



The Thompson TDA Model

Module 5: Recognizing the Difference between Inference and Analysis

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Dr. Jeri Thompson
*National Center for the Improvement of
Educational Assessment*





Warm-Up: Reflection Journal (page 2)

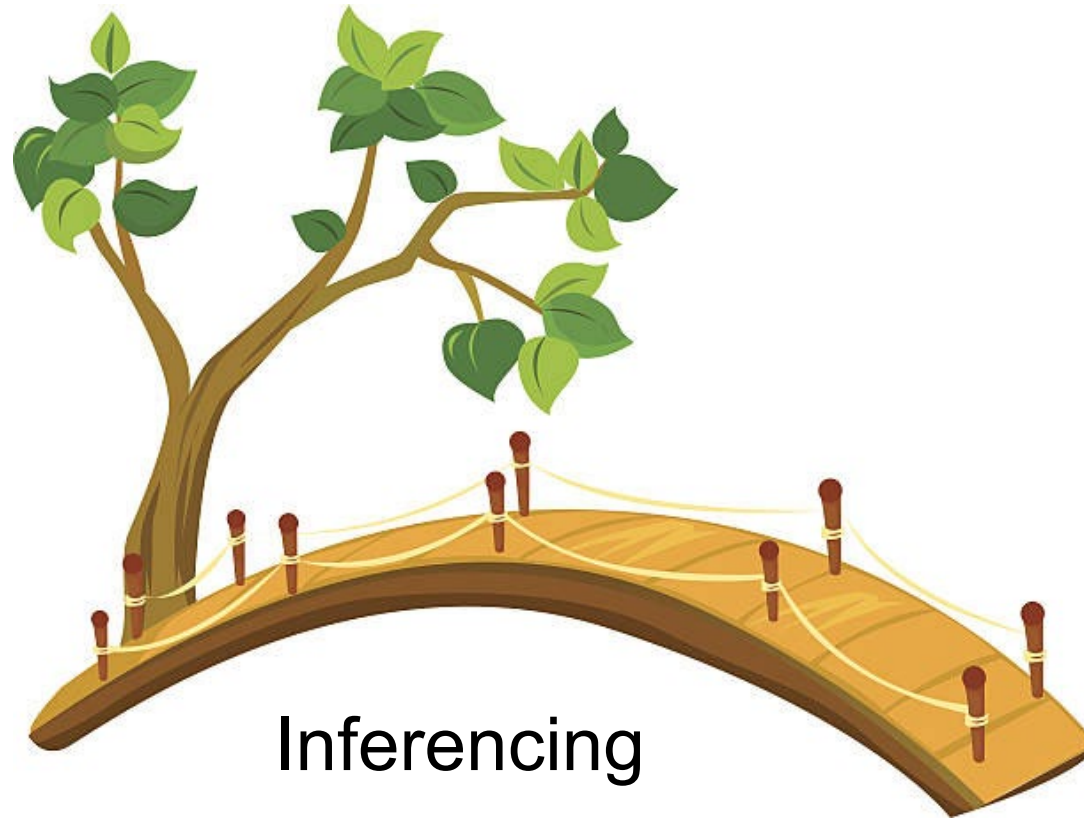
How do you define “inference”?

How is an inference the same/different from analysis?



Inference - Bridge to Analysis

Reading
Comprehension



Inferencing

Analysis



Reading Comprehension and Inferences

Basic Reading Comprehension - demonstrate general understanding of reading elements and the main information the author wants the reader to know

Inferencing - use text evidence from a section of the text and combine with background knowledge to interpret the author's meaning.



Blueberry Picking by Donald Hall

Blueberry Picking Donald Hall

We each took a pail and set out in different directions. I had never picked low-bush berries before, and there were tricks I didn't know. When I tried to scoop off a handful at once, I crushed some of the berries and pulled a leaf or a bit of stem along with them. My pail was full of foreign matter, which would make for a lot of picking over back at the farm. Yet when I tried to be careful, I went so slowly that it would have taken all morning to pick one bucket. The trouble with sitting was that I had to slide myself over the bumpy rocks, and I began to feel paralyzed where I sat. The heaviest stems of berries were always slightly out of reach. I tried kneeling, but my knees gave out. I tried standing, and it felt all right until I unbent, when I thought I would crack apart. Finally, I sat again.

I picked and picked. I switched from the right hand to the left and back again and picked two-handed, and still my pail was only a quarter full. I realized that even when I had filled it, it would barely cover the bottom of one of the big pails. I thought we would never fill even one of them. Then I heard my grandfather grunt as he straightened up, and saw him empty his full bucket into one of the big pails. "There's one," he said.

"Look at all I've done," I said, lifting my pail to show it to him.



Blueberry Picking

Donald Hall

Questions that Elicit an Inference

- How do you think the grandson feels about blueberry picking and how do you know?
- What does this tell you about the grandson?

We each took a pail and set out in different directions. I had never picked low-bush berries before, and there were tricks I didn't know. When I tried to scoop off a handful at once, I crushed some of the berries and pulled a leaf or a bit of stem along with them. My pail was full of foreign matter, which would make for a lot of picking over back at the farm. Yet when I tried to be careful, I went so slowly that it would have taken all morning to pick one bucket. The trouble with sitting was that I had to slide myself over the bumpy rocks, and I began to feel paralyzed where I sat. The heaviest stems of berries were always slightly out of reach. I tried kneeling, but my knees gave out. I tried standing, and it felt all right until I unbent, when I thought I would crack apart. Finally, I sat again.

I picked and picked. I switched from the right hand to the left and back again and picked two-handed, and still my pail was only a quarter full. I realized that even when I had filled it, it would barely cover the bottom of one of the big pails. I thought we would never fill even one of them. Then I heard my grandfather grunt as he straightened up, and I saw him empty his full bucket into one of the big pails. "There's one," he said.

"Look at all I've done," I said, lifting my pail to show it to him.

Inferences

*The grandson feels **frustrated** because no matter how he picks the blueberries he has foreign matter in his bucket and he can never get comfortable.*

*The grandson is **persistent** because despite the challenges of picking the blueberries he keeps picking them.*



Definition of Analysis

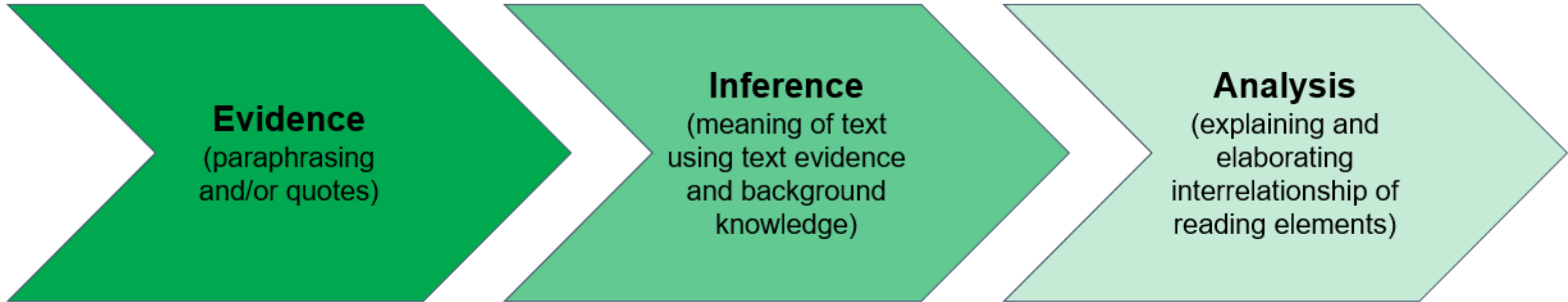


“A detailed examination of the elements or structure of text, by breaking it into its component parts to uncover interrelationships, in order to draw a conclusion”.

(Thompson & Lyons, 2017)



Chain of Reasoning





Grade 4 Student Example #1

One of the challenges is how he does not know how to pick berries. The grandson grabs handfuls and squishes some berries but then his grandfather shows him the ~~right~~ way. This is important because he gets frustrated that he won't get blueberries picked cause he is squishing them all. This connects to the prompt because he gets confused of how to pick the berries, but he still continues.

TDA Prompt

Write an essay analyzing how the grandson demonstrates a theme about persistence when responding to the challenges of blueberry picking.



One of the challenges is, how he does not know how to pick berries. The grandson grabs handfuls and squishes more berries but then his grandfather shows him the ~~right~~ way. This is important because he gets frustrated that he won't get blueberries picked cause he is squishing them all. This connects to the prompt because he gets confused of how to pick the berries, but he still continues.

His grandfather showed him the right way to pick and this helped the grandson to fill his bucket quicker. This encouraged him to persevere and overcome this challenge of squishing the blueberries.





Example #2

Pause the video and read the text [*The Cormorant in My Bathtub*](#) using this hyperlink.

TDA Prompt

*Write an essay analyzing how the main character of *The Cormorant in my Bathtub* changes in response to the events in the passage.*

The Cormorant in My Bathtub

By Brooke Rogers

When I was about eight, I went to live with my grandparents at the beach. I had never seen the ocean before, and to this day the memory is vivid. We pulled into the driveway at dusk, and I could see behind the house an exciting expanse of untouched water. I shivered. I could feel the blood beginning to pump through my veins. I felt warm and tingly. The colors of the horizon and the dying sun were a shimmer of pinks and purples. The sun, arrayed in its most beautiful gown, was ready to die valiantly.

From that moment on I was madly in love with the ocean. I lay in the sand for hours watching the cormorants circling over the lapping waves. How I envied those birds, their graceful black bodies circling and diving into the brilliant waters. They did not know fear or sadness; they knew only life, sun, and the ocean. They would plummet into the sea at tremendous speeds, and not once did they miss their prey. There were no failures. Each one always emerged with a silver minnow speared on its beak.

Every day from sunup to sundown I haunted the beach. I never tried to make new friends; I was always alone. I was always dreaming that I would become a cormorant and fly away over the ocean, never to be seen again.

It was a Wednesday night when the tanker sank. The rain was falling in solid sheets, the wind blowing at nearly fifty knots! All the power lines were out; even the glow of the lighthouse was not strong enough to pierce the storm. The captain of the tanker lost his course and ran aground on Lookout Point. The side of the tanker split on the rocks, spilling hundreds of thousands of gallons of oil into the raging sea.

The next day the ocean was calm, but the waves that lapped against the beach were tainted. Riding on the waves were the black remains of the oil tanker's cargo. I watched in horror as helpless sea birds struggled to stay afloat, flapping their wings in frenzied splashes as they tried desperately to free themselves from the clinging oil. Tears streamed down my cheeks as I dashed into the ocean and gathered up as many birds as I could capture. I returned to the house and filled the bathtub with clean, fresh water. Then I pried open as many beaks as I could. I watched helplessly as the birds surrendered to the clinging grease that clogged their nostrils and held fast their beaks. My whole body shook with grief. I lifted their limp bodies and tenderly set them on a towel. Among the dead were three gulls, two sand-pipers, and one brown pelican.

One bird remained in the tub, a black bird who would not give up. He lay quietly in the tub, but his eyes were alert, and he was wide awake. He was a cormorant. To take my mind off the others, I picked him up and began to rub his back with tissue and detergent. It took hours, but the bird seemed to sense that I was trying to help. He lay still and allowed me to wipe every last drop of oil off his glossy back. When I placed him back in the tub he drank deeply, enjoying the strange, sweet taste of fresh water for the first time.



Grade 6 Student Example #2

Reflection Journal (page 3):

Identify the..

- text evidence,
- the inference
- and analysis.

One event that the character changes to in response to the event is moving to the ocean. In the text it states, "I wanted the beach. I never tried to make new friends." The event of moving to the beach has an effect on the character. He loves the beach. He responds by going to the beach at all times. This changes him because before he moved he could have been very social! now he stays at the beach and does not try to make friends.



Grade 6 Student Example #2

Let's see if we found the same information!

Identify the..

- text evidence,
- the inference,
- and analysis.

One event that the character changes to in response to the event is moving to the ocean. In the text it states, "I wanted the beach. I never tried to make new friends." The event of moving to the beach has an effect on the character. He loves the beach. He responds by going to the beach at all times. This changes him because before he moved he could have been very social! now he stays at the beach and does not try to make friends.



Example #3

Pause the video and read the poem [Caged Bird](#) using this hyperlink.

TDA Prompt

Write an essay analyzing how the poet's descriptions develop the theme of the poem.

Caged Bird

BY [MAYA ANGELOU](#)

A free bird leaps
on the back of the wind
and floats downstream
till the current ends
and dips his wing
in the orange sun rays
and dares to claim the sky.

But a bird that stalks
down his narrow cage
can seldom see through
his bars of rage
his wings are clipped and
his feet are tied
so he opens his throat to sing.

The caged bird sings
with a fearful trill
of things unknown
but longed for still
and his tune is heard
on the distant hill
for the caged bird
sings of freedom.

The free bird thinks of another breeze
and the trade winds soft through the sighing trees
and the fat worms waiting on a dawn bright lawn
and he names the sky his own.

But a caged bird stands on the grave of dreams
his shadow shouts on a nightmare scream
his wings are clipped and his feet are tied
so he opens his throat to sing.

The caged bird sings
with a fearful trill
of things unknown
but longed for still
and his tune is heard
on the distant hill
for the caged bird
sings of freedom.

Maya Angelou, "Caged Bird" from *Shaker, Why Don't You Sing?* Copyright © 1983 by Maya Angelou. Used by permission of Random House, an imprint and division of Penguin Random House LLC. All rights reserved.



Grade 8 Student Example #3

Reflection Journal (page 4):

Identify the..

- text evidence,
- the inference,
- and analysis.

Reading the stanzas about the caged bird, the one thing he does appears every stanza. "...his wings are clipped and his feet are tied so he opens his throat to sing. The caged bird sings with a fearful trill of things unknown but longed for still and his tune is heard on the distant hill for the caged bird sings of freedom." The repetition of these two sentences are crucial to the theme of this piece. When reading about the caged bird, the image given by the word choice is cruel and unpleasant. Despite such descriptions, at the end, the caged bird's hope of one day being free is powerful. So powerful that even though he is bound, he uses the last option he has left-his voice-to continue singing of freedom again and again.



Grade 8 Student Example #3

Reading the stanzas about the caged bird, the one thing he does appears every stanza. "...his wings are clipped and his feet are tied so he opens his throat to sing. The caged bird sings with a fearful trill of things unknown but longed for still and his tune is heard on the distant hill for the caged bird sings of freedom." The repetition of these two sentences are crucial to the theme of this piece. When reading about the caged bird, the image given by the word choice is cruel and unpleasant. Despite such descriptions, at the end, the caged bird's hope of one day being free is powerful. So powerful that even though he is bound, he uses the last option he has left-his voice-to continue singing of freedom again and again.

Let's see if we found the same information!

- **Text evidence:** *"...his wings are clipped and his feet are tied so he opens his throat to sing. The caged bird sings with a fearful trill of things unknown but longed for still and his tune is heard on the distant hill for the caged bird sings of freedom."*



Grade 8 Student Example #3

Reading the stanzas about the caged bird, the one thing he does appears every stanza. "...his wings are clipped and his feet are tied so he opens his throat to sing. The caged bird sings with a fearful trill of things unknown but longed for still and his tune is heard on the distant hill for the caged bird sings of freedom." The repetition of these two sentences are crucial to the theme of this piece. When reading about the caged bird, the image given by the word choice is cruel and unpleasant. Despite such descriptions, at the end, the caged bird's hope of one day being free is powerful. So powerful that even though he is bound, he uses the last option he has left-his voice-to continue singing of freedom again and again.

Let's see if we found the same information!

- **Inference:** *When reading about the caged bird, the image given by the word choice is cruel and unpleasant.*



Grade 8 Student Example #3

Reading the stanzas about the caged bird, the one thing he does appears every stanza. "...his wings are clipped and his feet are tied so he opens his throat to sing. The caged bird sings with a fearful trill of things unknown but longed for still and his tune is heard on the distant hill for the caged bird sings of freedom." The repetition of these two sentences are crucial to the theme of this piece. When reading about the caged bird, the image given by the word choice is cruel and unpleasant. Despite such descriptions, at the end, the caged bird's hope of one day being free is powerful. So powerful that even though he is bound, he uses the last option he has left-his voice-to continue singing of freedom again and again.

Let's see if we found the same information!

- **Analysis:** *Despite such descriptions, at the end, the caged bird's hope of one day being free is powerful. So powerful that even though he is bound, he uses the last option he has left – his voice – to continue singing of freedom again and again.*



Chain of Reasoning: Reflection Journal (page 5)

Based on these three samples of student work showing evidence-inference-analysis, explain in your own words, how these students demonstrated a chain of reasoning.



Struggling Readers

“Glaser (1989) stated that one criterion for distinguishing poor and good readers is the number of inferences they produce. Glaser pointed out that poor readers do not realize their breakdowns in comprehension. Whereas good readers produce more inferences to rebuild comprehension breaks, poor readers simply paraphrase the text” (Ozgungor, S. & Guthrie, J., 2004, p. 438).



Instructional Implications: Reflection Journal (pages 6)

Given this information about good readers and struggling readers, what do you think are the instructional implications?



Instructional Implications

1. Teach students the meaning of inference and analysis as academic vocabulary.
2. Pose “why” questions to elicit an inference.
3. Correct misconceptions or incomplete understanding of the text immediately.



Final Thoughts- *Reflection Journal, pages 7-9*

Consider your instructional practices:

- 1) How often do you teach students the academic vocabulary necessary to successfully understand and engage in making inferences and analyzing different reading elements?
- 2) In what ways do you support students in making inferences when they are reading text? Describe the types of questions you pose and the strategies you use to help students make inferences.
- 3) What opportunities do you provide students to learn and practice what is expected in an analysis of two reading elements?



For More Information...

Thompson, J. (2019). [Recognizing the Difference between Inference and Analysis](#). Center for Assessment (www.nciea.org)

Or

[Pennsylvania Department of Education: Text Dependent Analysis \(TDA\) Toolkit](#)



The Thompson TDA Model

Text Dependent Analysis Response: Recognizing the Difference between Inference and Analysis

Text dependent analysis requires students to provide evidence from the text and to draw inferences based on what the text says in order to support an analysis. Students are expected to construct a well-written essay which communicates their inferences and their connection to the evidence, while drawing a conclusion aligned to the prompt in order to demonstrate analysis of the text. These expectations capture the three underlying components of text dependent analysis which include reading comprehension, analysis, and essay writing.

The purpose of this resource is to assist educators with understanding the meaning of inferring and analyzing, identifying the purpose of inferring and its connection to reading comprehension and analysis, and recognizing the difference between these two concepts in student writing.

Inference – the Bridge from Comprehension to Analysis

Reading comprehension requires students to understand, interpret, and engage with written texts. As students engage with text they create a mental representation of the situation and information communicated by the author. A foundational or prerequisite skill for the interpretation of the author's meaning and for demonstrating analysis is the ability to make inferences (Marzano, 2010, p. 80). To make inferences, readers use specific text evidence and combine this with their own background knowledge to determine the meaning of a small part of the text. When inferring, students look for logical relationships between words and/or events and they seek to make a connection between events by filling in missing information. In other words, inferring requires a "causal chain of underlying conceptualizations" (Trabasso, 1981, p. 3). An inference can also be described as connecting a piece of text and what is in the mind together – background knowledge/experiences – to make a valid and educated suggestion of an idea that is not directly stated in the text (Beers, 2003; Royer, Carlo, Dufresne, & Mestre, 1996, 378).



Going Deeper with Text Dependent Analysis

- Introduction:** Introduction to the TDA Professional Learning Series
- Module 1:** Text Dependent Analysis: A need for curriculum and instructional shifts
- Module 2:** Understanding Text Dependent Analysis
- Module 3:** Anatomy of Text Dependent Analysis Prompts
- Module 4:** Selecting Complex Texts for Analysis
- Module 5:** The Difference Between Inference and Analysis
- Module 6:** Purposeful Annotations
- Module 7:** Close Reading Questions Leading to Analysis
- Module 8:** Analyzing Reading Elements and Text Structures
- Module 9:** Collaborative Discussions
- Module 10:** Modeling a Text Dependent Analysis Response
- Module 11:** The Purpose of Text Dependent Analysis Learning Progressions
- Module 12:** Analyzing Text Dependent Analysis Responses
- Module 13:** Developing Close Reading Lessons Leading to Analysis
- Module 14:** Developing Replacement Units Leading to Analysis
- Module 15:** Using the Grades K-8 Deconstructed Standards



References

- 1) Beers, K. (2003). *When kids can't read: What should teachers do*. Portsmouth, NH: Heinemann.
- 2) Glaser, R. (1989). Expertise and learning: How do we think about instructional processes now that we have discovered knowledge structure? In D. Klahr & K. Kotosky (Eds.), *Complex information processing: The impact of Herbert A. Simon*, 269–282. Hillsdale, NJ: Erlbaum.
- 3) Marzano, R. (2010). The art and science of teaching / teaching inference, *Educational Leadership*, 67, 80-81. Retrieved from https://www.researchgate.net/profile/Robert-Marzano/publication/267379975_Teaching_Inference/links/56f26c0508aee9c94d0042e2/Teaching-Inference.pdf.
- 4) Ozgungor, S. & Guthrie, J. (2004). Interactions among elaborative interrogation, knowledge, and the process of constructing knowledge from text, *Journal of Educational Psychology*, 96, 437-443. Retrieved from: <http://www.corilearning.com/research-publications/2004-ozgungor-guthrie.pdf>.
- 5) Royer, M., Carlo, M., Dufresne, R., & Mestre, J. (1996). The assessment of levels of domain expertise while reading. *Cognition and Instruction*, 14, 373–408. Retrieved from: https://www.researchgate.net/publication/247502407_The_Assessment_of_Levels_of_Domain_Expertise_While_Reading/link/02e7e53a987afd54fb000000/download.
- 6) Thompson, J. (2018). *Text dependent analysis: The need for a shift in instruction and curriculum*. Dover, NH: Center for Assessment.
- 7) Trabasso, T. (1981). On the making of inferences during reading and their assessment. In J. T. Guthrie's (Ed.) *Comprehension and teaching: Research reviews*. Newark, DE: International Reading Association.



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Thank You