



# **Becoming Metacognitive Teachers: Think-aloud while Teaching**

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# Overview of Presentation

Weaving together the topic and constructs to create the study

The Study Question:  
How does metacognitive teaching occur in an EAP reading-to-write classroom?

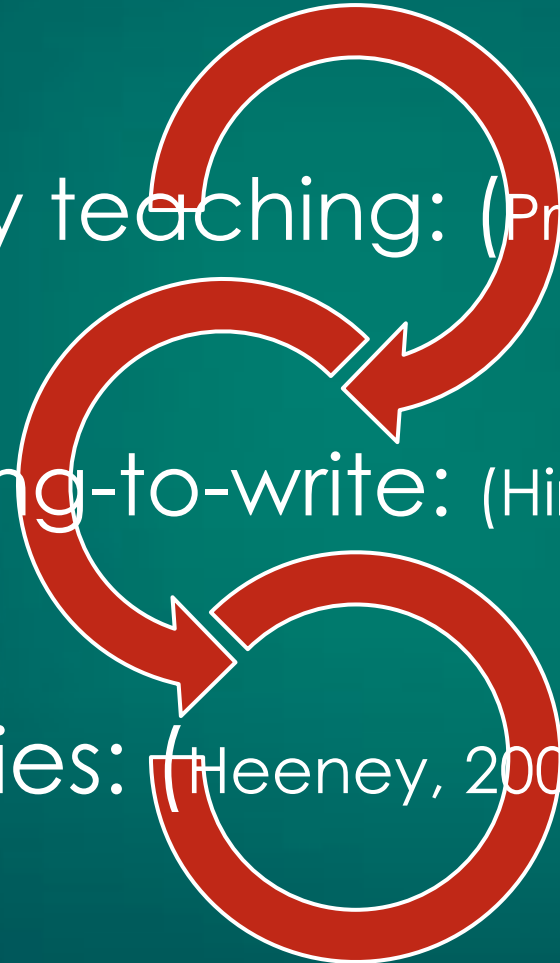
Results and reflections

# Weaving Together the Topic

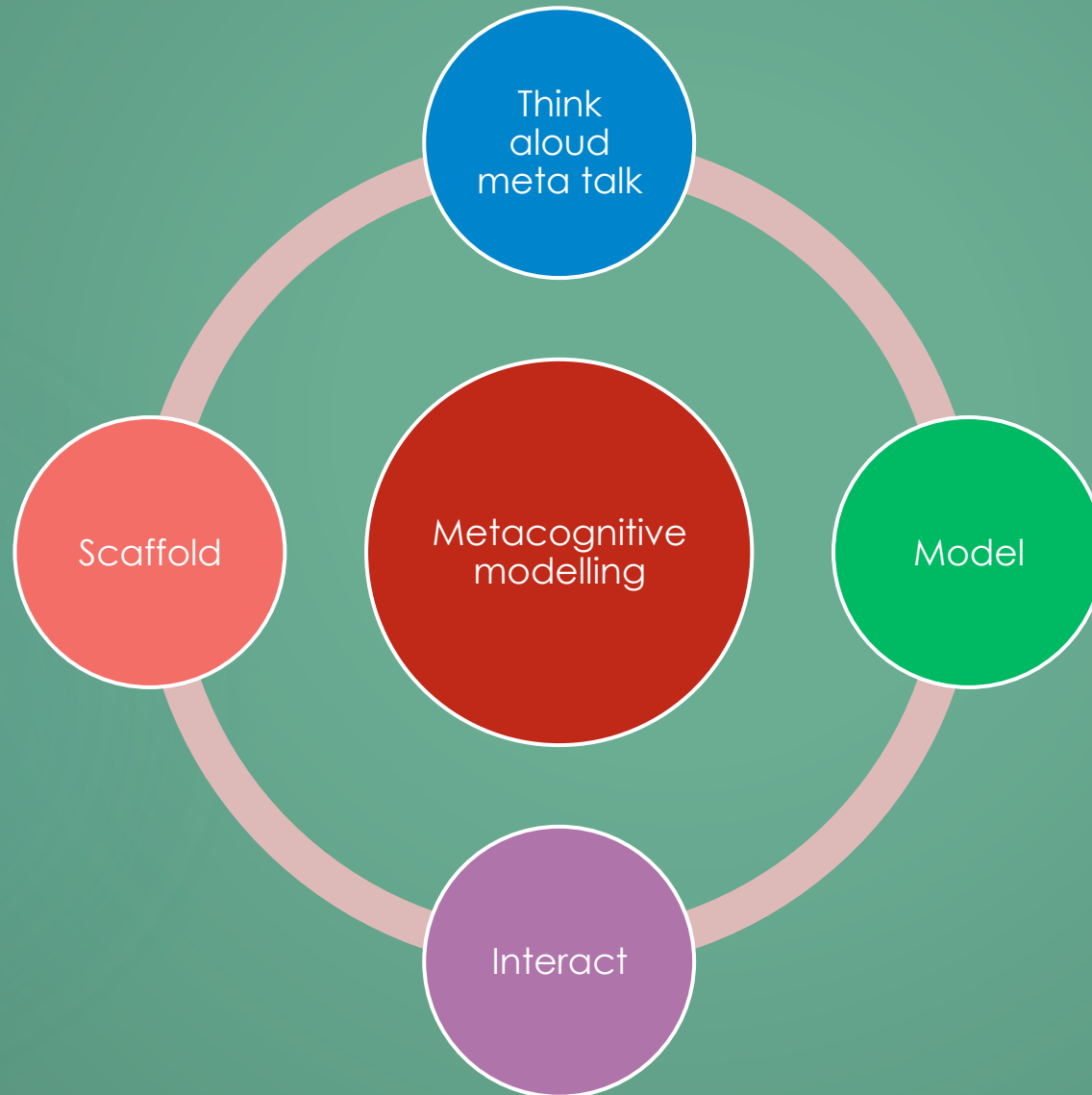
Exemplary teaching: (Pressley et al., 2001)

EAP Reading-to-write: (Hirvela 2004)

Strategies: (Heeney, 2005; Zhang, 2008)

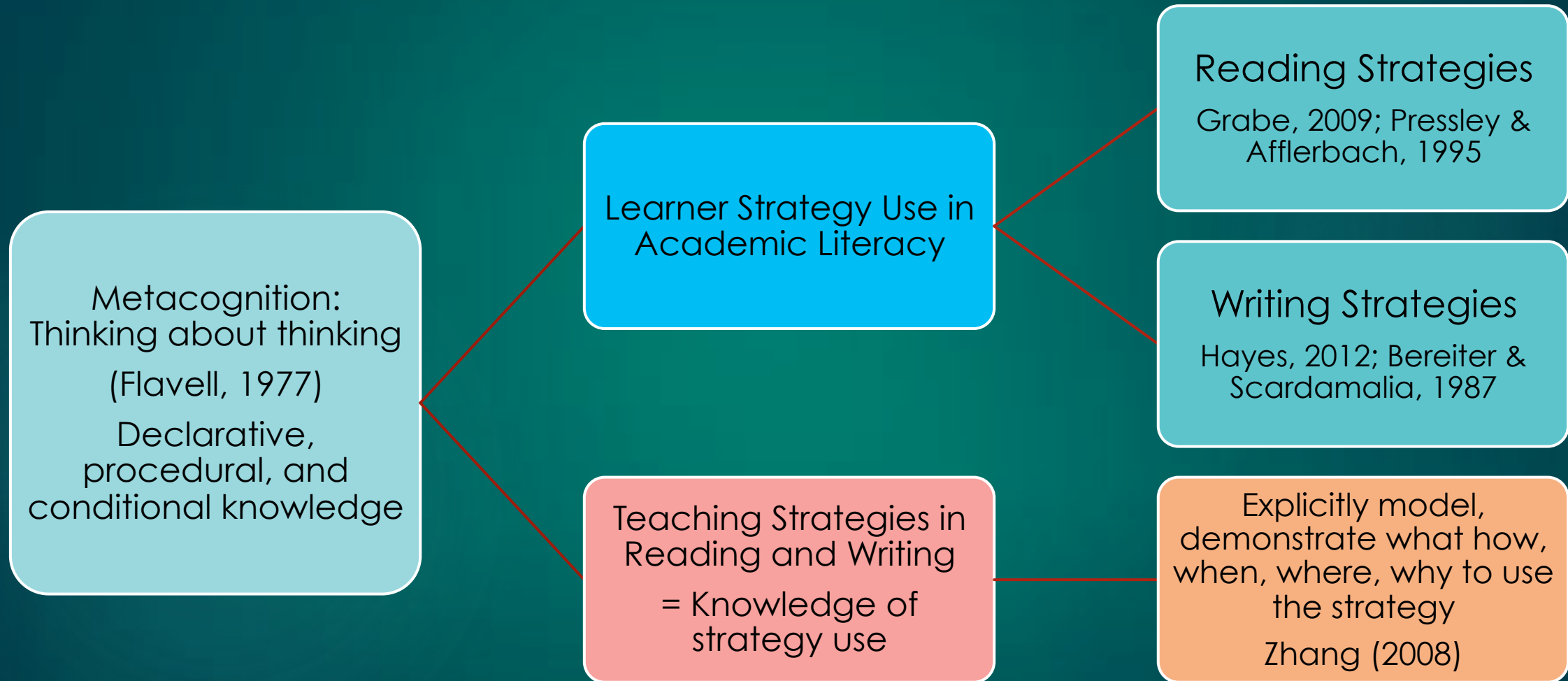


# What do Exemplary Teachers Do?



Cumming, 1995  
Pressley et al., 2001  
Roehler & Cantlon, 1997  
Vygotsky, 1978  
Wilson & Bai, 2010

# Metacognitive Strategies: A Teaching and Learning Framework



# The Case Study Context, Participants and Data Collection

## The Course

- A 10-week university EAP academic literacy class for credit
- Assignments: Process, contrast, paraphrasing, summarizing, argument writing based on readings - all written in class
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## The Teacher

- Sophia, experienced teacher: “Your reading informs your writing”
- Classroom observations (25 out of 30 classes)
- Field notes of teacher talk – transcribed
- Three interviews

## The Students

- Class of 25 - 17 Chinese, 2 Korean, others European or Indian.
- 55% first year from a range of faculties
- 6 recruited as focal students
- Two surveys

# The Focal Students

## The experienced

Rehan  
3<sup>rd</sup> year, Urdu

Vladimir  
Masters, Russian

## The struggling

Keith  
1<sup>st</sup> year,  
Cantonese

Armando  
1<sup>st</sup> year, Spanish

## The determined

Eva  
1<sup>st</sup> year,  
Mandarin

Jessica  
2<sup>nd</sup> year,  
Cantonese

Data Collected: 2 surveys, 5 post-writing think-aloud stimulated recall sessions, one final interview

# Methods of Categorizing Teaching and Learning Strategies in order to Analyse Data

## Ideas and Information

Activating prior knowledge, thinking about the topic and critically assessing text

## Language below Sentence Level - Vocabulary

Synonyms, collocations, word parts

## Language below Sentence level – Grammar

Passive, sentence variety, parallel structure, other grammar

## Discourse: Language above the Single Clause

Thesis statements, text organization, paragraphing, cohesion

## Regulation of Reading and Writing Task Processing

Planning, audience, editing, paraphrasing, assessing



# Coding the Teaching Data into Episodes

## ERA

- teacher centered
- little engagement
- no modelling
- little think aloud
- tells students what to do or tells about a strategy

## ESE

- uses awareness raising activities
- some engagement
- explains, models, demonstrates
- some think aloud while modelling

## ECM

- Enhances and specifically models the strategies that experts use
- engages students in the thinking process through social modelling
- thinks aloud as to how to do the process and allows the students to share in the thinking process

**ERA: Episodes of Raising Awareness; ESE: Episodes of Strategy Explanation; ECM: Episodes of Cognitive Modelling**

## Example ERA: little think aloud

I can't stress enough the importance of vocabulary this week because we will be only focusing on paraphrasing. . . . You need to have a bank account of synonyms for paraphrasing.

# Example ESE: some think aloud

**What does synthesise mean?** (She motions with the hands, makes them parallel). **Group** the ideas. **Look for** connections. **What are the connections** between the two articles on branding? You are **reading for connections** . . . **Every time** you read, **analyse each** reading and **then connect**. . . **Think about** the theme and ideas. **Take notes** on your readings to **make connections** and **this will inform your writing**. (ESE, Week 2, Day 2, E3, 1.3)

# Example ECM: inside the teacher's head

Not parallel!

Many alternative therapies are now not only scientifically documented to be cost effective but also medically effective.

Many alternative therapies are now scientifically documented to be/ not only cost effective/ but also medically effective.

Equal chunks of same type of language = parallel



It is beautiful because you made a beautiful mistake.... This is not parallel. How do we fix this? Watch what I do.  
(Rewrites and marks arrows) . . . See how I am moving the not only.....

Why did I do this? You need to think why! You need to understand why I did it. When you are listing, it must be in the same structure. You have to think as you do this kind of sentence. See how it reads now 'are now scientifically documented to be not only cost effective but also medically effective.'... I have to look down the sentence for the same word forms . . . (ECM, Week 4, parallel structure)

# The Focal Student ECL's

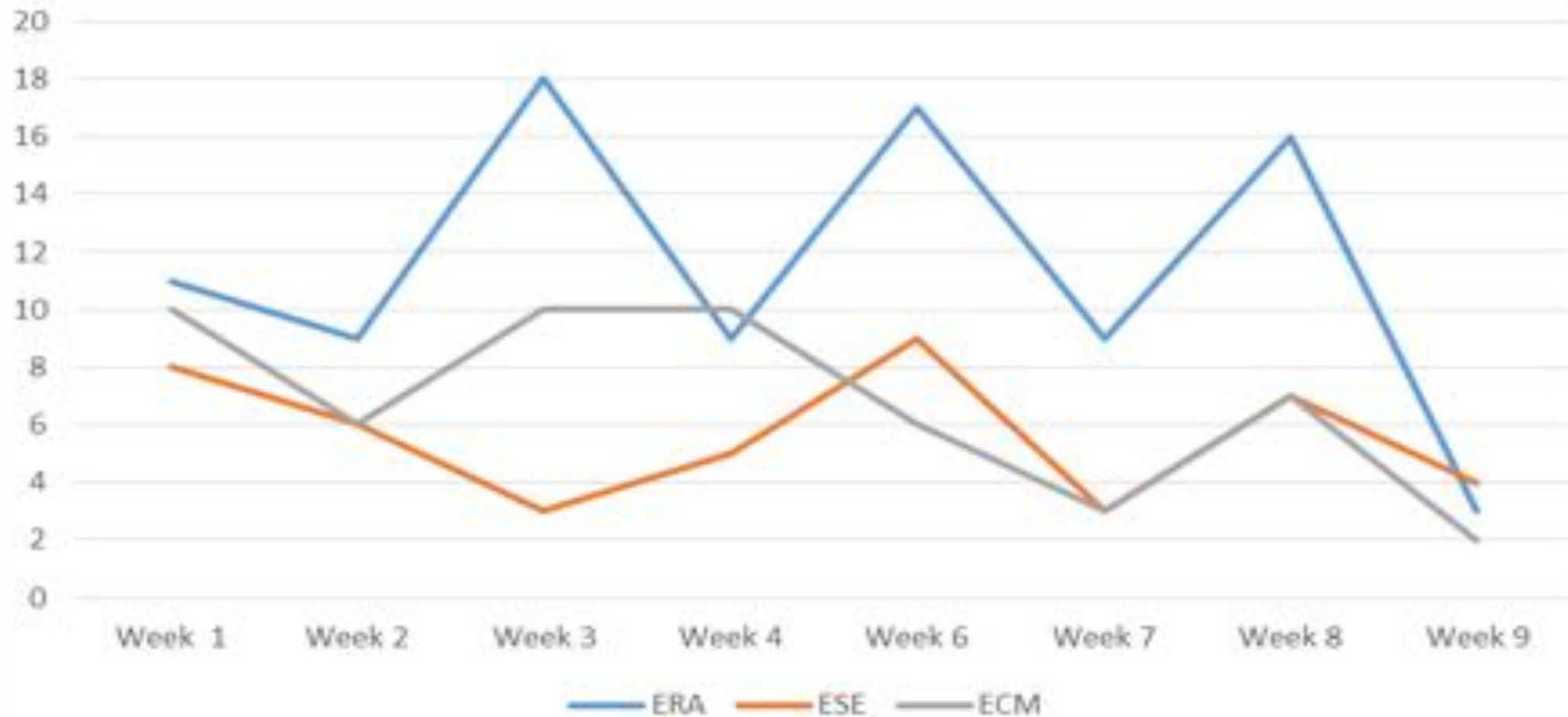
- *While Western medicine differs from Eastern medicine, complementary medicine becomes an integrative approach of that two types of medicine,”*

I had some difficulties with word combinations, but I like **integrative approach** (Vocabulary - Jessica)

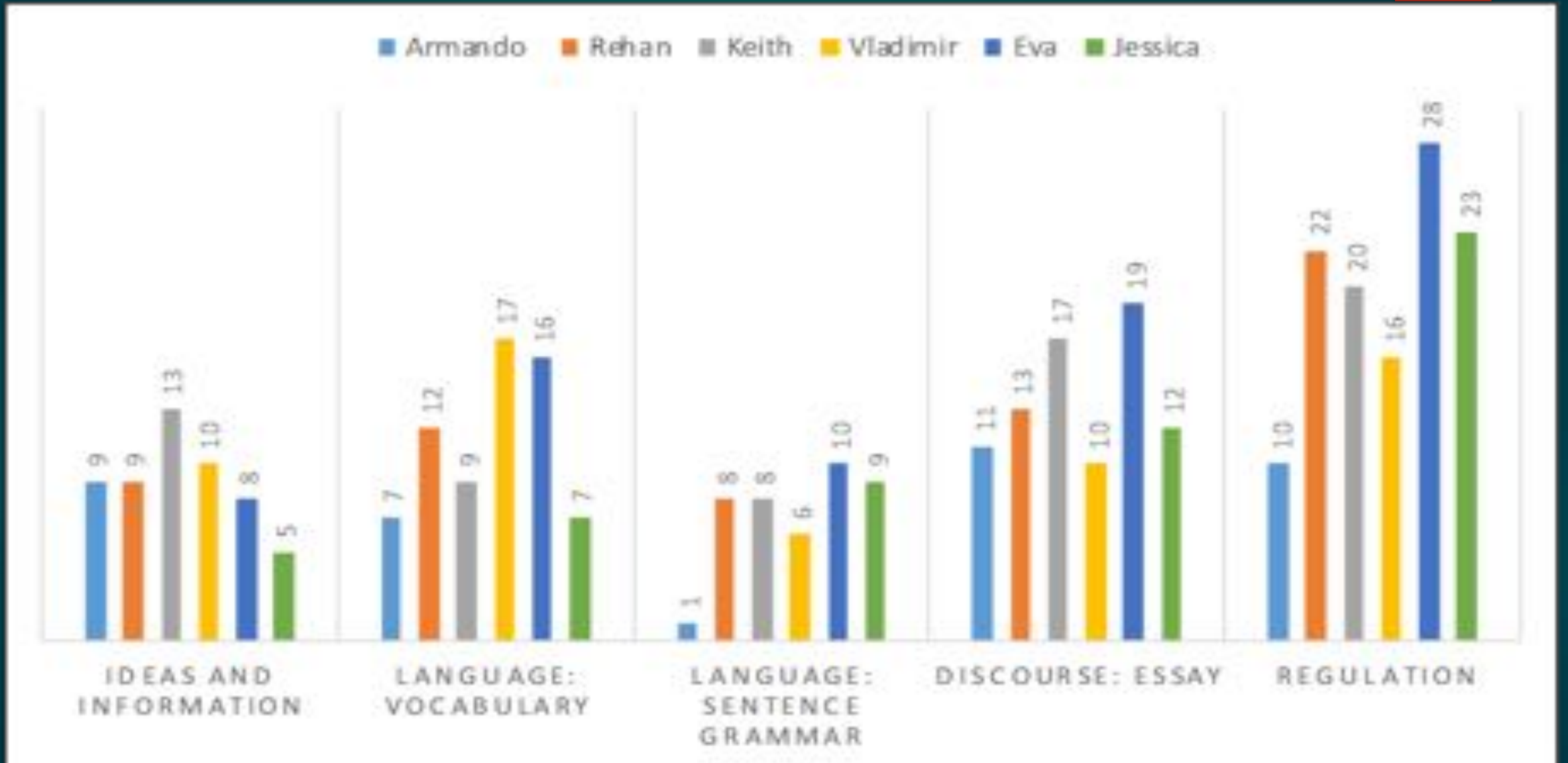
- .... I used the method Sophia taught us. Changing sentence structure, using synonyms - something like that. But I usually don't use the passive form of it because I get mixed up with it. I usually avoid using it. You see me using like paraphrasing and changing sentences. (Paraphrasing - Keith)

# Summary of Think-aloud Teaching Episodes

Variation of cognitive episodes



# Metacognitive Strategies Employed in Episodes of Learning



# Frequency of Teacher and Focal Student Metacognitive Episodes Compared = uptake?

Category	Teacher (ERA, ESE, ECM)			Focal students (ECL)		
	Contrast	Paraphrase	Argument	Contrast	Paraphrase	Argument
Assignment						
Ideas	18	2	6	38	0	21
Vocabulary	19	13	13	28	37	13
Sentence grammar	28	26	7	8	28	4
Discourse	7	1	18	5	10	45
Regulation	9	22	6	12	72	25



# Reflecting on the Results

Learning

Teaching

Teacher think aloud may mediate learning or "uptake"

Skills may carry forward—paraphrasing and synthesizing

Scaffold teaching novice to expert

Use familiar content in theme based teaching

Think aloud and model as and expert

Cumming, 1995  
Hirvela & Du, 2013  
Grabe & Zhang, 2014  
Pressely et al., 2001  
Wilson & Bai, 2010  
Graham & Perrin, 2007  
Briton, Snow & Wesche, 2003

# What Sophia thought.....

- ▶ Paraphrasing “watching the different strategies reinforced language development”
- ▶ Grammar: “I wanted them to think about it when they hear me think about it and ask the questions why and how.”
- ▶ Synthesis: “I can try to help them see the connections. It is a skill and a strategy, and organized writers have it, so surely weaker writers can learn if they hear how to do it.”

# What the Students Thought.....

- ▶ Paraphrasing : “It was really good. We made lots of practice in class. I like how Sophia showed the good and bad ones. I know synonyms are important and that is really good in a paraphrase.” (Vladimir)
- ▶ Grammar: “It helped cause sometimes some classmates make a mistake and Sophia will explain why and correct. . .I just have more um memory of that . . . then, I try talking to myself inside my head” (Jessica)
- ▶ Modelling: “The way she teaches more interactive, more thinking. This is like a system that I like. . . interactive activities, going to the board, brainstorming instead of working by yourself.” (Keith)

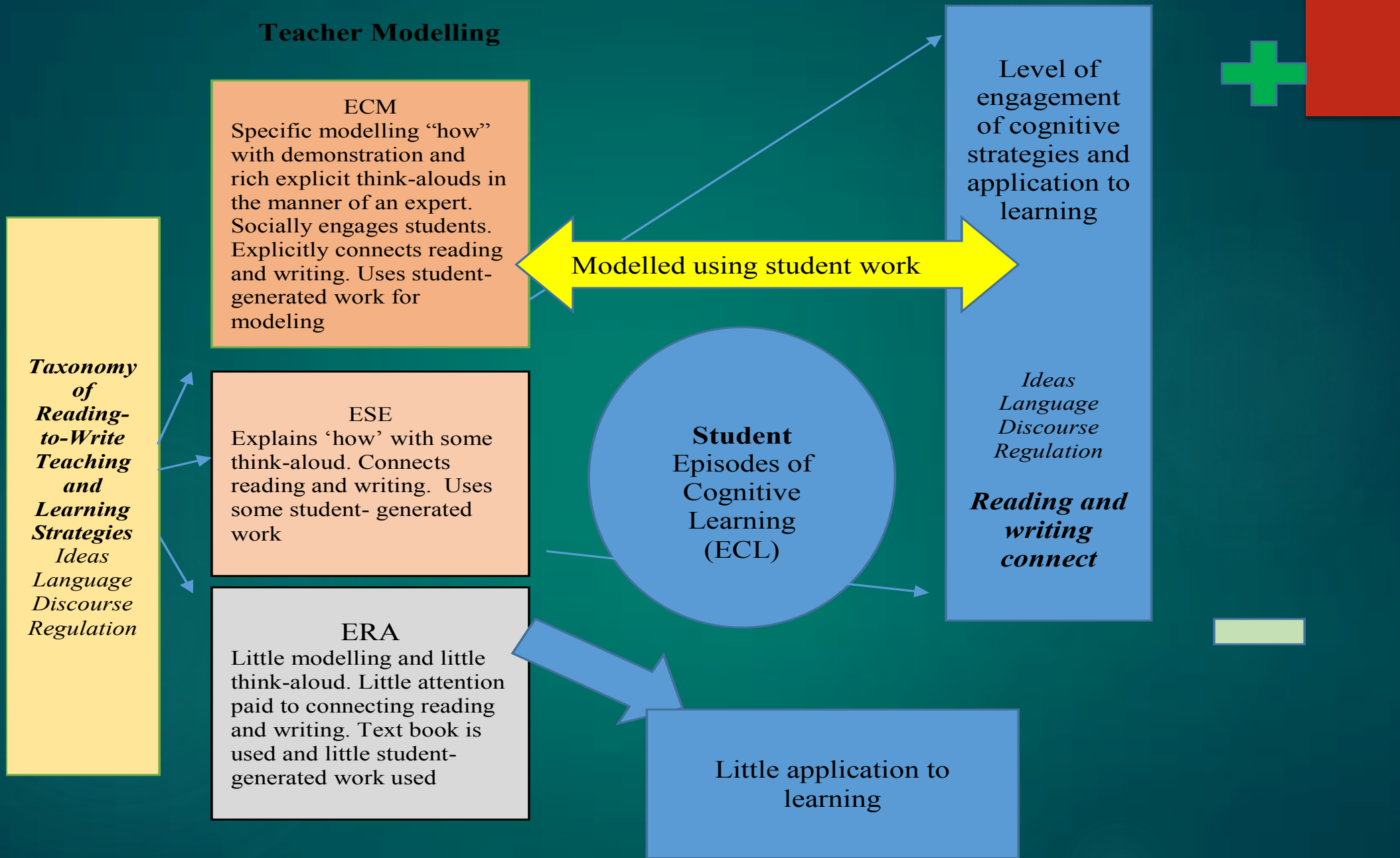


Figure 1. The teaching and learning framework of teaching and learning strategies

# Implications

## Theory

Integration of reading and writing and think-aloud modelling builds academic literacy skill

## Professional Development

Self-reflect on teaching practices and develop a set of think aloud teaching practices

## Metacognitive Modelling

## Teacher Education

Implement metacognitive modelling instruction into teacher training

## EAP Curriculum Planners

Consider first year bridging programs across disciplines for ESL learners



Thank

You