

Appendix A:

Video Checklist

Video Checklist

Interaction	1	2	3	4	5	6
<ul style="list-style-type: none"> • Start time • end time 						
I. Pattern						
• w/ group						
• w/1 student						
• w/whole class						
II. Promoting CT						
• promote reflection/ metacognition or opportunity for inquiry						
• questions to verify thinking						
• promote/verify reading & attention						
• promoting something else? (specify what)						
III. Type of Interaction						
• telling/lecturing						
• questioning						
• feedback						
• other						
IV. Character of Interaction						
• watching						
• managing						
• directing						
• guiding						

Appendix B:
Semi-Structured Interview Protocols for
Ms. Murray and Ms. Collins

Protocol for Initial Interview with Ms. Collins & Ms. Murray

- Warm up questions to get the teacher talking and help me understand their goals and the bigger picture:
 - Please tell me a little about the classes that use the Classroom, Inc. simulation.
 - Why did you choose to use the simulations? Why this simulation specifically?
 - What kinds of things do you want your students to learn from working with the simulations?
- Probing about the teacher's beliefs and attitudes
 - How would you describe yourself as a teacher?
 - What factor or factors do you feel affect students' learning the most?
 - What is most important in helping your students reach the goals you have set for them?
- Probing about how the teacher perceives her role
 - When your students are working with the CRI simulations, what sorts of things do you do? Why do you do these things?
 - What sorts of things do you do to tie the simulation into the students' lives and other activities?
 - To you, what does "coaching" mean?
 - How comfortable are you with coaching?
- Questions about strategies
 - Do you read any professional magazines or journals? Which ones? How often? Why do/don't you read them/it?
 - Have you ever participated in a peer group? Do you think there is any benefit in talking with your peers about the simulations? (What kinds of benefits?)
- Questions about professional development
 - What kinds of professional development activities have you been involved in in recent years? (What were they like? What were they for?)
 - Did you adopt the program/curriculum (whatever you were learning about)? Why/why not?

Protocol for Final Interview with Ms. Collins and Ms. Murray

- What do you feel the kids have improved at the most while using the simulation? Where do they need the most work? How do you plan on proceeding?
- What do you feel best about in your own teaching with the simulations so far? What area(s) would you most like to improve?
- How would you describe my role while I have been here? Have I done anything that has impacted your teaching? What could I have done to be more helpful?
- What is your impression of our peer group? Is this something you would like to continue to be involved in? Has it been helpful? What would make it more successful?
- Think about a classroom where learning is taking place – get a mental image of that room in your mind:
 - Describe what the students are doing?
 - What is the teacher doing to support the students?
 - What things are going on that help you to know that learning is happening?
- How do you think the simulation is going in general? Why do you say that?

Appendix C:
Reflective Questions for Interviews with
Ms. Murray and Ms. Collins

- Set 1 – Reflecting on a just-completed lesson
 - For the scenario you just finished, what were your primary goals for your students?
 - What knowledge did they already have that this built on?
 - How did this activity help move them toward your goal? (What new concepts were learned? What strategies were reinforced? What skills were developed?)
 - What difficulties or confusions related to the new concepts emerged from this activity?
 - How would you change this assignment? Why?

- Set 2 – Thinking about the teacher’s role (before or after the activity)
 - What will (did) you do to promote collaboration in this activity?
 - What will (did) you do to support the students’ in their problem solving?
 - What will (did) you present before the activity to introduce it to the students?
 - What are the goals of this introduction?
 - What are some questions you will (did) ask during the activity to monitor for understanding?
 - What are some questions you will (did) ask during the activity to push your students’ thinking further?

Appendix D:
Interview Protocols for
Mr. Crane and Mr. Deveneau

Initial Interview Protocol for Mr. Crane and Mr. Deveneau

- Probing about the teacher's beliefs and attitudes
 - Think about a classroom where learning is taking place – get a mental image of that room in your mind:
 - Describe what the students are doing?
 - What is the teacher doing to support the students?
 - What things are going on that help you to know that learning is happening?
 - Based on what you see and know to be true, how do you think students learn?

- Warm up questions to help me understand their goals and the bigger picture:
 - Please tell me a little about the classes that use the Classroom, Inc. simulation.
 - Why did you choose to use the simulations? Why this simulation specifically?
 - What kinds of things do you want your students to learn from working with the simulations?
 - How does the simulation fit into your general curriculum?

- Probing about how the teacher perceives her role in the simulations
 - When your students are working with the CRI simulations, what sorts of things do you do? Why do you do these things?
 - What sorts of things do you do to tie the simulation into the students' lives and other activities?
 - To you, what does “coaching” or “facilitating” mean?
 - How comfortable are you with coaching?

- Questions about strategies
 - Do you read any professional magazines or journals? Which ones? How often? Why do/don't you read it/them?
 - Have you ever participated in a peer group? Do you think there is any benefit in talking with your peers about the simulations? (What kinds of benefits?)

- Questions about professional development
 - What kinds of professional development activities have you been involved in in recent years? (What were they like, what were they for?)

- Did you adopt the program/curriculum whatever you were learning about?
Why/why not?

Final Interview Protocol for Mr. Crane

- What is your overall goal for your students? And think about it in finishing this sentence: I feel like a success if my students leave my class at the end of the year being able to or knowing...?
- How do you envision for yourself as a teacher? What kind of teacher do you want to be?
- What are your goals in working with Community Clinic?
- What do you think your students have improved at the most while using the simulation?
- Where do you think the students need the most work?
- What do you feel best about in your own teaching with the simulation so far?
- What would you most like to improve about your role as the teacher *in The Community Clinic*?
- What is your impression of our peer group?
 - What would make it more successful in your eyes?
 - What would make it better?
 - Are there things that you think I could have done that would have made it better?
- If you had total control over your curriculum would you want to use this simulation again?

Appendix E:
Interview Protocol for
Mr. Gabel

- What is the poverty level in the school? How many languages are spoken? What are the average test scores like for the school? How does this magnet compare to the rest of the school in these areas?
- Why did you adopt Classroom, Inc. simulations? What are the benefits and drawbacks to using them?
 - What do you want the students to get from using the simulations?
 - What do you want the teachers to get from using the simulations?
 - How do you decide who will team teach using the simulations?
 - What support would be offered to the CRI teachers if I weren't here?
- Envision the perfect learning environment
 - What are the kids doing in that environment?
 - What are the teachers doing in that environment?
 - How do you know learning is happening?
- What are the big goals for students in the magnet? (I feel like we have been successful if the students leave this school knowing or being able to...?)
- Describe your vision of the ideal working relationship for a school – how will teachers interact? Will there be team teaching? Peer coaching?
- What makes a good teacher?
- What kinds of things help teachers get there?

Appendix F:
Framework for
Proximal Goal Development

Developing Proximal Goals

1. What is your goal? Why?

- What does it mean to achieve this goal?
- What does it look like when it's happening?
- What does meeting the goal involve? (What has to happen for the goal to be met?)

2. Why aren't the students doing this already?

- Can't? Why?
- Won't? Why?

3. What kinds of things might get the students to the goal?

(brainstorm list of different things that may work – then look over them to develop a coherent approach*)

4. What can the teacher do to support these activities?

5. Reflect on how the strategy is working and adjust as necessary.

- Are the students improving in the area you are focusing on? If not, why?
- What other things might work to help them improve?
- What else can you do to support the students in reaching the goal?

*If you can't decide on a coherent approach, try to identify the first thing you can do to address the goal. Once that has worked, walk through these questions again to determine the next step.

Appendix G:
Lists of Proximal Goals
for Therese Collins

First List of Proximal Goals for Therese Collins

Big goal:

Create a coherent learning environment in which the students act as self-directed, reflective learners and the teacher becomes a cognitive coach.

Definitions:

Coherent learning environment – work on the simulation and the work that supports it is coherent and ties into the standard curriculum in some logical and apparent way.

Self-directed: students take responsibility for their own work and keep themselves on task

Reflective: the students are thoughtful about what they are doing and can answer questions that require them to examine their processes as well as their decisions and rationales. Moving in the direction of metacognition

Cognitive coach: the teacher supports student learning by modeling thoughtful behavior and her own thinking processes. She asks the student questions in order to understand how they are thinking and to push their thinking a step beyond where they are. She also uses these techniques to help students understand misconceptions and confusion. The cognitive coach provides the students with stimulating activities that allow them to flourish as thinkers, yet take responsibility for their own learning.

Proximal Goals:

Focus: student behavior

1. Use the computer as a privilege that the students need to earn. They enjoy doing the scenarios – we can use this to help hold students in control.
2. Explain the plan for the day each day before the students start using their machines. They should be told the basic plan for the day as well as any important information they might need to effectively complete the day's assignments. (Today we will.... You will.....). This doesn't need to include any specifics about the scenario, but might. Students should not be allowed to touch the machines until they have listened to the day's plans.
3. Prepare reflection questions that are ready right away when the students finish their scenarios. These may be on the board or on a sheet of paper. (Don't let students leave their task and cause disruptions.)
4. Combine numbers 1 & 2 so that students are introduced to what they are supposed to be reflecting on from the beginning (a more focused approach to completing the scenarios.)

5. Build questions that are more complex and which tie more tightly to the scenario so that students have to start answering them while they are working on the scenario and continue to work on them once they finish the scenario.

Focus: Reflection as a promotion of metacognition

1. Ask reflection questions
2. Develop questions that require students to expand their thinking beyond what happened (such as what happened next, why did x happen, how could we prevent this before, etc.)
3. Expand reflection questions to include questions that have students start to trace their thought processes

Focus: Promoting a more coherent curriculum

1. Make links between the simulation and the curriculum explicit. (Ex. The paper into paper scenario is like our penny harvest because...)
2. Create/find activities that allow students to include thinking and information into other coursework or real lives. (eg. Other thinking problems, learning about how to recycle, making recycled paper, etc.)
3. Reflect on the activities and determine their success/failure. Make necessary changes.
4. Present activities to the collegial group for feedback.

Focus: Becoming a cognitive coach

1. Ask students “Why?” questions (Why did you choose that, why is this a certain way, why can’t you do that....) while they are working on the simulation
2. Ask students why questions in their reflections?
3. Ask students to explain complex relationships (eg., why should we have a daycare center – how is it good for business? How might it hurt business?)
4. Always require the students to provide rationales for their decisions.
5. Play devil’s advocate, when necessary, to challenge students to be more clear in explaining their answers or to be clearer in their rationales.
6. Model your thinking process on harder problems. (I think this because of x, y, and z. It can’t be that because of c.)

Second Set of Proximal Goals for Therese Collins:

Goal: We want students to read for understanding when they are using the simulations.

What does this mean?

- Students will read the materials presented to them in a way that allows them to use the information they have gathered to make a thoughtful decision.
- Students will comprehend all of the issues outlined in the scenario
- Students will monitor their own understandings and will consult appropriate resources when they do not understand information or the situation provided in the scenario.

What does it involve?

- Students must monitor their own thinking and understanding to know whether or not they truly understand
- Students must read the information

What does it look like when it's happening?

- Students are engaged
- They are discussing their understandings
- They are discussing the situation
- They can explain any aspect of what's going on

Brainstorming:

What kinds of things might help improve students reading for understanding:

Things kids can do	Things teachers can do
<ul style="list-style-type: none"> - read what's on the screen - ask themselves if they understand each word - ask each other what words mean - define the problem within their team - generate questions based on the information they are finding and answer the questions as they find appropriate information - list information as they find it. - Visit each resource to be sure they are finding all relevant information to understand the problem 	<ul style="list-style-type: none"> - remind students to read what's on the screen - explain tot the students why it is important to read for understanding (why do we need to read carefully? What do we do if we don't understand? Why is it so important?) - Ask students questions as they work on the scenario that monitor whether or not the students are reading carefully (Ask for details. Ask how they know certain things. Ask what they know so far, ask why they are looking at something, ask why that something is important.) - Ask questions that demonstrate whether or not the students are reading (What is the situation? What do we know? What do we need to know?) - Hold whole-class discussion after a couple minutes to see what information students have found and what relevance they think it has on the problem) - Identify problematic words or concepts ahead of time and hold class discussions about what the words/concepts mean. Especially if they can be related to things in students' everyday lives.

Setting subgoals (proximal goals):

- Teachers take primary responsibility for getting students to read
 - Require note taking (May need to stop during the scenario and help guide them in what to write down.)
 - Ask questions about the scenario (What is going on? What information have you found?)
 - Teachers hold whole-class discussions requiring students to present information
 - Teacher requires students to take notes and list resources visited during the scenario
 - Students reflect on their decision and determine what they could do to improve

- Teachers and students share responsibility
 - Students generate questions as they work
 - Students answer their own questions as they work
 - Teacher reminds students to look up words they do not know
 - Teachers hold whole-class conversations in which students have to explain **why** the information they have found is relevant
 - Teacher asks each team questions as they work to be sure they are reading (Fact-based and consequence/relevance questions)
 - Continue to require note-taking

- Students become responsible for their reading
 - Students look up any unfamiliar words or concepts on their own
 - Students evaluate information and take notes as appropriate
 - Teachers ask students about the relevance of information and expect them to understand larger-context issues associated with it
 - Students can reflect on which pieces of information were most important and can coherently discuss how they decided between pieces of information when information conflicts.

A plan for moving between the steps:

Work on the parts of the step where you are. Start with top group – as students start showing signs of understanding, shift to the next section, but do it subtly. For instance: You ask a group about something they read. They can tell you the information, perhaps they refer to their notes, and generally demonstrate that reading has occurred. Before walking away from that group, ask a question from the next group – why does this information matter? How does the information fit together? How do you decide which trade-offs to go with? It's just another question to the group, but it pulls them into that next level. Ideally, when the kids get used to this, you could walk up to a group and ask, 'what's going on here?' and they will not only give you the facts, but draw a coherent image of the situation. An example might be the Scenario 6 situation. In Phase 1, the kids would say, 'we have to fill orders. The person who runs the machine is out. The mayor wants her paper sooner.' At phase 2, the answer might be, 'the person who runs the paper machine is out, so we have to do the scheduling. We looked at the orders and found out one was late already. And, the mayor wants her paper earlier. Now we need to figure out what to do.' At Phase 3, the kids would go into further explanation, for instance: 'The person who runs the paper machine is sick, so we need to schedule the paper runs. One of the orders was already late and we want to keep the customer, so we want to get that one done right away. Then, the mayor called and wanted hers early, but if we do hers early, someone else's will be late. So, we gotta figure out how to

do it.' Obviously, a lot of pushing and questioning needs to take place to help the students learn to put everything together. But, it's all little steps.