

The Outcomes of Understanding - Cognitive Markers of Deep Understanding

The Outcomes of Understanding in Narrative Text

Thinking patterns that characterize deeper comprehension (narrative text)
1. Readers experience empathy - we sense that we are somehow <i>in the book</i> . Empathy can include: <ul style="list-style-type: none"> • Character empathy in which we feel we know the characters, experience the same emotions, stand by them in their trials • Setting empathy in which we feel a part of the setting, • Conflict empathy in which we experience the internal and external conflict as if first-hand
2. Readers experience a memorable emotional response - the sense that what the reader feels may be part of his/her emotional life for a long time, he/she may feel moved to take action to mitigate a conflict in the world
3. Readers experience the aesthetic - we find particular aspects of a book very compelling; we feel a desire to linger with or reread portions of the text we find beautiful, well-written, surprising, humorous or moving
4. Readers ponder - we feel a desire to pause and dwell in new facets and twists in the text - we may want to reread in order to think more about certain ideas
5. Readers find ourselves thinking about the book when we're not reading - we generate new ideas and imagine new possibilities in characters' lives; our ideas are original, but related to the text
6. Readers advocate and evaluate - we may follow one character or plot element more intensively and may have the sense of being "behind" the character(s) or narrator - we want events to evolve in a particular way
7. Readers recognize patterns and symbols - we may experience a moment of insight or begin to use our knowledge of literary tools to recognize themes, motifs as well as symbols and metaphors in stories
8. Readers extrapolate from details in the text - we arrive at global conclusions from focal points in the text - these conclusions may reach beyond the scope of the text to other people, events, settings -- we may feel an urge to take action to solve a problem or act on an issue in our community
9. Readers are evaluate the author's intentions, values and claims - we actively study the author's style and may choose to replicate it in our writing; we are aware of how he/she manipulates our thinking with tools such as diction, foreshadowing and metaphor; we sometimes argue with the author; we discern and evaluate the author's success in making the book credible and we are attuned to ways in which he/she affirms or changes our beliefs, values and opinions .
10. Readers remember - we develop a sense of permanence that comes with deeply understanding something - we know that we'll be able to use a concept we understand in a new situation

The Outcomes of Understanding in Expository Text

Thinking patterns that characterize deeper comprehension (expository text)
<p>1. Learners imagine themselves in real world situations, immersed in ideas. We have compelling questions. We take on the role of scientist, social scientist, mathematician.</p> <p>We:</p> <ul style="list-style-type: none"> • begin to understand thought leadership - we explore and seek to understand the lives of those who have made significant contributions to a field and begin to imagine how we might make contributions • understand the problems that led to discoveries and new solutions in the scientific, technological or social scientific world - we have a sense of the elements that make a situation problematic and some sense of the steps to be taken to solve the problem
<p>2. Learners experience a memorable emotional response - we feel a passion to learn more, compassion for others that may be affected by a problem and may be moved to take action to mitigate a conflict in the world</p>
<p>3. Learners experience the aesthetic - we feel a sense of wonder about the complexities and nuances related to a concept we are learning - we may feel compelled to reread portions and dig more deeply into the topic</p>
<p>4. Learners revisit and rethink - we choose to re-read or explore other texts in order to learn more about a concept - we feel that we want to review and rethink a concept</p>
<p>5. Learners generate our own hypotheses and theories about why and how things happen in the natural and social world; we check those hypotheses against those that have been tested</p>
<p>6. Learners direct our energy to comprehending to a few ideas of great import - we develop a sense of what matters most, what is worth remembering, and have the confidence to focus on important ideas rather than details that are unimportant to the larger text - we evaluate the information and make decisions about credibility or bias in what we read</p>
<p>7. Learners recognize patterns and text structures including</p> <ul style="list-style-type: none"> • cause/effect - we use our background knowledge to discern how events affect each other • comparisons and contrasts - we develop a sense of how concepts are similar and different • chronology - we sense the general order of development or the progression of a series of ideas <p>problem/solution - when a problem is introduced, we begin to consider solutions and/or to anticipate solutions that may be presented in the text; we anticipate new problems and solutions related to earlier ones</p>
<p>8. Learners create schema -- we realize how newly learned concepts "fit" into existing background knowledge, that we can make sense in relation to what is already known - that our existing knowledge is accurate or inaccurate (and needs to be revised) - we look to a variety of sources to complete schema when we recognize that it is missing</p>
<p>9. Learners recognize the influence of beliefs/values/opinions - we may experience a sense of affirmation of existing beliefs/values/opinions and/or sense newly developing beliefs/values/opinions related to the text - we can give evidence to support them</p>
<p>10. Learners remember - we develop a sense of permanence that comes with deeply understanding something - we know that we'll be able to use a concept they understand in a new situation</p>

Keene

Dimensions of Understanding

Behavioral Markers of Deep Understanding

Behaviors associated with understanding (what we might observe in the classroom when children are understanding)

- Readers are deeply **engaged** - we experience a sense that the world around has disappeared and we are subsumed by the world of the text -- we choose to **focus** on particular ideas for longer periods of time, we may need to focus in silence and/or in conversation with others -- we **apply fervent attention** - we can observe others concentrating with a focus that is nearly impenetrable
- Readers **want to take action in the world based on what they have read** - through discussions, writing, drama or art we feel an urge to do something or act in some way to mitigate or resolve related conflicts in the world; we can talk about how a book changed us, caused us to think and act differently in our own lives -- we may want to **leave a written, artistic or dramatic legacy** - we want to make an observable contribution to the world around them based on what we read
- Readers **show willingness to struggle** - we choose to challenge ourselves in order to understand more deeply - we consciously fight any influence of negative self-judgment, seek, with a sense of efficacy to solve complex problems
- Readers can **describe our progress as readers** -- we can describe their own processes, preferences and progress as a reader - we can describe, for example, how we used a comprehension strategy and how such use improved our understanding -- we **define and describe how our thinking has changed** and can ascribe those changes to the use of comprehension strategies or other factors
- Readers **engage in rigorous discourse** - we speak with others in order to develop deeper understanding and/or defend our ideas - we remain open to **multiple** perspectives and consider others' ideas seriously, often integrating them into our own background knowledge -- we **argue/defend** - we may discuss, challenge others' ideas and beliefs and/or defend our own with evidence from the text and from background knowledge (schema)
- Readers are **renaissance learners** - we meander among a wide range of topics, interests, genres, authors, pursue study in areas we find compelling or aesthetically rewarding -- we **pursue a compelling question** - we may decide to tackle a topic of intense interest in order to build a knowledge base, satisfy curiosity

- Readers **experience insight** - we experience and can describe a moment of clarity, of "seeing" for the first time, possibly due to our efforts to recognize patterns and structures in text
- Readers **remember** - we reapply previously learned concepts and ideas in new learning situations

Making the Dimensions and Outcomes Come Alive in the Classroom

In order to help children become deeply engaged and experience a sense that the world around has disappeared and they are subsumed by the world of the text:

- Model -- talk with students about times when you have learned with an intensity that propelled you to a higher level of understanding - tell them about the circumstances - were you studying something about which you were passionately interested? What made you take intellectual risks you hadn't taken before? What was the payoff - what did you understand that you didn't understand before working fervently?
- Talk about developing areas of passionate interest - such passions don't come automatically to all kids - use individual conferences and small group meetings to help kids find the ideas that most interest them, talk with them about how to pursue topics of passionate interest - how do you do it in your own life - how might they do it? If we want children to **dwell** in ideas, choose to focus on one idea for a long period of time, they may need to focus in silence:
- Set aside some chunks of class time for focused, silent work in which students can concentrate on more deeply understanding one idea - when they have time to listen to themselves think and consider subtleties rather than rushing to memorize the next thing.
- Model how proficient readers frequently re-read and re-think portions of text - kids often think that re-reading means starting at the beginning and re-reading everything - show them how readers pick and choose among the portions of text they choose to explore more deeply.
- Teach kids about meta-cognition - thinking about one's own thinking - and the seven most common meta-cognitive strategies.

If we want children to embrace **struggle** and the insight to which it often leads:

- Create learning opportunities in which you purposefully ask students to tackle a more complex idea or text and provide more support for their learning than usual - teach them how we break apart or analyze complex problems in order to approach them in a systematic way, and model ways in which you take on a complex text or issue if your goal is to understand it deeply.
- Help kids understand that insights that come as a result of struggle are often more gratifying than memorizing facts.
- Talk about the role (positive and negative) self-criticism plays in learning about complex ideas - think about ways in which learners overcome.

We can help children learn to define and describe how their thinking has changed and how to manipulate their thinking to understand more completely:

- Think aloud about how you use comprehension strategies as tools to help you understand more effectively - how do you question, for example, to help you focus on a section of text that is complex or meaning-laden?
- Ask kids to apply the strategies and keep records of their thinking (records of using strategies) so that you can assess their developing understanding - these can be as simple as post it notes or as complex as self-assessments of group discussions.
- Talk with students about how books have changed your thinking, emotions, beliefs and values - how have books and ideas inspired you to take particular actions in your community - in what ways do books and ideas change students' thinking - what actions do they take in their community as a result of their evolving ideas?
- Ask students to create a timeline of their evolving thinking and the changes they experience in their knowledge and beliefs throughout a unit of study or on a particular concept.

If we hope that children recognize the influence of beliefs/values/opinions:

- We can think aloud to show how our own beliefs influence and are altered by text and new conceptual learning.
- We can think aloud to show how decisions we make (for example, inferences we make or decisions about which ideas are most important in a particular passage) are affected, at least in part, by our values, opinions and beliefs.
- We can help children become more aware of their beliefs and opinions and help them to use writing and oral language to discover opinions they may not have known they have.

If we want children to act as Renaissance learners, to develop and pursue a compelling question, tackle a topic of intense interest in order to build a knowledge base, satisfy curiosity:

- We can use a wide variety of materials across genres to help students understand complex ideas - use "way in" texts to work toward more complex or didactic readings.
- We can encourage student choice and ownership in pursuing questions and texts of particular interest to them.
- We can create time for students to pursue particular areas of interest within your topic or content area - move beyond the idea that all students must study the same thing at the same time.

If we want to see children engage in rigorous discourse, speaking with others in order to develop a deeper understanding and/or to defend their ideas:

- We must think aloud and model to show students that we understand ideas most deeply when we "do" something with those ideas, that discussion in which students become familiar with other learners' perspectives has a significant influence on the degree to which they understand complex ideas.
- We should create time for students to discuss ideas in different configurations - whole class, small groups, partners - we might ask students to reflect on how their thinking changed because of the perspectives others shared in discussion.

If we want students to experience the aesthetic, to feel a desire to linger with or reread portions of the text or the events that he/she finds beautiful or moving:

- We can use materials, topics and genres that capitalize on the impact of ideas and policies on people and model ways in which those materials and topics affect us as

learners - we can think aloud about what we remember because of an emotional or aesthetic impact.

If, ultimately, we want students to **remember, for experiences to become** potentially memorable to us.

- Focus, focus, focus - make decisions about which concepts matter most for students - don't be afraid to concentrate your instruction (thinking aloud, modeling, demonstrating) on far fewer concepts over a much longer period of time, giving kids an opportunity to work with the concepts and apply them in a variety of texts and contexts.