Metacognitive Awareness Inventory (MAI) Scoring Guide

Directions – For each True on the MAI give yourself 1 point on the following charts. For each False, give yourself 0 points in the Score column. Total the score of each category and place in box.

KNOWLEDGE ABOUT COGNITION

DECLARATIVE KNOWLEDGE	DECLARATIVE KNOWLEDGE	SCORE
– The factual knowledge the learner needs before being able to process or use critical thinking related to the topic – Knowing *about, what, or that* – Knowledge of one's skills, intellectual resources, and abilities as a learner – Students can obtain knowledge through presentations, demonstrations, discussions **PROCEDURAL KNOWLEDGE** – The application of knowledge for the purposes of completing a procedure or process – Knowledge about *how* to implement learning procedures (e.g. strategies) – Requires students know the process as well as when to apply process in various situations – Students can obtain knowledge through discovery, cooperative learning, and problem solving **CONDITIONAL KNOWLEDGE** – The determination under what circumstances specific processes or skills should transfer – Knowledge about *when* and *why* to use learning procedures – Application of declarative and procedural knowledge with certain conditions presented – Students can obtain knowledge through simulation	5. I understand my intellectual strengths and weaknesses.	
	10. I know what kind of information is most important to learn.	
	12. I am good at organizing information.	
	16. I know what the teacher expects me to learn.	
	17. I am good at remembering information.	
	20. I have control over how well I learn.	
	32. I am a good judge of how well I understand something.	
	46. I learn more when I am interested in the topic.	
	TOTAL	8

PROCEDURAL KNOWLEDGE	SCORE	CONDITIONAL KNOWLEDGE	SCORE
3. I try to use strategies that have worked in the past.		15. I learn best when I know something about the topic.	
14. I have a specific purpose for each strategy I use.		18. I use different learning strategies depending on the situation.	
27. I am aware of what strategies I use when I study.		26. I can motivate myself to learn when I need to.	
33. I find myself using helpful learning strategies automatically.		29. I use my intellectual strengths to compensate for my weaknesses.	
		35. I know when each strategy I use will be most effective.	
TOTAL	4	TOTAL	5

Schraw, G. & Dennison, R.S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology, 19,* 460-475.

REGULATION OF COGNITION

		SCORE
PLANNING –Planning, goal setting, and allocating resources *prior* to learning **INFORMATION MANAGEMENT STRATEGIES** –Skills and strategy sequences used to process information more efficiently (e.g., organizing, elaborating, summarizing, selective focusing) **COMPREHENSION MONITORING** –Assessment of one's learning or strategy use **DEBUGGING STRATEGIES** –Strategies used to correct comprehension and performance errors **EVALUATION** –Analysis of performance and strategy effectiveness after a learning episode	**PLANNING** ✔	
	4. I pace myself while learning in order to have enough time.	
	6. I think about what I really need to learn before I begin a task.	
	8. I set specific goals before I begin a task.	
	22. I ask myself questions about the material before I begin.	
	23. I think of several ways to solve a problem and choose the best one.	
	42. I read instructions carefully before I begin a task.	
	45. I organize my time to best accomplish my goals.	
	TOTAL	7

INFORMATION MANAGEMENT STRATEGIES	SCORE	**COMPREHENSION MONITORING** ✔	SCORE
9. I slow down when I encounter important information.		1. I ask myself periodically if I am meeting my goals.	
13. I consciously focus my attention on important information.		2. I consider several alternatives to a problem before I answer.	
30. I focus on the meaning and significance of new information.		11. I ask myself if I have considered all options when solving a problem.	
31. I create my own examples to make information more meaningful.		21. I periodically review to help me understand important relationships.	
37. I draw pictures or diagrams to help me understand while learning.		28. I find myself analyzing the usefulness of strategies while I study.	
39. I try to translate new information into my own words.		34. I find myself pausing regularly to check my comprehension.	
41. I use the organizational structure of the text to help me learn		49. I ask myself questions about how well I am doing while learning something new.	
43. I ask myself if what I'm reading is related to what I already know.			
47. I try to break studying down into smaller steps.			
48. I focus on overall meaning rather than specifics.			
TOTAL	10	TOTAL	7

DEBUGGING STRATEGIES	SCORE	**EVALUATION**	SCORE
25. I ask others for help when I don't understand something.		7. I know how well I did once I finish a test.	
40. I change strategies when I fail to understand.		18. I ask myself if there was an easier way to do things after I finish a task.	
44. I re-evaluate my assumptions when I get confused.		24. I summarize what I've learned after I finish.	
51. I stop and go back over new information that is not clear.		36. I ask myself how well I accomplish my goals once I'm finished.	
52. I stop and reread when I get confused.		38. I ask myself if I have considered all options after I solve a problem.	
		49. I ask myself if I learned as much as I could have once I finish a task.	
TOTAL	5	TOTAL	6

PSY:1010:EWX: Learning About Learning
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Metacognitive Journal Project Description

The main project in this class asks you to keep a metacognitive journal of your studying and learning approximately six of the eight weeks that the class runs. As we discussed in lecture, metacognition is "thinking about thinking," and being able to reflect on your own learning, develop learning plans, and monitor your progress are all essential to academic success.

Remember that we discussed the key aspects of metacognitive regulation in class (Tanner, 2012):

Planning	Monitoring	Evaluating
What strategies will I use to study (e.g., study groups, problem sets, evaluating figures in a text, practice quizzes, and/or going to office hours or review sessions)?	*To what extent am I being systematic in my studying all of the material? Am I spending too much or too little time on some material compared to other material?*	*What did I do to prepare for an exam/quiz/assignment that worked well so that I do that the next time? (For example, reviewing notes, practice problems, etc.)*
How much time do I plan on studying? Over what period of time and for how long will I need to study for each class?	*Am I taking advantage of all of the support available (office hours, Supplemental Instruction, review sessions)?*	*What did I do to prepare that did not go well that I should change next time?*
Which aspects of the course material should I spend more or less time on based on my current understanding?	*Am I struggling with my motivation to study? If yes, do I remember why I am taking this course?*	*What questions/problems did I not answer correctly? Why? How did my answer compare with the correct answer?*
What is your goal (e.g., read and summarize Chapter 3 and define the key terms)?	*Have I clarified things I was confused about? How was I able to clarify those points?*	*What kinds of errors was I making? Were they similar? (For example, setting up problems or including too little detail in an essay.)*
Estimate how much time your task will take and compare your estimate to the actual time a task took.	*What am I still confused on and how am I going to get those points clarified?*	*What confusions do I have that I still need to clarify? How will I make that happen?*
	What was the easiest for me to learn? Why? What was the most challenging? Why?	

The easiest approach to keeping a metacognitive journal will be to make short entries *every day* in a separate notebook or a folder devoted to your journal. You should use the chart above as a guide for each entry: think about your thinking. Did you not study long enough (planning)? Did you find yourself reading passively and how did you change to active reading (monitoring)? Did you not spend enough time on some topics when studying for a quiz (planning & evaluating)?

At the end of the odd numbered modules, I will ask you for a summary of the previous week's studying, and you should refer to your daily entries to develop those summaries, which you will submit via ICON.

Because the first journal entry is a "warm up" to get you thinking about metacognition and your studying, this journal entry will focus you on *looking back* at your studying the previous week. All journal entries will ask you to present a summary of your metacognitive reflections that you journaled while learning class material the previous week. You should be asking yourself the questions in the chart above *each time* you are learning material for any of your classes. Once you are comfortable with those questions, you can add other questions or observations to your journal entries. All entries should focus on your studying and learning and make explicit connection to metacognition, comprehension, and other topics discussed in the course.

For your first journal entry, in addition to looking at the previous week's studying, please summarize your responses to the metacognition survey you completed. Specifically, what sections did you score high on? Which did you score low on? Use the Scoring Guide provided in class to indicate your areas of strength or those that need improvement in both knowledge of cognition and regulation of cognition.

Journal entry sample questions

For each journal entry after this first week, please look at your learning class material over the previous week and reflect and evaluate your learning with the questions in the above chart. You do not need to answer every question for every class, but instead summarize the material that was most difficult, easiest, found the most challenging, etc. In addition to this summary, please include the number of hours each week you spent learning course material.

Some additional questions that you could answer briefly in your journal include:
1. What class did you spend the most time studying for outside of class? Did the studying involve reading, problem sets, or something else? Describe what you were asked to do.
2. Did you attend office hours? Why? Did you get your questions answered?
3. What learning habits seemed to work the best? Which did not seem to work? What learning habit will you try to improve on next week?
4. Did you have assignments/quizzes/tests? How did you do?

Material from later class sessions

We will discuss many new topics as the course proceeds, including reading comprehension and how memory works. Material in these class sessions hopefully will be useful as you learn material for your courses. As we cover new topics, you should comment in your journal about which procedures you tried, which worked, and which did not.

Tanner KD (2012). Promoting student metacognition. *CBE—Life Sciences Education, 11*, 113-120. doi: 10.1187/cbe.12-03-0033