

Fall 2013  
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Seminar in Learning, Cognition, and Development:  
Metacognition and Strategy Instruction

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**Learning Goals**

This course is designed to help you acquire the knowledge and skills shown in the following table. (The alignment of the learning goals with the overall learning goals of the LCD Master’s degree is also shown in the table. In addition, the table shows how each goal will be assessed.

LCD master’s program goals	Course goals	Assessment of course goals
1. Attain mastery of psychological constructs and theories relevant to learning, cognition and development.	1a. Gain knowledge of effective and ineffective strategies for learning and thinking. 1b. Gain knowledge of theories of learning strategies and strategy instruction. 1c. Gain knowledge of empirical results on metacognition, strategies, and strategy instruction.	In weekly discussions and problem discussions, you will to explain, evaluate, and apply research through the discussion questions that we pose in class. In your class paper, you will write about theories of and research on reasoning in ways that demonstrate your understanding and your abilities to evaluate and apply the research.
2. Appropriately apply these psychological constructs and theories to educational settings and related applied contexts.	2a. Develop skills of evaluating strategy use and strategy instruction. 2b. Develop skills of planning instruction to promote strategy development.	
3. Achieve skill in the critical evaluation of empirical evidence related to the psychology of education.	3a. Develop skills of learning to read and interpret empirical articles in the learning sciences	In the weekly discussions, you critique the studies you read both methodologically and theoretically. In your class paper, you will critically evaluate the key pieces of evidence that you review as part of your paper.
4. Attain competence in oral and written communication on topics within educational psychology.	4a. Develop skills of writing a literature review.	In the class paper, you will write a review of literature in an area of reasoning.

## Features of an Online Course

An online course differs from a traditional face-to-face course in a number of ways. Critically for this class:

- A. A strong emphasis on student-driven learning. The instructor role is of overall facilitator and coordinator.
- B. Work at your convenience. But it is important to be engaged most days during the week. This is quite different from a traditional course, in which it is perfectly fine to prepare the day before, go to class the day of class, and then not think about the course the other five days a week.
- C. Focus on asynchronous rather than synchronous activities. (This course will--officially--be all asynchronous.)
- D. Students have to do much more of the integrative work.

### Schedule

Schematically, the weekly schedule looks like this:

Su	M	T	W	Th	F	Sa
		Discussions for current week begin on Tuesday morning.	Continue contributing to discussions.			
		Begin reading the next week's readings.	Continue the next week's readings.	Continue the next week's readings.	Continue the next week's readings.	Continue the next week's readings.
Continue contributing to discussions.	Continue contributing to discussions.	The cycle repeats in the next week.				
Continue the next week's readings.	Complete the next week's readings.					
	Weekly assignment for current week's readings is due by midnight.					
	Submit one possible discussion question on each of the next week's readings.					

In this chart, "discussions" includes both (1) the main discussion threads about the papers we have read and (2) the discussion threads for the instructional problems. As you will see when you get online, these are in different sections of the week's web pages.

In addition to assignments within the weekly cycle, you will have four additional due dates (see also the Weekly Schedule):

- Monday, October 14. Submit a one-paragraph summary of proposal for class paper.
- Monday, November 4. Submit an outline of your proposed class paper.
- Wednesday, December 18. Submit class paper.

**IMPORTANT NOTES:**

1. Some requirements and procedures may be adjusted as we find out how things are working this semester.
2. There may be technological hiccups to work through the first few weeks.
3. Before reading more than two weeks ahead, check with me; I may decide to swap out some readings later in the semester with different readings, based on issues raised in our class discussions.

**Evaluation**

1. Discussions of weekly readings (including facilitation and summaries)	40%
2. Weekly online problems	15%
3. Weekly assignments	15%
4. Literature review	30%

All written assignments must be typed and submitted through the course website. Feedback will be provided on each assignment that you turn in.

1. Discussions of readings

Each week, you will discuss the readings. We will focus on:

- Clarifying understanding of the readings. For research articles, this includes the research question, what the method was, what the results were, and what the appropriate conclusions are.
- Discussing applications and implications of the ideas you have read about.

Each week, you should contribute at least 11 entries (including at least 4 responses to what classmates have written) to the discussion threads.

Evaluation will be based on the number of contributions as well as the quality of your contributions.

2. Weekly problems

In most weeks, I will post one or more problems as one discussion thread. You should each respond appropriately to this problem. This will typically involve at least 2 or 3 posts per problem.

### 3. Weekly assignments

These will include a variety of assignments that allow you to apply what you have learned to new problems, to reflect on the readings, to consider applications to your own life, or to reflect on collaborative activities, the course, and your role in discussions. These will typically be about a page in length, and you will write your answers in a Google doc that I will create for you.

The specific assignment will be posted each week.

### 4. Literature Review

1. Choose a topic (e.g., reading, writing, coping skills, prosocial skills, reasoning, etc.) that you would like to investigate.

2. Find 12 to 15 articles that report on strategies that are effective in this topic. At least half of the articles should report results from empirical studies.

3. Write a review paper that summarizes this research. Your paper should be single-spaced, 12-point Times Roman (or Times) font, 1-inch margins on all sides. The paper should be from 16 to 20 pages.

In the paper:

- You define and clarify a problem related to metacognition or strategy instruction.
- You summarize previous investigations to inform the reader of the current state of the problem.
- You identify gaps, contradictions, or flaws in the existing literature.
- You make clear what knowledge is needed to fill these gaps or resolve these contradictions.
- Your topic is sufficiently focused that you can address issues adequately.
- You should provide sound evidence to back up your claims.
- Your organization should be clear so that the reader can follow your argument easily.
- Your paper should be well written (including grammar and spelling) and well organized.
- You provide enough detail that any criticisms you make of the existing literature is comprehensible.

4. This paper should represent new work.

### **Policy on Academic Integrity**

The Policy on Academic Integrity will apply to written assignments. The Rutgers Policy on Academic Integrity is described in the GSNB and GSE catalogs. To paraphrase this policy, graduate students who commit plagiarism will be expelled from the university. Plagiarism includes failure to attribute key ideas to scholars who developed those ideas and failure to quote, with page numbers, any sentence, clause, or extended phrase that appears in another's work. I reserve the right to request that any or all students submit an electronic copy of either draft of your term paper to be checked for plagiarism.

## Netiquette

This is drawn from Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace*. San Francisco: Jossey-Bass, p. 101.

- a. Check the discussion frequently and respond appropriately and on the subject.
- b. Focus on one subject per message and use pertinent, informative, and not-too-long subject titles
- c. Capitalize words only to highlight a point or for titles. Capitalizing otherwise is generally viewed as SHOUTING.
- d. Be professional and careful with your online interaction
- e. Cite all quotes, references, and sources.
- f. When posting a long message, it is generally considered courteous to warn readers at the beginning of the message that is a lengthy post.
- g. It is inappropriate to forward someone else's message(s) without their permission.
- h. Use humor carefully. The absence of face-to-face cues can cause humor to be misinterpreted as criticism or flaming (angry, antagonistic criticism). Feel free to use emoticons such as :- ) or ;- ) to let others know that you're being humorous.

## Norms

This is an example of norms for participating in constructive controversies. Smith, K., Johnson, D. W., & Johnson, R. T. (1981). Can conflict be constructive? Controversy versus concurrence seeking in learning groups. *Journal of Educational Psychology*, 73, 651-663.

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| <ol style="list-style-type: none"><li>1. I am critical of ideas, not people.</li><li>2. I remember that we are all in this together.</li><li>3. I encourage everyone to participate.</li><li>4. I listen to everyone's ideas, even if I do not agree with them.</li><li>5. I restate what someone has said if it is not clear.</li><li>6. I try to understand both sides of the issue.</li><li>7. I first bring out all the ideas, then I put them together.</li></ol> |
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Although written for younger students, this is not a bad way for all of us to start. At the same time, however, let's add these norms:

Critical to the advance of knowledge are:

- a. Criticizing ideas, and having our ideas criticized by others
- b. Taking up criticism
- c. Exploring ideas without fully believing them, or without believing them at all.

## Schema for Analyzing Articles

1. Introduction
  - a. In the introduction/literature review section(s) of the article, has the author established the existence of a practical problem?
  - b. In the literature review of the article, has the author demonstrated the existence of a gap in current knowledge? If so, does the study actually address this gap?
2. Empirical results and conclusions
  - a. What are the dependent and independent variables?
  - b. What did the participants in each condition do?
  - c. What are the results? (Be sure you understand tables and figures).
  - d. What are the main conclusions that the author draws about this sample?
3. Measures

Are the measures reliable and valid?
4. Internal validity

Evaluate the conclusions in term of their internal validity. That is, are these conclusions valid for this sample?
5. External validity

To what extent can the empirical conclusions be generalized?

  - i. to other participants?
  - ii. to other measures?
  - iii. to other settings?
  - iv. to other tasks?

### Schedule by Week

Week	Specific Topic	READINGS and JOURNALS due before this week begins (before Tues)		Discussions starting on Tuesday	Other assignments
Week 1. 9/3 to 9/9	Introduction			Problems	Post self-introductions (instructions via email)
Week 2 9/10 to 9/16	SRL I	Chinn (2011a) Zimmerman (1998)	Winne & Hadwin (1998)	Readings Problems	
Week 3 9/17 to 9/23	Comprehension	Bereiter & Bird (1985)	Cromley et al. (2010) Strømsø & Bråten (2002)	Readings Problems	
Week 4 9/24 to 9/30	Writing	White & Bruning (2005) Graham (2006)	Hayes & Flower (1986)	Readings Problems	
Week 5 10/1 to 10/7	Reasoning	Wineburg (1991)	Nisbett et al. (2001) TBA	Readings Problems	
Week 6 10/8 to 10/14	Other strategies	Kirschner & van Merriënboer (2013)	Rogat & Linnenbrink-Garcia (2011) Dawes (1996)		
Week 7 10/15 to 10/21	General instruction	Collins, Brown, & Newman (1989)	Chinn (2011b)	Readings Problems	
Week 8 10/22 to 10/28	General programs	Guthrie et al. (2004)	Pressley et al. (2006)	Readings Problems	Oct. 29: Submit one-paragraph summary of proposal for class paper.
Week 9 10/29 to 11/4	Instruction focused on SRL	Cleary & Zimmerman (2004)	Kistner et al. (2010) Schunk & Zimmerman (2007)	Readings Problems	Nov. 5: Submit lesson or unit plan that you propose to analyze in the instructional analysis.
Week 10 11/5 to 11/11	General programs II	Harris et al. (2006)	McKeown et al. (2009)	Readings Problems	
Week 11 11/12 to 11/18	Groups	Barron (2003)	King (2002) Webb (2013)	Readings Problems	
Week 12 11/19 to 11/25	Goals & Assessment	Page-Voth & Graham (1999)	Wilson & Sloane (2000)	Readings Problems	
Week 13 12/1 to 12/7	Scaffolding	Britt & Aglinskias (2002)	Schwartz et al. (2012) TBA	Readings Problems	
Week 14 12/8 to 12/14	Discussions	Waggoner et al. (1995) Chinn et al. (2001)	TBA	Readings Problems	Dec. 12: Instructional analysis is due.
Week 15: 12/15-12/21		No readings or discussion; this is a week to complete your class paper.			Dec. 19: Class paper is due.

\*\* Note that beginning with Week 13, the schedule shifts back five days due to Thanksgiving, and the last three weeks will start on Sunday rather than on Tuesday.

## Bibliography

- Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 453-494). Hillsdale, NJ: Erlbaum.
- Chinn, C. A. (2011b). *Learning environments that promote self-regulated learning*. Unpublished manuscript.
- Chinn, C. A. (2011a). *Self-regulated learning and complex cognitive strategies*. Unpublished manuscript.
- Harris, K. R., Graham, S., & Mason, L. H. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy development with and without peer support. *American Educational Research Journal, 43*, 295-340.
- Waggoner, M. A., Chinn, C. A., Anderson, R. C., & Yi, H. (1995). Collaborative reasoning about stories. *Language Arts, 72*, 582-589.
- Chinn, C. A., Anderson, R. C., & Waggoner, M. A. (2001). Patterns of discourse in two kinds of literature discussion. *Reading Research Quarterly, 36*, 378-411.
- Reznitskaya, A., Anderson, R. C., McNurlen, B., Nguyen-Jahiel, K., Archodidou, A., & Kim, S.-y. (2001). Influence of oral discussion on written argument. *Discourse Processes, 32*, 155-175.
- McKeown, M. G., Beck, I. L., & Blake, R. G. K. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. *Reading Research Quarterly, 44*, 218-253.
- Barron, B. (2003). When smart groups fail. *Journal of the Learning Sciences, 12*, 307-359.
- Britt, M. A., & Aglinskas, C. (2002). Improving students' ability to identify and use source information. *Cognition and Instruction, 20*, 485-522.
- Schwartz, D. L., Chase, C. C., Opezzo, M. A., & Chin, D. B. (2011). Practicing versus inventing with contrasting cases: The effects of telling first on learning and transfer. *Journal of Educational Psychology, 103*, 759-775.
- Graham, S., Harris, K. R., & Mason, L. (2005). Improving the writing performance, knowledge, and self-efficacy of struggling young writers: The effects of self-regulated strategy development. *Contemporary Educational Psychology, 30*, 207-241.
- Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., et al. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology, 96*, 403-423.
- Page-Voth, V., & Graham, S. (1999). Effects of goal setting and strategy use on the writing performance and self-efficacy of students with writing and learning problems. *Journal of Educational Psychology, 91*, 230-240.

Wilson, M., & Sloane, K. (2000). From principles to practice: An embedded assessment system. *Applied Measurement in Education, 13*, 181-208.

Pressley, M., Gaskins, I. W., Solic, K., & Collins, S. (2006). A portrait of Benchmark School: How a school produces high achievement in students who previously failed. *Journal of Educational Psychology, 98*, 282-306.

Winne, P. H., & Hadwin, A. F. (1998). Studying as self-regulated learning. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Metacognition in educational theory and practice* (pp. 277–304). Hillsdale, NJ: Erlbaum.

Zimmerman, B. J. (1998). Academic studying and the development of personal skill: A self-regulatory perspective. *Educational Psychologist, 33*, 73-86.

Dawes, R. (1996). *House of cards: Psychology and psychotherapy built on myth*. New Haven: The Free Press.

Kirschner, P. A., & van Merriënboer, J. J. G. (2013). Do learners really know? Urban legends in education. *Educational Psychologist, 48*, xx-xx.

Kistner, S., Rakoczy, K., Otto, B., Dignath-van Ewijk, C., Buttner, G., & Klieme, E. (2010). Promotion of self-regulated learning in classrooms: investigating frequency, quality, and consequences for student performance. *Metacognition & Learning, 5*, 157-171.

Cleary, T. J., & Zimmerman, B. J. (2004). Self-regulation empowerment program: A school-based program to enhance self-regulated and self-motivated cycles of student learning. *Psychology in the Schools, 41*(5), 537-550.

Schunk, D. H., & Zimmerman, (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modeling. *Reading & Writing Quarterly, 23*, 7-25.

Stromso, H. I., & Braten, I. (2002). Norwegian law students' use of multiple sources while reading expository texts. *Reading Research Quarterly, 38*, 442-468. (Note: I have had to remove the diacritical marks in the authors' names because, very strangely, Firefox will not display this whole page unless I remove them!)

Bereiter, C., & Bird, M. (1985). Use of thinking aloud in identification and teaching of reading comprehension strategies. *Cognition and Instruction, 2*, 131-156.

Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review, 108*, 291-310.

Rogat, T. K., & Linnenbrink-Garcia, L. (2011). Socially shared regulation in collaborative groups: An analysis of the interplay between quality of social regulation and group processes. *Cognition and Instruction, 29*, 375-415.

Cromley, J. G., Snyder-Hogan, L. E., & Luciw-Dubas, U. A. (2010). Cognitive activities in complex science text and diagrams. *Contemporary Educational Psychology, 35*, 59-74.

White, M. J., & Bruning, R. (2005). Implicit writing beliefs and their relation to writing quality. *Contemporary Educational Psychology, 30*, 166-189.

Hayes, J. R., & Flower, L. S. (1986). Writing research and the writer. *American Psychologist, 41*, 1106-1113.

Graham, S. (2006). Writing. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (2nd ed., pp. 457-478). Mahwah, New Jersey: Erlbaum.

Webb, N. (2013). Information processing perspectives on collaborative learning. In C. E. Hmelo-Silver, C. A. Chinn, C. C. K. Chan, & A. M. O'Donnell (Eds.), *International handbook of collaborative learning* (pp. xx-xx). New York: Taylor & Francis.