First, on a personal note, I want you to know this PBL Case Problem has been difficult for me to design and I know the reason: Elaine’s Circle. I know I can prepare a good PBL Case Problem based on a book—I’ve done it many times—but if I prepare this problem that way I wouldn’t be true to Elaine, her students, and the lessons taught about what it means to be a teacher and a learner in a community of learners. That is why writing this PBL Case Problem is hard—very hard.

To set the problem in a context I like Howard Zinn’s blurb inside the front cover:

“There is an enormous library of books on education—the theory, the practice. But Bob Katz here gives us a book that gets to the heart and soul of teaching, of learning, by telling an unforgettable story of one teacher, one class, one year, one fourth-grade child. Impending tragedy becomes an occasion for what should be the goal of all education—young people working together to have life triumph over death.”

What you and your CoLT will need to do for this PBL Case Problem is think about what Elaine and her students have taught you about what it means to be a teacher. What problems she and her students confronted—not the easy ones—but the really difficult ones—for which there aren’t any answers in the Teacher’s Edition. This is going to require you and your CoLT to think critically about what it was like to be in Elaine Moore’s class. It is going to require you to reflect on how she decided what was important to teach, the way she taught, and for her students to learn what they did in the way they did it. It is going to require you to generate hypotheses in an attempt to explain what you witnessed in that fourth grade class. It is going to require you to explore the professional literature and talk with members of our profession to discover what others with years of experience have to say about what Elaine and her class did that year. It is going to require you take time and effort and it is not going to be easy.

This PBL Case Problem is going to require you to dig down into the text, tear it apart, analyze, reflect, discuss, and maybe even argue as you explain just what it was Elaine did and just when you think you have it figured out realize your solution leads you to another question. Teaching, as Bob Katz wrote is a “process, a method, a practice, an outlook, a perspective. It has no beginning and no end. It is a circle.” (Katz, 2005, p. xvii). This PBL Case Problem is about a circle—a learning circle.

I want you and your CoLT to dive into that circle—Elaine’s Circle—and discover just what Elaine did to cause a group of twenty-five fourth graders to become a community of learners.

Revised:032014
Project 3.1 Discovery
Selecting a Problem Reflecting the Reality of Teaching

“...Community involves more than convenient rhetoric.
It’s a process, a method, a practice, an outlook, a perspective.
It has no beginning and no end.
It is a circle.”

Bob Katz, Elaine’s Circle, p. xvii

Introduction

What you need to accomplish in this PBL stage is to think about what Elaine and her students have taught you about what it means to be a teacher. What problems she and her students confronted—not the easy ones but the really difficult ones—ones for which there aren’t any answers in the Teacher’s Edition. You might want to consider dividing up the chapters (for some it may mean accepting responsibility for more than one) and engage the chapter in “close reading.”

Close Reading is part of the Common Core State Standards (CCSS) which “…will prepare Tennessee students with essential knowledge and skills to compete in an increasingly global environment. These standards emphasize thinking, problem-solving and creativity…” (TNCore, n.d.) and is an important part of your pre-service teacher education preparation. Simply, “… a close reading is a careful and purposeful reading. Well actually, it’s rereading. It’s an encounter with the text where students really focus on what the author had to say, what the author’s purpose was, what the words mean, and what the structure of the text tells us” (Fisher, 2013). You will need to bring your 13,000 hours of “classroom apprenticeship” with you as you engage in your close read. It will not be enough to “skim” the chapter you will need to, as Louise Rosenblatt (2005) wrote, “create a live circuit” (p. 67) between you, Elaine, and her class. It will not be enough to sit in the back of Elaine’s class and watch. You will have to get in there with Alex, Jake, AJ, Danielle, Michelle, Laura, Sarah, Logan, Daniel, David and the fifteen other students. You will have to deal with “playful jostling…the squirming arms and legs” as you maneuver for a place close to Elaine.

When you get close to Elaine you get close to how and why she does things. You are privy to her thoughts, you begin to understand her philosophy of teaching, her classroom management techniques, the way she uses formative and summative assessment, the way she plans her instruction, and the way she interacts with parents, colleagues, and administrators. Your task is to shadow Mrs. Moore through this year, observe, ask her questions, seek out her responses, and when something happens you don’t understand ask her, as her students do:

“Please Mrs. Moore. Please, tell us more!”
Deliverable for Stage 1: Discovery

You will submit as evidence of completing the Discovery phase of this PBL Case Problem a list of questions your CoLT wants to ask Mrs. Moore about what you observed in her class. It could be something her students did as a result of her teaching. It could be why she reacted the way she did to a teacher, parent, administrator, or child. It could be her reason for sequencing her instruction in a certain way. It could be about what she does with her “free-time.” Or, it could just be how she handles the day-to-day problems of being a teacher and a mother.

You will need to come back to class with a single list of questions for Mrs. Moore from your CoLT and be prepared to share them with the class.

Your scribe will also need to submit your list to the D2L Drop Box labelled 3.1 Discovery.

Your submission for Project 3.1 Discovery stage will be assessed using the following rubric:

<table>
<thead>
<tr>
<th>D2L Grade Book Category</th>
<th>Advanced 8 pts.</th>
<th>Proficient 5 pts.</th>
<th>Minimal 3 pts.</th>
<th>Developing 1 pt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1 Problem Identification Ensuring CoLT members Participation</td>
<td>The selected problems are multi-faceted and evidencing the efforts of all members of the CoLT cooperated in the question development.</td>
<td>The selected problems are of sufficient complexity evidencing the efforts of all members of the CoLT cooperated in the question development.</td>
<td>The selected problems are marginally complex but is not sufficient to evidence the efforts of all members of the CoLT cooperated in the question development.</td>
<td>The selected problems are simplistic and did not provide sufficient evidence of efforts of every member to of the CoLT cooperated in the question development.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D2L Grade Book Category</th>
<th>Advanced 8 pts.</th>
<th>Proficient 5 pts.</th>
<th>Minimal 3 pts.</th>
<th>Developing 1 pt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.2 Problem Identification Timeliness of the selected problem</td>
<td>All of the selected problems are ones for which a simplistic answer is not available and has been identified in multiple sources as one about which there is a need for “Please Mrs. Moore. Please, tell us more!”</td>
<td>Most of the selected problems are ones for which there does not exist a simplistic answer and most require a need for “Please Mrs. Moore. Please, tell us more!”</td>
<td>Most of the selected problems are ones for which there is a simplistic answer; however, a few do demonstrate a need for “Please Mrs. Moore. Please, tell us more!”</td>
<td>All of the selected problems are one for which there is a simplistic answer and not in need of a close reading of the book or of a need to ask “Please Mrs. Moore. Please, tell us more!”</td>
</tr>
</tbody>
</table>

Revised_032014

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1 The word(s) in BOLD reflect differences from the proficient category.
Adapted from:
Problem 3.2.1 Prolog

“A problem well put is half solved”

John Dewey

Identifying problems for exploration are easy—identifying problems with significance—problems that will expand your understanding of what it required of a teacher is harder—much harder! But putting them in a form that will motivate you to explore more and in depth is the hardest task of all and that is now your task!

Your CoLT prepared as set of questions you wanted to ask Elaine. Some of them look easy to solve and it is tempting to select one of them—simple problem, simple solution, less work, and more time to do what you want to do. Makes sense? Sure…well maybe. There is a downside to selecting a simple question—take a look at the rubric associated with this part of the PBL case problem.

What you want is a problem that has a viable solution, but therein lies a conundrum and it was best stated by William Bruce Cameron: “However, not everything that can be counted counts, and not everything that counts can be counted.”¹ Simply what Mr. Cameron was saying a problem that is a simple problem with an obvious answer may not be worthy of investigation. What is important is your CoLT identify a problem of sufficient complexity, vagueness, and interest to the CoLT to sustain your attention until you are ready to present your solution in PBL State 4.

Deliverable for PBL Stage 3.2.1 Prolog

You will submit as evidence of your CoLT completing stage 3.2.1 a problem not to exceed fifty (50) words in length identifying a problem based on one or more incidents found in Elaine’s Circle.

Your scribe will also need to submit your list to the D2L Drop Box labelled 3.2.1 Prolog

¹ Contrary to the attribution of part of this quote by Bob Katz to Albert Einstein on page 219 of Elaine’s Circle the Quote Investigator in a posting dated May 26, 2010, “believes that the preponderance of currently available information indicates that William Bruce Cameron combined two phrases to create the adage. He also seems to have coined at least one of the two phrases that were combined. In addition, current evidence suggests that the full two-part adage was created after the death of Einstein.” Available at http://quoteinvestigator.com/2010/05/26/everything-counts-einstein/
Your submission for Project 3.2.1 *Discovery* stage will be assessed using the following rubric:

<table>
<thead>
<tr>
<th>D2L Grade Book Category 3.2.1 Problem Identification</th>
<th>Levels of Achievement</th>
<th>Advanced 8 pts.</th>
<th>Proficient 5 pts.</th>
<th>Minimal 3 pts.</th>
<th>Developing 1 pt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring CoLT members Participation and problem complexity</td>
<td>The selected problem(s) are <strong>multi-faceted</strong> and evidencing the efforts of all members of the CoLT cooperated in the question selection &amp; development.</td>
<td>The selected problem(s) are of sufficient complexity evidencing the efforts of all members of the CoLT cooperated in the question selection &amp; development.</td>
<td>The selected problem(s) are <strong>marginally</strong> complex but is not sufficient to evidence the efforts of all members of the CoLT cooperated in the question selection &amp; development.</td>
<td>The selected problem(s) are <strong>simplistic</strong> and did not provide sufficient evidence of efforts of every member to of the CoLT cooperated in the question selection &amp; development.</td>
<td></td>
</tr>
</tbody>
</table>

**Introduction 3.2.2**

Elaine had two ironclad rules for Circle Time: anyone could say whatever he or she wanted, so long as it had some connection to learning and nobody was allowed to criticize or scorn another’s remarks.

*Katz, B. (2005), Elaine’s Circle, p. 27.*

“An idea is a connection” and you and your CoLT in this stage are “looking for connections... [seeking] a new perspective...” (Gallup Management Journal). In this stage you are brainstorming (refer to pages 16 and 18-21 in your CoLT Handbook for more information); you are generating more possibilities and possible solutions to your problem(s). “During [ideation] all judgment is suspended, [your CoLT] is encouraged to go for quantity of ideas, not quality, spontaneously build on one another’s ideas, and push the boundaries of the imagination...even wild, crazy, audacious ideas are welcome. In fact, the motto for divergent thinking is, “Everything is possible!” All ideas are equally embraced and recorded...there really is no such thing as a bad idea. The goal is to simply achieve the largest creative yield of ideas and new connections possible” (Smartstorming).

Your CoLT will submit a list of ideas associated with possible solutions for your problem(s). This may include subtopics, related terms, ideas where information might be found, etc. Simply, anything the members of your CoLT think might help you reach a consensus solution for your problem(s).

**Deliverable for Stage 3.2.3 Ideation**

You will submit to your CoLT 3.2.2 Drop Box as evidence of completing the *Ideation* phase the list of items generated by your CoLT during the *Ideation* stage.

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2 The word(s) in BOLD reflect differences from the proficient category.
Your submission for Project 3.2.2 Ideation stage will be assessed using following rubric:

<table>
<thead>
<tr>
<th>D2L Grade Book Category 3.2.2</th>
<th>Levels of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced 8 pts.</td>
<td>Proficient 5 pts.</td>
</tr>
<tr>
<td>Minimal 3 pts.</td>
<td>Developing 1 pt.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results of Ideation Stage</th>
<th>Levels of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The list of ideas, terms, subtopics, etc. generated during the CoLT’s Ideation is varied, provides evidence of divergent thinking and thinking outside-of-the-box about the problem.</td>
<td>The list of ideas, terms, subtopics, etc. generated during the CoLT’s Ideation is varied and provides evidence of divergent thinking about the problem.</td>
</tr>
<tr>
<td>The list of ideas, terms, subtopics, etc. generated during the CoLT’s Ideation is varied and provides <strong>minimal</strong> evidence of divergent thinking about the problem.</td>
<td>The list of ideas, terms, subtopics, etc. generated during the CoLT’s Ideation is homogeneous and provides <strong>little or no</strong> evidence of divergent thinking about the problem.</td>
</tr>
</tbody>
</table>

Revised 03/2014

Adapted from:
Smartstorming (2010). The power of divergent and convergent thinking: Guide your group’s thinking process to new heights of productivity. Available at: http://smartstorming-blog.com/tag/ideation-techniques/
Introduction

Investigation may be described as “any task that requires, or would benefit from, factual information or opinions you do not already have” (George, 2008, p. 15) that will help in solving the PBL problem. This is probably the most challenging of the sections and as such it has an emotional component. This part of the PBL process requires not only for you and your CoLT to act and think but also deal with uncertainty (George, 2008). It is this last part of the research process that causes the most trouble. It requires you to work the “often complex process of discovering sources related to your [problem], evaluating your finds in light of your own ideas, and — often, but not always — repeating or adding [to Step 2] as your focus sharpens” (George, 2008, p. 23).

Elaine probably had this in mind when she thought about her class at the start of the school year:

“So she never knew how a class would develop. The start of each school year was like the beginning of a river rafting trip. She knew little about the water ahead except the general direction of it (flowing past the necessary curriculum checkpoints) and where it eventually emptied out (early June, and matriculation to the next grade level). The river could get rough. There could be interludes of tranquility. But there would always, always be surprises”

(Katz, B., 2005, p. 51)

During this stage you and your CoLT will experience disappointment, frustration, pleasure, joy, comedy, and maybe even some tranquility, but be assured there will be surprises. It is how you handle the surprises that will determine the degree of success in this stage. One of the surprises is going to be disagreements between members of your CoLT. You should be prepared for this as this is largest task you have attempted without scaffolding from your instructor. If this does happen you might want to think about implementing some ground, if you haven’t already done so (reference page 38 in your PBL handbook for some suggestions). If you have trouble locating resources stop at the Reference Desk (it is on the left side the lobby of the Walker Library). If you come up against a totally insurmountable problem you might check and see if your instructor will help—you might be surprised!
**Deliverable 3.3: Investigation**

You will submit as evidence of completing the *Investigation* phase a list of resources generated by your CoLT during this stage that have the potential of being used in answering your PBL problem. The list will need to be organized alphabetical by author’s last name. You must an accepted citation format (I would suggest APA, but if you feel more comfortable with MLA you may use it). The importance is your reference list be consistent in form.

Your scribe will need to submit your list to the **D2L Drop Box labelled 3.3 Investigation**.

Your submission for Project 3.3 Investigation stage will be assessed using the following rubric:

<table>
<thead>
<tr>
<th>D2L Grade Book Category (3.3.1): Access Resources I</th>
<th>Advanced 18 pts.</th>
<th>Proficient 15 pts.</th>
<th>Minimal 10 pts.</th>
<th>Developing 5 pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and access information resources, such as library databases, collections, Web sites, and/or conducts interviews appropriate to the PBL question.</td>
<td><strong>Selects and accesses various</strong> discipline-specific resources for the field or research topic; <strong>develops and applies various effective search strategies</strong> using keywords, synonyms, and subject searches.</td>
<td>Selects and accesses various quality resources for the field or research topic; develops and applies search strategies using keywords, synonyms and subject searches.</td>
<td>Selects and accesses general resources appropriate for the field or research topic; develops and applies search strategies using basic keywords and synonyms.</td>
<td>Selects and accesses general resources; develops and applies search strategies using basic keywords.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D2L Grade Book Category (3.3.2): Quality of References</th>
<th>Advanced 18 pts.</th>
<th>Proficient 15 pts.</th>
<th>Minimal 10 pts.</th>
<th>Developing 5 pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizes and uses appropriate and credible information/data to support the purpose of the project.</td>
<td><strong>References are primarily peer-reviewed professional journals or other approved sources</strong> (e.g., government documents, agency manuals, interviews...). <strong>The reader is confident</strong> the information and ideas can be trusted.</td>
<td>Although most of the references are professionally legitimate, a few are questionable (e.g., trade books, internet sources, interviews, popular magazines, etc.). The reader is uncertain of the reliability of some of the sources.</td>
<td>Many of the references are from sources that are not peer-reviewed and have uncertain reliability. The quality and accuracy of much of the material presented may be questioned.</td>
<td>All but one or two of the references are from sources that are not peer-reviewed or are of uncertain reliability. The quality and accuracy of much of the material presented is questionable as they have not been peer-reviewed.</td>
</tr>
</tbody>
</table>

Revised: 032014
Adapted from:

1 Text appearing in **BOLD** indicates a difference between that level and the PROFICIENT level.
Introduction

Several times during the day, Elaine had the students take a seat, on a log or a rock or the ground, open their notebooks to a blank page, and do a three-minute...fast write. "About something you've seen or heard or smelled or thought today," she explained. She wanted them to master the habit of noticing and recording their observations, like a naturalist would. Later, back in class, she would have them refer to these notes in order to write a poem or story or essay.

Katz, B. (2005), p. 72

“Any experienced interviewer or researcher will tell you making sense of what you talked about, wrote in your field notes, or what you have read or what you have observed is the hardest part of making meaning and then harmonizing it with your problem statement” (Means, 2011, p. 22).

Taking what you found and organizing it is difficult. One way to do this is to create a storyboard. First, locate a wall, whiteboard, chalkboard—just some large space on which you can organize your thoughts. Write the major topics that came out of the ideation stage you have used to organize your possible problem solution (these may have also occurred during the investigation stage) around which you can organize support for a possible answer to your problem. Put these on a PostIt® note1 and put them on the wall. Next put the information you found in your investigation stage that supports or explains these points also on PostIt® notes. Repeat this process until you have all the evidence you think supports that portion of your problem solution. Repeat this with each topic and the evidence you plan on using to support it.

Now, the hard part. Look at your wall—are there PostIt® notes that don’t fit under a subtopic? Would they better fit under another subtopic? If so, move the PostIt® note. If they don’t fit anywhere take them down, but don’t discard them—you may find a place for them later. Arrange and rearrange the PostIt® notes under your main topics until when you read a topic and then the PostIt® notes under it, what is displayed make sense and supports your problem solution. This is going to take time, but it is well worth it for what you have done is prepare an initial draft of your problem solution2.

The final part of this stage is your problem solution. Whatever format it takes, be certain that it meets the criteria found in the rubric for the Interpretation stage.

---

1 If you need PostIt® notes have your Cadger see Dr. Means—he has a supply.
2 Take a picture of your wall (it might be best if you take a separate one of each topic). You can use this to assist in preparing your problem solution as evidence of completing this stage.
Deliverable 3.4 Interpretation

You will submit as evidence of completing the Interpretation stage some form of documentation of having expended some form of effort as a CoLT in organizing the information from the Investigation stage into a form for the Learning as Conversation stage. This may take the form of a narrative describing what you did, a photograph, video display, or some other “thing” that proves this stage was the result of a collaboration amongst the member of you CoLT and not the work of a sub-committee of the CoLT.

Your scribe will also need to submit evidence of your problem solution to the D2L Drop Box labelled 3.4 Interpretation.

Your submission for the Project 3.4 Interpretation stage will be assessed using the following rubric:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D2L Grade Book Category</td>
<td>Thinking, Communicating, and organizing</td>
<td>Demonstrates in-depth understanding and insight into the issue(s) under discussion, through careful analysis and reflection. Ideas are developed and expressed fully and clearly, using many appropriate examples, reasons, details, or explanations. Examines the issue from three or more perspectives.</td>
<td>Demonstrates a general understanding of the topic. Ideas are generally expressed clearly through adequate use of examples, reasons, details, or explanations. Examines the issues from more than one perspective.</td>
<td>Demonstrates some understanding of the topic, but with limited analysis and reflection. Ideas are not expressed clearly and examples, reasons, details, and explanations are lacking. Examines the issue from a single perspective.</td>
</tr>
</tbody>
</table>

Revised: 042014
Adapted from:

3 Text appearing in **BOLD** indicates a difference between that level and the PROFICIENT level.
Introduction

“As Mrs. Moore had explained at the very start of the school year, learning was something we do our entire life. It is what makes us who we are. If we stop learning we call that …”


During this stage you will organize what you developed in the Interpretation Stage into some coherent whole. The media you use is not important. It can be a paper or a multimedia presentation. What is important is the content. You must present a defensible solution to your problem—a problem solution supported by documentation and unless the documentation comes from a peer-reviewed journal or book¹ you will need to be sure you have *triangulated* the information from other sources. Finally you will probably want to refer to the *Learning AS Conversation* section of your CoLT Handbook (pages 45-46) to ensure you have not forgotten anything when you are preparing the solution to your problem.

If you have done a good job all that may be needed for this stage is a check to make sure you have incorporated any suggestions made by your colleagues following your presentation as well as anything your CoLT thought important that may have been omitted or might add to the quality of your case problem solution.

Your scribe will need to submit your presentation to the D2L Drop Box labelled 3.5 Learning as Conversation.

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¹ You may assume if a book is published by a reputable or nationally recognized publisher it has been peer reviewed. If you are not sure about a publisher’s reputation check with your instructor.
Your submission for the Project 3.5 *Learning AS Conversation* stage will be assessed using the following rubric:

<table>
<thead>
<tr>
<th><strong>Levels of Achievement</strong></th>
<th><strong>D2L Grade Book Category</strong></th>
<th>Advanced 15 pts.</th>
<th>Proficient 10 pts.</th>
<th>Minimal 7 pts.</th>
<th>Developing 2 pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing about knowing (metacognition) is a skill that needs to be developed if one is to be a reflective professional</td>
<td>3.5.1 What did YOU learn?</td>
<td>The presentation used appropriate methodology to link evidence developed to the consensus problem decision, and is logically presented and fully and appropriately analyzed. The CoLT members developed appropriate arguments in support of their consensus problem decision.</td>
<td>The presentation logically organized the information gathered as evidence and make good connections among ideas; although the pertinence of information may not be explicitly linked to the purpose of the project or the information may not be fully and appropriately analyzed.</td>
<td>The CoLT’s consensus problem decision may be inadequately presented, incompletely executed, or inappropriate to the purpose of the consensus problem.</td>
<td>The CoLT needs to work on communicating more effectively the results of their consensus problem decision. The presentation lacked appropriate transitions and connections between the body, conclusions, and the identified problem.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Levels of Achievement</strong></th>
<th><strong>D2L Grade Book Category</strong></th>
<th>Advanced 8 pts.</th>
<th>Proficient 5 pts.</th>
<th>Minimal 10 pts.</th>
<th>Developing 5 pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced presentation of relevant and legitimate information that clearly supports a plausible solution to the CoLT’s problem, shows a thoughtful, in-depth analysis of the problem, and provides important insights to the problem’s significance.</td>
<td>3.5.2 Content</td>
<td>Information provided in the problem solution is reasonable, there is evidence of an analysis of the CoLT's problem solution, and provides some insights to the problem’s significance.</td>
<td>Information provided in the problem solution supports a likely solution to the CoLT's problem; however, there is little support for the proposed problem solution. The analysis of the problem solution is superficial and the problem solution provides few insights as to be importance of the problem.</td>
<td>Information provided in the problem solution does not directly support a likely solution to the CoLT's problem, there is no support for the proposed problem solution, the analysis of the problem solution is hasty and the problem solution is lacking in insight as to the importance of the problem.</td>
<td></td>
</tr>
</tbody>
</table>

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2 Metacognition is used “to regulate one's own cognition, to maximize one's potential to think, learn…Metacognition refers to a level of thinking that involves active control over the process of thinking that is used in learning situations. Planning the way to approach a learning task, monitoring comprehension, and evaluating the progress towards the completion of a task: these are skills that are metacognitive in their nature…Strategies for promoting metacognition include self-questioning (e.g. "What do I already know about this topic? How have I solved problems like this before?")", thinking aloud while performing a task, and making graphic representations (e.g. concept maps, flow charts, semantic webs) of one's thoughts and knowledge” (Wikipedia, 2011).
### Levels of Achievement

<table>
<thead>
<tr>
<th>D2L Grade Book Category 3.5.3: Synthesis</th>
<th>Advanced 15 pts.</th>
<th>Proficient 10 pts.</th>
<th>Minimal 7 pts.</th>
<th>Developing 2 pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CoLT problem solution clearly shows evidence of comprehension and interpretation. The CoLT problem solution effectively combines several aspects to create something new, fresh, and original. Specifics are effectively used to illustrate the problem solution.</td>
<td>The CoLT problem solution shows evidence of comprehension and interpretation. The problem solution clearly combines several aspects to create something new and original. Specifics, not generalities, were used to support the problem solution.</td>
<td>The CoLT problem solution shows minimal evidence of comprehension and interpretation. The problem solution relies on generalities to support its main idea. The problem solution begins to make connections between ideas, but it is hard to see their own involvement with the problem solution.</td>
<td>The CoLT problem solution statements are listed and tend to be vague. The problem solution does not make connections between the ideas in the problem solution and there is little or no evidence that an attempt has been made to make any attempt to make these connections.</td>
<td></td>
</tr>
</tbody>
</table>

Revised: 032014

Adapted from:

Rubrics Adapted from: