

Psych 7845: Cognitive Development

3 Credit Hours

TR 12:35 – 02:05p

Psychology Bldg 217

<http://developmentalcognitivescience.org/lab/7845.html>

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M 3 – 4p

This course will review research findings from the study of cognitive development, particularly the development of thinking in the first decade of life. The goal of the class is to further our understanding of what is known about cognition in children, how changes in children's thinking occurs, and how knowledge about changes in children's thinking can be applied to improve children's well-being.

The fact that this is a relatively small class, rather than a large lecture, presents us with some opportunities and some risks. The opportunities are for people to express themselves actively on a regular basis, rather than sitting back and just taking in what a lecturer tells them. The risk is that with no one giving a two-hour lecture, the quality of the class depends at least as much on what you do as on what I do.

For this reason, we need some ground rules to help us meet our goals. First, everyone should attend each class meeting. (If you experience a true emergency, let me know beforehand that you won't be attending class.) Second, everyone is expected to actively participate in the discussion. This is essential if the class is to be a true seminar, rather than degenerating into a rotating lectureship. Third, everyone is expected to be at class on time.

Grades in the course will be based on class participation (30%), two take-home midterms (30%), and a take-home final (40%).

Class participation. Each of you will present and lead a discussion of two focus articles on a contemporary problem in cognitive development. The typical presentation is 15 minutes long and contains at least 5 substantive slides. Additionally, each of you should send discussion questions for each class to me and to the discussion leader *at least 24 hours prior to class*. The key criteria for my grading class participation will be high quality and reasonable quantity of contributions when you are not leading the discussion and posing important and stimulating questions and leading an interesting discussion when you are.

Midterms and final. The midterms and final will be based on the readings and the discussions. The midterms will include 5 short essay questions, each worth 20 points; the questions will be taken from the questions posed in the class, both by me and by you. The final exam will be similar to the midterm, but it will include 10 questions. Among these, 7 will be specific to the material after the midterm and 3 will be on material covered before the midterm. Due dates of midterms are indicated below.

Primary Text:

Siegler, R. S., & Alibali, M. W. (2005). *Children's Thinking (4th Edition)*. Saddle River, NJ: Prentice-Hall

Class Number	Class Date	Topic	Readings
		Core Issues in Cognitive	
1	11-Jan	Development	Siegler, R. S., & Alibali, M. W. (2005). Chapter 1.
2	16-Jan	Piaget's Theory	Siegler, R. S., & Alibali, M. W. (2005). Chapter 2.
		18-Jan	
3	23-Jan	Contemporary Theories	Piaget, J. (1964). Development and learning. In R. E. Ripple & N. Rockcastle (Eds.), <i>Piaget Rediscovered</i> (pp. 7 – 20).
		Genes and Neural	
4	25-Jan	Development	Siegler, R. S., & Alibali, M. W. (2005). Chapters 3 and 4.
		Johnson, M. H. (2005). Developmental cognitive neuroscience. Chapter 2. Building a brain.	
		Polderman, T. J. C., Benyamin, B., de Leeuw, C. A., Sullivan, P. F., van Bochoven, A., Visscher, P. M., & Posthuma, D. (2015). Meta-analysis of the heritability of human traits based on fifty years of twin studies. <i>Nature Genetics</i> , 47(7), 702–709. http://doi.org/10.1038/ng.3285	
5	30-Jan	Atypical Neural Development	Nelson, C. A., & McCleery, J. P. (2008). Use of event-related potentials in the study of typical and atypical development.
		Dennis, E. L., & Thompson, P. M. (2013). Typical and atypical brain development: a review of neuroimaging studies. <i>Dialogues in Clinical Neuroscience</i> , 15(3), 359–384.	
		Perceptual Development 1:	
6	1-Feb	Classic Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 5. Perceptual development
		Perceptual Development 2:	
7	6-Feb	Contemporary Problems	Spelke, E. S., Breinlinger, K., Macomber, J., & Jacobson, K. (1992). Origins of knowledge. <i>Psychological Review</i> , 99, 605-632.
		Bremner, J. G., Slater, A. M., & Johnson, S. P. (2015). Perception of Object Persistence: The Origins of Object Permanence in Infancy. <i>Child Development Perspectives</i> , 9(1), 7–13. http://doi.org/10.1111/cdep.12098	
		Wood JN, Wood SMW. 2016 The development of newborn object recognition in fast and slow visual worlds. <i>Proc. R. Soc. B</i> 283: 20160166. http://dx.doi.org/10.1098/rspb.2016.0166	
		Language Development 1:	
8	8-Feb	Classic Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 6.
		Language Development 2:	
9	13-Feb	Classic Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 6.
		Language Development 3:	
10	15-Feb	Contemporary Problems	MacWhinney, B. (1975). Rules, rote, and analogy in morphological formations by Hungarian children. <i>Journal of Child Language</i> , 65 -77.
		Saffran, J. R., Aslin, R. N., & Newport, E. L. (1996). Statistical learning by 8-month-old infants. <i>Science</i> , 274, 1926-1928.	
		Marcus, G. F., Vijayan, S., Bandi Rao, S., and Vishton, P. M. (1999). Rule-learning in seven-month-old infants. <i>Science</i> , 283, 77-80	
11	20-Feb	Midterm 1	
		Conceptual Development 1:	
12	22-Feb	Object Concepts	Siegler, R. S., & Alibali, M. W. (2005). Chapter 8.
		Sloutsky, V. S. (2015). Conceptual development. <i>Handbook in Child Psychology and Developmental Science</i> .	
		Conceptual Development 2:	
13	27-Feb	Space, Number, & Time	Siegler, R. S., & Alibali, M. W. (2005). Chapter 8.
		Conceptual Development 3:	
14	1-Mar	Causality	Siegler, R. S., & Alibali, M. W. (2005). Chapter 8.
		Learning and Memory 1:	
15	6-Mar	Classic Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 7.
		Learning and Memory 2:	
16	8-Mar	Classic Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 7.
		Learning and Memory 3:	
17	20-Mar	Contemporary Problems	Brainerd, C. J., Reyna, V. F., & Ceci, S. J. (2008). Developmental reversals in false memory: A review of data and theory. <i>Psychological bulletin</i> , 134(3), 343.
		Howe, M. L. (2008). What is false memory development the development of? Comment on Brainerd, Reyna, and Ceci (2008).	
		Ghetti, S. (2008). Processes underlying developmental reversals in false-memory formation: Comment on Brainerd, Reyna, and Ceci (2008).	
		Brainerd, C. J., Reyna, V. F., Ceci, S. J., & Holliday, R. E. (2008). Understanding developmental reversals in false memory: Reply to Ghetti (2008) and Howe (2008).	
18	22-Mar	Midterm 2	
		Social Cognition 1: Classic	
19	27-Mar	Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 9.
		Social Cognition 2:	
20	29-Mar	Contemporary Problems	Johnson, S. C. (2003). Detecting agents. <i>Philosophical transactions of the Royal Society</i> , 358, 549 - 559.
		Yamaguchi, M., Kuhlmeier, V., Wynn, K., and vanMarle, K. (2009). Continuity in social cognition from infancy to childhood. <i>Developmental Science</i> , 12, 746–752	
		Heyes, C. (2014). False belief in infancy: a fresh look. <i>Developmental Science</i> , 17(5), 647–659. http://doi.org/10.1111/desc.12148	
		Development of Reasoning 1:	
21	3-Apr	Classic Findings	Siegler, R. S., & Alibali, M. W. (2005). Chapter 10.
		Development of Reasoning 2:	
22	5-Apr	Contemporary Problems	Gentner, D. (1993). Why we're so smart. In D. Gentner and S. Goldin-Meadow (Eds.), <i>Language in mind: Advances in the study of language and thought</i> (pp. 195 – 235). Cambridge, MA: MIT Press.
		Bullock, M. J., & Opfer, J. E. (2009). What makes relational reasoning smart? Revisiting the perceptual-to-relational shift in the development of generalization. <i>Developmental Science</i> , 12, 114 – 122.	
		Badger, JR, & Shapiro, LR (2012). Evidence of a transition from perceptual to category induction in 3- to 9-year-old children. <i>Journal of Experimental Child Psychology</i> , 113, 131 - 146	
23	10-Apr	Intelligence	TBA
24	12-Apr	Academic Skills	Siegler, R. S., & Alibali, M. W. (2005). Chapter 11.
		Academic Skills:	
25	17-Apr	Contemporary Issues	Anderson, J. R., Reder, L. M., & Simon, H. A. (1996). Situated learning and education. <i>Education researcher</i>
		Greeno, J. G. (1997). On claims that answer the wrong question. <i>Education Researcher</i> .	
		Anderson, J. R., Reder, L. M., & Simon, H. A. (1997). Situative versus Cognitive Perspectives: Form Versus Substance.	
		Core Issues in Cognitive	
26	19-Apr	Development Revisited	
		26-Apr	Final Exam Due

Disability Services: Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and they should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (http://studentaffairs.osu.edu/info_for_students/csc.asp).