 1. Your questions will be addressed during the workshop on August 8th.

https://spelmancollege.az1.qualtrics.com/SE/?SID=SV_bNMa4AfBI5jb6yF

- Even if you do not have any questions please click the link to submit your name so we have record that you completed Section 1 of the training module. After you have submitted your response you may proceed to Section 2.



First in the World Instructor Training Module Fall 2016

Section 2



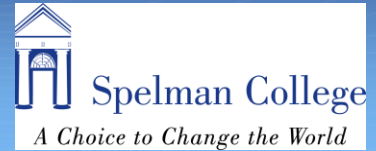
Section 2: Treatment Instructional Strategies

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- I. What is Metacognition?
- II. Cognitive Strategy Instruction (CSI)
- III. The Metacognitive Model
- IV. **Strategy 1**-Reciprocal Teaching (RT): Reading Intervention
- V. **Strategy 2**-Self-Regulated Strategy Development (SRSD): Writing Intervention
- VI. **Strategy 3**-Reading Logs: Putting it all Together
- VII. Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom
- VIII. Section 2 Activity: The ADW Syllabus- Create Your Own Lesson



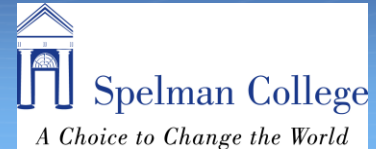
The Spelman College FITW Project: *Metacognitive Awareness & Academic Performance Among Female African-American Undergraduate Students*



- As a “treatment” instructor you will be trained in metacognitive instruction to implement in your ADW classroom.
- Metacognitive awareness in the Classroom...
 - Benefits to Faculty:
 - **Enhanced** teaching effectiveness
 - **Increased** student engagement in the classroom (and with the material)
 - **Flexibility** to adapt techniques for virtually any subject matter



The Spelman College FITW Project: *Metacognitive Awareness & Academic Performance Among Female African-American Undergraduate Students*

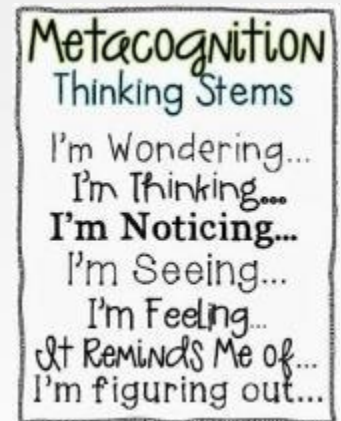


- **Metacognitive awareness in the Classroom...**
 - **Benefits to Students:**
 - **Awareness** of their own thinking & learning (and ineffective learning strategies)
 - **Improvements** in students' ability to monitor what they know and what they need to learn
 - **Promotes** a growth mindset; evolving beliefs about learning into something that is achievable rather than innate or fixed
 - **Positively** correlated with academic achievement
 - **Negatively** correlated with dropping out of school
 - **Facilitates** the development of students who are able to make purposeful changes in their academic behaviors
 - **Increases** the degree to which students will transfer (knowledge) to new situations without the need for explicit prompting



Metacognition: What is it & How can it help you (and your students)?

- Metacognition refers to your awareness of how well you truly understand a concept.
- Weaker students tend to be extremely overconfident in how well they understand material.
- Having poor metacognition may indicate that students have poor study skills...in that case, “more studying” won’t help.



Poor study skills can increase confidence without increasing understanding!



Metacognition: What is it & How can it help you (and your students)?

- Research indicates that students w/ poor metacognitive skills perform less well academically than peers.
- More than 80% of college students report “re-reading a textbook” as their primary study strategy.
 - Re-reading is:
 - 1.) time consuming,
 - 2.) doesn't result in durable learning,
 - 3.) can cause self-deception (increased familiarity comes to *feel* like mastery of the content)

(Karpicke, Butler, & Roediger, 2009)



Metacognition: What is it & How can it help you (and your students)?

One problems with poor judgment is that we usually don't know when we've got it....

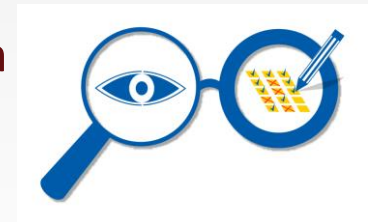
- Teaching metacognitive awareness in the classroom can help students to become more aware of their learning and understanding.
- We know that metacognition refers to one's awareness of how well they truly understand a concept...but what does metacognition look like?



Stages of Metacognition

There are 3 stages of Metacognition:

- 1) **Planning**: involves the processes prior to the learning task
 - a) Selecting a strategy, making predictions, allocating time, etc.
- 2) **Monitoring**: One's "real-time" awareness of comprehension or performance
 - a) Such as self-testing over the course of a learning task
- 3) **Evaluating**: Post-task activity
 - a) Where one assesses outcomes and performance in light of goals and strategy choices





Teaching Metacognitive Awareness: Cognitive Strategy Instruction (CSI)

*Since many of the 1st year students work or study together outside of ADW, it is important that our intervention takes place primarily **inside** the classroom. Thus, the intervention will be the **way that you discuss** reading & writing with the students inside of your classroom.*

- **Cognitive Strategy Instruction (CSI):** is an instructional approach emphasizing the development of *thinking skills & processes* as a means to enhance learning.
- The **objective** of CSI is to enable students to become more strategic, self-reliant, flexible, and productive in their learning endeavors.



Teaching Metacognitive Awareness: Cognitive Strategy Instruction (CSI)

There are 3 critical components to CSI:

- 1) Skillful use of effective strategies
- 2) Understanding of the use, significance, and limitations of those strategies
- 3) Self-regulation of strategic performance (including any combination of goal-setting, self-monitoring, self-instructions, & self reinforcement)



Teaching Metacognitive Awareness: Cognitive Strategy Instruction (CSI)

There are 3 critical components to CSI:

- 1) Skillful use of **effective strategies**
- 2) Understanding of the use, significance, and limitations of those **strategies**
- 3) Self-regulation of strategic performance (including any combination of goal-setting, self-monitoring, self-instructions, & self-reinforcement)

On the following slides you will learn about the 3 intervention strategies which you will promote in the classroom!



The Metacognitive Model: Metacognitive Awareness in Reading & Writing

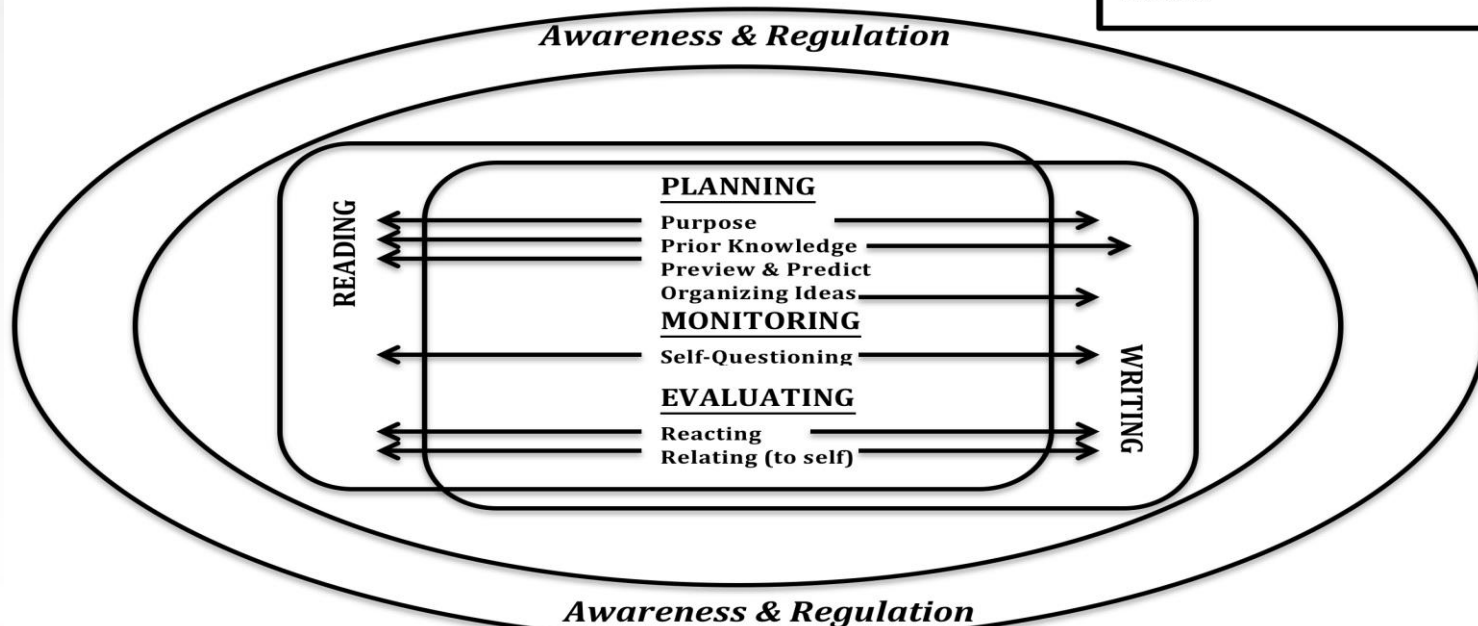
Metacognitive awareness is a characteristic of active readers and effective writers!

- *The areas that typically prove most challenging to entering college students are reading comprehension and college-level writing. Therefore, we have identified 3 instructional strategies that build metacognitive awareness in reading and writing.*
- *The “metacognitive model” on the next slide illustrates how the instructional strategies will help students to incorporate the 3 stages of metacognitive awareness (planning, monitoring, & evaluating) in the weekly reading and writing in ADW.*



The Metacognitive Model: Metacognitive Awareness in Reading & Writing

Awareness and regulation are represented as thought processes, which are used in conjunction with any and all strategies throughout the model.





The Intervention: Metacognitive Awareness in Reading and Writing

- **Strategy 1**-Reading Intervention: Reciprocal Teaching (RT)
- **Strategy 2**-Writing Intervention: Self-regulated Strategy Development (SRSD)
- **Strategy 3**-Putting it all together: Reading Logs

Reciprocal Teaching and Self-regulated Strategy Development are types of Cognitive Strategy Instruction (CSI)



Use RT when discussing the weekly readings in class!



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Reading: Reciprocal Teaching (RT)



The first CSI that you will be asked to implement in your ADW classroom, Reciprocal Teaching (RT), focuses primarily on reading. RT is an instructional procedure designed to teach students cognitive strategies that can lead to improved reading comprehension.

● What is RT?

- Focus is on teaching students specific, concrete, comprehension-fostering strategies they can apply to the reading of new text.
- 4 comprehension strategies
 1. **Generating questions**
 2. **Summarizing (in own words)**
 3. **Attempting to clarify word meanings or confusing text**
 4. **Predicting what might appear next (in the reading)**
- Learning of the cognitive strategy is supported through dialogue between instructor & students as they attempt to gain meaning from text.



Use RT when discussing the weekly readings in class!



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Reading: Reciprocal Teaching (RT)



4 Strategies

While reading, the instructor teaches students how to...

1. Generate questions
2. Summarize (in own words)
3. Attempt to clarify word meanings or confusing text
4. Predict what might appear next

Scaffold Practice

5. The practice becomes a dialogue
4. Gradual shift in responsibility
3. Instructor invites students to initiate discussion & react to their peers statements
2. Students practice strategies on next selection
1. Instructor modeling of 4 strategies on text selection



Use RT when discussing the weekly readings in class!



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Reading: Reciprocal Teaching (RT)



- **Goal of Reciprocal Teaching (RT)**: Students should be able to self-monitor their comprehension as they are reading.
- **Early Stages of RT (early in the semester)**
 - ✓ Instructor assumes the major responsibility for instruction by explicitly modeling the process of using the 4 strategies (see previous slide) on a selection of text.
 - ✓ Instructor supports each student's participation through specific feedback, additional modeling, coaching, hints and explanation.
 - ✓ Student participation (when discussing readings in class) can include:
 - ✧ Elaborating or commenting on another student's summary
 - ✧ Suggesting other questions
 - ✧ Commenting on another's predictions
 - ✧ Requesting clarification of material they did not understand
 - ✧ Helping to resolve misunderstandings



Use RT when discussing the weekly readings in class!



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Reading: Reciprocal Teaching (RT)



- **Mid to Late Stages of RT (mid to end of the semester)**

- ✓ There is a shift from the instructor doing much of the work (initiating discussion) to the students taking over the major thinking role while the instructor observes and helps only when needed.
- ✓ At this point the classroom discussion becomes a dialogue:
 - ✧ *One student asks a question, another answers, and a third comments on the answer*
 - ✧ *One student summarizes, and another comments on or helps to improve the summary*
 - ✧ *One student identifies a difficult word or concept, and the other students help to further explain the meaning and give reasons for the inference they made.*
- ✧ **Great emphasis is placed on encouraging students to provide instructional support for each other in the classroom**



Use RT when discussing the weekly readings in class!



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Reading: Reciprocal Teaching (RT)



● Encouraging Metacognitive Reading Outside of Class

- ✓ Students should be encouraged to practice the 3 stages of metacognition while reading (**planning** – prior to reading; **monitoring** – their understanding while reading; and **evaluating** – relating to self and reactions).
 - ✧ *See slides #54-56 for tips!*

● Implementing RT in the Classroom

- ✓ Students should 1st be introduced to the 4 RT strategies (see slide 33) *before* the dialogues begin.
 - ✧ *Tip: Keep the 4 strategies posted on the board or overhead during class discussions of the readings and encourage students to use the strategies as they discuss the text.*
- ✓ Instruction should “march ahead of development & lead it”
 - ✧ *Tip: Set your expectations high and let students rise to the challenge. You might be surprised by the higher-level thinking that can be achieved during the first-year.*



Use RT when discussing the weekly readings in class!



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Reading: Reciprocal Teaching (RT)



- **Implementing RT in the Classroom**

Please take a moment with the ADW syllabus and think about how you might implement RT in your lessons.

- *What will change?*
- *What will stay the same?*

**For the Section 2 activity (at the end of the section) you will be asked to create a lesson from the syllabus incorporating RT.*



The Intervention: Metacognitive Awareness in Reading and Writing

- **Strategy 1**-Reading Intervention: Reciprocal Teaching (RT)
- **Strategy 2**-Writing Intervention: Self-regulated Strategy Development (SRSD)
- **Strategy 3**-Putting it all together: Reading Logs

Reciprocal Teaching and Self-regulated Strategy Development are types of Cognitive Strategy Instruction (CSI)



Use SRSD when discussing writing in class!



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Writing: Self-Regulated Strategy Development (SRSD)



The second CSI that you will be asked to implement in your ADW classroom, Self-Regulated Strategy Development (SRSD), focuses primarily on writing. SRSD is an instructional procedure designed to teach students cognitive strategies that can lead to improved writing ability.

● What is SRSD?

- Students are taught strategies for **planning** & **revising** text in combination w/ procedures **regulating** the strategies in the writing process.

● What are the goals of SRSD?

Students should:

- Master higher level cognitive processes involved in composing
- Develop autonomous, reflective, self-regulated use of effective writing strategies
- Form positive attitudes about writing and themselves as writers

In SRSD the “strategy/strategies” refers to the 3 stages of metacognition (*planning, monitoring, & evaluating*)



Use SRSD when discussing writing in class!



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Writing: Self-Regulated Strategy Development (SRSD)



Instructor-Modeling may involve

Teaching students to:

1. **Set goals** for improving specific aspects of their writing
2. **Self monitor changes** in their writing performance or behavior
3. **Develop an internal dialogue** for directing strategies (**planning, monitoring, and evaluating**) in the writing process

Scaffold Practice

-
5. **Independent Performance**
 4. **Support it**
 3. **Make it your own**
 2. **Model it**
 1. **Discuss it**



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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Elements of SRSD Instruction

1. **Discuss It.** Set the stage. Discuss when and how students might use a **strategy** to accomplish specific writing tasks and goals. Talk about the benefits of becoming a more proficient and flexible writer. Address any negative self-talk or negative beliefs the student holds, and ask the student for a commitment to try to learn and use the strategy. Discuss how the learner should track progress to document the use and impact of the **strategy**.

Note: “Strategy”=3 stages of metacognition (planning, monitoring & evaluation)



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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Elements of SRSD Instruction

2. **Model It.** Model the **strategy** using think-alouds, self-talk, and self-instruction as you walk through the steps (“As a professional in my field I _____ when I read a passage like this...”). Discuss afterwards how it might be made more effective and efficient for each individual, and have students customize the **strategy** with personal self-statements. Ask students to set specific writing goals. Model the **strategy** more than once with various sample texts; for example, use a graphic organizer to demonstrate how to comprehend various texts of a similar genre (persuasive arguments or editorials).

Note: “Strategy”=3 stages of metacognition (planning, monitoring & evaluation)



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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Elements of SRSD Instruction

3. **Make It Your Own.** **Strategies** are composed of multiple steps, similar to a checklist. Paraphrasing or re-naming the steps in a mnemonic or creating a new mnemonic is fine, provided that the student is able to remember the steps that the names represent. Customizing the checklist or mnemonic helps students make it their own. Students also are encouraged to “make **strategies** their own” by modifying and personalizing them. Personalization is considered critical to strategy ownership and is monitored to ensure that students do not change **strategies** in ways that make them less effective.

Note: “Strategy”=3 stages of metacognition (planning, monitoring & evaluation)



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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Elements of SRSD Instruction

4. **Support It.** Use the **strategy** as often as possible, in as many ways as possible. In the classroom students can be supports for each other, offering direct assistance, prompts, constructive feedback, and encouragement. When you introduce a new type of application (a new genre or writing frame, for example), it may be appropriate to model the **strategy** again. Students can rely on charts and checklists too, as they learn the **strategy** and make it their own, but all of this should fade as students become familiar enough with the **strategy** to set their goals, monitor their use of the **strategy**, and use self-statements independently.

Note: “Strategy”=3 stages of metacognition (planning, monitoring & evaluation)



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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Elements of SRSD Instruction

5. **Independent Performance.** Students come to use the **strategy** independently across a variety of tasks. For example, students may begin to draw graphic organizers without being prompted as a means to help them comprehend and plan.

Students learn strategies in the context in which they apply them, increasing the likelihood that they will see the relevance of the strategies and be more likely to maintain and generalize them.

Note: “Strategy”=3 stages of metacognition (planning, monitoring & evaluation)



Writing: Self-Regulated Strategy Development (SRSD)



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● Encouraging Metacognitive Writing Outside of Class

- ✓ Students should be encouraged to: *plan, monitor, evaluate, revise, and manage the writing process.*
 - ✧ *See slides #57-59 for tips!*

● Implementing SRSD in the Classroom

- ✓ Instruction begins as instructor-directed but w/ a goal of empowering students to be self-directed.
 - ✧ *Tip: SRSD instruction should be explicit, direct, and guided so that strategies become integrated into the overall learning process.*



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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- Strategies for Implementing SRSD in the Classroom



1. **RAP.** Active comprehension requires self-monitoring and self-regulation. Explain to students that RAP means Read, Ask, & Paraphrase, as in the following:
 - a. Read a paragraph or passage. Ask yourself, “What is the topic?” “What is the most important thing it tells me about that topic?” “What are the most important details?” Paraphrase, or put it in your own words.
 - b. Start by introducing a paragraph. After students have mastered identifying the main idea and important details at the paragraph level, you can increase the amount of text. Students will vary in how much practice they need. All students should practice with a variety of types of text, increasing in challenge, to identify topics in passages where main ideas are not explicitly stated.
 - c. In the **Ask** step, the student first identifies the topic. Prompt students to check their thinking by asking whether they think that the whole paragraph is about the topic they have chosen. After they have identified the topic, ask them to determine the main idea—that is, what the author wanted to say about the topic. Finally, ask them to determine details that are essential to capture important information. Then, ask students to describe their understanding of the passage in their own words. Set the text aside and explain. When students are comfortable using the RAP strategy for comprehension, you can extend it to helping them write summaries.



Writing: Self-Regulated Strategy Development (SRSD)



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• Strategies for Implementing SRSD in the Classroom

1. **POW+TREE.** This strategy helps writers approach an essay-writing task and check their work as they become more independent.



- a. **POW** (represents & emphasizes the importance of the planning process). *Pick* my idea and pay attention to prompt; *Organize*; *Write* and say more.



- b. **TREE** (is a memory & visualization tool that helps writers structure their essays). *Topic* sentence is like the trunk of the tree that supports the whole argument; *Reasons* (at least 3) are like the roots of the argument; *Explain* is a reminder to tell more about each reason; and finally, *Ending* is like the earth that wraps up the whole argument. Graphic organizers shaped like trees (concept maps) can help students while brainstorming and planning which prompt the internalization of the strategy.



Use SRSD when discussing writing in class!



Writing: Self-Regulated Strategy Development (SRSD)



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- Implementing SRSD in the Classroom

Please take a moment with the ADW syllabus and think about how you might implement SRSD in your (writing) lessons.

- *What will change?*
- *What will stay the same?*

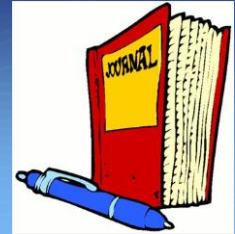
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The Intervention: Metacognitive Awareness in Reading and Writing

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- **Strategy 3**-Putting it all together: Reading Logs

Reciprocal Teaching and Self-regulated Strategy Development are types of Cognitive Strategy Instruction (CSI)

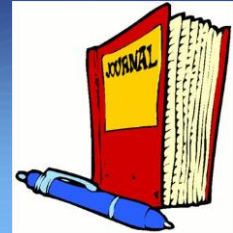


Reading Logs: Putting it all together

*The third intervention strategy that you will be asked to implement in your ADW classroom are Reading Logs (or journals). **The weekly reading log assignment will complement the RT & SRSD instruction that students receive in the classroom.***

- **What is a Reading Log?**

- A written record of a student's experience while reading. The reading logs use the act of writing to enhance reading comprehension and metacognition, integrating the benefits of RT and SRSD.
- During the semester (weeks 2-11), students will submit one reading log reflection each week via Moodle. Instructors will NOT be responsible for grading the logs. Students will receive completion credit for the logs.
- There will be 10 logs worth a total of 10% of the final grade in the course.
- Other assignments/quizzes should NOT be substituted for the reading logs & vice versa.

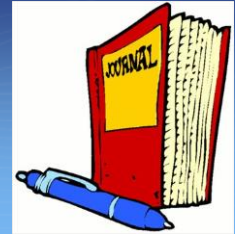


Reading Logs: Putting it all together

- **With each reading assignment students should...**
 - Use their reading logs to write thoughts that come to mind when they first read the title, or to comment on actions (such as referencing the dictionary when they encounter a confusing word or phrase)
 - Write critical commentaries on what they read, synthesize ideas presented by the authors, and indicate how the text relates to their own experience
 - All students will receive the same instructions for the weekly reading logs:
*“As you complete your readings for the week you should also keep a log of your thoughts to submit on Moodle. In your log you should reflect on your thoughts while completing the reading assignments. This is an open assignment; you are free to discuss whatever thoughts you have about the reading experience. You may discuss any or all readings in your log. Your reading log should be a minimum of 250 words to receive full credit. **You will not be allowed to submit the log after the due date/time each week.**”*



Reading Logs: Putting it all together



- As a “treatment” instructor we encourage you to prompt students to use the reading logs as an opportunity to explicitly write out the planning, monitoring, and evaluation processes they should be engaging in as they complete the weekly readings.
 - However, for consistency, the actual assignment instructions must be the same for all students (treatment and control).
- See slides #54-56 for tips and examples.



Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom: Self-Questions

54

- The following questions can be used to to Promote Student Metacognition while engaging in **reading assignments**:

- **Planning (before reading)**

- What do you already know about this topic? How did you set up your environment to optimize concentration/limit distractions? What questions to you already have about this topic that you want to find out more about? How much time do you think you will need to complete the reading? What is the purpose of this text? After previewing the text what assumptions do you have?



(Tanner, 2012)



Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom: Self-Questions

55

- The following questions can be used to to Promote Student Metacognition while engaging in **reading assignments**:



- **Monitoring (while reading)**
 - What insights (new understanding) are you having as you read? What confusions (concepts or terms)? What questions are arising for you as you read? Do you find the reading interesting (why or why not)? Is your current environment conducive to your reading (if not what will you change)? How can you make this material personally relevant? Can you distinguish important information from details? How well do you understand what you are reading?

(Tanner, 2012)



Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom: Self-Questions

56

- The following questions can be used to to Promote Student Metacognition while engaging in **reading assignments**:
- **Evaluating (after reading)**
 - What was the reading about (in your own words)? What did you read that was in conflict with your prior understanding? How did the ideas you read about relate to previous readings/classroom discussions (in this or other classes)? What will you do to get your questions answered and your confusions clarified? If you were to do this reading again, would you do anything differently? What worked well that you should do again for the next reading?



(Tanner, 2012)



Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom: Self-Questions

57

- The following questions can be used to to Promote Student Metacognition while engaging in **writing assignments (ex. Critical essay)**:
- **Planning (before writing)**
 - In what ways will this assignment help you think and write like a professional in your field? What do you need to have clarified to complete this assignment successfully? Which skill(s) will you practice/use in this assignment? How will you organize your ideas before you begin writing? How did you set up your environment to optimize concentration/limit distractions? How much time do you think you will need to complete the writing assignment? What is the instructor's goal in having you complete this assignment? What are all the things you need to do to successfully accomplish this task? What resources do you need to complete the task (and do you have them)?



(Tanner, 2012)



Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom: Self-Questions

58

- The following questions can be used to to Promote Student Metacognition while engaging in **writing assignments (ex. Critical essay)**:
- **Monitoring (while writing)**
 - What insights are you having as you complete the writing assignment? What confusions? What questions are arising for you as you complete the writing assignment? Is your current environment conducive to your writing (if not what will you change)? What strategies are you using that are working well? What is most challenging for you about this assignment? Most confusing? What can you do mid-assignment to address these challenges and confusions?



(Tanner, 2012)



Additional Suggestions for Increasing Students Metacognitive Awareness in the Classroom: Self-Questions

59

- The following questions can be used to Promote Student Metacognition while engaging in **writing assignments (ex. Critical essay)**:
- **Evaluating (after writing)**
 - What did you find most interesting about the writing assignment? To what extent did you successfully accomplish the goals of the assignment? If you were the instructor, what would you identify as the strengths of your work and the flaws in your work? When you do an assignment like this again, what do you want to remember to do differently? What worked well that you should use next time? What confusions do you have that you still need to clarify?



(Tanner, 2012)



Section 2 Activity: The ADW Syllabus- Create your own lesson



- In Section 2 you learned about Metacognition and the 3 Treatment Instructional Strategies. You were also prompted to begin thinking about how you might implement the strategies in your ADW classroom.
- Before proceeding to Section 3 on “Things to Keep in Mind” please click the link below where you will plan an ADW lesson using the strategies discussed in this section. Your sample lessons will be used during the workshop on August 8th (anonymously if you prefer).

https://spelmancollege.az1.qualtrics.com/SE/?SID=SV_b42GGX5475mMwZL

- After you have submitted your sample lesson you may proceed to Section 3.



First in the World Instructor Training Module Fall 2016

Section 3



Section 3: Things to Keep in Mind

Table of Contents

- I. Resources
- II. Section 3 Activity: Goal Setting- How can you use metacognitive strategies in the classroom to achieve your teaching goals?



Important Resources



Welcome to the final section of the FITW Instructor Training Module! In this section you will learn about valuable resources that you can refer to if you have any questions about implementing the instructional strategies.

Moodle

As a ADW instructor participating in the FITW project, you will be required to submit all assignments through Moodle and utilize the Moodle Gradebook. The weekly reading logs will be pre-programmed on your classroom Moodle page. During the training on August 8th we will have a session on how to use the Moodle Gradebook. If you are new to Moodle you will need to complete a brief training module prior to attending workshop. The module can be found at the link below.

Moodle page: spelelearn.spelman.edu

General Moodle Training Module:

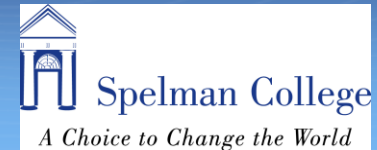
http://mit.spelman.edu/documents/documentation/Faculty_Quick_Start_Moodle_Guide_eThink.pdf

https://www.youtube.com/playlist?list=PLxcO_MFWQBDcQKY3XeLpwDVFbnmPOZWK8

Spelman MIT Help: <https://mit.spelman.edu/itcatalog/?q=content%2Flearning-management-system>



Important Resources



Spelman College FITW Project

We recently created a FITW website with additional project information and FAQs. This is a wonderful resource to use if students or colleagues inquire about the FITW project. In addition, contact information for the project PI and Co-PI can be found below.

Spelman College FITW website: <http://www.spelman.edu/academics/caps/first-in-the-world-grant>

For general project questions: Dr. Francesina Jackson, Principal Investigator, Director of the Center for Academic Planning and Success (CAPS). Milligan Building, Suite 2312, Room 2312D
404-270-5582, fjackso8@spelman.edu

For questions about implementing the instructional strategies: Dr. Jimmeka Guillory, Co Principal Investigator, Assistant Professor, Department of Psychology. Giles Hall, Room 307
404-270-5807, jguillo1@spelman.edu



Section 3 Activity: Goal Setting- How can you use metacognitive strategies in the classroom to achieve your teaching goals? 65



- Throughout the training module you have learned how you can encourage metacognitive awareness in your students to improve learning outcomes. In this final section activity you will reflect on how using metacognitive strategies in the classroom can not only help your students, but how it can help you to achieve your teaching goals.
- Please click the link below where you will briefly identify ways in which metacognitive strategies can help you to achieve your teaching goals this semester. You will also have an opportunity to pose any final questions before the training workshop on August 8th. Thank you for your participation, we will see you at the workshop!

https://spelmancollege.az1.qualtrics.com/SE/?SID=SV_8ocoqswuKiC7Cmx



References

- <http://www.ed.gov/>
- <http://www.spelman.edu/academics/caps/first-in-the-world-grant>
- <http://crlt.umich.edu/>
- Karpicke, J. D., Butler, A.C., & Roediger, H. L. (2009). Metacognitive strategies in student learning: Do students practice retrieval when they study on their own? *Memory*, 17, 471-479. [\[PDF\]](#)
- Tanner, K. D. (2012). Promoting Student Metacognition. *CBE Life Sciences Education*, 11(2), 113–120.



Peer Recitation Facilitator Training Day 2 “Group 1”

Dr. Jimmeka Guillory Wright
First in the World Co-PI
Psychology Department



Objectives of Today's Session

- ❑ Understand the Project
- ❑ Learning Strategies
- ❑ Understand What PRF Session Will Look Like
- ❑ Receive Faculty Assignments





First in the World Project Experimental Design



The Spelman College First in the World (FITW) Project

Objective: Test the effectiveness of various learning strategies in the ADW classroom (1st phase 2016-2018) & in peer recitation settings (2nd phase 2018-2020).





Your role as a Peer Recitation Facilitator (PRF)

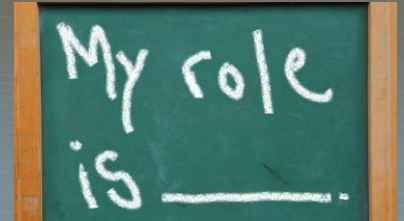


As a PRF participating in the FITW project you will be required to:

- ✧ **Attend all training sessions**
- ✧ **Attend weekly staff meetings (TBA)**
- ✧ **Abide by the PRF Handbook**
- ✧ **Facilitate 4 PRF sessions per week**
- ✧ **Support the collection of data:**
 - ✧ **Take attendance and record topics covered immediately after each PRF session (due day/time TBA)**
 - ✧ **Complete weekly PRF program evaluations (due day/time TBA)**
 - ✧ **Complete a pre/post PRF survey instrument (beginning and end of year)**



Your role as a Peer Recitation Facilitator (PRF)



As a PRF participating in the FITW project you will be required to:

- ✧ **Maintain confidentiality (student and project)**
- ✧ **Be vigilant about not allowing students (not on your roster) to sit in your PRF session**
- ✧ **Allow evaluators to observe and/or record PRF sessions**



The Importance of Experimental Design

- ✧ **The purpose of the First in the World project is to provide evidence for what works in higher education.**
- ✧ **The goal is to:**
 - ✧ Improve learning and understanding for future generations of Spelman students!!!
 - ✧ Disseminate the project findings nationwide to provide educators, administrators, and policymakers with the information they need to make evidence-based decisions.



The Importance of Experimental Design: Random Assignment



Why Other Students Can't Sit in Your Session....

- ✧ As you know you were randomly assigned to Group 1 or Group 2.
- ✧ The Spelman College FITW project is utilizing random assignment because it is considered the gold standard for measuring an intervention's impact.
- ✧ **The unique advantage of random assignment:** It enables us to assess whether the intervention itself, as opposed to other factors, caused the observed outcomes.



The Importance of Experimental Design: Random Assignment



Why are we using “Random Assignment”?

- Specifically, the process of randomly assigning students into either Group 1 or Group 2 ensures, to a high degree of confidence, that there are **no systematic differences between the groups in any characteristics (observed and unobserved) except one – namely, the learning strategy emphasized during PRF sessions.**
- Therefore, the resulting difference in outcomes between the two groups can confidently be attributed to the intervention alone and **not to other factors.**



The Importance of Experimental Design: The Risk of Spillover



Congratulations! You are now part of the First in the World Project!

Please note: Innovations are being tested and should not be discussed

- As an Peer Recitation Facilitator participating in the FITW project we ask that you please refrain from discussing the project details and training information with others. This includes:
 - ✧ Classmates/Peers at Spelman (PRFs and others)
 - ✧ Faculty (especially ADW faculty)
 - ✧ And...anyone other than the FITW staff 😊



The Importance of Experimental Design: The Risk of Spillover



Congratulations! You are now part of the First in the World Project!

This comes with great responsibility...

- Discussing the project details could introduce contamination into the project, and threaten the credibility of the project.
- Remember, when we analyze the outcome data we want to be sure that any (learning) differences that we see across student groups is due to the intervention/learning strategy and not any other cause.



The Importance of Experimental Design: Fielding Questions



- Throughout your participation in the FITW project you may be asked questions by your classmates, peers or students in your PRF sessions.
- While students (and others) should not know who is in each of the 2 groups, they may express concerns. It is also possible that you may have concerns.
- When in doubt please direct others to a FITW staff member (Dr. Francesina Jackson, fjackso8@spelman.edu, 404-270-5582 or Dr. Jimmeka Guillory Wright, jguillo1@spelman.edu, 404-270-5807)
- *****It is important to remember that this is a project to test the impact of specific learning strategies on student learning. ALL ADW students will receive the beneficial impacts of the PRF sessions. *****



Group 1 Learning Strategy: Metacognition



Metacognition: What is it & How can it help you (and your students)?

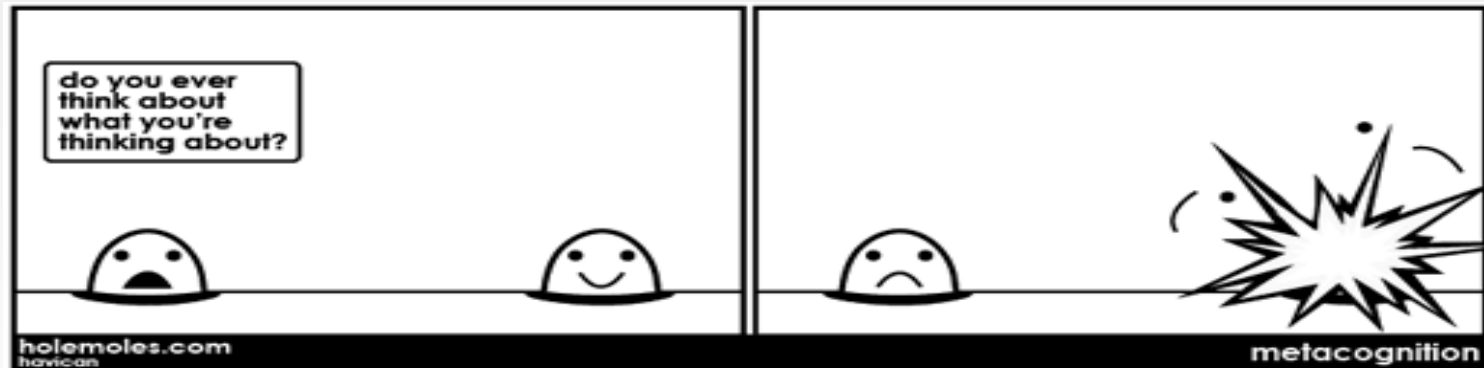
What do you already know about metacognition?

- In your group write key points that you (already) know about metacognition and report out to group.



Metacognition : What is it & How can it help you (and your students)?

- Metacognition refers to your awareness of how well you truly understand a concept.



- Weaker students tend to be extremely overconfident in how well they understand material.
- Having poor metacognition may indicate that students have poor study skills...in that case, “more studying” won’t help.

Poor study skills can increase confidence without increasing understanding!



Metacognition : What is it & How can it help you (and your students)?

Breaking down the word “Metacognition”

- What does “**meta**” mean?
 - Higher level of abstraction
 - “X about X”
- What does “**cognition**” mean?
 - The mental process involved in knowing, learning, and understanding things



Metacognition : What is it & How can it help you (and your students)?

- Research indicates that students w/ poor metacognitive skills perform less well academically than peers.
- More than 80% of college students report “re-reading a textbook” as their primary study strategy.
 - **Re-reading is:**
 - **1.) time consuming,**
 - **2.) doesn't result in durable learning,**
 - **3.) can cause self-deception (increased familiarity comes to *feel* like mastery of the content)**

80%

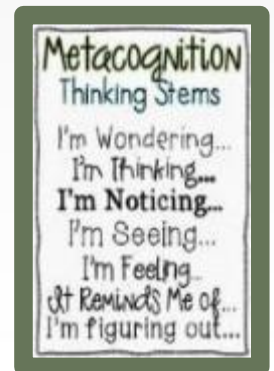
(Karpicke, Butler, & Roediger, 2009)



Metacognition: What is it & How can it help you (and your students)?

One problem with poor judgment is that we usually don't know when we've got it....

- How can we address the “illusion of knowing” with students?
- **Give students objective gauges of learning/understanding:**
 - Pay attention to the cues that students use to judge their learning





Helping your students to
become self-aware of
their understanding



Helping Students to Become **Self-Aware** of their Understanding

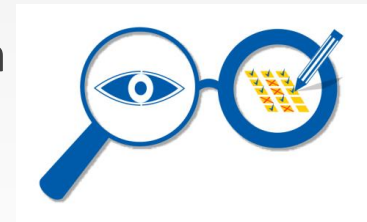
- Requires assessment **and** feedback
- **Provide concrete constructive Feedback on student progress and understanding.**
- Students need to understand how to use feedback
 - Give them the opportunity to use feedback (from you and their peers) effectively
 - Ask them...
 - How well do you know what you know? How do you assess what you need to know?



How can you help students to become aware of their level of understanding at each stage?

There are 3 stages of Metacognition:

- 1) **Planning**: involves the processes prior to the learning task
 - a) Selecting a strategy, making predictions, allocating time, etc.
- 2) **Monitoring**: One's "real-time" awareness of comprehension or performance
 - a) Such as self-testing over the course of a learning task
- 3) **Evaluating**: Post-task activity
 - a) Where one assesses outcomes and performance in light of goals and strategy choices



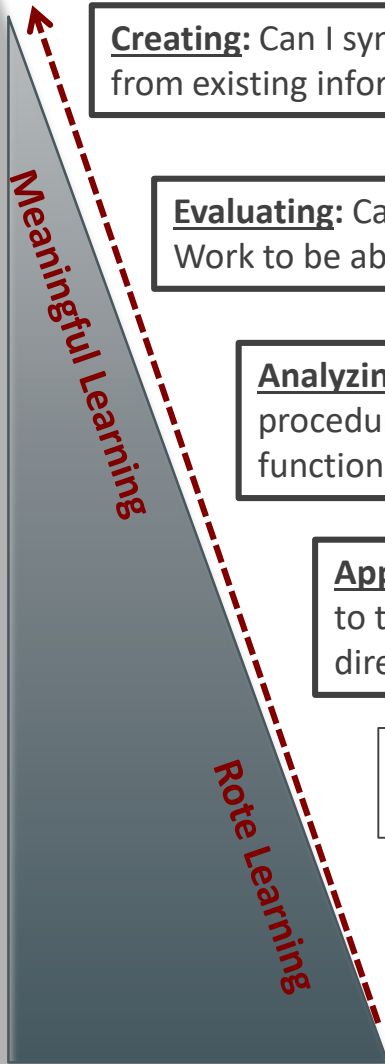


Helping Students to Become **Self-Aware** of their Understanding

- Self-assessment can happen in each of the 3 stages:
 - Planning, Monitoring, and Evaluating
- With more MC awareness students become more accurate in their evaluations of understanding.
 - They may no longer say they understand (when they don't)
- Provide time/opportunity for self-assessment each week
 - Example: Ask students to predict their performance and compare afterwards



Helping Students to Become **Self-Aware** of their Understanding: Bloom's Taxonomy



Creating: Can I synthesize the information in an original way? Work to be able to construct new information from existing information.

Evaluating: Can I determine the best rationale, plan, solution, course of action, etc. given the information? Work to be able to make judgments with information.

Analyzing: Can I distinguish processes, procedures, or principles from seemingly identical processes, procedures or principles? Work to distinguish and differentiate between comparable processes, functions, methods, etc.

Applying: Can I apply this information to a new or different situation, problem or context? Work to transfer principles and/or concepts to a to a different problem or task with minimal cues or direction.

Understanding: Can I explain the reasoning behind the ideas/concepts? Work to explain and provide rationales to support concepts and/or principles.

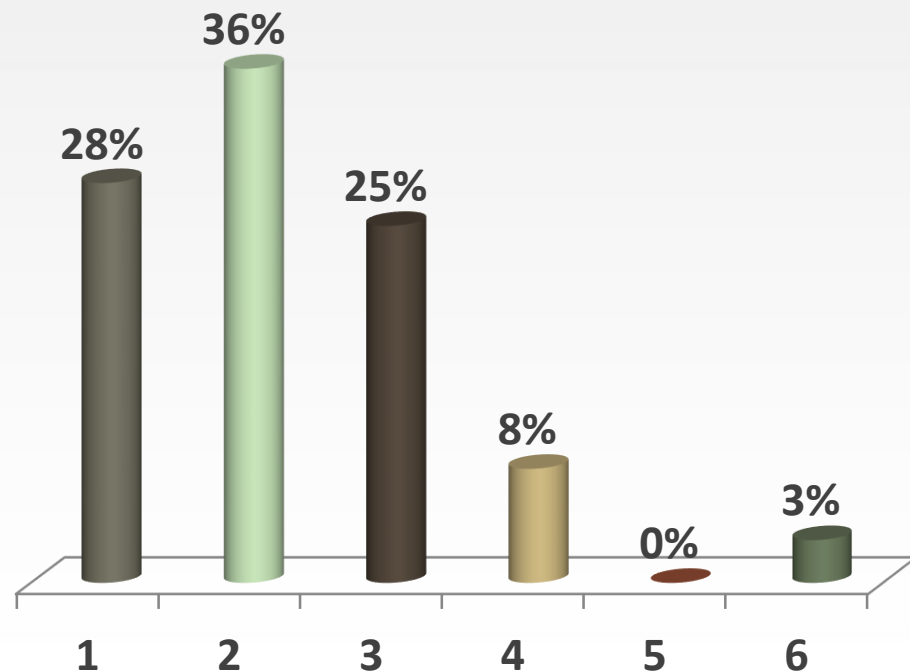
Remembering: Can I define the key terms on my own? Work to recall/recognize information, ideas, and principles in the approximate form in which they were learned.



Using Bloom's Taxonomy to Help Students to Become **Self-Aware** of their Understanding

At what level of Bloom's did you have to operate to make A's or B's in high school?

1. Remember
2. Understand
3. Application
4. Analysis
5. Evaluation
6. Create



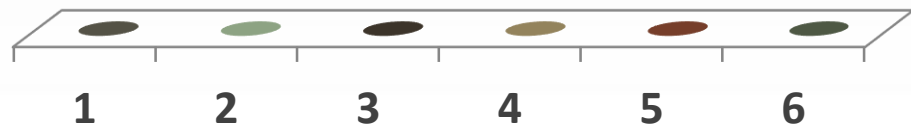


Using Bloom's Taxonomy to Help Students to Become **Self-Aware** of their Understanding

At what level of Bloom's did you have to operate to make A's or B's in ADW?

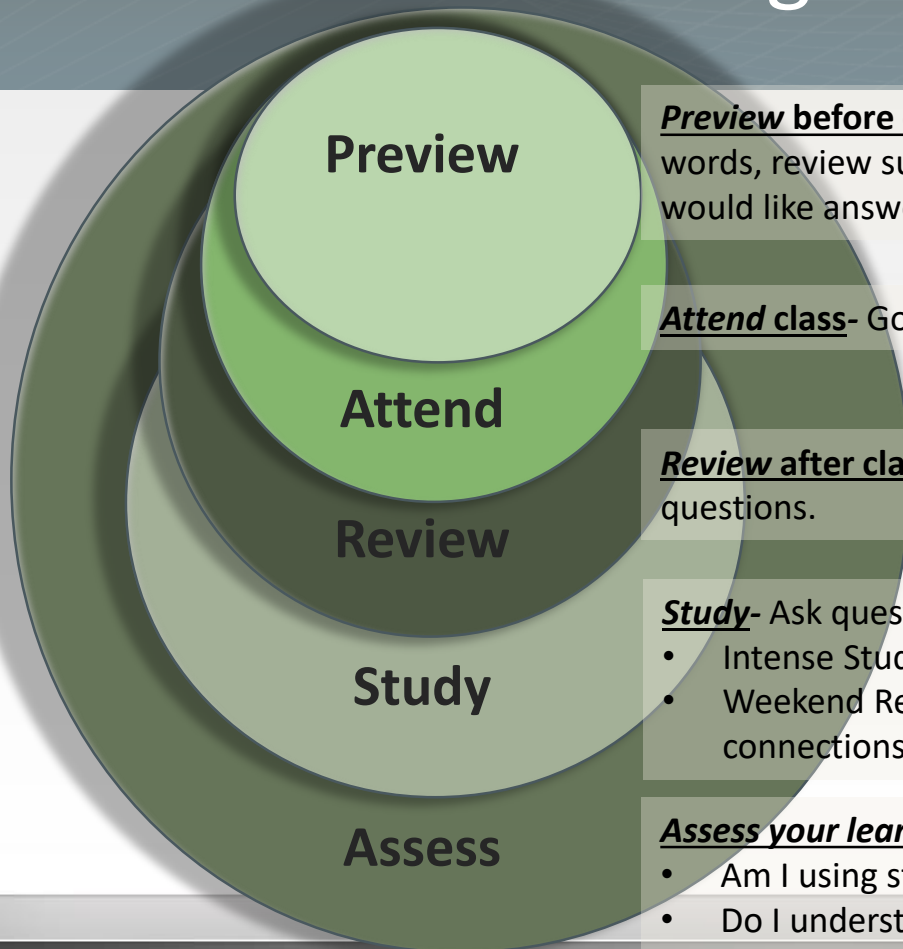
1. Remember
2. Understand
3. Application
4. Analysis
5. Evaluation
6. Create

?





Helping Students to Become **Self-Aware** of their Understanding: Study Cycle



Preview before class- Skim the chapter, note the headings & boldface words, review summaries & chapter objectives, & note questions you would like answered in class.

Attend class- Go to class! Ask questions and take meaningful notes.

Review after class- Within 24 hours, read notes, fill in gaps and note any questions.

Study- Ask questions such as “why”, “how”, and “what if”.

- Intense Study Sessions: 3-5 short study sessions per day
- Weekend Review: Read notes and material from the week to make connections.

Assess your learning- Periodically perform reality checks

- Am I using study methods that are effective?
- Do I understand the material enough to teach it to others?



Helping Students to Become Self-Aware of their Understanding



Important points to consider in preparing to facilitate a peer recitation session....

1. **Prior Achievement & Disposition:** The levels of students at the start
2. **Targeted Learning:** The desired levels at the end
 - a. *Learning intention/objective*
 - b. *Success criteria*



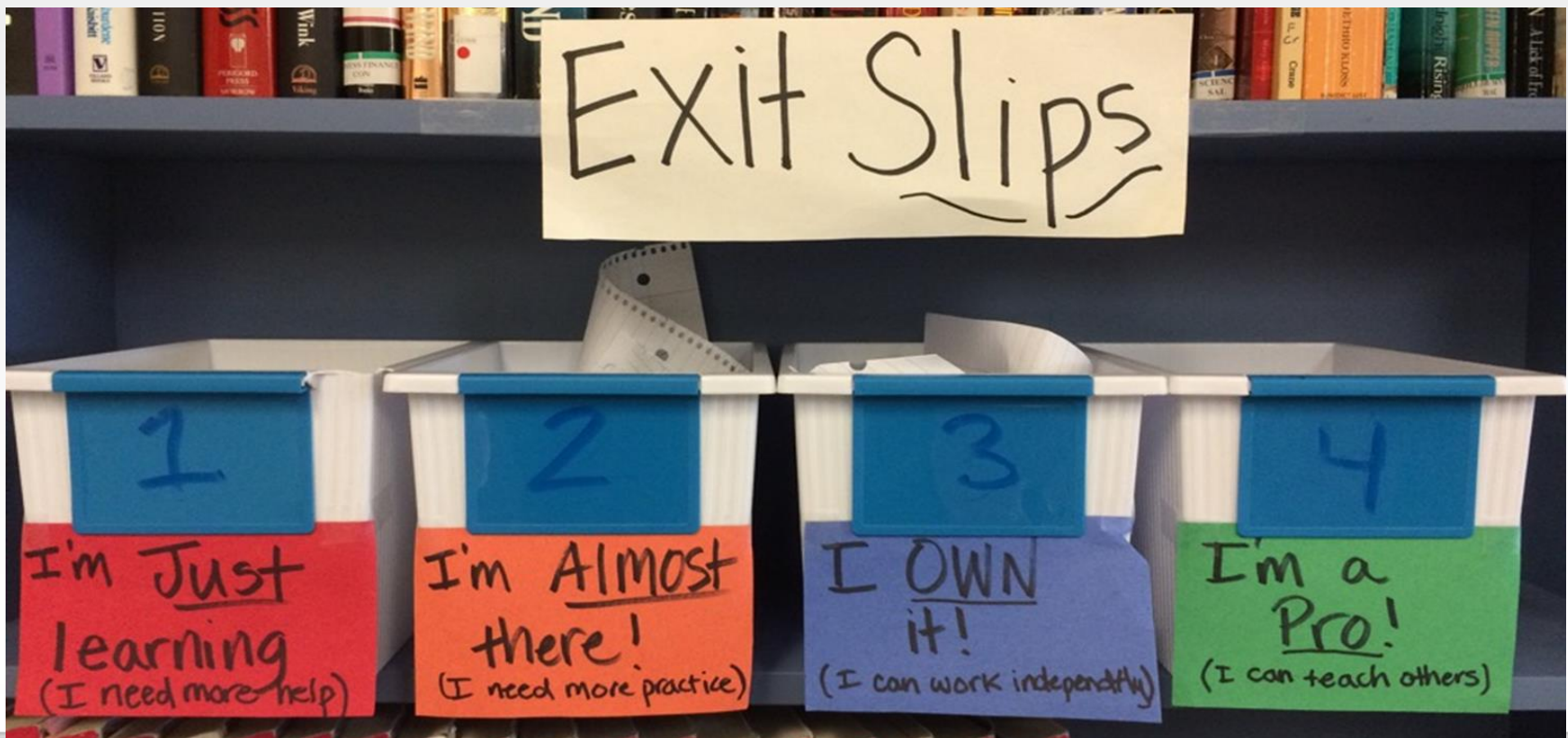


Three Questions

- **What** am I learning today?
- **Why** am I learning this?
- **How** will I know that I have learned it?



Helping Students to Become Self-Aware of their Understanding





Helping Students to Become Self-Aware of their Understanding



- **No direct explanation! This creates learned helplessness**
 - **Ways to avoid direct explanation:**
 - Questions, prompts, cues, etc.
 - If those don't work use "I" modeling ("here's how I think about this when I do this"-without telling how to do it, "when I read this here is what I am wondering"-think-aloud).
 - Not "you did this" or "you didn't do this"-then students get defensive.



Helping Students to Become Self-Aware of their Understanding



- **“Telling”**
 - Telling students the “right answer” can backfire
 - They think your words contain all of the information and neglect to do more on their own
 - See what they know...
 - Have students look for patterns on their own first.
- **When the justification for learning or instructional strategy relies on “it’s faster” backfire potential is high.**



Helping Students to Become Self-Aware of their Understanding



To provide effective feedback, we must have a very clear idea of where students are and where they are meant to be and then aim to provide feedback that reduces this gap.

- **3 Feedback Questions:**

1. **Where am I going?:** Provide mastery-related goals.
2. **How am I going to get there?:** Feedback should be relative to the starting or finish point.
 - a. **Rapid Formative Assessment**-quick formative assessment (diagnostic) during the session
 - i. Think of examples with your group members....
3. **Where to next?:** Can lead students to develop self-regulation over the learning process.



Encouraging Behavioral Change Based on Students' Self-Awareness



Encouraging Action or **Behavioral Change** Based on Students' Self-Awareness

- After you have assessed students understanding (or had them to self-assess their understanding) **and** have provided feedback...
- Students should develop a plan of action or behavioral change based on their new awareness.
- What are some ways that you can encourage action or behavioral change in your students?





Applying Metacognitive Strategies to the ADW 111 Terms of Engagement



ADW 111 Terms of Engagement

Construction of Knowledge

Gender

Identity

Class

Heteronormativity

Diaspora

Race

Resistance

Intersectionality

Resilience

Sexuality

Trans
Identity

Critical Consciousness



Applying Metacognition to the ADW 111 Terms of Engagement

- Each group will receive a term of engagement
- Provide example of how you could implement each metacognitive strategy with your term of engagement
- Report out to group



SUMmarize It!
Shorter than the text
Use your own words
Main ideas only 

Summarize and Make Inferences

- Allow students to Summarize in their own words and make Inferences

HOW TO MAKE AN INFERENCE

BACKGROUND KNOWLEDGE + CLUES FROM THE TEXT

GOOD READERS PIECE TOGETHER CLUES FROM THE TEXT AND FILTER THEM THROUGH THEIR BACKGROUND KNOWLEDGE TO MAKE INFERENCES.



- How can you encourage students to **summarize and make inferences** in your sessions?
- How will you assess student understanding (or give students an opportunity to self-assess) to provide feedback?
- After students become aware of their understanding how will you encourage behavioral changed based on this information?



Paraphrase

- Allow students to Paraphrase in their own words.

SUMMARY VERSUS PARAPHRASE	
Summary is a brief statement or account of the main points of a text.	Paraphrase is rewording of a text to clarify the content.
Summary is shorter than a paraphrase.	Paraphrase is longer than a summary.
Summary can be selective.	Paraphrase has to be specific.
Summary condenses the text.	Paraphrase clarifies the text.

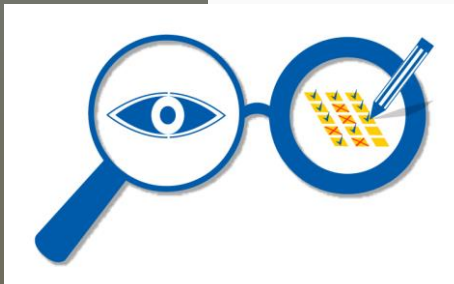
- How can you encourage students to **paraphrase** in your sessions?
- How will you assess student understanding (or give students an opportunity to self-assess) to provide feedback?
- After students become aware of their understanding how will you encourage behavioral changed based on this information?



3 Stages of Metacognition

- Teach students the 3 stages of Metacognition (Planning, Monitoring, and Evaluating). Allow time for practice on content.

- How can you encourage students to **self-assess themselves** in each of the 3 stages of metacognition?
- After students become aware of their understanding how will you encourage behavioral changed based on this information?





Model Behavior

- **Model metacognitive strategies on text.**

- How can you model the metacognitive strategies (3 stages) on the text in your sessions?
- How will you have students self-assess in order to provide feedback?
- After students become aware of their (previous) strategies how will you encourage behavioral change based on this information?

“If we don’t model what we are trying to teach, then we really are teaching something else”





Provide Strategies

- Provide students with strategies to help them be more accurate in their evaluations of understanding. Give students reliable reference points (objective gauges).

- What strategies can you provide students with to help them be more accurate in their evaluations of understanding?
- After students become aware of their understanding how will you encourage behavioral change based on this information?





Your 1st Session!



What will your 1st session look like?

- **Start, Middle, End**
- **Potential Texts....**
- **Week 2: Construction of Knowledge, Revolutionary Pedagogy, & Critical Consciousness**
 - Freire, Paulo, "Pedagogy of the Oppressed"
 - Collins, Merle, "Crick Crack"
 - Hubbard, Ruth, "Fact Making and Feminism"
 - Guy-Sheftall, Beverly, "Gender as an Analytic Category"
- **Week 3: Framing and Defining Diaspora**
 - Patterson, Tiffany R. and Robin Kelley, "Unfinished Migrations: Reflections on the African Diaspora and the Making of the Modern World"
 - Guy-Sheftall, Beverly, "Shifting Contexts: Lessons from Integrating Black, Gender, and African Diaspora Studies"



Contacts and Resources

Question Type

- Learning Strategies or Metacognition
- General PRF Administrative Issues
- First in the World Questions
- ADW Content

Appropriate Contact

- Dr. Jimmeka Guillory Wright
(jguillo1@spelman.edu or 404-270-5807)
- Ms. Natasha Emmanuel
(nemmanu1@spelman.edu or 404-270-6480)
- Dr. Francesina Jackson
(fjackso7@spelman.edu or 404-270-5582)
- Dr. Pushpa Parekh
(pparekh28@gmail.com or 404-270-5531)