

# Scholars in the Sandbox: Academic Talk with Preschoolers



Center for Children & Families  
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Piasta et al., 2012, p. 387

“Children from economically-disadvantaged backgrounds are especially likely to show lags in language and communication skills, including vocabulary, morphology/syntax, and discourse (e.g., Bowey, 1995; Dickinson & Snow, 1987; Hoff-Ginsberg, 1998; Justice & Ezell, 2001)” . . .

# Main Goal:

Dispel this wide-spread belief that  
most preschoolers at risk for  
academic difficulties have  
**OVERALL WEAK** oral language  
skills

# Current View

**Weak  
OVERALL  
preschool  
oral  
language  
skill**

Leads to

**Later  
Academic  
difficulties**

# Proposed View

**Lack of/Less  
familiarity  
with  
Academic  
Register**

**Leads  
to**

**Later  
Academic  
difficulties**

# Propose A More Refined Lens to Consider Preschoolers' Oral Language Skills

- Two DIFFERENT oral language registers available to preschoolers that are MEASURED differently
- Many preschoolers at risk for later academic difficulties have weaknesses in only ONE of these registers

# Casual Talk (CT)



An integrated set of co-occurring language features important for carrying out everyday affairs — having relationships with others and getting the business of everyday living accomplished

# Academic Talk (AT)



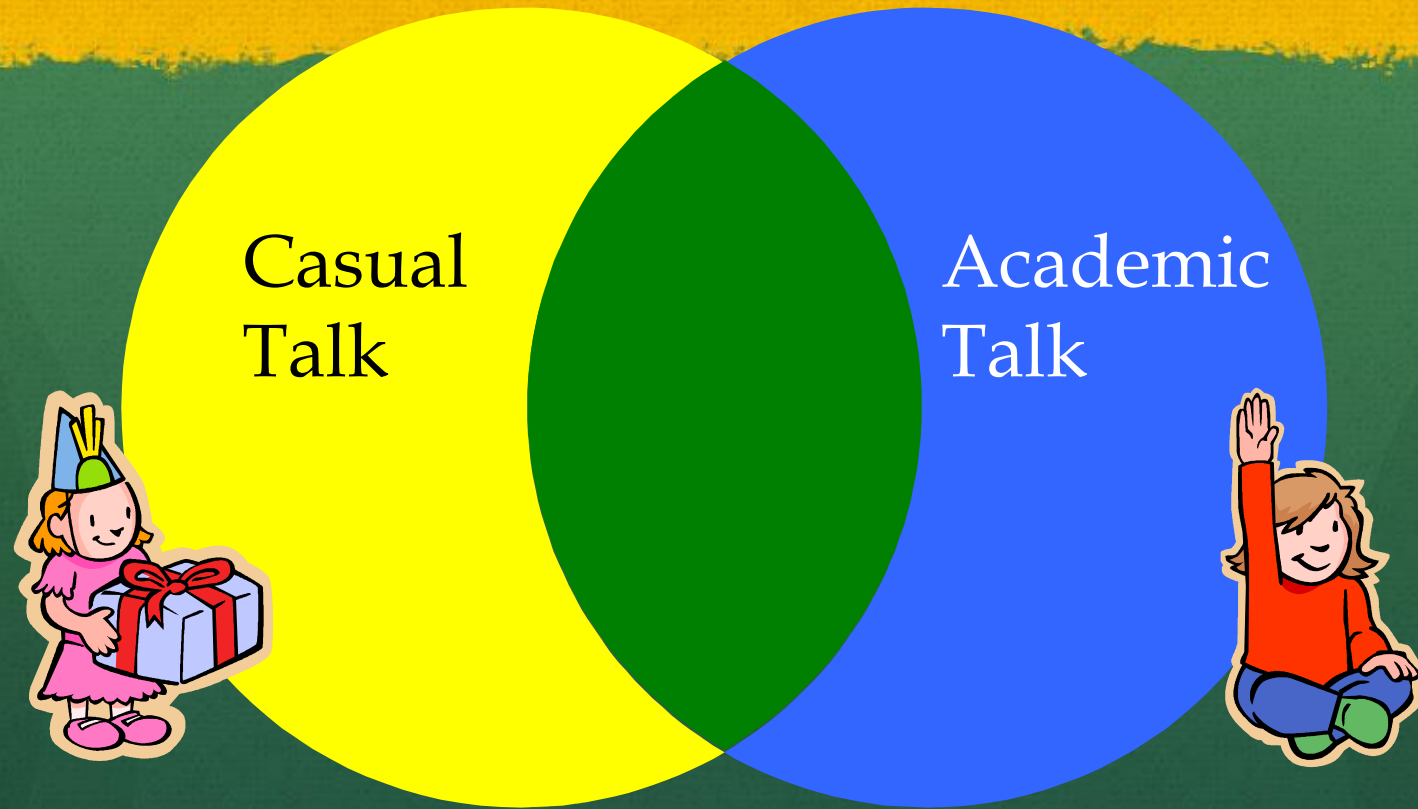
An integrated set of co-occurring oral language features important for academic success in general, and for reading comprehension in particular – language used to transmit, display, & build knowledge and understanding



# Two Preschool Oral Language Registers, But **Only AT** is:

- Often not familiar to preschoolers at risk for academic failure
- Measured by formal norm-referenced language tests
- Critically important to academic success

# Same Language, Two Registers



Different Patterns of Language Use

# What do I mean by register?

A culturally determined  
**PATTERN** of language and  
communication use

# What do I mean by pattern?

A set of **co-occurring** features along many dimensions that are more prevalent in one register versus another

# Why do we have registers?

- Because language is FUNCTIONAL for the situation we use it in – so language is a tool that can be changed or shaped to do different things
- Registers are the different patterns of language use reflecting the different purposes

EXAMPLE:  
“Baby Talk” vs. “Adult Talk” Register



EXAMPLE:  
“Baby Talk” vs. “Adult Talk” Register



# Functions

## Casual Talk



Language for Daily  
Living

## Academic Talk



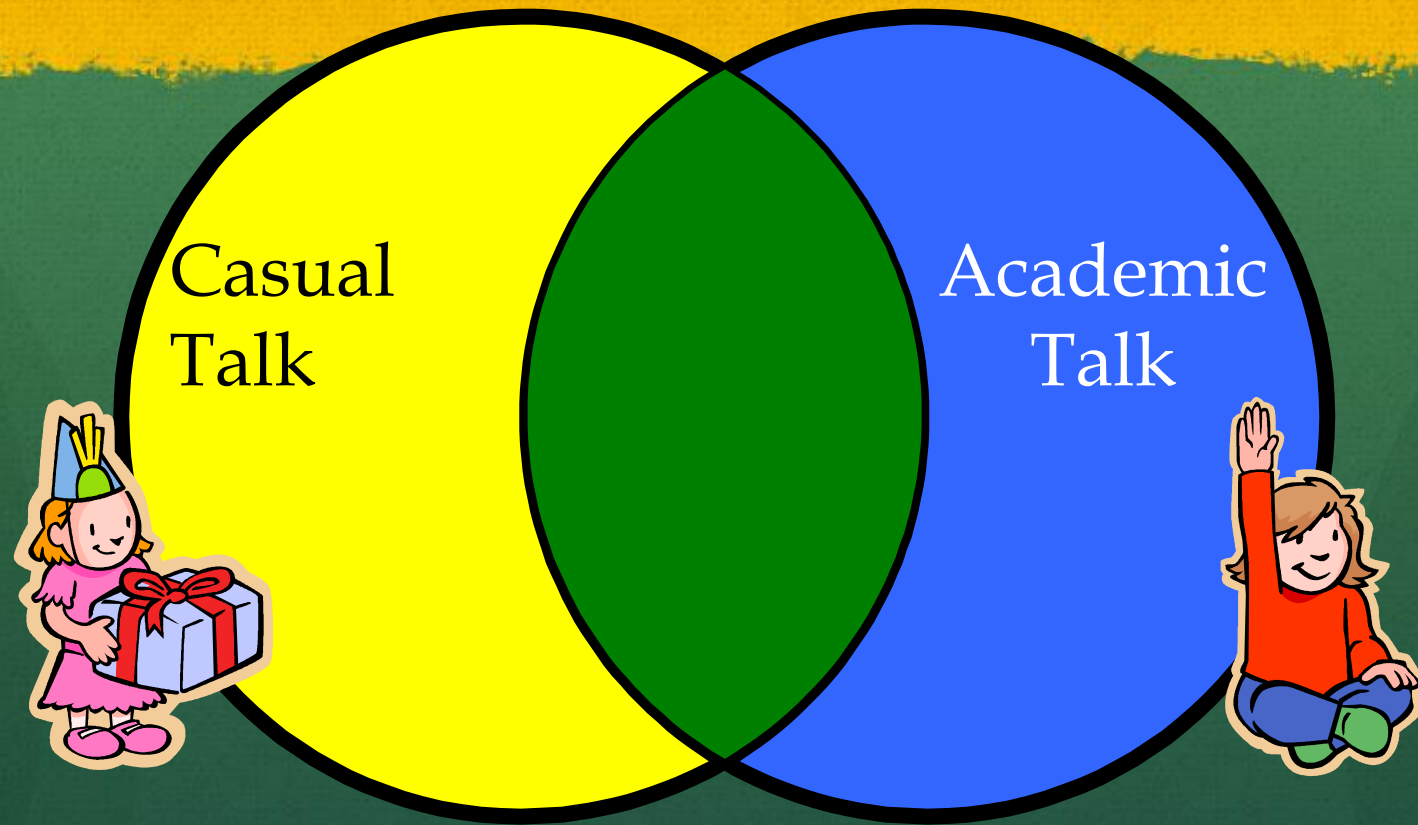
Language for Formal  
Learning



# Registers are Culturally Shaped

- Cultures that FREQUENTLY use AT
  - a. Classrooms in Western culture
  - b. Families/homes of preschoolers where parents have relatively high education levels

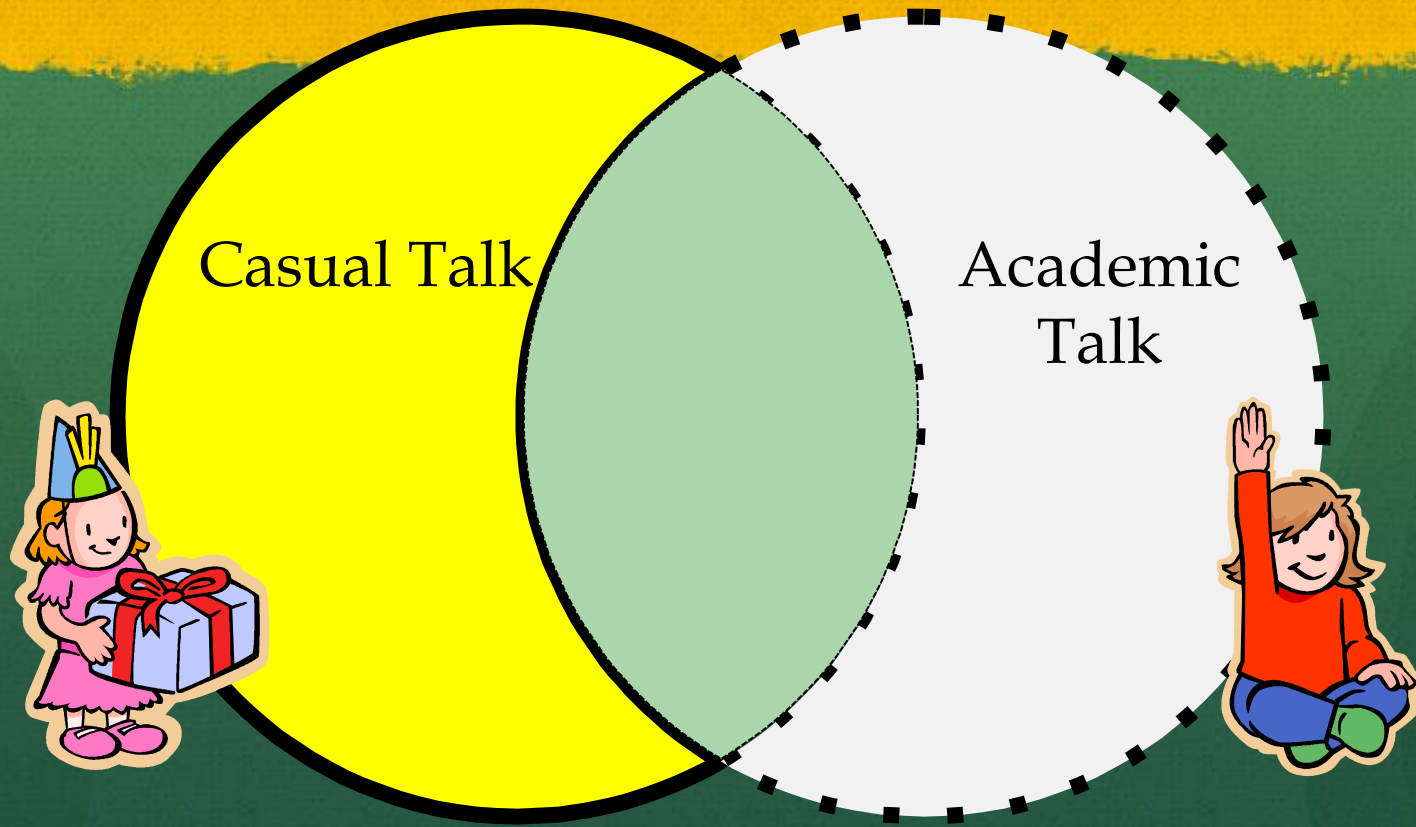
# Preschoolers with More Highly-Educated Parents



Exposed to (from onset of language) and therefore strong skills in BOTH registers (van Kleeck, 2014, in press)



Preschoolers Whose Parents Have Lower Education Levels  
(including many culturally and linguistically diverse - CLD- children)



Almost ALL strong in CT; many quite weak in AT,  
causing academic risk

# Pattern Emerging in Recent Research:

Different types of assessments of pre-K and kindergarten oral language abilities show very different relationships with later reading comprehension and other measures of academic achievement.

# My Explanation:

Different assessments reflect different types of preschool and kindergarten oral language (registers) – casual talk or academic talk -- & that is why they do a better or worse job of predicting later reading comprehension or academic success for preschoolers at risk for later academic difficulties.

Moderate to strong predictors of later reading comprehension/academic achievement for preschoolers at risk are found oral language assessed by:

- Formal discrete point (questions are unrelated to each other) language tests
- Most story retells (measures complex integration of language abilities)

# A Formal Discrete Point Language Test





# Preschoolers at Risk Academically

Have fairly consistent quite low performance on oral language when measured by formal, discrete-point tests or by story retell measures (average -1 SD below mean)

Formal oral language  
test or story retell

Academic  
talk

Assesses

Reading comprehension  
or school achievement

Predicts

# Why this difference in exposure to AT in the homes of different children?

## Logic Path

- The more time Mom (& likely Dad, too) spent in school, the better she got at AT herself.
- The better she is, the more she uses AT just naturally with her own children at home.
- The more she uses AT, the more her child learns to understand and use AT, too.

Weak or no prediction of later reading comprehension/academic success for preschoolers at risk when oral language assessed by :

- Language sample analyses (LSA) of spontaneous conversation during play (taps CT skill)



# Preschoolers at Risk Academically

Perform similarly to their peers  
whose parents have higher  
education levels on language  
sample analyses of their oral  
language skills – no weakness here!

For preschoolers at risk for later academic difficulties:

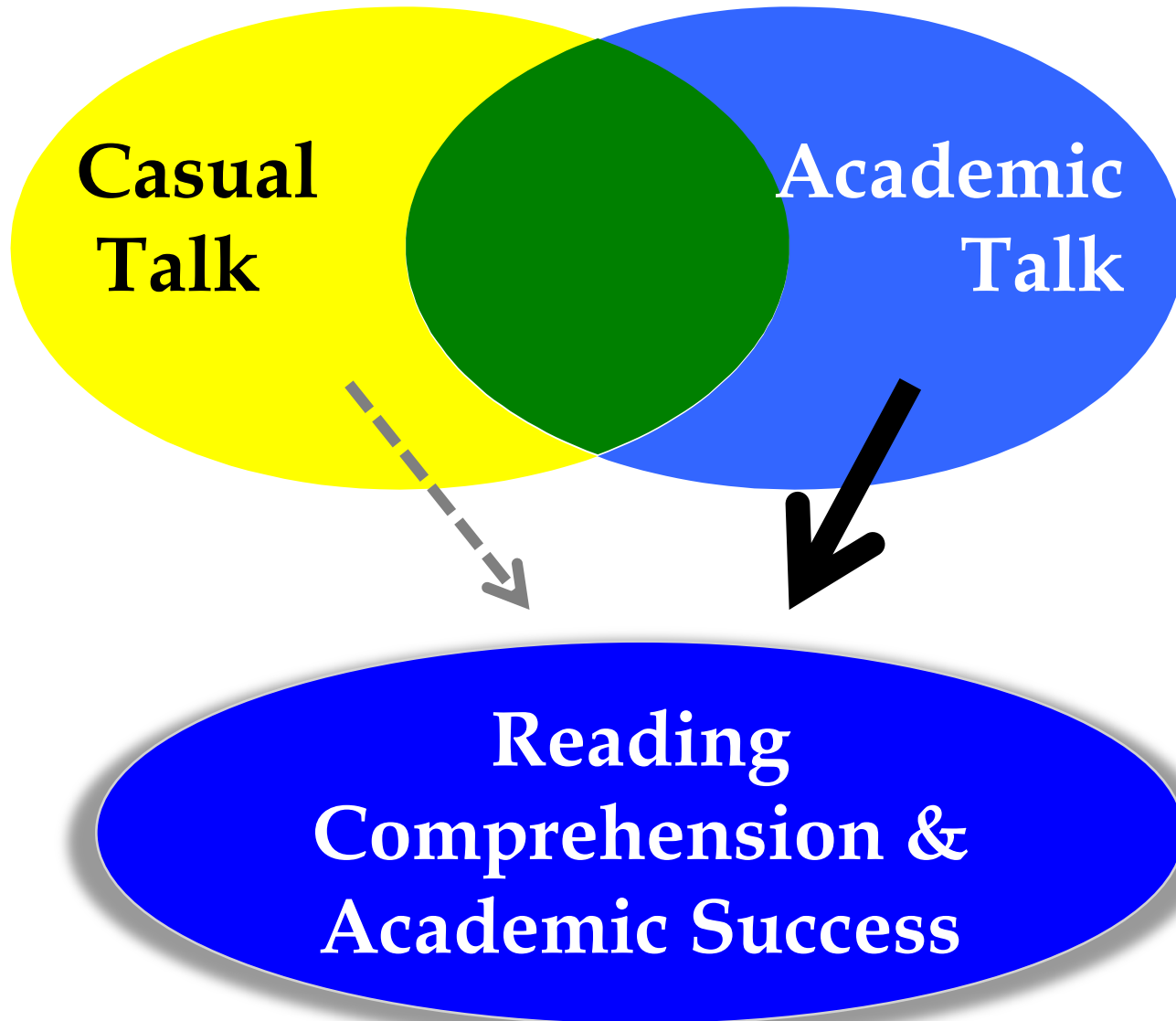
Conversational  
language sample  
analysis (LSA)

Casual  
Talk

Assesses

Reading  
comprehension/school  
achievement

# Relationship of registers to later school achievement:



# Language Exposure and Strengths of Different Preschoolers

**CT**

Many preschoolers of  
mothers with low  
education

**CT & AT  
Woven  
Together**

Many preschoolers of  
mothers with higher  
education levels



Current View ONLY Considers an Academic Language Register with School-Aged Children

Greatly increasing concern with important role of a broad academic language register in **school-aged children's** academic success

Now several literature reviews: Scarcella, 2003; Schleppegrell, 2001, 2004; Snow & Uccelli, 2009

# Proposed View

- Waiting even until kindergarten is TOO late
- Research repeatedly shows that children who start behind as preschoolers (on formal tests & hence AT skills), tend to stay behind academically for the remainder of their academic careers

Impact of Using the AT  
register in Classroom or  
Home Dependent on Two  
Foundations

(adapted from Pianta's research  
team)

Quality Factors  
in Pre-K  
Classrooms (&  
in Preschoolers'  
Homes)



Engaging in  
Academic Talk

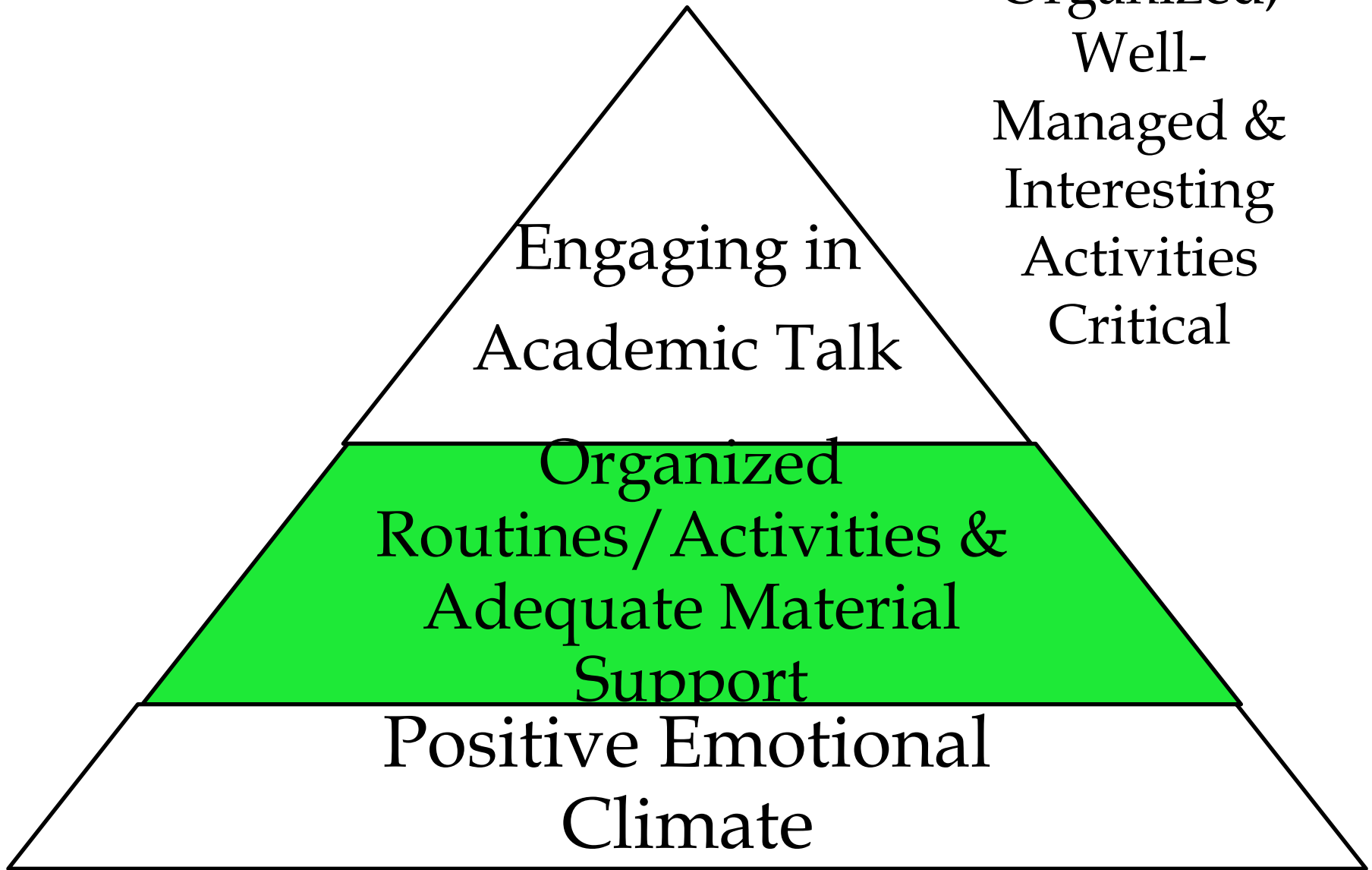
Organized  
Routines/ Activities &  
Adequate Material  
Support

Positive Emotional  
Climate

Engaging in  
Academic Talk

Organized  
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Support

Positive Emotional  
Climate



Adult-Child  
Interactions

**Most**

Critical Factor  
For Learning

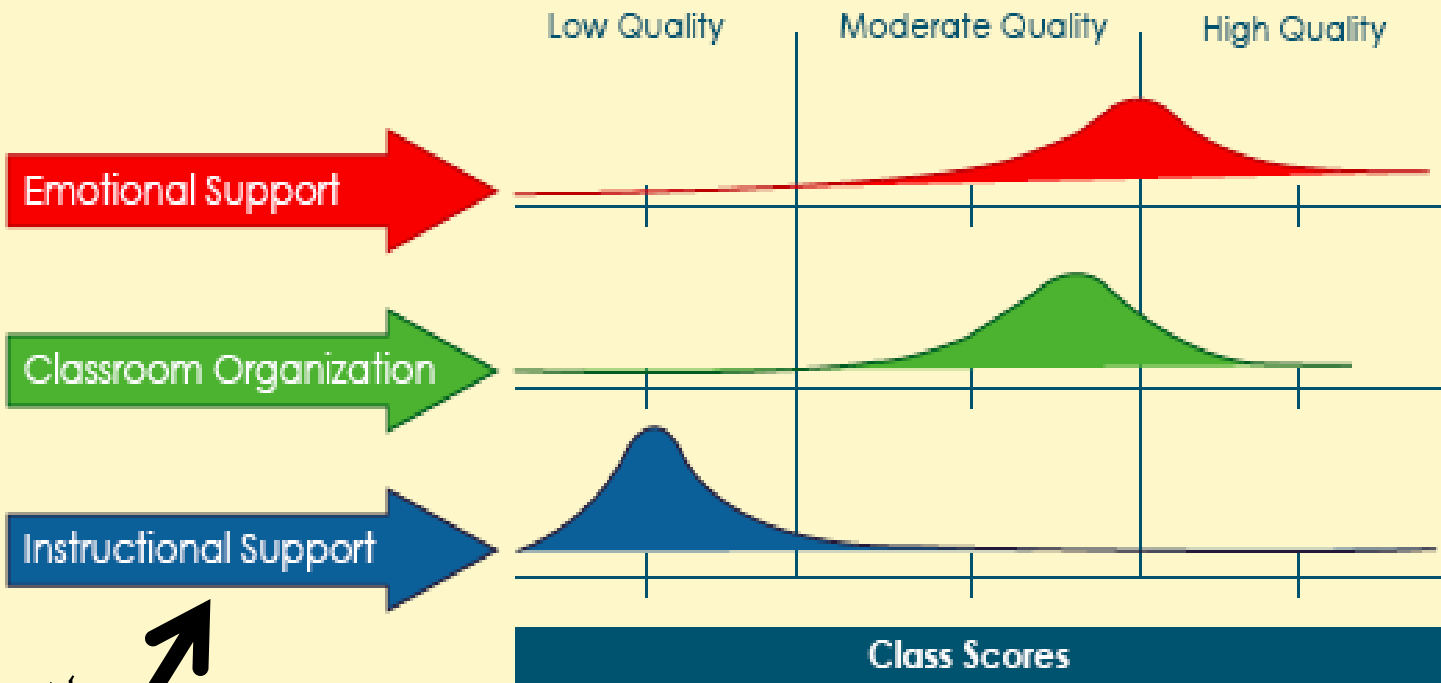


Engaging in  
Academic Talk

Organized  
Routines/ Activities &  
Adequate Material  
Support

Positive Emotional  
Climate

## Average Ratings of Interactions in Pre-K - 3rd Classrooms



*Academic Talk* →

From Mashburn, Pianta, Hamre, Downer, Barbarin, Bryant, Burchinal, Early, & Howes, 2008





# Features Distinguishing CT & AT

# Continuum of Frequency of Features

Casual Talk

Academic Talk

Written Acad. Lang



# CT & AT Registers are NOT on a Developmental Continuum

- CT does NOT have to come first! The two registers can develop simultaneously from the **beginning** of language development
- They are DIFFERENT patterns of language used for DIFFERENT functions – one register does not build on the other.


# CT & AT Registers are NOT on a Developmental Continuum

**NOT:** CT  AT  
developmental time

**BUT:** CT   
AT   
(higher parental education)

# CT & AT Registers are NOT on a Developmental Continuum

**NOT:** CT  AT  
developmental time

**BUT:** CT   
AT   
(lower parental education)

**Social-  
Interactive  
Features**

```
graph TD; A["Social-Interactive Features"] --> C(( )); B["Cognitive Features"] --> C;
```

**Cognitive  
Features**

**Social-  
Interactive  
Features**



The diagram consists of a large white circle at the bottom center. Two white callout boxes with black text point towards this circle. The box on the left is labeled 'Social-Interactive Features' and the box on the right is labeled 'Cognitive Features'. The 'Cognitive Features' box and its callout line are highlighted with a thick red border.

**Cognitive  
Features**

**Social-  
Interactive  
Features**

**Cognitive  
Features**

```
graph TD; A["Social-Interactive Features"] --> C((Linguistic Features will Mostly Happen Automatically)); B["Cognitive Features"] --> C;
```

Linguistic  
Features will  
Mostly  
Happen  
Automatically



# Child Rearing Values in Western Culture Schooling & More Educated Mainstream Families

- Encouragement of autonomy/independence
- Exhibitionism (anthropology term) – less competent person displays skills to more competent people in order to gain confidence & a sense of personal achievement

# Social-Interactive Features

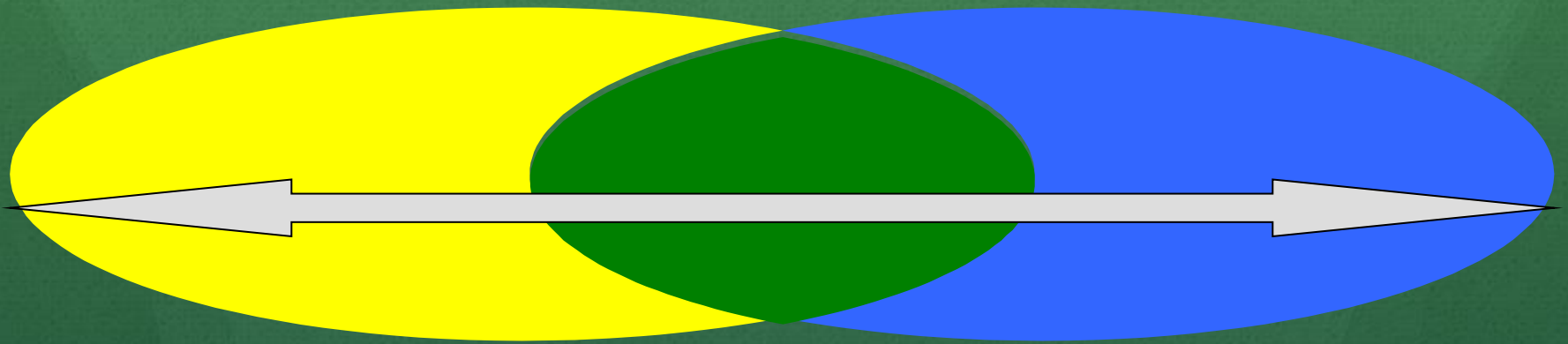
## Distinguishing CT and AT

- a. Rules for Participating in Interaction
  - i. Degree of independence encouraged
  - ii. Nature of verbal display – having children show you what they know by TELLING you
  - iii. How you participate in interactions
- b. Degree of Formality

# Degree of Independence in Thinking & Self Direction in Activities

Casual Talk

Academic Talk



More encouraged in  
mainstream culture  
homes, less so in  
many CLD homes



**Encouraged**

# Degree of independence in thinking encouraged

Asking questions like the following to foster child's independence as a thinker and as having a say in his or her activities:

- *What do you think?*
- *Do you think that that will work?*
- *Which book would you like me to read to you?*

# Two Kinds of Verbal display in AT (showing what you know by TELLING adults)

<b>Of What</b>	<b>Why Asked</b>
Already acquired knowledge 	Show adults what you already know (assessment); Help child gain confidence in being able to answer
Thinking 	Build new knowledge; Display thinking; Develop critical thinking by practicing it

# VERBAL DISPLAY

- Often not practiced in many low-income or culturally diverse families (children often expected to learn via quiet observation)
- Common manifestation of exhibitionism in individualist cultures and institutions (e.g., schools), hence commonly requested in AT

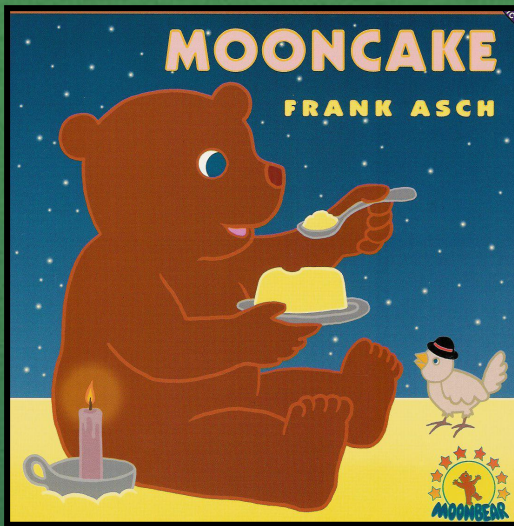
For children **not** familiar/comfortable with questions regarding information they & teacher already know answer to, teachers can explain:

- I will ask questions I already knows the answer to
- In school, your job is to tell me the answer anyway
- This will help me know see if I'm doing a good job teaching

For children **not** familiar/comfortable with questions asking them to talk about what they are thinking, teachers can explain:

- I want you to tell me what you are thinking, even if you are not sure of the answer
- If you don't have any ideas, I'll tell you what I'm thinking (teacher provides a "think aloud")





*“I wonder who this book is going to be about?” I haven’t read this book before, so I don’t know for sure who it is about. But I can*

*use hints from the cover to guess who the book might be about. There is a picture of a bear and a bird on the cover. So maybe the book is about the bird or the bear, or maybe about both. But, I’d have to read the book to find out if I made a good guess or not.”*

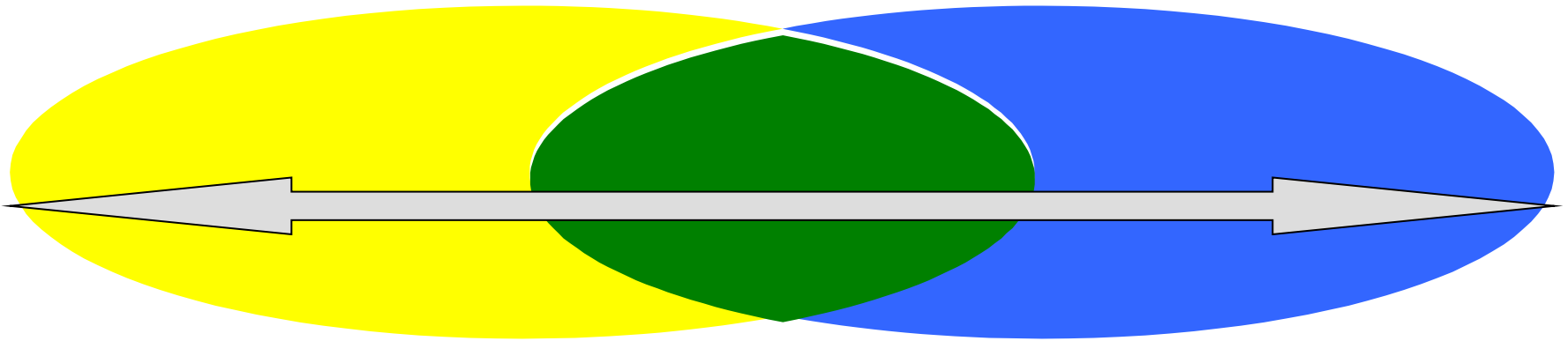
# Topic Participation

Many-to-one (many children to one or a couple of adults) classroom context influences social interaction in classroom

# Who Controls Topic

Casual Talk

Academic Talk



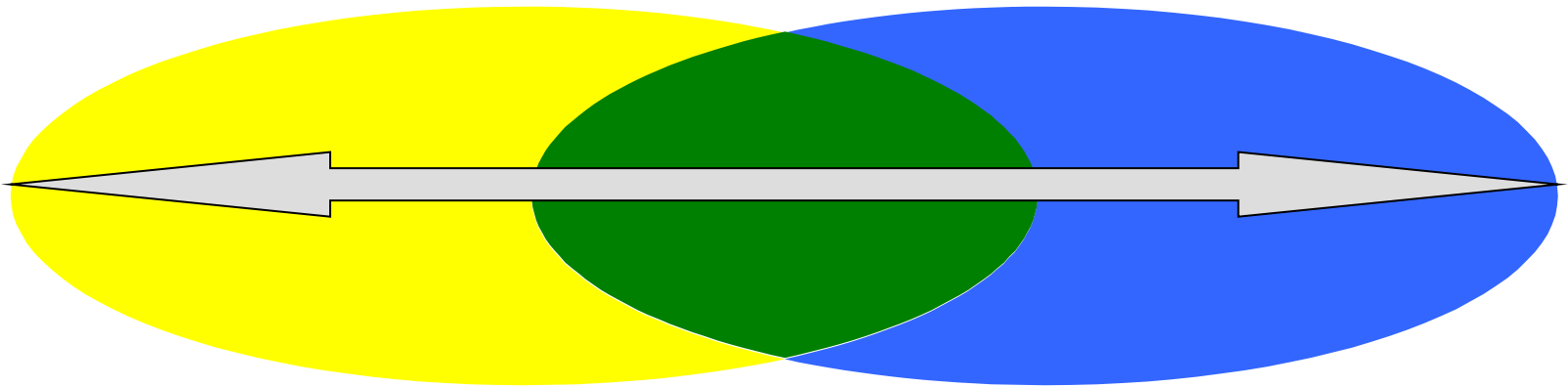
All participants in interaction in more mainstream culture families; Not as encouraged in children from CLD families

Generally controlled by teacher

# Topic Spontaneity

Casual Talk

Academic Talk



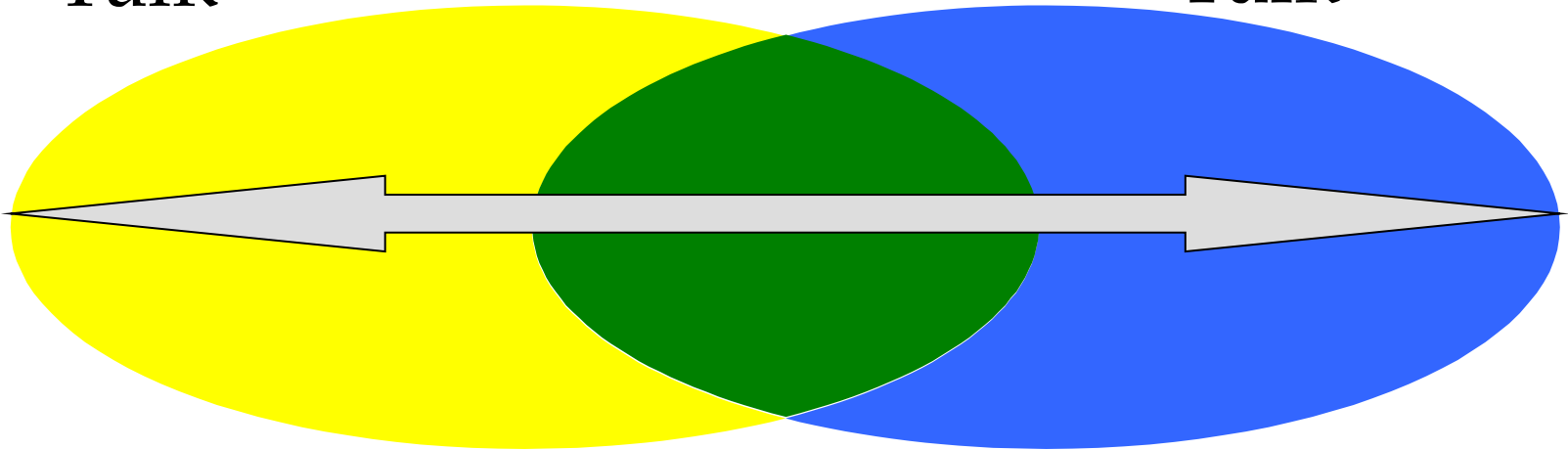
Spontaneous contributions from children encouraged in more mainstream families, but are less encouraged in CLD families

Typically elicited and focused by teacher

# Balance of Contributions to Talk

Casual  
Talk

Academic  
Talk



More balanced/equal  
in mainstream culture  
families; Tend to have  
give & take  
conversations

Less balanced;  
Teachers often talk  
much more than  
children

# In Classroom, Teacher Can:

- Make sure rules for participation in any activity are clearly stated to children as routines are established in beginning of the school year
- Gently hold children to the current task and topic
- Engage children in discussion frequently and work to help all children in class feel comfortable contributing.

The background features a stylized landscape with green, triangular mountain peaks at the top. Below the mountains is a large, horizontal band with a vertical gradient from orange at the top to yellow at the bottom. The text 'Degree of Formality' is centered in this yellow band.

# Degree of Formality

# Less Formal = Casual Talk Register





More Formal = AT Register



# Formality Shows up in Vocabulary Choices

CT allows more “colloquial” (everyday)  
vocabulary than AT does

- Examples: *kid, kitty, go bananas, gonna, y'all*

# Formality Shows up in Vocabulary Choices

CT uses more simple, common,  
high frequency, familiar  
vocabulary than AT

# More Germanic Terms in CT & More Latinate Equivalents AT

<b>Germanic</b>	<b>Latinate</b>
Eat	Dine
Hand	Manual
Ask	Inquire
At Night	Nocturnal
Teach	Educate
Baby	Infant
Help	Assist

# Formality Shows up in Vocabulary Choices

CT uses more “appreciative markers”  
that convey attitude, interest, values,  
and involvement than AT

Examples: *Wow, Cool, Gee, Really?*

*Oh no! You're kidding!*

# Teachers Can:

Introduce “fancy” synonyms

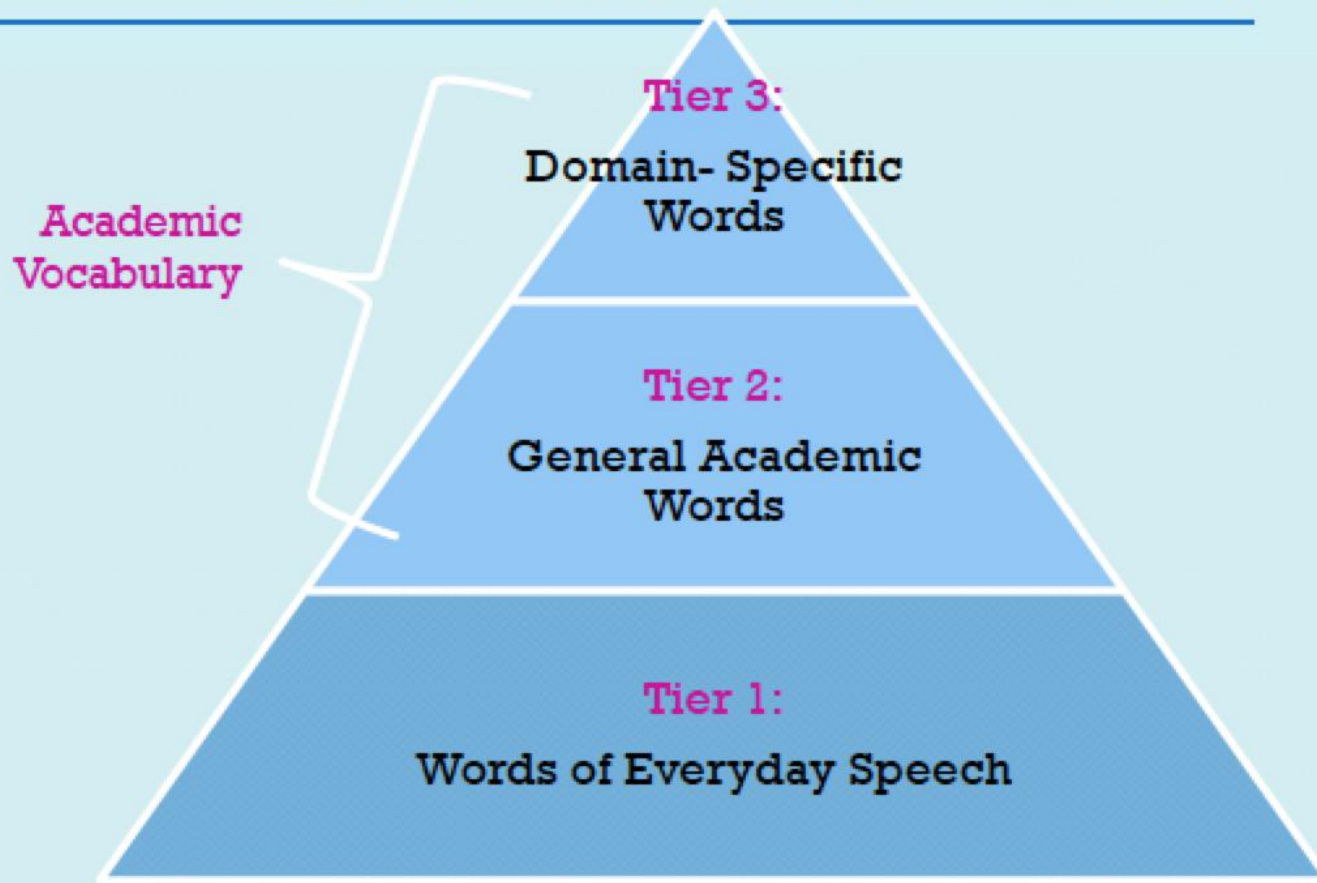
(e.g., *dine* for *eat*, *infant* for *baby*,  
*assist* for *help*)

# Teachers Can:

Use more “Tier 2” vocabulary

From Beck, McKeown, & Kucan , 2013

## Three Tiers of Words





# Teachers Can Use Tier 2 Vocabulary:

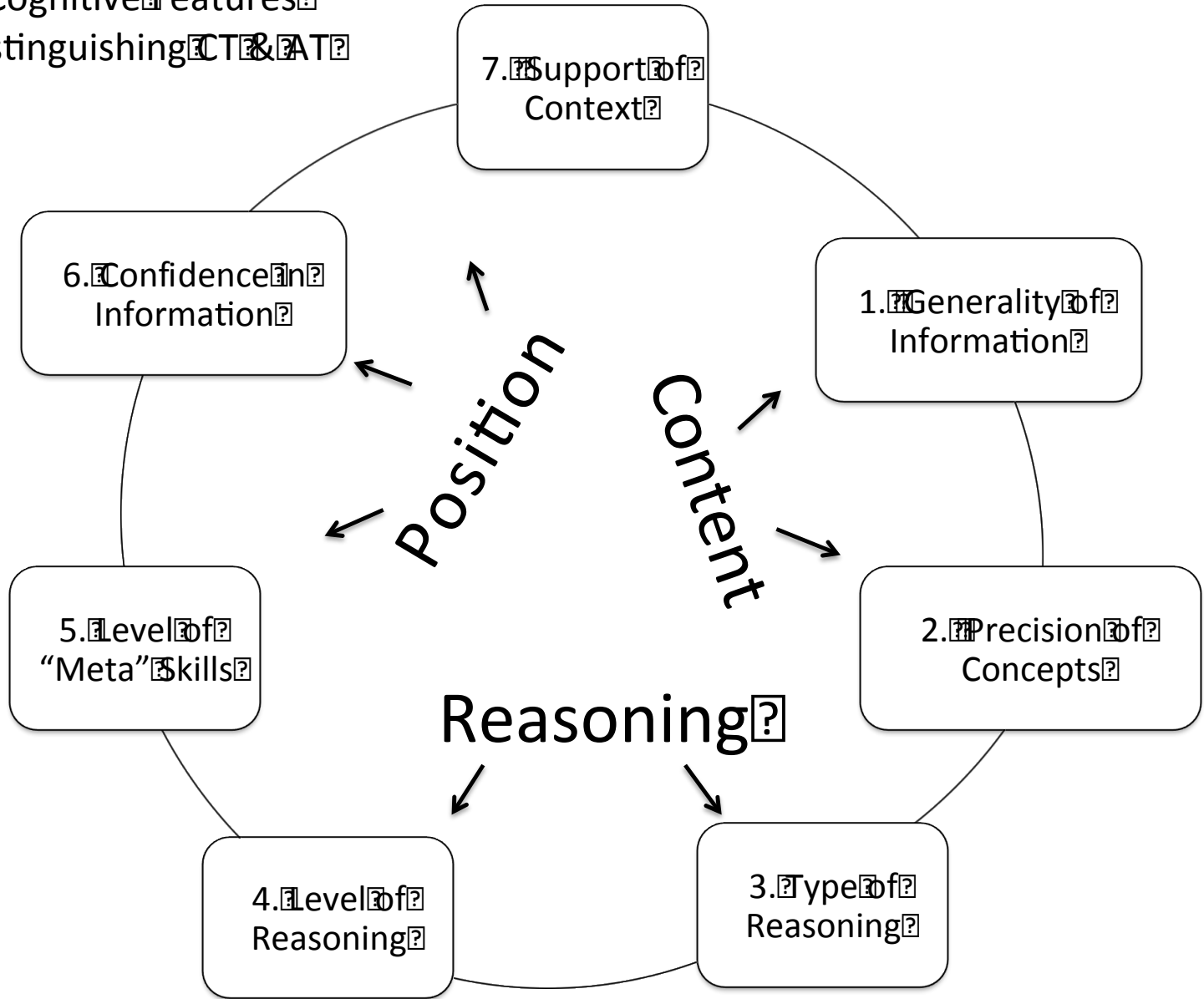
*e.g., demonstrate,  
directions, opposite,  
represent, sequence,  
accurate, pattern*



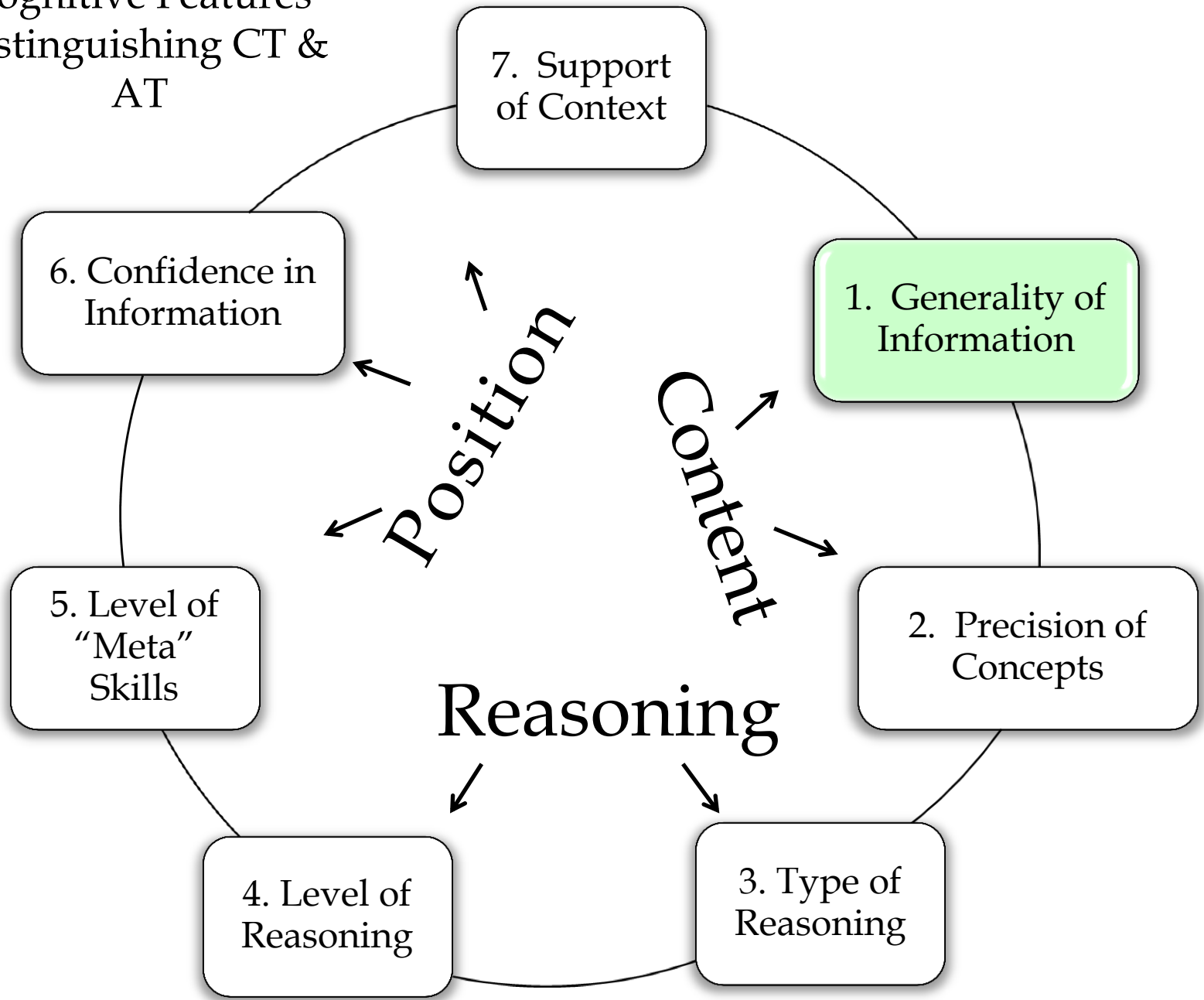
# Cognitive Features

## Distinguishing CT & AT

Cognitive Features  
Distinguishing CTE & AT



Cognitive Features  
Distinguishing CT &  
AT



# Generality of Information

## CT

- **Specific, personally familiar, personally relevant** objects, animals, people, places, actions, & events discussed for **practical** reasons

## AT

- **General characteristics & qualities of categories** of objects, animals, people, places & events to build scientific/theoretical knowledge (less personally familiar & relevant)
- **Generally known** (by wider public) people, places & events

# How Generality of Information Can Show Up In Language Used

## CT

Nouns more frequently represent specific persons, places, and things ; concrete nouns

Fewer superordinate (*animal*) & subordinate (*tabby*) category terms

More Tier 1 vocabulary

## AT

Nouns often represent more abstract ideas: *migration, development, weather*

More superordinate & subordinate category terms

More Tier 2 vocabulary that cuts across academic disciplines

# Teachers Can Regarding the General Information in AT:

Engage children in discussions of general kinds of information (e.g., how shadows are formed, seasons, weather, farm animals, growing plants, dinosaurs)

# Teachers Can Regarding the General Information in AT:

e.g., Help children transition  
from stories about specific  
characters to more general  
scientific information



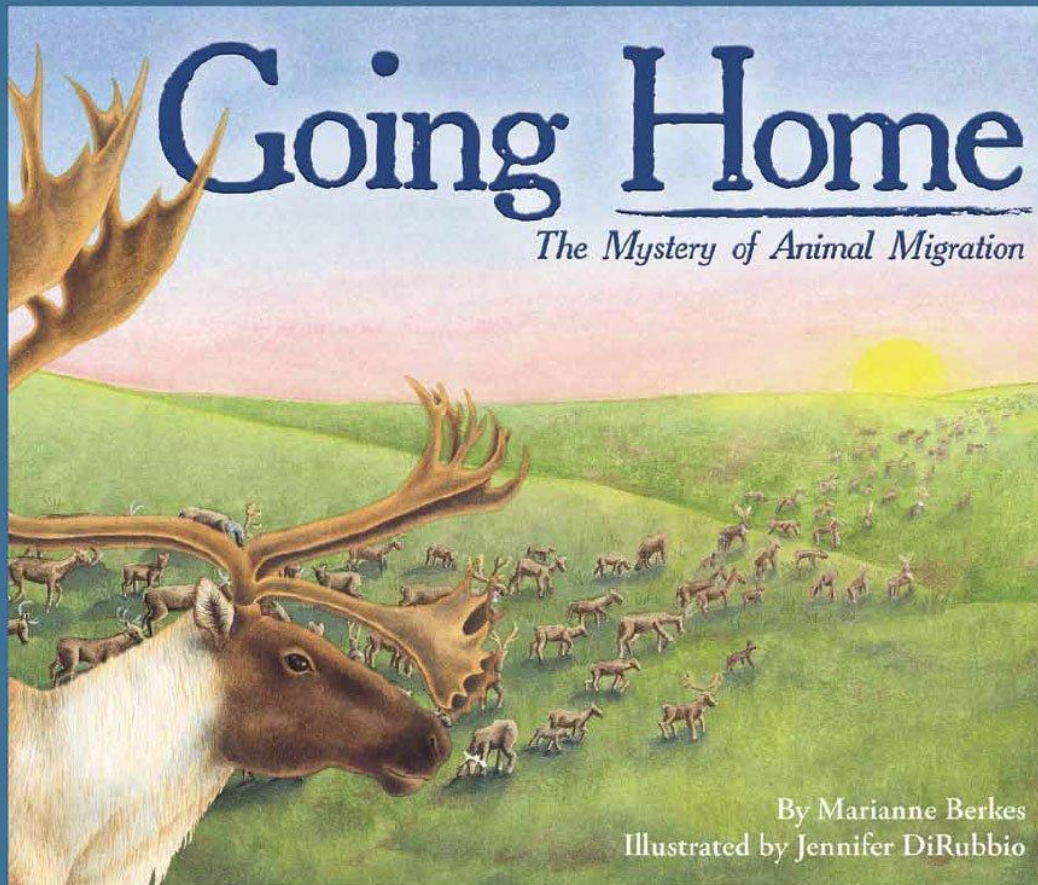
# An example from storybook Mooncake by Frank Asch

- Book text: “I would like to go with you,” said Little Bird, “but winter is coming, and I must fly south with the flock.”
- No further discussion of this in the story.

# Could Extend Story of One Bird Flying South to General Concept of Migration

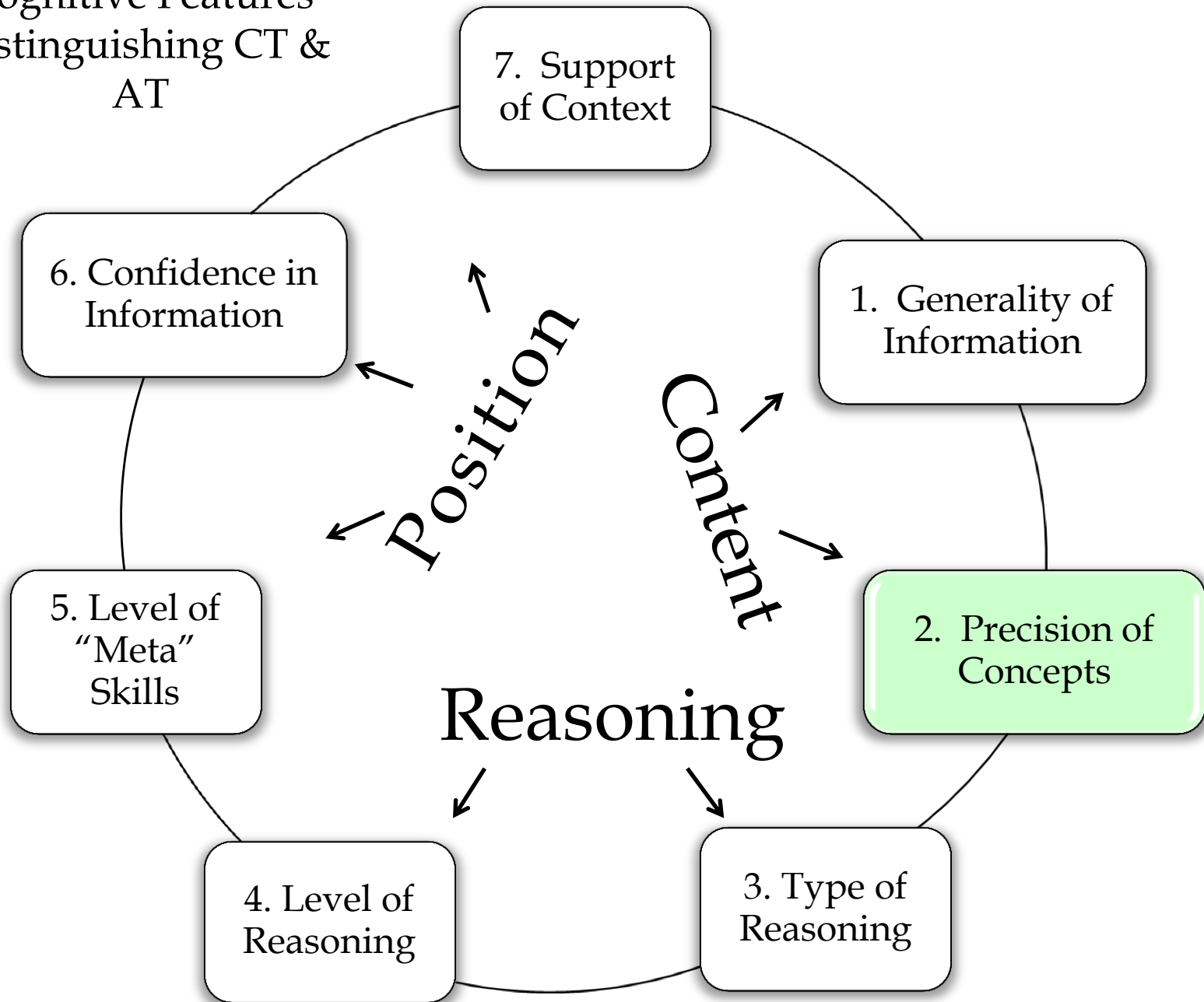
Migration- Some birds fly very long distances to places where it is warmer in the winter. We call this migration. Birds usually migrate to a warmer place so they can find food.

Then maybe launch into using an information (expository) book appropriate for preschoolers



Information book  
on migration

Cognitive Features  
Distinguishing CT &  
AT



# Precision of Concepts:

- CT: Don't have to be very precise with ideas
- AT: Requires being increasingly more precise with ideas as the register continues to develop

# How Precision (or lack thereof) of Information Can Show Up In Language Used

**CT:**

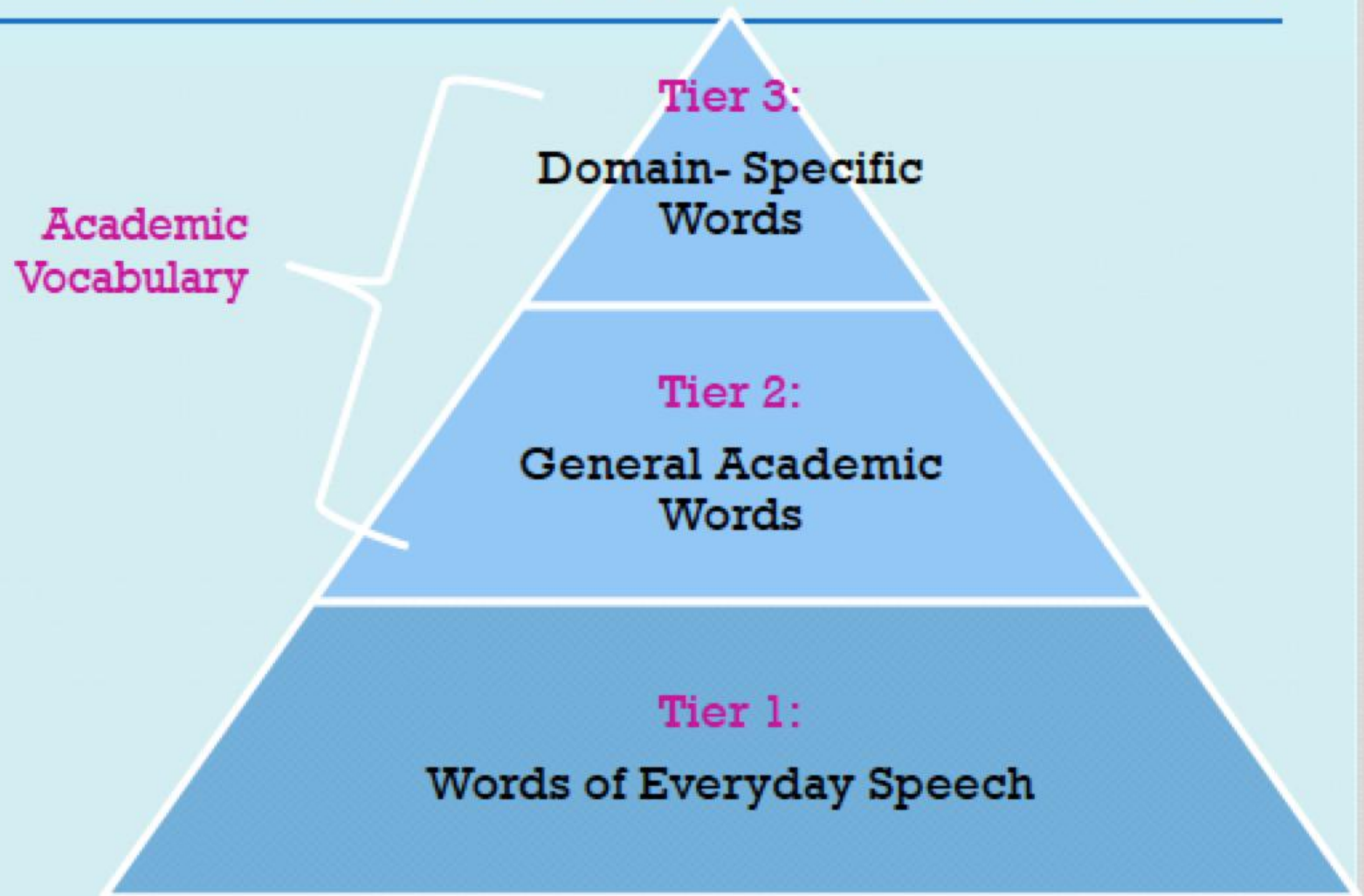
“Fuzzy” terms are frequent (e.g., *sort of, something like, thing, do, there, this*)

**AT:**

Precise academic vocabulary (Tier 3 vocabulary)

# Three Tiers of Words

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# Teachers Can Foster Precise Concepts by Using Tier 3 Words:

- *Eclipse*
- *Circumference*
- *Peninsula*
- *Evaporation*
- *Metamorphosis*
- *Migration*

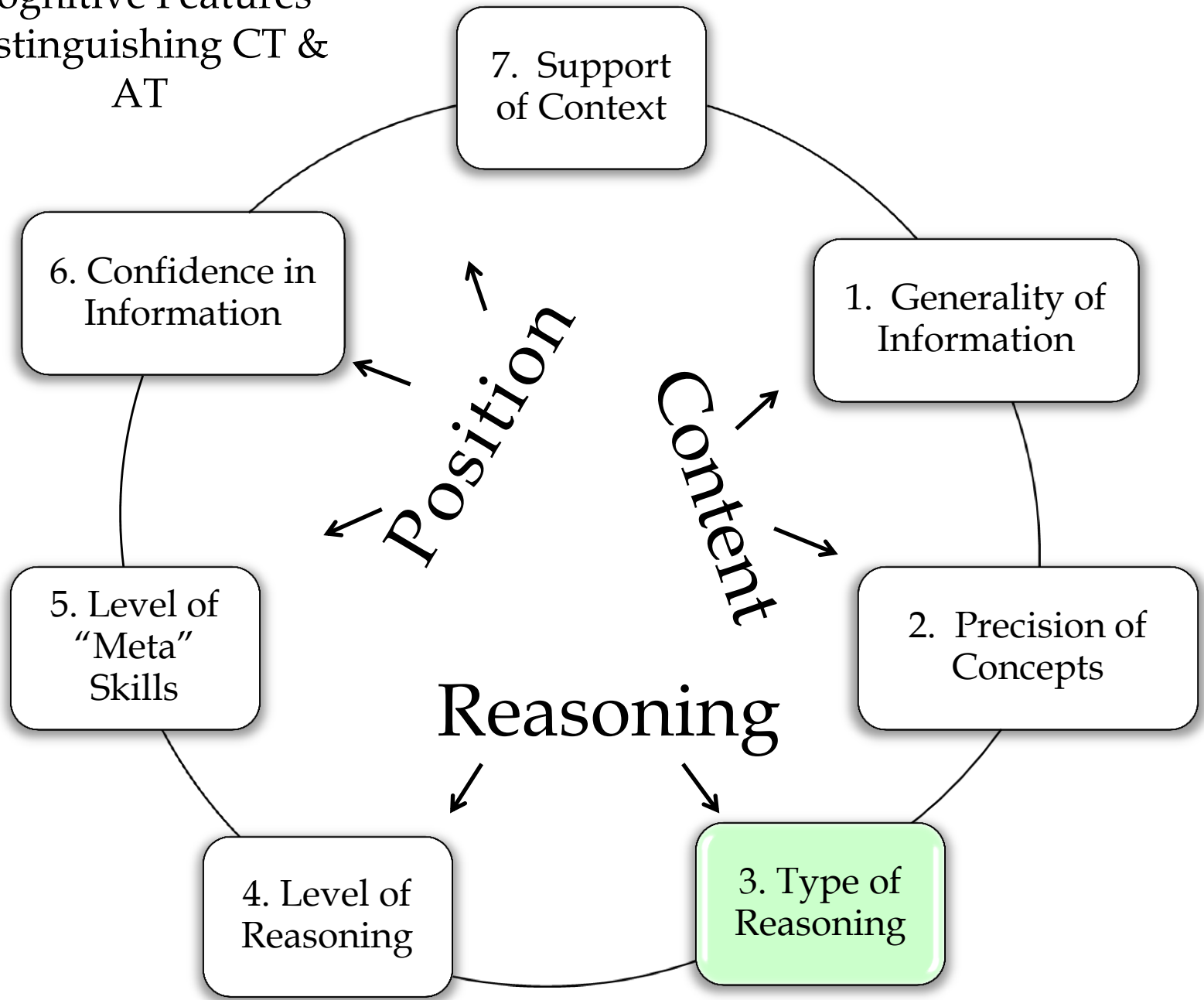


# Best When teachers Can Use Tier 3 Words Integrated Around a Topic:

A unit on volcanoes would require students to understand a number of related specialized vocabulary words:

- *Molten*
- *Crust*
- *Mantle*
- *Magma*
- *Lava*

Cognitive Features  
Distinguishing CT &  
AT



# Type of Reasoning

## CT:

Allowed to “ramble” and very loosely connect topics while conversing

Called “topic-associated” narratives

## AT:

Required to “stay on topic” and keeps things logical and in correct sequence (called linear reasoning)

Called “topic-centered” narratives

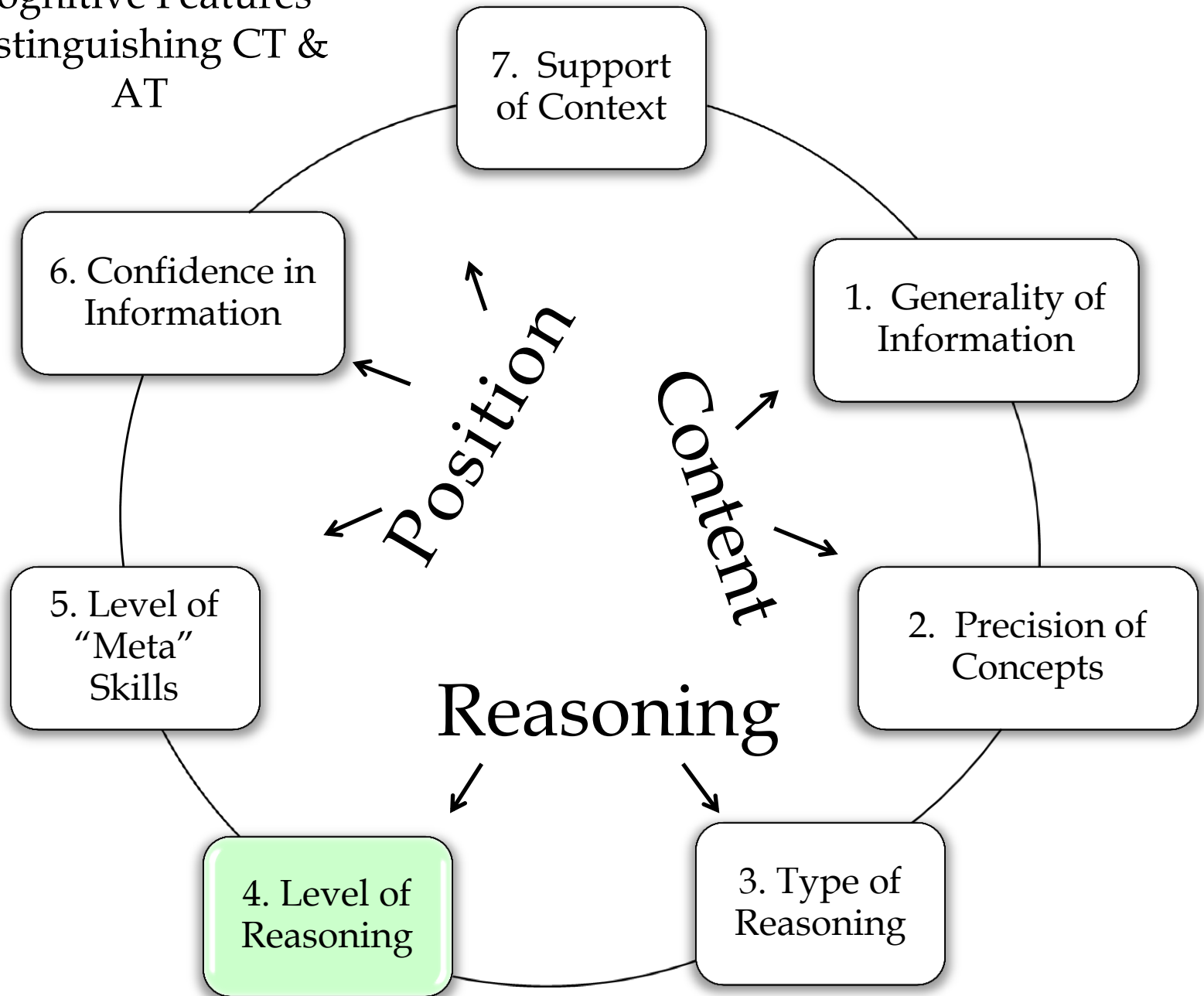
# To foster type of reasoning, teachers can:

- Frequently elaborate on children's answers to questions or contributions to discussion
- Have children retell stories and retell logical sequence of steps in activities and events they have experienced.
- Gently guide children back to the topic if discussion goes too far afield

# Sequence of photos of activity children experienced as support for reporting to someone not present



Cognitive Features  
Distinguishing CT &  
AT



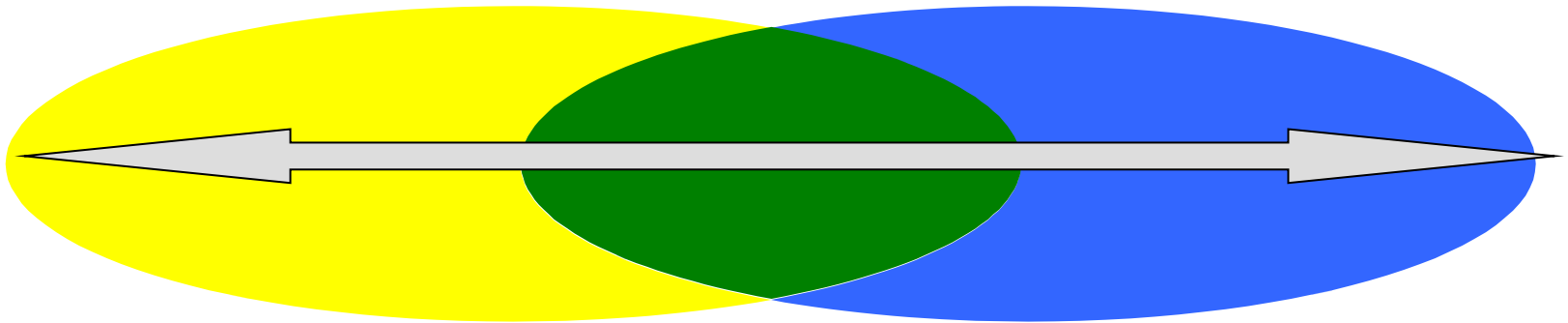
# Level of Reasoning

Casual Talk

(less cognitive demand)

Academic Talk

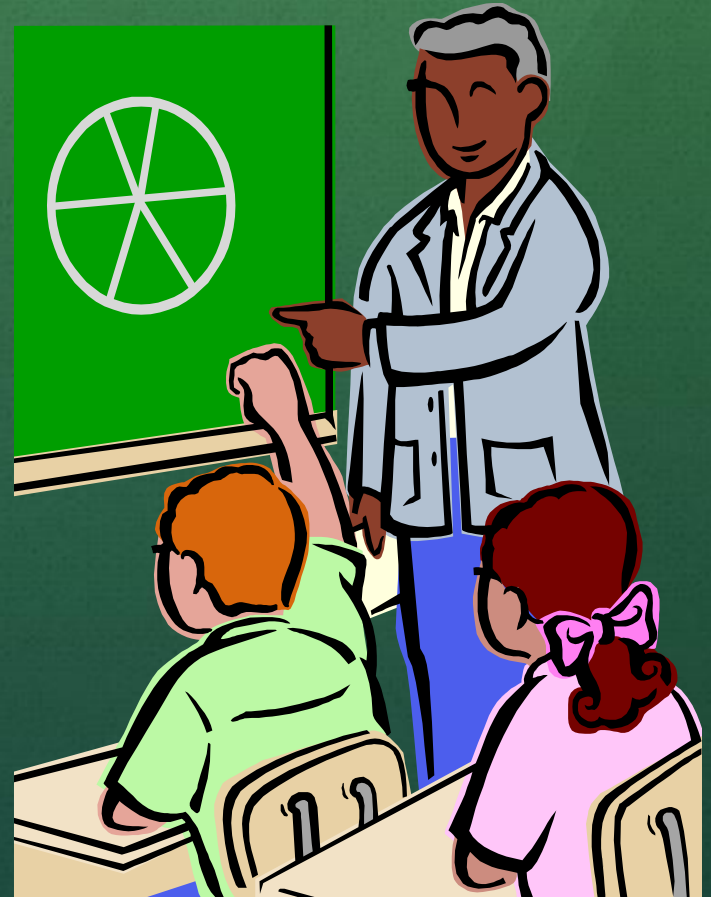
(more cognitive demand)



More basic level – talk about & report on specific & familiar things (label, describe, relay specific events)

More higher level thinking conveyed in inferential language

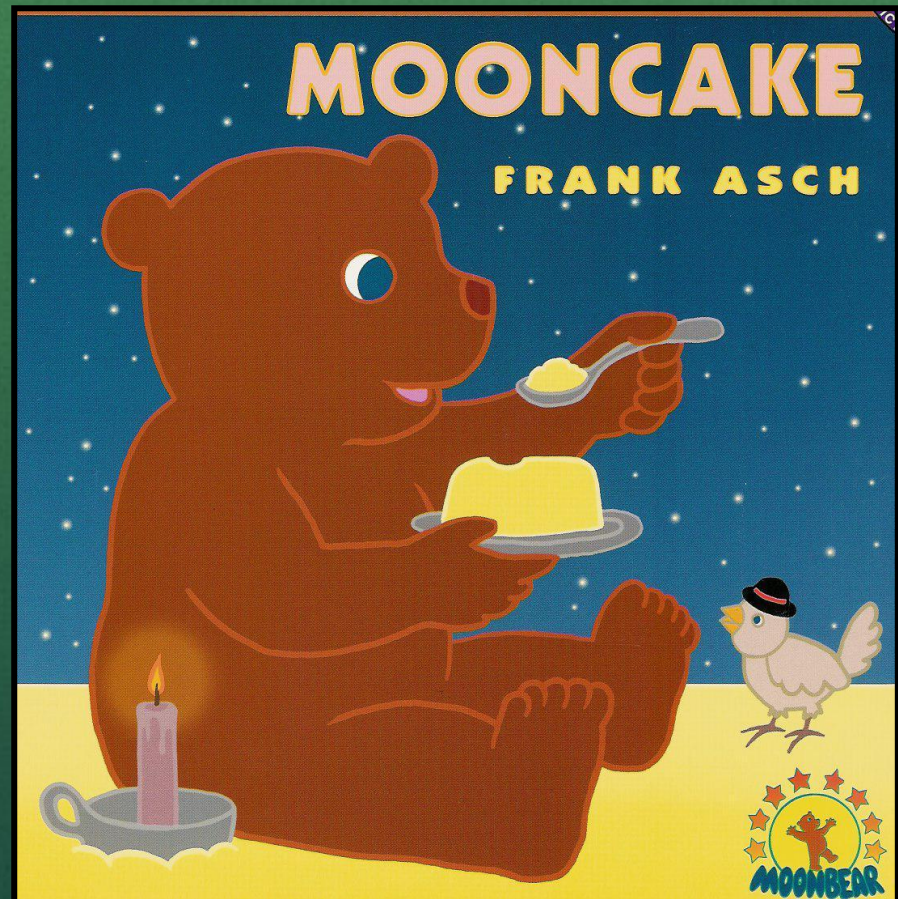
We have to engage  
in **inferencing** when  
information has not  
been **directly**  
provided for us . . .





Teachers can ask higher level questions that require inferencing during book sharing and other activities

*Who do you think this story is going to be about?*



# Community Helpers

Literal: *What color are the firefighters' clothes?*

Inferential: *Why do you think firefighters wear such bright clothes?*



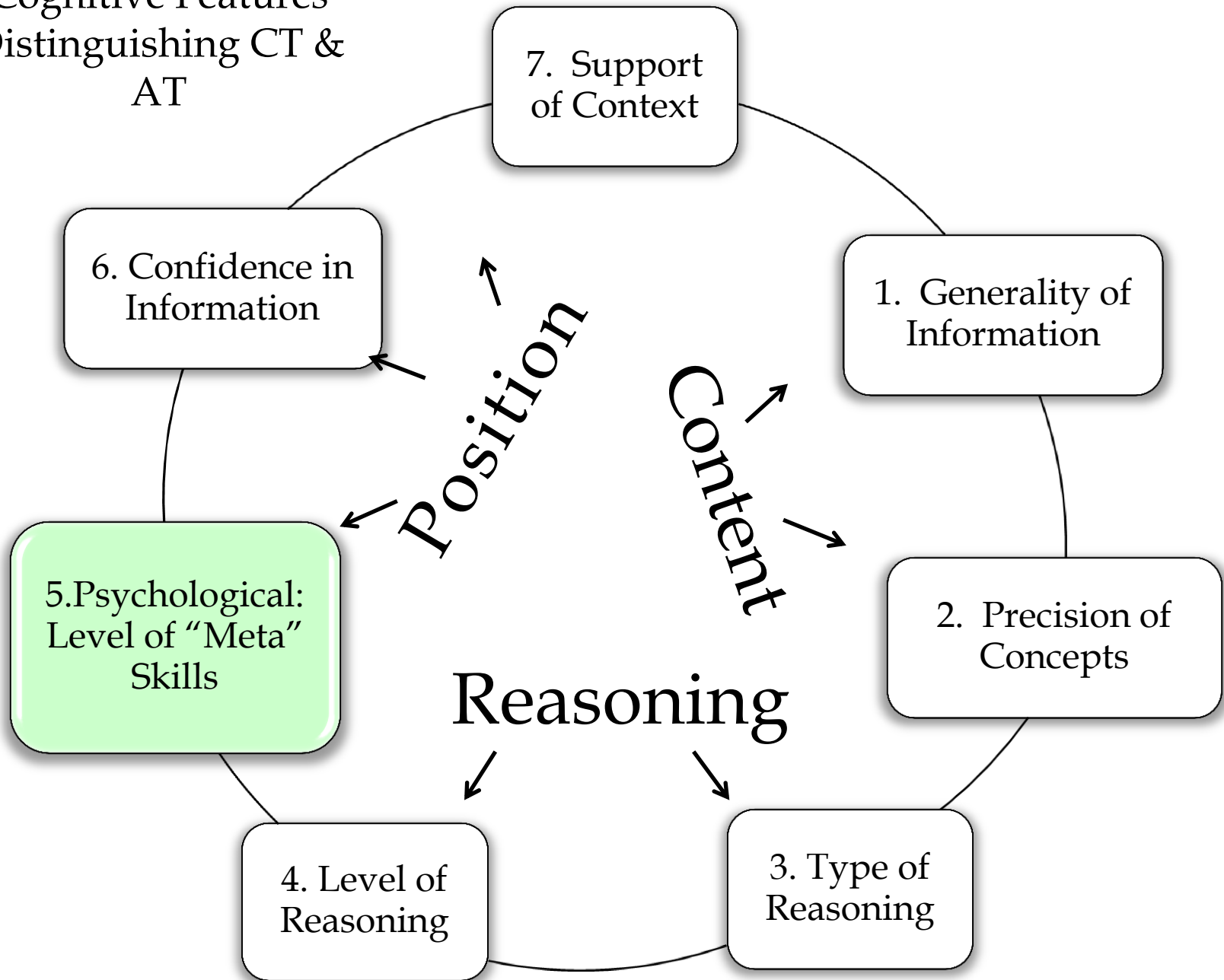
# Examples of higher-level thinking (that involve inferential uses of language)

explain, problem solve, categorize, talk  
about cause & effect, hypothesize,  
predict, summarize, categorize,  
generalize, compare, contrast, describe,  
define, justify, analogize, give examples,  
evaluate, interpret, & synthesize

# Verbs That Can be Used in Classroom Related to Thinking

*Wonder, think, guess, believe, agree, suppose,  
imagine, know, decide, forget, remember,  
understand, comprehend, confuse, predict,  
compare, concentrate, aware, analyze, assume,  
anticipate, contradict, generalize, evaluate, infer,  
research, hypothesize, conclude, doubt, plan,  
realize, summarize, estimate, claim, picture,  
aware*

Cognitive Features  
Distinguishing CT &  
AT



# “Meta-” Skills Involve

- Awareness of cognitive processes (e.g., memory, comprehension, learning, & thinking) or of language and its various components (e.g., phonology, morphology, & syntax)

“Meta-“ Skills are Typically Only Used  
in School and Therefore Only Found in  
AT

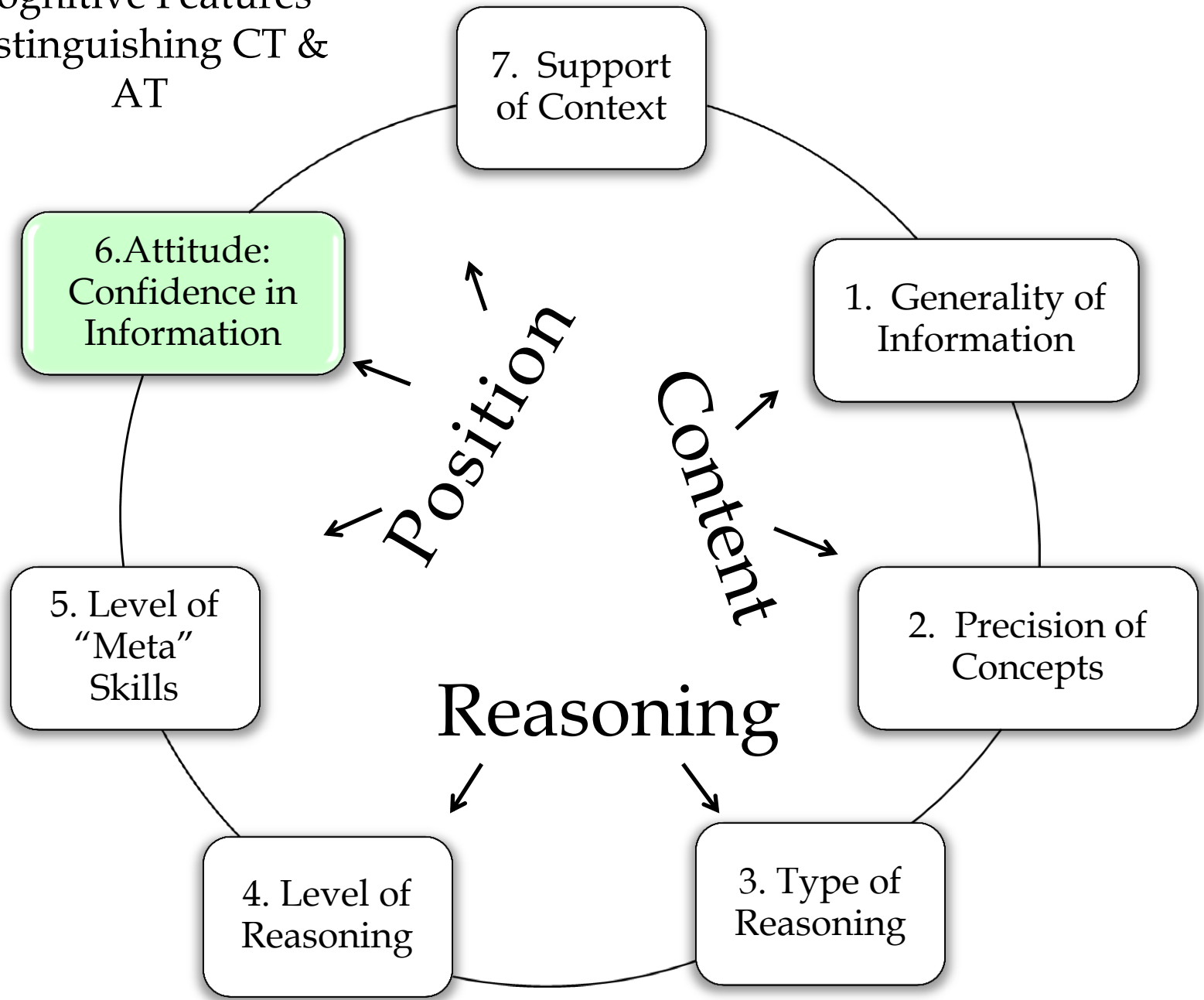
For example: Phonological  
awareness (sound units that make  
up words) is important in learning  
to read

# For Awareness of Cognitive Processes Teachers Can:

Teacher discusses strategies for cognitive processes such as remembering (e.g., *What could we do to try to remember what this story is about? Maybe we could look at the pictures to help us?*)



Cognitive Features  
Distinguishing CT &  
AT



# Confidence in Information

- **CT:** Not required to convey your degree of confidence in the information you are sharing
- **AT:** Speakers need to tell listener about the credibility of what they are saying

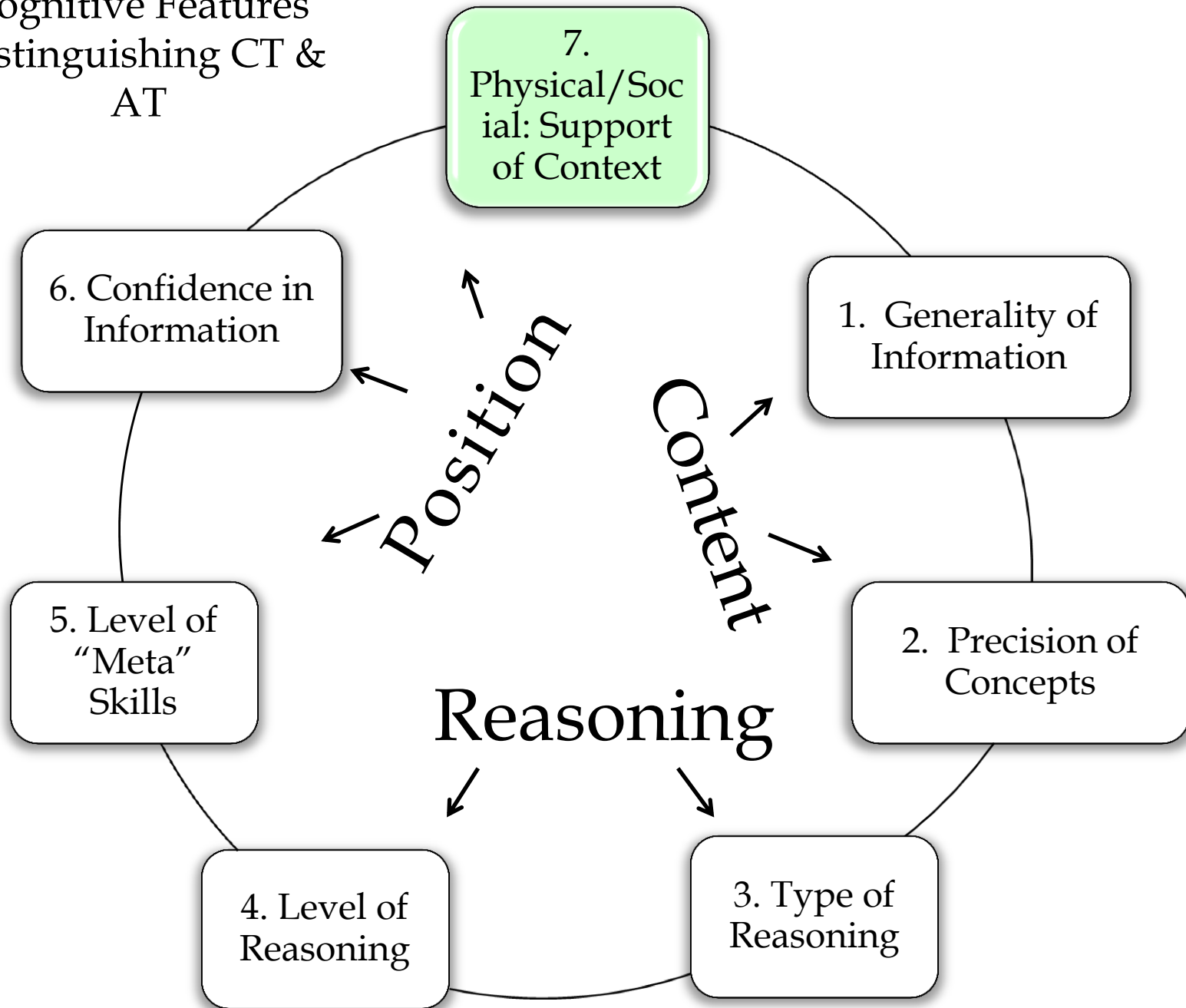
# Verbal Expressions of Degree of Confidence in Information

- Possibility
- Probability
- Typicality
- Certainty

# Words Used to Express

- **Verbs:** *believe, think, know, wonder, guess, doubt, seem, claim*
- **Nouns:** *possibility, guess, doubt*
- **Adjectives:** *likely, clear, certainly, obviously*
- **Adverbs:** *maybe, perhaps, probably, definitely, usually, frequently, sometimes, always*
- **Terms used with verbs :** *might, should, could*

Cognitive Features  
Distinguishing CT &  
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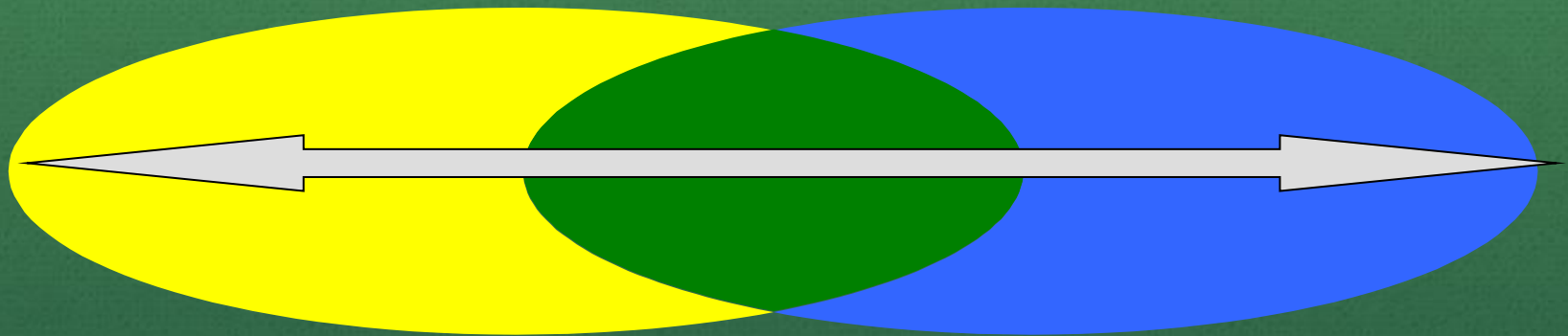
# Relationship to Social Context

Casual Talk

(less cognitive demand)

Academic Talk

(more cognitive demand)



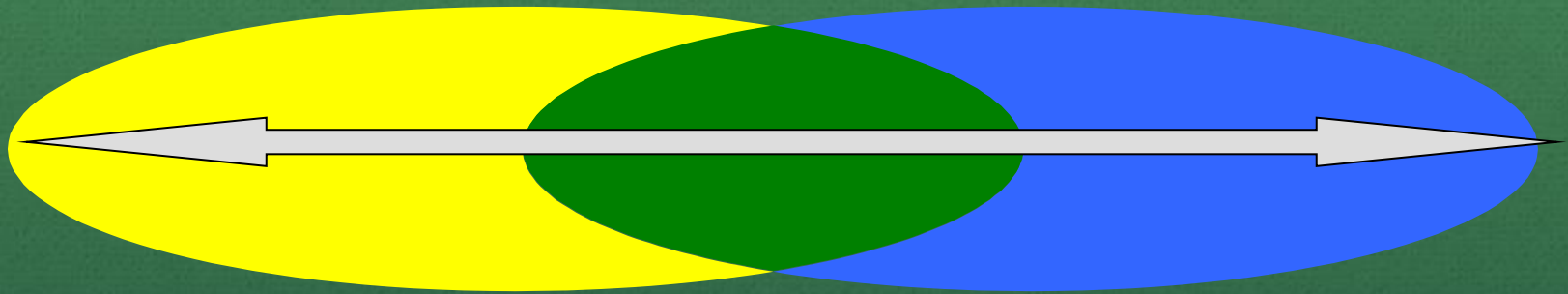
Embedded in social context; often with people who know you well and can “fill in” information not stated or not well-stated

Much less shared social context

# Relationship to Immediate Physical Context

Casual Talk

Academic Talk



More talk is  
about things in  
physical context

More talk is about  
physically non-  
present things or  
about more  
abstract things

Teachers can talk about things not present in physical context:

Non present things:



Abstract things:  
Migration





# Activities Increasingly Less Supported by Physical & Social Context

Ongoing activity >

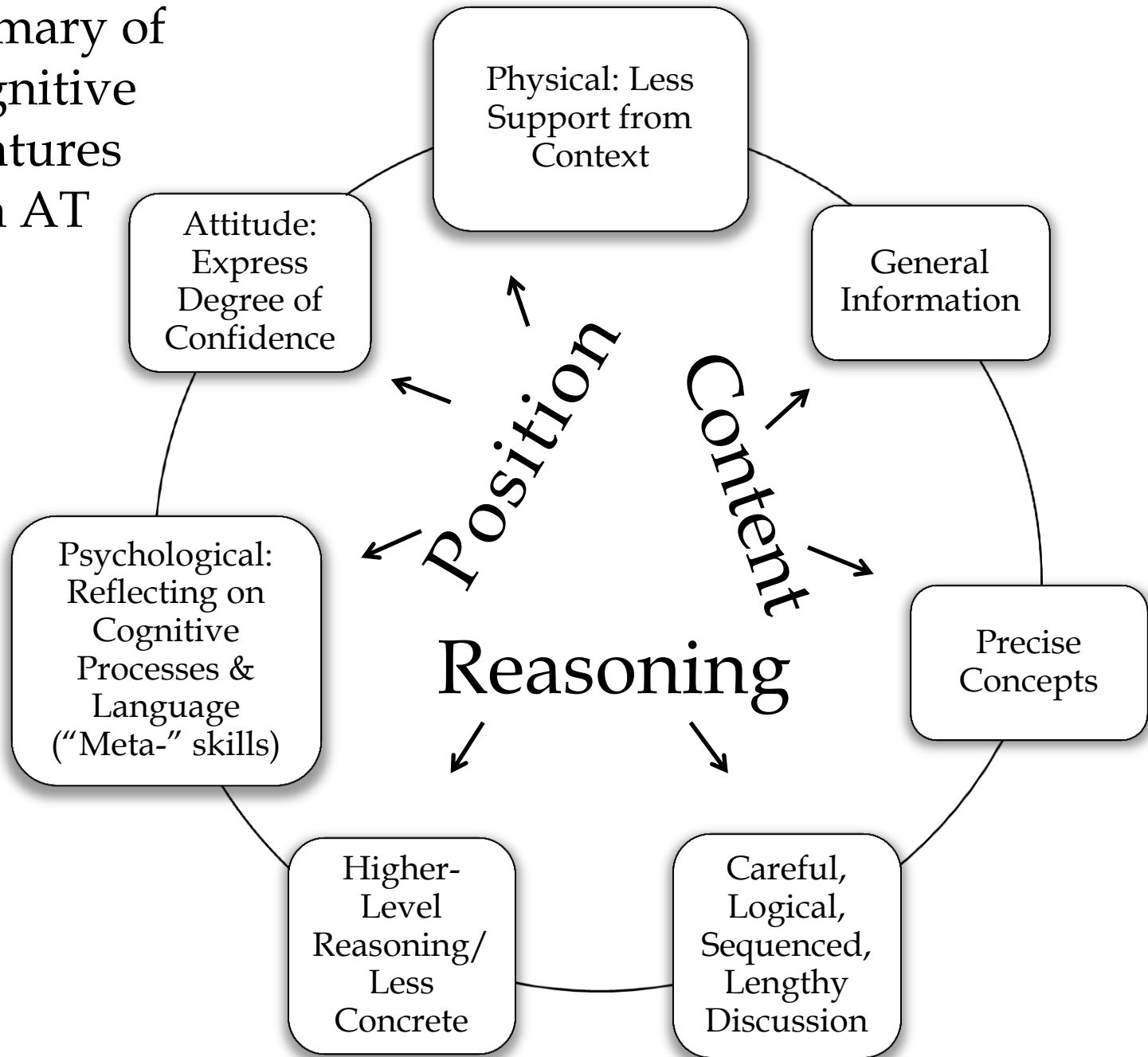
Past activity >

Book sharing >

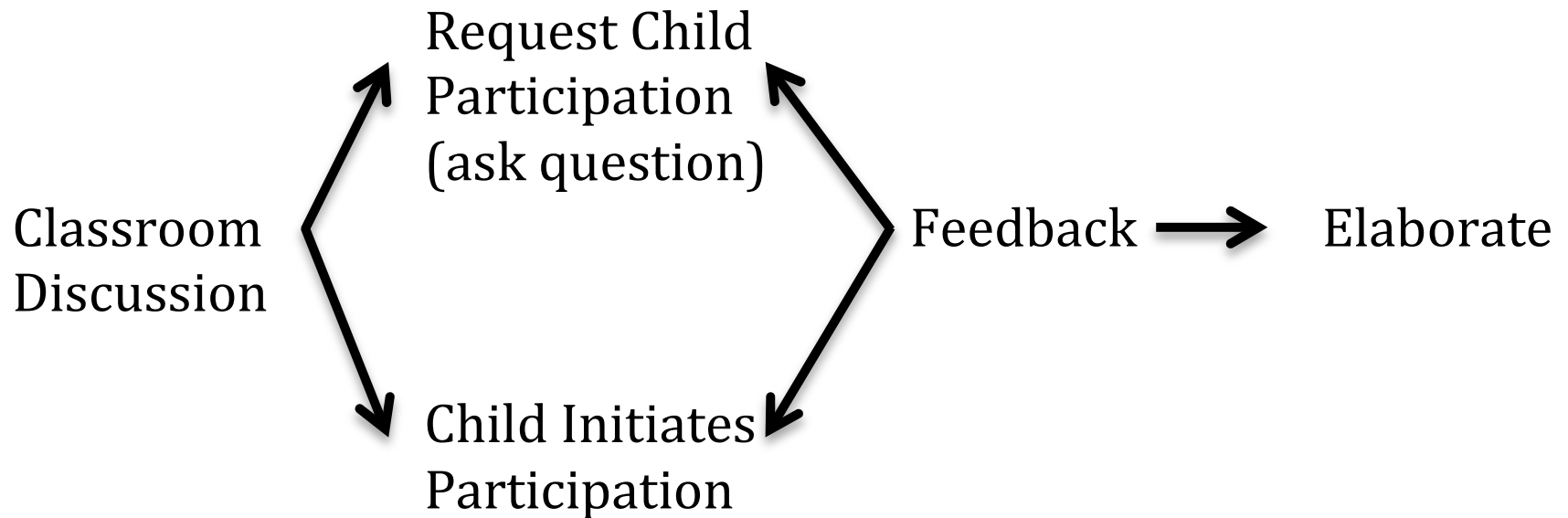
Future Activity >

Independent Test Taking

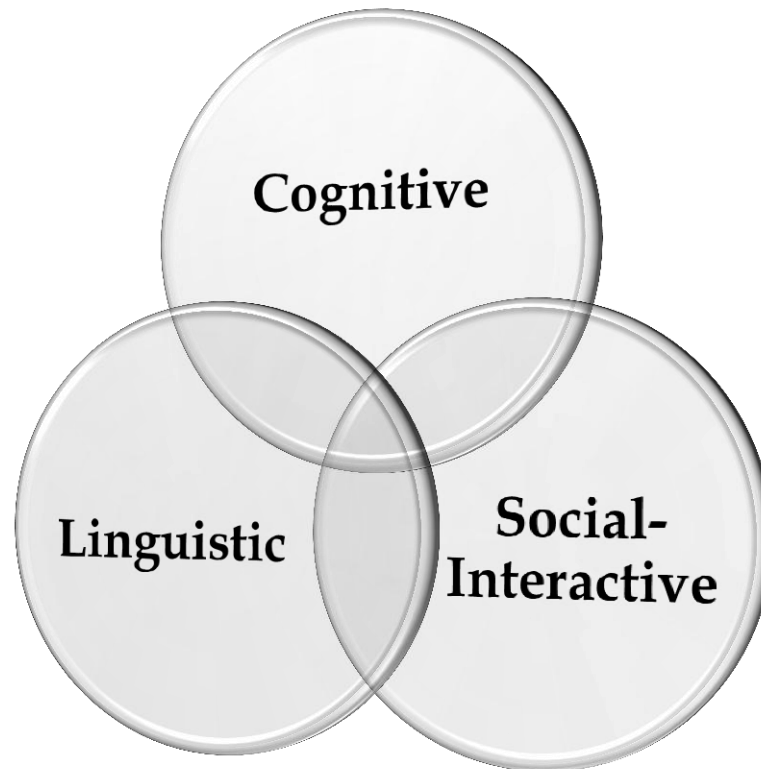
# Summary of Cognitive Features in AT



# Steps for Teacher Integrating Across Features of AT



**Academic talk** involves the conscious *simultaneous* use by the adult of numerous possible cognitive and social interactive features, which serve to shape many linguistic features.



# When Teaching, We Can Make AT Easier and Harder

- Manipulating only one cognitive features initially to make it easier (e.g., using inferential language during an ongoing in the physical context)
- Gradually adding more and more cognitive features (see next slide . . . )

To integrate the information in this presentation, I gratefully acknowledge being carried by the work of many scholars in many disciplines conducted over many years!



*Vielen*  
**Dank**

*Merci*

**THANK YOU**

**Gracias**

*Grazie*

**Ευχαριστώ**

**SHUKRIYA**

**Dhanyawaadagalu**

A black dog is lying in a deep snowdrift. The dog's head is visible, and it appears to be looking towards the camera. A speech bubble is positioned to the right of the dog, containing the text "OK, time to chill." The background shows a clear blue sky and the branches of a tree.

**OK, time  
to chill.**



# Discussion

Contact:

[annevk@utdallas.edu](mailto:annevk@utdallas.edu)







I referred to this register as “school talk” in 2006 book. Why “academic talk” now?

# Sharing Books and Stories to Promote Language and Literacy

A Volume in the Emergent and Early Literacy Series



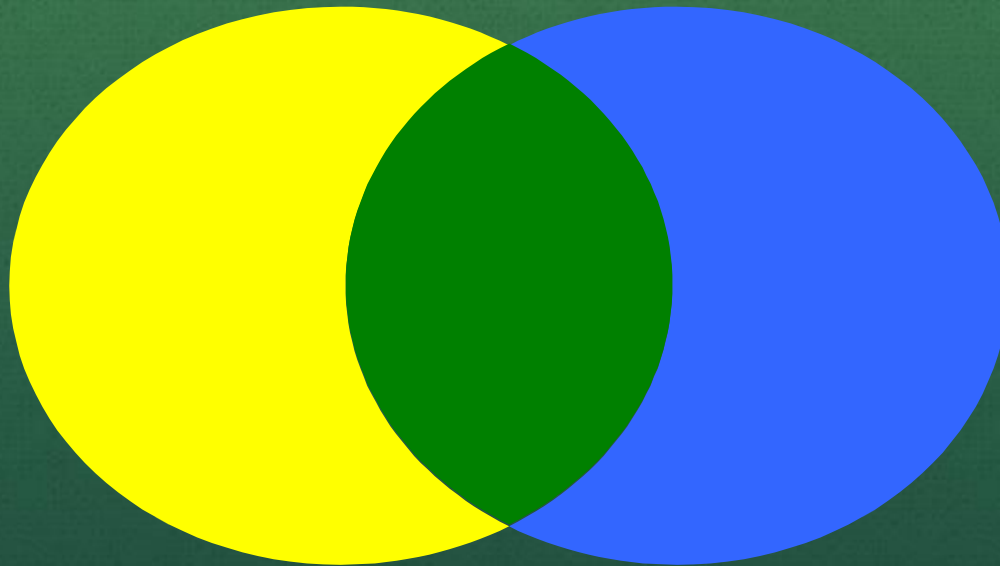
*Anne van Kleeck*



# In Preschool, We Frequently Use Both Registers

Casual Talk

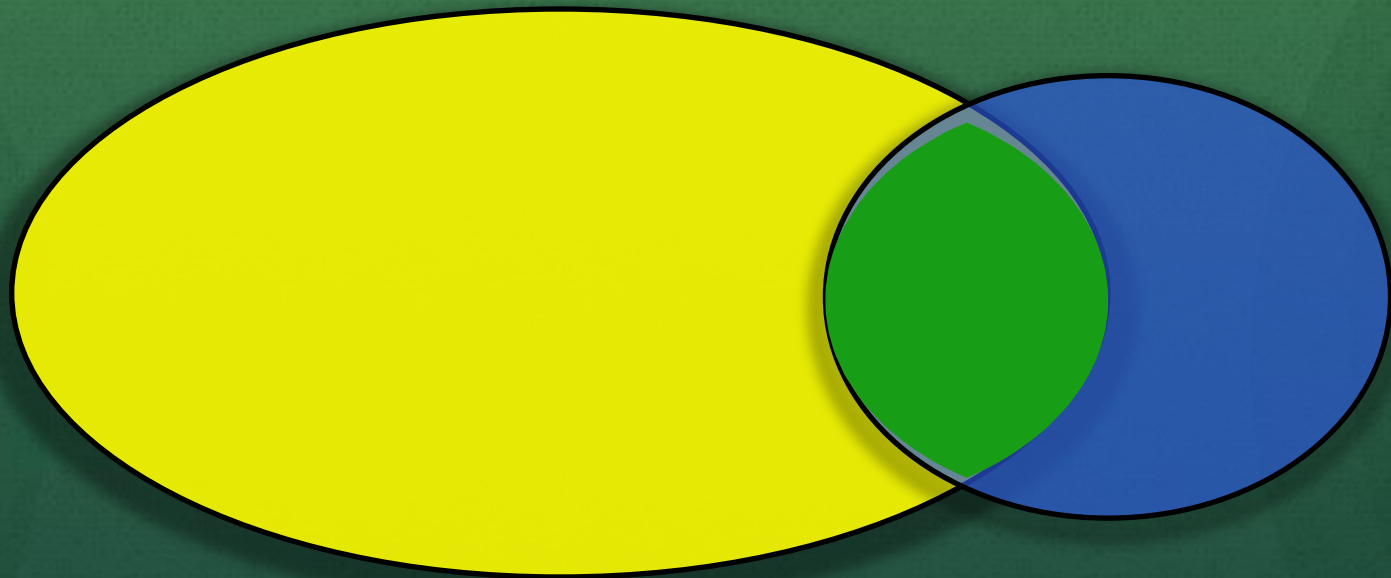
Academic Talk



# Preschool Classroom

Casual Talk

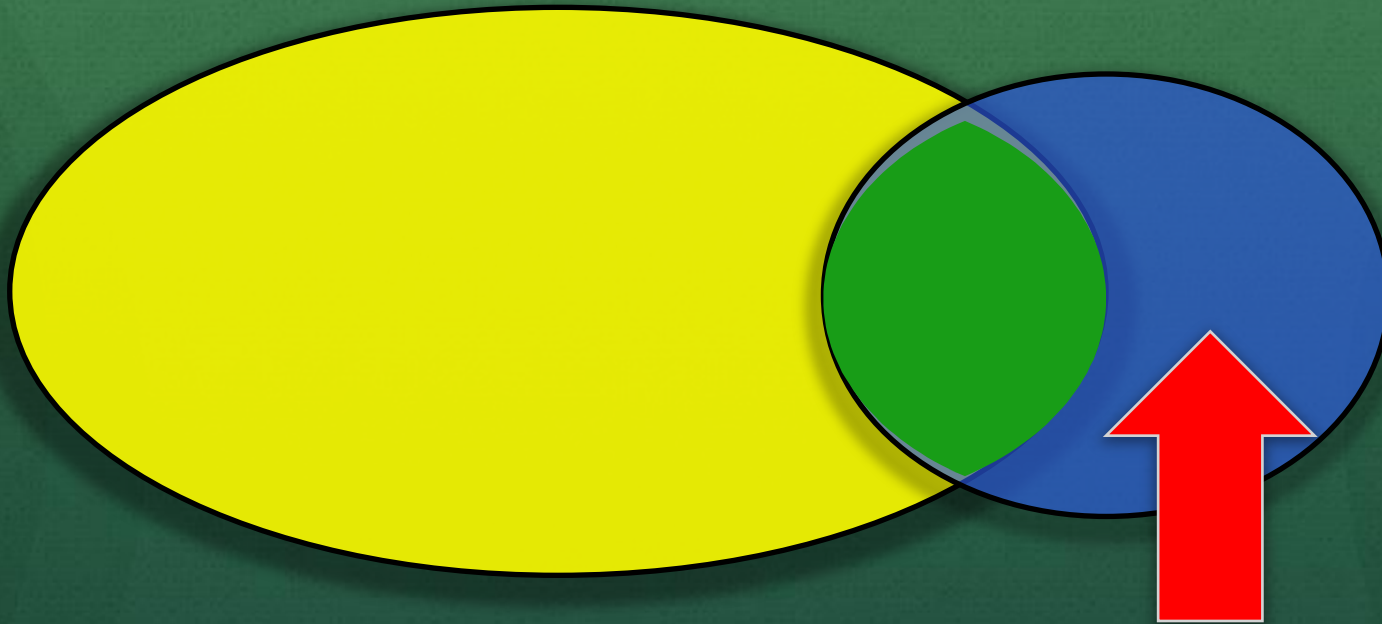
Academic Talk



# Preschool Classroom

Casual Talk

Academic Talk

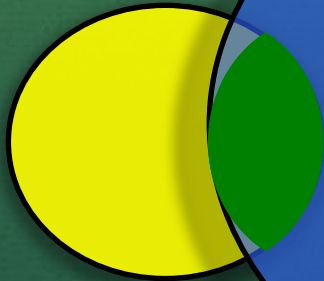


Although maybe less frequent, AT is critically important!



# Later School Years

Casual Talk



Academic Talk

I referred to this register as “school talk” in 2006 book. Why “academic talk” now?

# Sharing Books and Stories to Promote Language and Literacy

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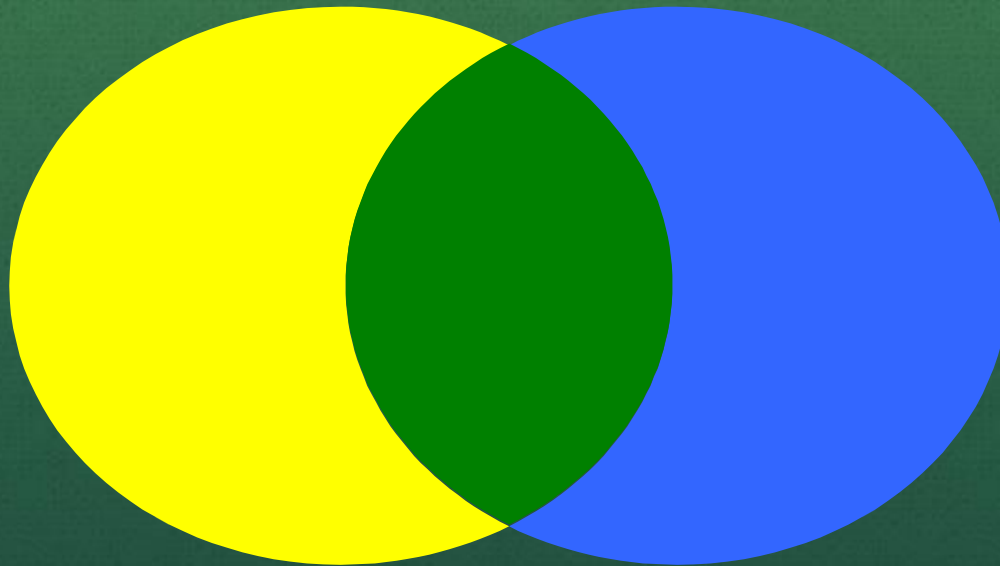
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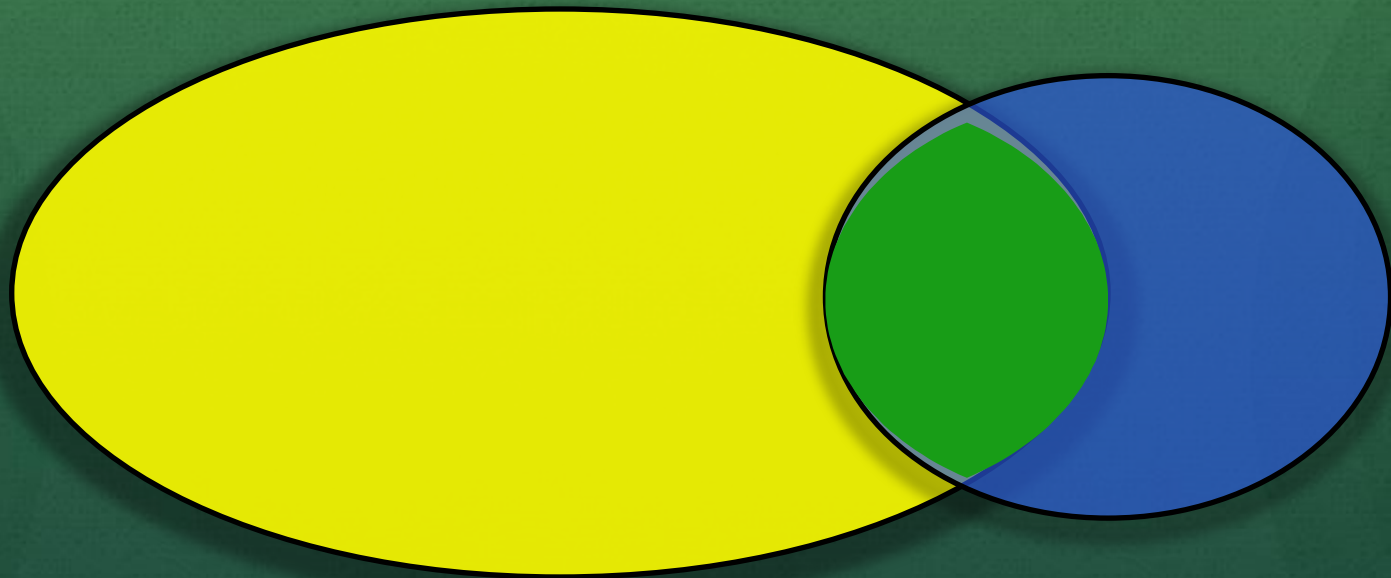
Academic Talk



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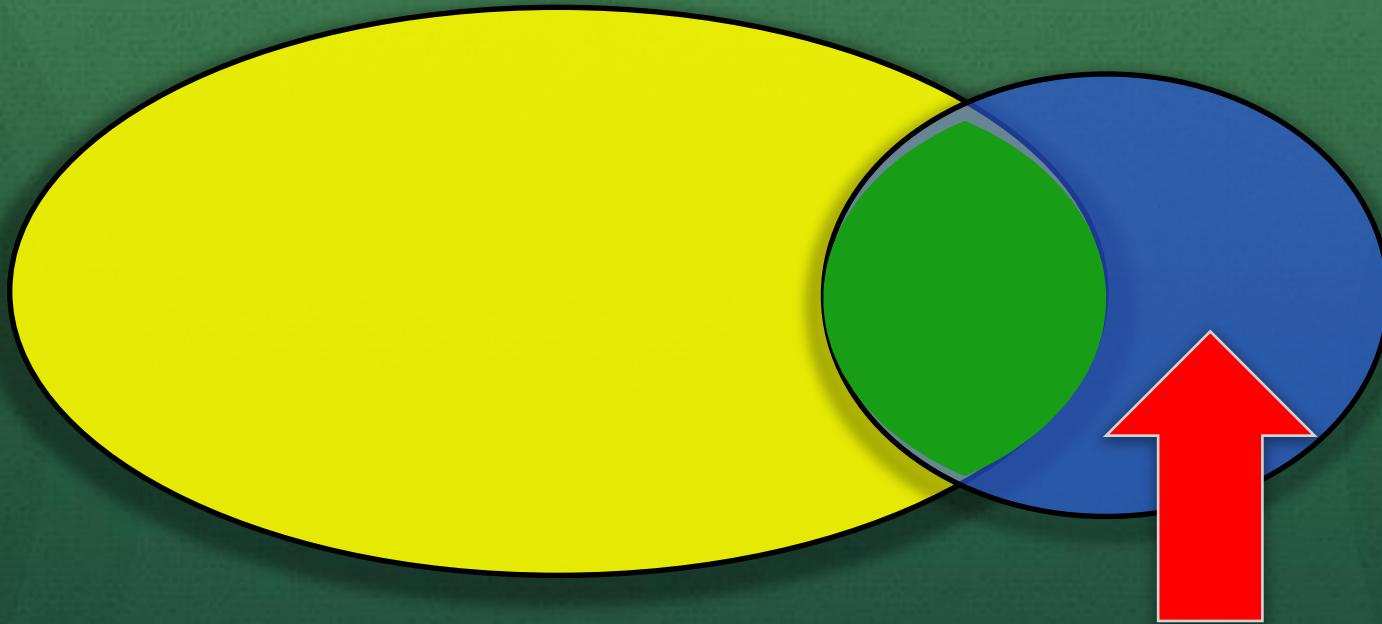
Academic Talk



# Preschool Classroom

Casual Talk

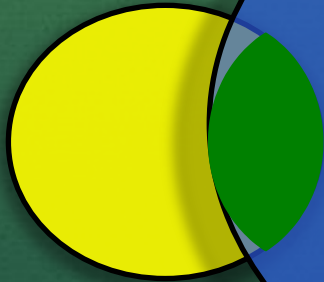
Academic Talk



Although maybe less frequent, AT is critically important!

# Later School Years

Casual Talk



Academic Talk

# Example study . . . .

Formal language test performance of 502 children at entrance to kindergarten played a

“strikingly important role in predicting later school achievement”

(Durham, Farkas, Scheffner Hammer, Tomblin, & Catts, 2007, p. 301).

# Related to Mother's Education Level

(Durham et al., 2007, p. 300, 301)

- “The mother's educational attainment has a powerful direct effect on the children's kindergarten language skill.”
- **NEED TO QUALIFY:** On their academic talk skills as measured by formal tests



# Related to Mother's Education Level

(Durham et al., 2007, p. 300, 301)

- “The typically more positive school performance by children from higher-SES families is largely determined by differential oral language skills that are provided to their children by more highly educated parents.”
- **NEED TO QUALIFY** – Because these mothers expose their children in more academic talk, and that is what is being measured!

# Example study . . . .

Formal language test performance of 502 children at entrance to kindergarten played a

“strikingly important role in predicting later school achievement”

(Durham, Farkas, Scheffner Hammer, Tomblin, & Catts, 2007, p. 301).

# Example study . . .

DeThorne et al., 2010

- Measures language from spontaneous conversation related to reading comprehension
  - No relationship when measured at the same time
  - Very weak relationship to reading comprehension one year later

Inferential (**higher level reasoning**) question (requesting verbal display) about something in a book (**decontextualized**) that is focused on and aspect of story grammar (**logical, linear reasoning** regarding story structure) and involves think alouds when adult supplies answer (modeling **modulation of certainty**). Could also involve **general information** and use vocabulary the involves a **precise concept**.

# Simultaneous Cognitive Features

