

Metacognition

CrCrTh655

Fall 2014

Tuesdays 6:45-8:30 (plus online lectures)

Wheatley 2-157

Contact Information

Instructor: Orin C. Davis, Ph.D.

Office Hours: Tuesdays in person, otherwise virtual, by appointment only

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Textbooks:

- 1) *Metacognition*, Dunlosky & Metcalfe (2009)
ISBN-10: 1412939720 | ISBN-13: 978-1412939720
- 2) *Using Reflection and Metacognition to Improve Student Learning*, Kaplan et al. (2013)
ISBN-10: 1579228259 | ISBN-13: 978-1579228255
- 3) MindTools e-book. This can be purchased and downloaded by going to <http://www.mindtools.com/store/product.php?productid=16134>.
- 4) Other readings as assigned (see [course wiki](#))

Course Description

This course considers various aspects of metacognition and how they influence behavior in children and adults. Topics include the individual's knowledge of his or her own cognition, self-awareness, the monitoring of conscious thought processes, inferences about unconscious thought processes, metacognition as a decision process, metacognitive strategies, the development of metacognition, and metacognition as a source of individual differences in children.

Course Overview

How do we engage in effective thinking, learning, and problem solving? Knowing this, how do we apply that understanding in our daily lives? This course entails thinking about thinking, or *metacognition*, and will examine the mechanisms of the construct in addition to considering applications in both personal life and a diverse array of fields.

Course Objectives

- Become familiar and conversant with the terminology surrounding metacognition
- Learn to develop your own metacognition and facilitate others' development
- Apply the principles of metacognition to a variety of fields

Communication

I will post course materials and announcements on the wiki (<http://crcrth655.wikispaces.umb.edu/>). You are required to check the wiki regularly (at least 2 times per week). *You are responsible for being cognizant of all course announcements.*

Online Lectures

Lectures (usually ~50 minutes) will be posted prior to class (excepting the first meeting), and you are expected to review these lectures before class starts. Links to lectures will be posted on the wiki.

School Cancellations

In the event of a school cancellation, we will resume class as usual on the next scheduled class day. Changes to the class schedule will be discussed during the first class meeting following the cancelled class.

Code of Conduct

The University's Student Code of Conduct (http://www.umb.edu/life_on_campus/policies/code) exists to maintain and protect an environment conducive to learning. It sets clear standards of respect for members of the University community and their property, as well as laying out the procedures for addressing unacceptable conduct. Students can expect faculty members and the Office of the Dean of Students to look after the welfare of the University community and, at the same time, to take an educational approach in which students violating the Code might learn from their mistakes and understand how their behavior affects others.

It is your own responsibility to understand and abide by UMass's [Student Code of Conduct](#), which includes the university's academic honesty policy. Please note that failing to observe this policy can result in severe penalties ranging from a 0 on an assignment, to failing the course, to being expelled from the university.

Accommodations

Sections 504 and the Americans with Disabilities Act of 1990 offer guidelines for curriculum modifications and adaptations for students with documented disabilities. If applicable, students may obtain adaptation recommendations from the Ross Center (287-7430). The student must present these recommendations to each professor within a reasonable period, preferably by the end of the Drop/Add period.

Course Requirements and Grading

Class participation. This is a course rooted in thoughtful discussion and consideration of the material. Ergo, it is incumbent upon you to be prepared *at all times*. Class participation is a major part of the course, and will require that you be active and engaged at each meeting, in addition to occasionally leading class discussions. You will be graded as a function of the depth, thoughtfulness, and activity of your participation. In order to do this, you need to be attentive, and to make substantive statements that go beyond merely [dis]agreeing and/or providing an example of your own experience. You need to explain your line of reasoning and show why the example is relevant. At minimum, constructive commentary requires analysis of the sources to defend a contention. Better is insightful performance that leads the listener to new insights and ideas through complex arguments that are rooted in the interplay and analysis of multiple sources. Often this requires a thesis, a discussion of the caveats to the thesis, and a resolution (synthesis) that indicates when the thesis does and does not apply. A good guideline is to make sure you have spoken substantively at least 2-3 times per class.

Reflection Journal. Each week, you should write a 1-2 page (single-space), 12-point, Times New Roman font paper that reflects upon what you learned that week. Submit your journal at the end of the semester. ***DUE 12/16 AT 12 PM EASTERN.***

MindTools. This course will also involve the use of several chapters from MindTools. You are required to do the exercises associated with the chapters and submit the final MindTools journal at the end of the semester. ***DUE 11/11 AT 12 PM EASTERN.***

Final Paper. The final will require you to design a strategy for improving both metacognition and learning in an applied context. Jump into the persona of a consultant or coach and choose a context in which you will advise on the development of metacognition and learning at any/all of the individual, group, and organizational levels. Making generous references to the course material as the underpinning, develop 5-7 solutions and write them up in a well-written paper (spelling, grammar, and good writing all count as part of your grade). As a guideline, the paper should be about 10-12 pages double-spaced, 12-point, Times New Roman font (20 pages max, and this is nearly impossible to do in less than 8). This assignment is suitable for inclusion in the Reflective Practitioner's Portfolio (<http://ctrpp.wikispaces.umb.edu/home>) ***DUE 12/16 AT 12 PM EASTERN.***

Overview of the Grading

Class participation:	30%
Reflection journal:	20%
MindTools:	20%
Final:	30%

How to Succeed in This Course

I would like very much for all of you to be successful in this course and to enjoy the learning experience. To that end, these are my recommendations for doing well in my course:

- Read the chapter before attending lecture. Lectures are prepared with the assumption that you have read the material assigned for that day. That is, *you are seeing this material for the second time.*
- Do not leave any assignment until the last minute. Reflections should be written throughout the semester, and likewise for the MindTools journal. Expect the final paper to take at least **20** hours to develop, write, and edit – start early!
- Email me if you have questions, but try to solve the issue yourself, first. When you email me, I will want to know how you have attempted to answer the question so that I may guide you more effectively. Remember, *try to solve it yourself*, and then email me if you cannot do so.
- Remember the following adage: prepare for at least twice as long as the schedule hours of the course. Since there are 3 hours of class per week in this course, you should devote about 6 additional hours per week to preparing for this course. That's less than an hour a day!
- Bring your passion! This is a very exciting subject, and I encourage you to dive in fully.

Course Calendar and Reading Assignments

9/9 – Overview of Metacognition

What does it mean to aware of our own thoughts and monitor them?

Serious Introductions: Provide your name, intended career path, what you hope to get out of this course, and a story about you at your best

Readings: Dunlosky & Metcalfe (D&M), Ch. 1-2

9/16 – Analyzing Metacognition

Through which methods have researchers developed an understanding of metacognition?

Readings: D&M Ch. 3

MindTools: Time Management

9/23 – Feeling Like We Know

How do we know what we know, and how do we know if we know?

Readings: D&M: Ch. 4, Epistemology (Stanford Encyclopedia of Philosophy):

<http://plato.stanford.edu/entries/epistemology/>

MindTools: Information Skills

9/30, 10/7 – Judgment

When we think we learned something or figured things out, are we correct? How do we know?

Readings: D&M Ch. 5, 6, 7

MindTools: Decision Making

10/14 – Accuracy

We think our memories are perfect, but they aren't – how not? How does/should that affect our trust in our own abilities?

Readings: D&M Ch. 8

MindTools: Communication Skills

10/21, 10/28 – Brainstorming and CPS

How do we engage in problem solving?

Readings: Treffinger & Isaksen (2005), Basadur et al. (2014), Segal (2004), Puccio et al. (2006) (on wiki)

MindTools: Problem Solving

MindTools: Practical Creativity

11/4 – Mindset

To what extent does our mindset enable or inhibit our capacity for personal growth?

Readings: Job et al. (In Press), Hong et al. (1999), Heyman & Dweck (1998) (on wiki)

Mindtools: Stress Management

NO CLASS 11/11

11/18 – Metacognition in Education (Part 1)

How do our metacognitive abilities develop, and how can we facilitate that process in children?

Readings: D&M Ch. 9-10, Flavell (on wiki)

11/25 – Metacognition in Education (Part 2)

How do we bring metacognition to the classroom?

Readings: Kaplan et al. Ch. 1-2

12/2 – Metacognition in Education (Part 3)

Applications of Metacognition I: How do we integrate reflective/metacognitive practices into applied sciences?

Readings: Kaplan et al. Ch. 3-5

12/9 – Metacognition in Education (Part 4)

Applications of Metacognition II: How does metacognition enable us to be more effective writers?

Readings: Kaplan et al. Ch. 6-7

Please remember to do evaluations: <http://bit.ly/CCTEval>

The syllabus is subject to change at any time with notice from the professor.

References

- Basadur, M., Gelade, G., & Basadur, T. (2014). Creative Problem-Solving Process Styles, Cognitive Work Demands, and Organizational Adaptability. *The Journal of Applied Behavioral Science*, 50(1), 80-115.
- Dunlosky, J., & Metcalfe, J. (2008). *Metacognition*. Thousand Oaks, CA: Sage Publications.
- Flavell, J.H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American psychologist*, 34(10), 906.
- Heyman, G. D., & Dweck, C. S. (1998). Children's thinking about traits: Implications for judgments of the self and others. *Child development*, 69(2), 391-403.
- Hong, Y. Y., Chiu, C. Y., Dweck, C. S., Lin, D. M. S., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology*, 77(3), 588.
- Job, V., Walton, G.M., Bernecker, K., & Dweck, C.S. (In Press). Implicit Theories About Willpower Predict Self-Regulation and Grades in Everyday Life. *Journal of Personality and Social Psychology*.
- Kaplan, M, Silver, N., LaVaque-Manty, D., & Meizlish, D. (Eds.). (2013). *Using Reflection and Metacognition to Improve Student Learning: Across the Disciplines, Across the Academy*. Sterling, VA: Stylus Publishing, LLC.
- Puccio, G.J., Firestien, R.L., Coyle, C., & Masucci, C. (2006). A review of the effectiveness of CPS training: A focus on workplace issues. *Creativity and Innovation Management*, 15(1), 19-33.
- Segal, E. (2004). Incubation in insight problem solving. *Creativity Research Journal*, 16, 141-148.
- Treffinger, D.J., & Isaksen, S.G. (2005). Creative Problem Solving: The history, development, and implications for gifted education and talent development. *Gifted Child Quarterly*, 49(4), 342-353.