Using Knowledge of Text Structure to Improve Comprehension in Grades 6-12

— Sheryl Turner —
About the Presenter

Sheryl Turner
Sheryl Turner, MA, is a senior research associate at RMC Research Corporation and currently works with the Regional Educational Laboratory Southeast at Florida State University. Previously, she was a literacy expert with the Center on Instruction and a technical assistance provider for the National Reading Technical Assistance Center. She has extensive experience in organizing and providing consultative assistance to states and districts in their planning and implementation of federal programs. Sheryl serves as a high quality resource in literacy and teacher quality, providing evidence-based tools and resources, product development, and collaboration on professional development to support professional capacity building at the state and district levels. She also supports states and districts with the transition and implementation of new state and core standards, use of data and assessments to improve instruction, providing effective instructional support for teachers, principal leadership, turning around the lowest-achieving schools, and statewide capacity to implement and sustain programs.

About CDL

Founded in 1992, the Center for Development and Learning (CDL) is a results-driven 501(c)(3) nonprofit organization. CDL’s mission is to improve the life chances of all children, especially those at high risk, by increasing school success. We believe that all children, regardless of how they look, where they come from, or how they learn, can and will achieve school success when provided with highly effective teachers and positive, supportive learning environments.

CDL’s services fall into three silos:
1. Evidence-based professional development for teachers, principals, teacher leaders, related specialists, paraprofessionals, parents and caregivers
2. Direct services to students
3. Public engagement of stakeholders at all levels

CDL’s professional learning services comprise approximately 85% of our work. For over 18 years, we have been a trusted source of specialized professional learning services for educators. CDL’s professional learning is designed, facilitated, evaluated and adjusted to meet the needs of the learners. In collaboration with school and district leaders and teachers, we examine student and teacher data and build professional learning in response to student and teacher performance. We evaluate progress frequently and adjust accordingly.

We have special expertise in literacy, building collaborative capacity, leadership and talent management, high-yield teaching strategies and tactics, differentiated instruction, and learner-specific instruction. Call us – we are ready to serve you.
Using Knowledge of Text Structure to Improve Comprehension in Grades 6-12

Sheryl Turner

Objectives for Participants

- Understand the research supporting text structure instruction
- Learn strategies for teaching students to recognize and use informational text structures to improve comprehension
- Explore tools and resources for teaching about text structure

What is Text Structure?

Definition: The organization of ideas in the text and the relationship that those ideas form to communicate meaning (Meyer & Rice, 1984)

Common Structures:
- Description
- Sequence
- Problem & Solution
- Compare & Contrast
- Cause & Effect

What Does the Research Say?

One thing good readers do is note the structure and organization of text. (Sherris, 2002; Duke & Pearson, 2002; Schreiner, et al., 2006)

Almost any approach to teaching the structure of informational text improves comprehension and recall of key information in a text. (Dickson, Simmons & Kameenui, 1995; Duke & Pearson, 2002)

Text structure awareness and use are highly related to comprehension. (Dickson, Simmons & Kameenui, 2002; & Duke, 2005; Duke & Pearson, 2002)

Explicit instruction in text structure facilitates comprehension. (Dickson, Simmons & Kameenui, 2002; & Duke & Pearson, 2002)

Time spent on text structure instruction does not detract from the amount of content students can learn. (Hillman, Hall & Lauer, 2003)

Increasing time spent on text structure instruction will NOT reduce the amount of content students can learn.

Direct instruction in one text structure doesn’t improve facility in using other text structures. (Hillman, Hall & Lauer, 2003)

Students need direct instruction in each of the text structures in order to understand them and use them effectively.

Implications
Why Text Structure Knowledge Is Important

**Cause**
Why did this happen?
- I use text structure knowledge when I read.
- I can locate and organize information.
- I remember what I read.

**Effect**
What happened?
- I can locate and organize information.
- I remember what I read.
- I understand what I read.

The Common Core State Standards follow NAEP's lead in balancing the reading of literature with informational texts, which includes literary nonfiction and historical, scientific, and technical texts.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Literary Text</th>
<th>Informational Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>8</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>12</td>
<td>30%</td>
<td>70%</td>
</tr>
</tbody>
</table>

From Common Core State Standards for English Language Arts & Literacy, 2010, p. 236

NAEP Common Core Standards for ELA

<table>
<thead>
<tr>
<th>Gr 6–12 Reading</th>
<th>Literature</th>
<th>Informational Text</th>
</tr>
</thead>
</table>

Common Core Standards for ELA

Grade 6-12 Common Core Standards

<table>
<thead>
<tr>
<th>Anchor Standard</th>
<th>Grade Specific Standard Examples</th>
</tr>
</thead>
</table>
| Craft and Structure
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole. | Grade 7 ELA Informational Text
6. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of ideas. |
| Grades 6-8 History/Social Studies
5. Describe how a text presents information (e.g., sequentially, comparatively, causally). | Grade 8 ELA Informational Text
6. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic. |
| Grades 6-8 Science and Technical Subjects
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic. |
Describe the connections between sections of a text. Convey complex ideas and information clearly through the organization of the content. Explain the relationships between events, ideas, or steps in a procedure. Produce writing in which the organization is appropriate to task and purpose.

3 Text Structure Strategies

- Look for Clue Words
- Ask and Answer Questions
- Use Graphic Organizers

(Williams, Hill & Lauer, 2004; Kazakowicz, Reed & Miller, 2010; Glover, 2004)

Signal Words

Purpose: to explain why or how something happened/happens
Effect = what happened
Cause = why it happened

Signal Words and Phrases
as a result if . . . then outcome
because impact reasons for
consequently in order to since
due to influenced by so that
effects of is caused by therefore
for this reason leads to thus
how on account of when...

Comprehension Questions

1. What were the specific events that happened?
2. Why did the events happen? What were the causes?
3. What were the results or outcomes of these events happening? What was the effect?
4. Did prior events cause or influence the main event? If so, in what ways?
5. What is the significance of the event and/or the results (outcomes)?
Economic Impact
The economy of nearly every city was impacted by the flu epidemic of 1918. The workforce was paralyzed because 21-to-29 year olds suffered the greatest casualties. Essential services were on the verge of collapse since workers like firemen, nurses, and garbage collectors were too sick to come to work. New public health ordinances prohibiting public gatherings resulted in theaters, cinemas and hotels losing millions of dollars.

As a result of the unexpected high volume of deaths among the young, insurance actuarial projections were incorrect. Therefore, many insurance companies were unable to pay life insurance claims.

Adapted from Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects 2010, Appendix C, pp. 80-81.
**Effect (What happened?)**

- Cities economies impacted
- Workforce paralyzed
- Essential services collapsing
- Theaters, cinemas and hotels losing money
- Insurance actuarial estimations were off
- Insurance companies could not pay claims

**Cause (Why?)**

- 1918 flu epidemic
- Young workers hit hardest
- Workers too sick to work
- Public health ordinances ban public gatherings
- Number of young people dying

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**Your Turn to Practice**

1. Using Handout #3 (with help from Handout #1)
   - Identify the text structure
   - Model a Think Aloud
   - Select comprehension frame questions
   - Complete a graphic organizer
   - Explain how knowing the text structure helped you

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**Other Considerations**

- Revisit structures often
- Collaborate with colleagues
- Remember the goal!

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**A Word of Warning**

There will often be multiple organizational structures within any given text, even within the same passage or paragraph.

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**And the Text Structure is . . .**

1. The devastation caused by the Great Depression was not confined to the United States. Its effects were being felt in cities and countries all around the world.
2. One of the most immediate problems facing Franklin Roosevelt after the election was how to get huge numbers of people back to work quickly.
3. The Great Depression in the United States is said to have begun on Black Tuesday, October 29th of 1929, with the stock market crash and ended when we entered World War II in 1941.
1. The devastation caused by the Great Depression was not confined to the United States. Its effects were being felt in cities and countries all around the world.
2. One of the most immediate problems facing Franklin Roosevelt after the election was how to get huge numbers of people back to work quickly.
3. The Great Depression in the United States is said to have begun on Black Tuesday, October 29th of 1929, with the stock market crash and ended when we entered World War II in 1941.
4. Life for the millions of people out of work during the Great Depression was harsh and often involved riding the rails and living in makeshift shelters in areas known as shantytowns.
5. Although the Great Depression impacted every region of the country, the hardships faced by those living in rural areas were very different from the difficulties those living in major cities encountered.

For More Information

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Informational Text Structure

Templates

October 2012
Problem and Solution

Pages 1 through 7 have been adapted from materials posted on the Literacy Leader website, http://www.literacyleader.com

Purpose: to state one or more problems and provide one or more solutions to the problem.

Signal Words and Phrases

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Disadvantage</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>In Order To</td>
<td>Since</td>
</tr>
<tr>
<td>As A Result Of</td>
<td>Issue</td>
<td>So That</td>
</tr>
<tr>
<td>Because</td>
<td>Led To</td>
<td>Solution</td>
</tr>
<tr>
<td>Cause</td>
<td>Problem</td>
<td>Solved</td>
</tr>
<tr>
<td>Dilemma</td>
<td>Puzzle</td>
<td></td>
</tr>
</tbody>
</table>

Comprehension Question Frames

1. What is the problem?
2. Who has the problem?
3. Why is it a problem?
4. What is causing the problem?
5. What solutions have been suggested or tried?
6. What are the pros and cons of various solutions?
7. Which solutions worked or seem to have the best chance for solving the problem?

Graphic Organizers
Description

Purpose: to explain a topic, concept, person, place, event or object, by providing characteristics, features and/or giving examples.

Signal Words and Phrases

descriptive words (e.g., color, shape, size)
position words (e.g., above, along, beside, between, in front of, near)
appears to be for example made up of
characteristics for instance most important
consists of in fact specifically
features looks like such as

Comprehension Question Frames

1. What is the subject being described?
2. How is the topic being described (i.e., where it is, what it does, how it works, what it looks like, its classification)?
3. What are the most important attributes or characteristics?

Graphic Organizers
**Compare and Contrast**

**Purpose:** to describe what is similar and/or different about two or more subjects.

<table>
<thead>
<tr>
<th>Signal Words and Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>alike</td>
</tr>
<tr>
<td>also</td>
</tr>
<tr>
<td>although</td>
</tr>
<tr>
<td>as</td>
</tr>
<tr>
<td>as opposed to</td>
</tr>
<tr>
<td>as well as</td>
</tr>
<tr>
<td>both</td>
</tr>
</tbody>
</table>

**Comprehension Question Frames**

1. What subjects are being compared?
2. What is it about them that is being compared?
3. What characteristics of the subjects form the basis of the comparison?
4. What characteristics do they have in common? How are they alike?
5. In what ways are they different?

**Graphic Organizers**

[Diagram of Venn Diagram with 'Alike' and 'Different' sections]
Chronology/Sequence

Purpose: to provide information in time order or the order in which events, actions, or steps in a process occur.

### Signal Words and Phrases

<table>
<thead>
<tr>
<th>after</th>
<th>finally</th>
<th>later</th>
<th>soon</th>
</tr>
</thead>
<tbody>
<tr>
<td>as soon as</td>
<td>first/second/third</td>
<td>meanwhile</td>
<td>step</td>
</tr>
<tr>
<td>at the same time</td>
<td>following</td>
<td>next</td>
<td>then</td>
</tr>
<tr>
<td>before</td>
<td>immediately</td>
<td>now</td>
<td>today</td>
</tr>
<tr>
<td>directions</td>
<td>initially</td>
<td>prior to</td>
<td>until</td>
</tr>
<tr>
<td>during</td>
<td>last</td>
<td>simultaneously</td>
<td>when</td>
</tr>
</tbody>
</table>

### Comprehension Question Frames

1. What sequence of events is being described?
2. What are the major events or incidents that occur?
3. What happens first, next, last?
4. How is the sequence or cycle revealed in the text?
5. What are the steps, directions, procedures to follow to make or do something?

### Graphic Organizers

1. ________________  
2. ________________  
3. ________________  
4. ________________

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Cause and Effect

Purpose: to explain why or how something happened/happens
Effect = what happened  Cause = why it happened

<table>
<thead>
<tr>
<th>Signal Words and Phrases</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>as a result</td>
<td>if . . . then</td>
</tr>
<tr>
<td>because</td>
<td>impact</td>
</tr>
<tr>
<td>consequently</td>
<td>in order to</td>
</tr>
<tr>
<td>due to</td>
<td>influenced by</td>
</tr>
<tr>
<td>effects of</td>
<td>is caused by</td>
</tr>
<tr>
<td>for this reason</td>
<td>leads to</td>
</tr>
<tr>
<td>how</td>
<td>on account of</td>
</tr>
<tr>
<td></td>
<td>outcome</td>
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<tr>
<td></td>
<td>reasons for</td>
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<tr>
<td></td>
<td>since</td>
</tr>
<tr>
<td></td>
<td>so that</td>
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<tr>
<td></td>
<td>therefore</td>
</tr>
<tr>
<td></td>
<td>thus</td>
</tr>
<tr>
<td></td>
<td>when . . . then</td>
</tr>
</tbody>
</table>

Comprehension Question Frames

5. What were the specific events that happened?
6. Why did the events happen? What were the causes?
7. What were the results or outcomes of these events happening? What was the effect?
8. Did prior events cause or influence the main event? If so, in what ways?
9. What is the significance of the event and/or the results (outcomes)?

Graphic Organizers

The Center for Development and Learning
Text Structure Activity A for Module Participants

Directions: This handout may be used to actively engage in the model lesson presented on slides 18 through 24. You may wish to reference Handout #1, *Informational Text Structure Templates*, as you do this activity. Use the text on Page 1 to find the signal words that would help identify the text structure and to underline or circle answers to comprehension questions asked during the “Think Aloud” activity. Then pause the presentation and complete the blank graphic organizer on Page 2 before continuing with the rest of the module.

**Economic Impact**

The economy of nearly every city was impacted by the flu epidemic of 1918. The workforce was paralyzed because 21-to-29 year olds suffered the greatest casualties. Essential services were on the verge of collapse since workers like firemen, nurses, and garbage collectors were too sick to come to work. New public health ordinances prohibiting public gatherings resulted in theaters, cinemas and hotels losing millions of dollars.

As a result of the unexpected high volume of deaths among the young, insurance actuarial projections were incorrect. Therefore, many insurance companies were unable to pay life insurance claims.

*Adapted from ELA CCSS document, Appendix c, pp. 80–81*
Economic Impact

Effect: What happened?

City economies impacted

because

Cause: Why did it happen?

1918 flu epidemic

because

because

because

because

because

because
Directions
1. Select one of the passages below.
2. Practice modeling a Think Aloud about how you figured out what text structure it follows, including identifying signal words.
3. Select and complete an appropriate graphic organizer for your passage.
4. Select comprehension questions you would ask students to use with this passage.
5. Explain how knowing the text structure helped you locate, organize, understand and recall the content.

Practice Passage #1: NASA: The Early Years

After World War II, both the United States and its Cold War rival, the Soviet Union, began programs in space exploration that came to be known as the “space race”. The Soviet Union launched the first artificial satellite, named Sputnik, in October of 1957. The United States’ first launch of a satellite, Explorer 2, followed nearly four months later in early 1958. As a direct response to the perception that America was losing the space race, Congress passed legislation creating the National Aeronautics and Space Administration (NASA) in July of 1958. That agency began its operations in October of that same year.

NASA created and implemented three major programs involving human space travel during their initial twenty years of operation. The first was the Mercury program. These flights were conducted from 1961 to 1963, and each was manned by a single astronaut. Once the Mercury missions proved that humans could, indeed, survive in space, Project Gemini (1965-66) brought exploration to the next level using two-astronaut crews to learn to perform advanced maneuvers in space. The third set of early manned space missions, named Project Apollo, was flown between 1968 and 1972 with moon exploration as the target.

Practice Passage #2: What’s in a Name?

Hurricanes and typhoons are both considered tropical cyclones, and one hallmark of a tropical cyclone is that it contains sustained winds that reach or exceed 74 miles per hour. The intensity of any cyclone is identified by categories numbered 1 through 5 based on a measure known as the Saffir-Simpson Hurricane Wind Scale.

Hurricanes are tropical cyclones that occur in the Atlantic or the eastern Pacific Ocean. Typhoons are found in the west Pacific Ocean. The area most affected by hurricanes is the Caribbean Sea. Whereas, places like Southeast Asia and the China Sea receive the greatest number of typhoons. Regardless of where it forms, a typhoon always rotates in a counterclockwise direction. Hurricanes, on the other hand, rotate one direction (clockwise) in
the southern hemisphere and the opposite direction (counterclockwise) in the northern hemisphere.

Hurricanes and typhoons, as you might expect, share many of the same attributes. These tropical cyclones are caused by instability in atmospheric conditions, usually in warmer areas around the world. And both are characterized by heavy winds, storm surges, heavy rains, and tornados that can cause massive destruction.

Typhoons occur more frequently than hurricanes. There are typically 25-30 typhoons in a year. The average number of hurricanes per year is closer to 10-15.

Practice Passage #3: The Oregon Sunstone

The Oregon sunstone, also known as heliolite, is actually a feldspar crystal that appears to shimmer with metallic color when viewed in just the right light. This burst of sparkling color is known as “shiller” and occurs when light reflects simultaneously off tiny copper platelets embedded in the stone.

Sunstones come in a wide range of colors, depending on the amount of copper in them. The darker the stone, the more copper it contains. Some are almost clear. Others may be tan, light yellow, or pale pink. Sunstones that are deep red, blue or green in color are the rarest and most valuable. Some of the deeper colored stones appear to have multiple shades of color in them. Bicolored, or dichroic, stones will be one color when viewed from a certain direction and another color when seen from a different angle.

Oregon sunstones are mined from the surface debris found atop old lava flows. The debris is dug up with picks and shovels and sifted through a screen. Then the sunstones are separated from the other rocks collected on the screen by hand. There are currently only four sites in the state where sunstones are being found. Three of the sunstone producing areas are operating as privately held mining claims. The fourth belongs to the Bureau of Land Management and is open to the public for free collecting.

Practice Passage #4: A Neighborhood Comes Together

Community leaders in one city neighborhood were becoming concerned about the health of their citizens. Data shared with city officials indicated that residents in their section of the city had higher levels of obesity and more weight-related health problems than those who lived in other neighborhoods. A Mayor’s Task Force set up to research the issue, found two major factors contributing to weight gain and its subsequent health problems like diabetes and heart
disease. One of the likely causes was not having access to affordable ways to exercise and the other was that there were very few grocery stores selling fresh fruits, produce, meats, and other healthy food options located in the district.

The Task Force, with input from advisory groups representing various stakeholders in the community, came up with several solutions for providing new and affordable ways for residents to exercise. The local hospital agreed to open its physical therapy facilities in the evenings for a nominal fee so that local families could use it as a low-cost health club. Area schools began allowing community-sponsored teams to use their gymnasiums, tracks, and ball fields when they weren’t being used for school events. And the Mayor and City Council even agreed to include a request for funding a bike path through the neighborhood and adding sidewalks on one side of every block that didn’t have them in a City Betterment Grant they were submitting to a national foundation.
Graphic Organizer

Comprehension Questions

How did applying my knowledge of text structure help me comprehend?
Text Structure Activity B for Module Participants

Directions: This handout may be used to actively engage in the activity presented on slides 28 and 29. Fill in the blank with the text structure you think the passage would be written in if it began with these topic sentences. You may wish to reference Handout #1, *Informational Text Structure Templates*, as you do this activity.

1. The devastation caused by the Great Depression was not confined to the United States. Its effects were being felt in cities and countries all around the world.

   **Probable text structure:**

2. One of the most immediate problems facing Franklin Roosevelt after the election was how to get huge numbers of people back to work quickly.

   **Probable text structure:**

3. The Great Depression in the United States is said to have begun on Black Tuesday, October 29th of 1929, with the stock market crash and ended when we entered World War II in 1941.

   **Probable text structure:**

4. Life for the millions of people out of work during the Great Depression was harsh and often involved riding the rails and living in makeshift shelters in areas known as shantytowns.

   **Probable text structure:**

5. Although the Great Depression impacted every region of the country, the hardships faced by those living in rural areas were very different from the difficulties those living in major cities encountered.

   **Probable text structure:**
# Instructional Planning Tools

## Planning Tool for Teaching about Text Structure

*Adapted from *Doing What Works*

<table>
<thead>
<tr>
<th>Teaching Strategies</th>
<th>Planning Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify an informational text structure you would like to teach or review</td>
<td></td>
</tr>
<tr>
<td>Select texts that are:</td>
<td></td>
</tr>
<tr>
<td>▪ good examples of the particular structure you are teaching</td>
<td></td>
</tr>
<tr>
<td>▪ engaging, interesting</td>
<td></td>
</tr>
<tr>
<td>▪ appropriate to the students’ reading level</td>
<td></td>
</tr>
<tr>
<td>▪ high quality, have rich language</td>
<td></td>
</tr>
<tr>
<td>Explain why understanding text structure is important</td>
<td></td>
</tr>
<tr>
<td>Model how to identify text structure</td>
<td></td>
</tr>
<tr>
<td>Help students to identify clue words in informational texts</td>
<td></td>
</tr>
<tr>
<td>Use graphic organizers (maps, charts, cards, diagrams) to help students match structure to content</td>
<td></td>
</tr>
<tr>
<td>Plan questions to help students understand text structures</td>
<td></td>
</tr>
<tr>
<td>Plan activities for students to explore text structure on their own, in pairs or groups (diagrams, games, dramatizations, etc.)</td>
<td></td>
</tr>
<tr>
<td>(other teaching strategies here)</td>
<td></td>
</tr>
</tbody>
</table>
# Planning Tool for Creating Text Structure Lessons
## Using Content Area Text

<table>
<thead>
<tr>
<th><strong>Teaching Strategies</strong></th>
<th><strong>Planning Notes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify passages from the text for this lesson/unit/chapter where applying text structure knowledge would be useful.</td>
<td></td>
</tr>
<tr>
<td>What pre-reading questions would you ask or activities would you have students do to help them identify the structure type? (e.g., looking for signal words)</td>
<td></td>
</tr>
<tr>
<td>What during-reading supports will you provide to help them use their knowledge of text structure to understand this passage? (e.g., guiding questions to answer and record, graphic organizer)</td>
<td></td>
</tr>
<tr>
<td>What after-reading supports will you use to help them use their knowledge of text structure to understand, recall, organize, and/or summarize this passage? (e.g., guiding questions, writing summaries from graphic organizer information, topical file cards or sticky notes)</td>
<td></td>
</tr>
<tr>
<td><em>(other teaching strategies here)</em></td>
<td></td>
</tr>
<tr>
<td>How will you assess</td>
<td></td>
</tr>
<tr>
<td>(1) how well students are learning to identify this text structure and use it to improve comprehension and</td>
<td></td>
</tr>
<tr>
<td>(2) next steps?</td>
<td></td>
</tr>
</tbody>
</table>
References


