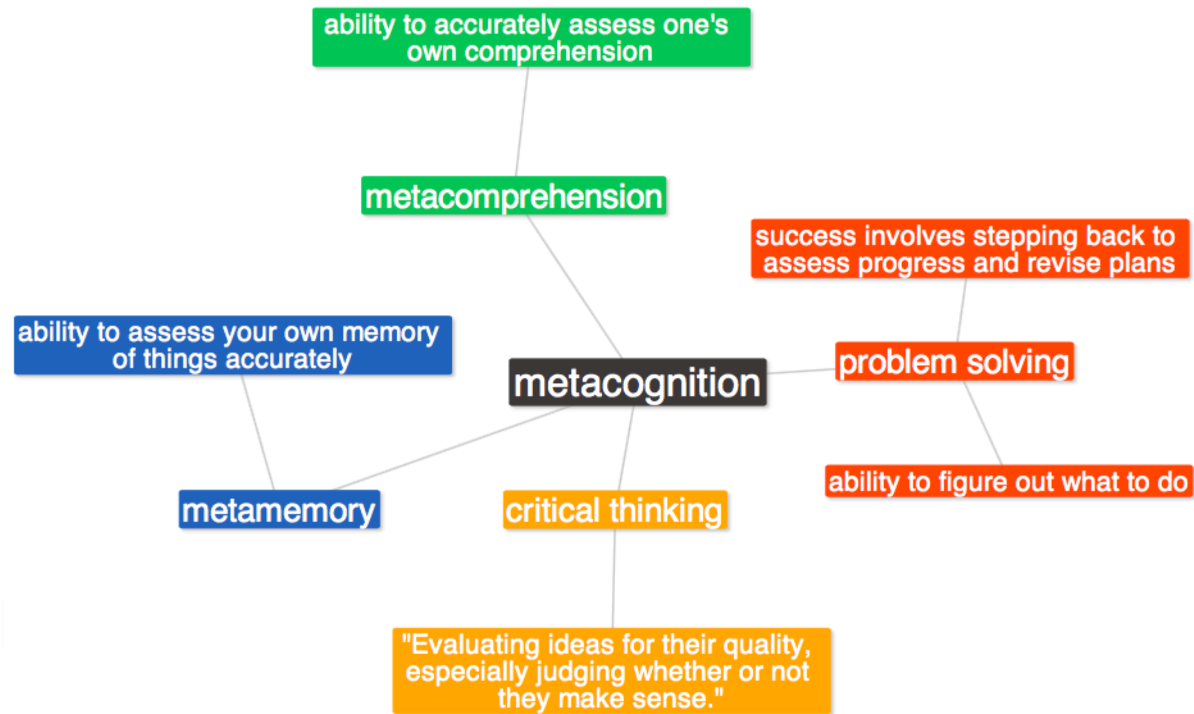
What is metacognition?



Metacognitive Strategies That Are Teachable in the Classroom

Metacognitive strategies	Explanation of teaching strategies
Monitoring thinking processes	Teachers have to model self-monitoring of thinking processes to assist students in developing their own thinking processes (Gourgey, 1998). For instance, teachers might perform a task and reflect on it aloud so students can observe the process.
Self-selecting metacognitive strategies	Teachers assist students in learning how to select their own metacognitive strategies. Students who self-select strategies are more successful than those who adopt teacher- imposed strategies.
Internalizing self-monitoring techniques	Teacher uses scaffolding techniques which initially offers support then gradually reduces the support as students learn how to self- monitor.
Analyzing and simplifying problems	Teacher uses explicit instruction to teach students how to analyze and simplify problems.
Developing higher order questions.	Teachers train students to ask higher order questions rather than those that have only one answer.
Developing working memory	Teachers assist students in the automation of lower-level functions

Metacognitive Writing Activities

Draw your writing process

1. Think of the last formal writing project you worked on. It could be an article, a grant, a syllabi, a research proposal… but not something like an email.

2. Determine the steps that went into writing the finished product. The steps may have been linear, recursive, or something all your own.

3. Using either two full pages in your daybook, a piece of legal-sized paper, or even a Post-it easel sheet of paper and the arts and crafts materials, draw your writing process. It could be a timeline, a road, a specific image… whatever makes since to you. You can use pictures, words, and any other materials that will help convey the details of your process.

4. Have fun and look forward to sharing and seeing other's! ☺

Think-Pair-Share:

Pair up with someone you have not worked with yet to share your process picture.

Be sure to discuss and take some brief notes on the following:

- Which genre were you describing?
- Briefly explain the steps/pieces of your process.
- Why did you depict them in this manner?
- What strikes as interesting you about your partner's product? How does it compare to yours?
- Help each other determine and then discuss what may be missing or left out.

Afterwards, you will have the opportunity to share interesting observations about your process, or your partners, with the whole group.

Writing Timeline

1. Take about four minutes. Think back over your life about who you have been as a writer. Think of all the writing you have done from childhood to adulthood. Brainstorm as many events as you can where writing played a role—push yourself—see if you can come up with 8 to 10 or more events. Let your mind drift to writing you did as a small child, the writing you did in school or out of school, assignments that you did that helped you or derailed you as a writer, any sharing that you did of your writing, people who influenced you or got in your way, anything that profoundly affected you as a writer. The events can be positive or negative.

2. Take about 3 minutes and select out at least five of these events (but you can have more) that were most important in forming you as the writer you are today. You can check them off or circle them or list them on a separate page of your daybook.

3. Take about 20 minutes and portray the five or more events creatively as a time-line. You can draw, cut out pictures from magazines, use construction paper or just a daybook page. Use symbols and words. You can even think 3-dimensionally. Whatever you decide, you should graphically represent the events.

Reflection in Daybook

- What did you discover about yourself as a writer?
- Who, if anyone, affected you as a writer in childhood? What does this mean for who you are as a writer now?
- Who most influenced who you are as a writer now? How did this person (these persons) affect you?
- What made your best writing experience your best or your worst your worst?
- Look over your timeline and determine your favorite environment for writing. What materials do you need? When do you write? What conditions help you do your writing?
- What genres do you like to write?
- How do you get started writing?
- How do you know when you are finished writing?
- Who are your audiences?
- Do you revise? How? When?
- Do you edit your work? How? When?
- Read back over your reflections and look back at your timeline. What generalizations or discoveries can you make that might apply to other writers?

Share your timeline and what struck you in your reflections with 1 or 2 partners.

Writer's Memo / Writer's Reflection

All writers "luck up" once in a while, do a little something special in their writing that's unexpected or that has unexpected results with readers. But for the most part, writers work hard at drafting and revision, and each change seems part of a slow and arduous process of figuring out where to go, what to do, what to say. "Good" writers can also, then, talk about what they've done, taking responsibility for the choices they have made, articulating the reasons for those choices, recognizing the effects those choices may have on certain readers.

For the Writer's Memo, I want you to demonstrate your abilities as that second type of writer. If we spend two weeks (or more, sometimes) inventing information, drafting possible versions of a text, responding to each other, revising our texts, etc., then we should be able to talk about the processes we went through to get to this finished draft. To that end, please draft a memo to me, as teacher-evaluator, to help me see your particular processes and what vision you have for this text (that I might have a context in which to read). Below is a template you can use for your memo:

Student Name
Course # & Section
Teacher Name
Date

Writer's Memo

Paragraph #1: What was the assignment for which you wrote this project? Trace the evolution of this project. When did you decide on this topic? What topics did you reject in favor of this one? How did your topic evolve from what you knew at first to what you know now? (Other comment relevant to topic evolution)

Paragraph #2: Describe the process you used to write the project. Do you think the process that you used was effective? Why or why not? Include the specific revisions you've made to the project. What revision suggestions did you get? from whom? Which did you choose to use? Why? Which did you reject? Why? Where in the project did you make these changes? What effects do these choices have on your project/your readers? Why?

Paragraph #3: What aspects of your writing in the project are effective and why do you think they are effective? Please be specific: For example, rather than saying "I used good examples," identify one or two examples that you used and explain why these examples are good ones.

Paragraph #4: What do you think could be improved in your written project and how could it be improved? Again, please be specific.

Paragraph #5: What do you think could be improved in your written project and how could it be improved? Again, please be specific.

Paragraph #6: Purpose/Audience/Publication. Explain in one sentence what the purpose of your project is: are you trying to argue something? persuade a reader about something? tell as story to illustrate a point about the world? explore pertinent issues? etc . . . Then, tell me who your *primary* audience is (those you most want to write to) and why you chose them. Be sure to include what sort of publication site your piece would be appropriate for (or toward which you're working even if you're not really ready yet for that space).

You should be able to produce this memo in one single-spaced page. If you can't say it in one page, cut cut cut. Sometimes, to write reflective/analytical pieces like these, we start by rambling, trying to figure out what we have to say. Fine, but go back and get rid of the "fluff." **I won't accept them if they're not typed and single-spaced in Times New Roman 12 pt. font.**

Critical Thinking Checklist

Identify what's important:

- What are the key ideas, problems, arguments, observations, findings, conclusions?
- What evidence is there?
- Distinguish critical from other types of writing (eg. descriptive); fact from opinion; bias from reason

Evaluate what you find:

- Explore the evidence - does it convince?
- What assumptions are being made and inferences drawn?
- Is there engagement with relevant, up to date research?
- How appropriate are the methods of investigation?
- Is there a consistent and logical line of reasoning?
- Do you agree with what's being said? Why?
- How is language being used (emotive, biased etc.)?

Look beyond what you're reading/hearing:

- What other viewpoints, interpretations and perspectives are there? What's the evidence for these? How do they compare?
- How does your prior knowledge and understanding relate to these ideas, findings, observations etc.?
- What are the implications of what you're reading/hearing?

Clarifying your point of view:

- Weigh the relevant research in the area
- Find effective reasons and evidence for your views
- Reach conclusions on the basis of your reasoning
- Illustrate your reasons with effective examples

Debriefing the Thinking Process

This is a closure activity that focuses discussion on student learning process(es). This debriefing encourages student development of awareness/mindfulness and practices strategies that can be applied to other learning situations.

1. The instructor guides students in review of the activity, gathering data on students' thinking processes and feelings.
2. The group classifies related ideas, identifying thinking strategies used.
3. The group evaluated their success, discarding inappropriate strategies, identifying valuable strategies for future use, and seeking promising alternatives.

Mapping an Essay

You are to create a "visual map" of the essay. Your map should:

- Designate symbolically the key parts of the essay being sure that you cover the argument from beginning to end.
- Introduce the "road" signs of the essay—that is, mark portions of the essay where you would want your traveler to dwell—places where the reader should stop and spend time.
- Place scenic emblems from the essay: items from the article that the reader should consider as important to her understanding of the essay.
- Interweave significant language from the essay within the map.
- Introduce **symbolically** the central terms of the essay.
- Have at least one piece of original text from the essay.

Your map should leave the viewer with

1. A clear sense of the article
2. The desire to read it.
3. A sense of direction.
4. A question to consider

Mapping Your Process – Book Study

Take some time to go back through the notes you've made in your book(s) and through the blogs you've posted and responded to.

1. Map out your process throughout the book study.

    a. What caused you to pose questions?
    b. What enabled you to answer questions?
    c. What caused you to develop or deepen in inquiry?
    d. What do you want to start doing in your teaching?
    e. What do you want to stop doing in your teaching?
    f. What caused you to argue and disagree?
    g. What caused you to agree and support?
    h. How has you thinking changed or been affected since you started the book study?
    i. What quotes or posts affected you most? Why?
    j. What themes or questions did you keep coming back to?

2. Share your map with a partner.

3. Take a picture or screen shot of your map and post it on the course website.

Exit Slip

Name: Date:

What did you find interesting or useful today? About writing, yourself as a writer/teacher/learner, about your needs/values/interests as a writer or teacher of writing?

What do you wish you had said/written? What lingering questions or concerns do you have? Is there anything else you would like us to know or consider?

What can we help or assist you with at this point? OR, what can we do differently in future workshops to offer participants a better experience?

Thank you!

Self-Evaluation

Guided self-evaluation experience can be introduced through individual conferences and checklists focusing on thinking processes. Gradually, self-evaluation can be applied more independently. As students recognize that learning activities in different disciplines are similar, they will begin to transfer learning strategies to new situations.

1. Define
   - a. Do you understand what the client is asking for?
   - b. Does the client understand what they are asking for?
   - c. Do you agree on the definition of terms?
   - d. Does the brief have any flaws?
   - e. Can you manage client expectations?

2. Research
   - a. Do you have a feedback from the previous project?
   - b. Do you have a statistical composition of the user group?
   - c. Do you understand the target market?
   - d. What is the education level of the user group?
   - e. What are the typical lifestyles of the user group?
   - f. What are the aspirations of the user group?

3. Ideate
   - a. Do you understand the brief?
   - b. Do you have sufficient research information?
   - c. Which methods will be used for idea generation?

4. Prototype
   - a. Do all potential solutions require prototyping?
   - b. What elements will the prototype test?
   - c. What functionality will the prototype have?

5. Select
   - a. Does the design meet the defined needs of the brief?
   - b. Does the design resonate with the target audience?
   - c. Can the design be produced to take into account?
   - d. Has the client signed off the Design?

6. Implement
   - a. Has the client signed off the designs?
   - b. Have printers or other productions professionals been booked?
   - c. Has the artwork been delivered to production professionals?
   - d. Has the job been proofed against the design?
   - e. Has the finished job been delivered?

7. Learn
   - a. Has dialogue with the client about the success of implementation taken place?
   - b. How successful was the implementation?
   - c. What feedback has the client received or commissioned?
   - d. What aspects can be improved?

Instructions for Classroom Dynamic Criteria Mapping

Dynamic Criteria Mapping (DCM) is a process by which you and your students can discover what you, the instructor, value in student work. DCM yields a more empirically grounded, more detailed, and more useful account of your values than traditional rubrics can. Here is a brief set of instructions you can try classroom DCM.

Collect data. Once you have handed back to your students two or three substantial sets of responses to their work, ask your students to gather together those responses and bring them to class on the appointed day. Ask students to prepare by noting specific comments you made, in response to specific aspects of their work, that show something(s) you value. Note: you show what you value *both* in those qualities whose presence you praise and in those qualities whose absence you lament.

On the appointed day, ask students to work together to generate a long list of qualities, features, or elements of their work that you have shown you value. Ask for illustrations or quotations that demonstrate each value they identify. Ask for passages or excerpts from their work that demonstrate those values.

Analyze the data. After you and your students have created a large "pile" of evaluative statements and indicators, it is time to analyze the data to create a representation ("map") of your values. The key is not to rush this process, to allow the generalizations to build slowly and organically, from the most specific level to the most general. The most straightforward way to begin is to ask yourselves whether certain statements of value belong together. You can then begin to compose clusters of values and figure out how they relate to other clusters. You might notice that some values are in tension with others, or lie along a spectrum. You might notice that some values are related sequentially or thematically.

It is very helpful to cross-reference the various criteria you are mapping with the specific examples of student work that demonstrate (or fail to demonstrate) the qualities you value. The examples and samples from students' projects help to clarify and inform the more abstract statements of what you value (criteria).

Create the map. In collaboration with your students, find a way to represent the final analysis of your data, the criteria you discovered that you value and the relationships among them. Such maps sometimes take the form of diagrams, charts, graphs, or other visual representations. Sometimes the best you can generate is a list of criteria, and even just a list is quite valuable.

Publish and use the map. Reproduce the map, and find ways to work it into your processes of assigning, responding to, and evaluating student work. Don't feel that every assignment needs to draw on every criterion on the map. In fact, no single project will invoke every criterion; in any given situation, only certain parts of the map will be relevant.

Revise the map. From time to time, repeat the process to update the map, add detail and nuance, and make it more accurate and useful.