

Cognitive Development in Context PSYC 3281 - Spring 2026

Course Information

Day: Wednesdays
Time: 2:10-4:00 PM
Location: Lewisohn Hall 308A

Instructor Information

Name: Dr. Natalie Brito
Email: nhb2111@columbia.edu
Office: Uris 820
Office Hours: By Appointment

COURSE DESCRIPTION

This course will provide an overview of theories, methods, and research findings in the area of cognitive development with focus on individual differences in various domains, including language, memory, and social cognition. The course is designed around in-class discussion and critical analysis of core controversies within the field. The course is heavily discussion-based, with the aim of creating a dynamic class context for active learning. The three main emphases around which the course is structured include: (1) theoretical foundations and methodological approaches to cognition; (2) the course and process of cognitive development; and (3) contextual influences on cognitive processes (specifically, family, school, neighborhood, culture).

PREREQUISITES

This is a seminar course in the Psychology Department directed toward upper-level undergraduate students. Prerequisites include Science of Psychology (PSYC UN1001) and one other 2000-level psychology course. Students with other backgrounds, who think they have the appropriate preparation and motivation are asked to reach out to the instructor for permission to register.

COURSE OBJECTIVES

Students will be able to:

- **Understand** major theoretical approaches in cognitive development, and foster skills necessary to critically evaluate and synthesize theory and research in cognitive development. Students will come to appreciate the limitations of any single theory, and recognize that different theories provide different explanations for the same phenomena.
- **Describe** different methods that are used to study cognition and be able to evaluate, critique, and compare the methodological tools that might be most applicable to addressing questions about specific research questions.
- **Apply** the theories, methods, and findings of cognitive development to contemporary issues in the news or of societal importance. Students will be able to relate topics from class to everyday problems and real-world concerns that are relevant to social policy and educational practice.
- **Analyze and critically evaluate** the theories, research questions, methods, findings and take-home messages of assigned readings. Students will create and participate in critical dialogue with peers around the readings to generate possible next steps for the future of the field.
- **Promote** student's skills at the analysis and critique of major controversies in the field, through student-led discussions. Students will learn how to communicate research findings to non-academic audiences to help advance public understanding of psychological science.

These objectives will be achieved through engagement with readings and in-class discussions. Reading assignments will be based on theoretical writings and empirical papers on cognitive processes and the contextual/cultural settings of development. Discussions will elaborate on the strengths, limitations, and future directions in areas of theory and methodologies. Students will share their thoughts with one another, and critically analyze readings and generate next steps for future research.

COURSE READINGS

There is no textbook required for this course. Every week, students will be assigned 2-3 readings relevant to the topic of the week. Readings will comprise empirical articles, literature reviews, or commentaries. The readings are listed below and will be posted in PDF form on Canvas.

GRADING CRITERIA

Course Component	Assessment	Grading %	Deadlines
Reading Completion	Reading Response	20%	Submit by 8pm the day before the class for every class period. <i>Exception: You do not have to submit a reading response for Week 1 and before your assigned presentation</i>
Preparation and participation	Effective preparation and engagement	20%	Every class period
Student presentations	Paper Presentation	30%	During the assigned class period
Final Paper	Proposal	5%	Due Week 9
	Outline	5%	Due Week 12
	Final Paper	20%	Due the last day of reading period (May 7 th)

ASSIGNMENT DESCRIPTIONS

Pre-Course Survey. In the first class, students will be asked to fill out a pre-course survey that will contain questions about their educational background, courses they have taken in psychology and neuroscience, their familiarity with reading research articles, and their prior experience with research within the domain of cognitive development. This survey is ungraded and does not contribute to the student's final grade, however, it will help to ensure that the content, discussions, and assessments can be structured to reflect a range of perspectives and experiences being brought into this classroom.

Reading Response. Students will read the assigned articles and submit a short reading response to CourseWorks by 8pm the night before class. These are short (300-500 words) responses that should demonstrate a thorough reading and understanding of the week's papers. The goal of these reading responses is to help you keep current on course topics. The reading responses also help me to understand where students may have had difficulty with the readings and which topics students were most intrigued by – thereby helping to guide class discussions. Responses should be clearly written, with attention to grammar, spelling, etc. Once you write a draft, please read back through what you've written before submitting it to CourseWorks. The content and focus of your posts can vary quite widely:

- Ask a theoretical, empirical, or methodological question that came up during your readings
- Identify a connection between the current paper and a paper from a prior week
- Discuss an interesting finding and its implications
- Offer substantive critique of the paper's methods or interpretation of results

You will only submit 11 reading responses (you do not have to submit reading responses if you are presenting that class). However, you should still read all the papers assigned for that class period, including the one in your presentation (of course!).

As the goal of these assignments is to keep you up to speed and to help guide my teaching and our class discussions, the reading responses will be graded on a complete/incomplete basis. Each reading response will receive points based on these criteria:

- Full points - Completed by 8PM the night before class
- 50% - Completed after the deadline, but before class starts
- 0% - Incomplete as of the beginning of class

Preparation and Participation. As a seminar course, this class relies heavily on discussions. In the first class we will discuss what participation can look like and create community guidelines for discussion. To ensure that everyone is accountable for thoroughly engaging with the readings and presentations, your active participating during class will contribute to your final grade. There are different ways of participating and engaging constructively in classroom discussions. Effective participation and engagement could include:

- Asking insightful or clarifying questions
- Connecting readings from different weeks or readings from this course to another
- Drawing parallels and/or contrasts between findings from different readings
- Offering thoughtful critiques of the research methodology and/or interpretation and providing suggestions for how it might be improved
- Bringing in outside sources that contribute to the findings, or the way they are interpreted and applied
- Actively listening to classmates and responding to their ideas.

Participating is an essential component of this course and of your grade, and you are expected to attend and actively engage in each class. Unexcused absences will count against your participation grade. Your ungraded self-reflection completed during the middle of the semester will give you some feedback on how you are doing in the class in terms of your preparation and participation.

Student Presentations. You will present one of the readings during class, providing an overview of the paper and bring up points of discussion. I will give you feedback on your presentation before you present during class. The presentation should be around 20 minutes.

Final Paper. The final paper will be the primary written assessment for this class. The final paper will be approximately 8-10 double-spaced pages in length (excluding references) and will be on a topic of your choice. The paper should integrate and synthesize information from multiple weeks of class and must include an applied component (intervention, educational outreach, or policy proposal).

- Proposal: By week 9, you will be asked to submit a short paragraph about your intended topic for the final paper, with at least 3 relevant references. I will provide feedback on your proposal including suggestions for other sources you could use.
- Outline: By week 12, you will be asked to submit an outline of your final paper. Please include the key ideas/themes you plan to cover, section headings, timeline, and relevant references.
- Final Paper: The final paper is due on the last day of the reading period

COURSE SCHEDULE

Week	Topic	Assessments
January 19 th (Week 1)	Introduction: Foundational Theories	Pre-course survey (ungraded) No assigned reading or reading response due
January 26 th (Week 2)	Brain Development & Sensitive Periods	<ul style="list-style-type: none"> Submit reading response by 8pm on the night before the class (excluding the class period of your presentation) Come prepared to class and actively participate in discussions Present on an empirical research paper Complete a self-reflection on your participation by February 23rd (ungraded)
February 2 nd (Week 3)	Perception & Motor Development	
February 9 th (Week 4)	Attention	
February 16 th (Week 5)	Memory	
February 23 rd (Week 6)	Language I (Processing & Acquisition)	
March 2 nd (Week 7)	Language II (Social Context)	
March 9 th (Week 8)	Executive Function	
Midterm grades with feedback released		
March 16 th (Week 9)	<i>No Class – Spring Break</i>	<ul style="list-style-type: none"> Submit reading response by 8pm on the night before the class (excluding the class period of your presentation) Come prepared to class and actively participate in discussions Present on an empirical research paper Submit a proposal for the final paper by March 23rd Submit an outline for the final paper by April 13th
March 23 rd (Week 10)	Intelligence	
March 30 th (Week 11)	Social Cognition	
April 6 th (Week 12)	Culture & Cognition	
April 13 th (Week 13)	Cognitive Development & Policy	
April 20 th (Week 14)	Future of Cognitive Development	
April 27 th (Week 15)	Wrap Up!	
Each student will submit a final paper (8-10 pages) by the last day of the reading period (May 7 th)		

COURSE POLICIES

ATTENDANCE

Attendance is expected for every class – you cannot get full points for participation without attendance. In order to have an excuse absence (e.g., if you are sick or have a personal emergency), please email me at least 2 hours prior to the start of class.

ACCOMMODATIONS

Any student who needs an accommodation should make an appointment to see me as soon as possible, at least by the end of the second week of class. If you have not already done so, stop by the Office of Disability Services (ODS) on the 7th floor of Lerner Hall to register for support services. ODS often requires two weeks to process an application, so please contact them as soon as you can, preferably before the course begins. <https://www.health.columbia.edu/content/disability-services>

ACADEMIC SUPPORT SERVICES

Writing Center. If you need assistance with writing the final paper, please see <https://www.college.columbia.edu/core-curriculum/undergraduate-writing-program/writing-center>

Columbia Libraries. The Columbia Libraries can help all students find academic sources, or help with reference management. <https://library.columbia.edu/index.html>

AI POLICY

You can only learn from work you actually do. Unless otherwise stated, you should not use generative AI tools to create any part of an assignment in this course; every submission should be entirely your work.

ACADEMIC INTEGRITY

All members of an academic community have the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity. You are responsible for fully citing others' ideas in all of your research papers and projects, honest when taking exams, and only submit your own work and not that of another student. If you have questions or concerns regarding these expectations, I am happy to discuss further with you. If academic integrity has been violated, the student will receive a zero for that assignment and will be reported to the University. Detailed information on what constitutes a violation of academic integrity (along with examples) can be found in Columbia's Undergraduate Guide to Academic Integrity:

<https://www.college.columbia.edu/academics/academicintegrity>

COURSE READINGS

1/21	INTRODUCTION: FOUNDATIONAL THEORIES
1/28	BRAIN DEVELOPMENT & SENSITIVE PERIODS <u>Assigned Readings:</u>

	<ul style="list-style-type: none"> • Bick, J., & Nelson, C. (2017). Early experience and brain development. <i>Wiley Interdisciplinary Reviews: Cognitive Science</i> • Nketia, J., Amso, D., & Brito, N.H. (2021). Towards a more inclusive and equitable developmental cognitive neuroscience. <i>Developmental Cognitive Neuroscience</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> • Tooley, U.A., Bassett, D.S., & Mackey, A.P. (2021). Environmental influences on the pace of brain development. <i>Nature Reviews Neuroscience</i>.
2/4	<p>PERCEPTION & MOTOR DEVELOPMENT</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> • Franchak, J. M. (2020). The ecology of infants' perceptual-motor exploration. <i>Current opinion in psychology</i> • Karasik, L. B., & Robinson, S. R. (2022). Milestones or millstones: How standard assessments mask cultural variation and misinform policies aimed at early childhood development. <i>Policy Insights from the Behavioral and Brain Sciences</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> • Lewkowicz, D.J. & Ghazanfar, A.A. (2009). The emergence of multisensory systems through perceptual narrowing. <i>Trends in Cognitive Sciences</i> • Tamis-LeMonda, et al., (2008). When infants take mothers' advice: 18-month-olds integrate perceptual and social information to guide motor action. <i>Developmental Psychology</i>.
2/11	<p>ATTENTION</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> • Rosen, M.L., Meltzoff, A.N., Sheridan, M.A., & McLaughlin, K.A. (2019). Distinct aspects of the early environment contribute to associate memory, cued attention, and memory-guided attention: Implications for academic achievement. • Werchan, D., Brandes-Aitken, A., & Brito, N.H. (2022). Signal in the noise: Dimensions of predictability in the home auditory environment are associated with neurobehavioral measures of infant sustained attention. <i>Developmental Psychobiology</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> • Vedeckina, M., & Borgonovi, F. (2021). A review of evidence on the role of digital technology in shaping attention and cognitive control in children. <i>Frontiers in Psychology</i>
2/18	<p>MEMORY</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> • Riggins, T., Canada, K.L., & Botdorf, M. (2020). Empirical evidence supporting neural contributions to episodic memory development in early childhood: Implications for childhood amnesia. <i>Child Development Perspectives</i>

	<ul style="list-style-type: none"> Want, Q. (2021). Cultural pathways and outcomes of autobiographical memory development. <i>Child Development Perspectives</i> <p><u>Optional Readings:</u></p>
2/25	<p>LANGUAGE I (PROCESSING & ACQUISITION)</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Ford, A. L., Elmquist, M., Merbler, A. M., Kriese, A., Will, K. K., & McConnell, S. R. (2020). Toward an eco-behavioral model of early language development. <i>Early Childhood Research Quarterly</i> Ellwood-Lowe et al., (2020). What causes the word gap? Financial concerns may systematically suppress child-directed speech. <i>Working Paper Series – Center for Effective Global Action</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> Gardner-Neblett, N. & Iruka, I.U. (2015). Oral narrative skills: Explaining the language-emergent literacy link by race/ethnicity and SES. <i>Developmental Psychology</i>
3/4	<p>LANGUAGE II (SOCIAL CONTEXT)</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Lauro, J., Core, C., & Hoff, E. (2020). Explaining individual differences in trajectories of simultaneous bilingual development: Contributions of child and environmental factors. <i>Child Development</i> Kim et al., (2020). Bilingual language broker profiles and academic competence in Mexican-Origin Adolescents. <i>Developmental Psychology</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> Pierce, et al., (2015). Past experience shapes ongoing neural patterns for language. <i>Nature Communications</i>
3/11	<p>EXECUTIVE FUNCTION</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> McCoy, D.C. (2019). Measuring young children’s executive function and self-regulation in classrooms and other real-world settings. <i>Clinical Child and Family Psychology Review</i>. Miller-Cotto, D., Smith, L. V., Wang, A. H., & Ribner, A. D. (2022). Changing the conversation: A culturally responsive perspective on executive functions, minoritized children and their families. <i>Infant and Child Development</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> Diamond, A. (2013). Executive Functions. <i>Annual Review of Psychology</i>
3/18	No Class – Spring Break
3/25	

	<p>INTELLIGENCE</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Franklin, V.P. (2007). The Tests are Written for the Dogs: The Journal of Negro Education, African American Children, and the Intelligence Testing Movement in Historical Perspective. <i>Journal of Negro Education</i>. Turkheimer, E., Harden, K.P., & Nisbett, R.E. (2018). There's still no good reason to believe black-white IQ differences are due to genes. <i>Vox</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> Plomin, R., & Von Stumm, S. (2018). The new genetics of intelligence. <i>Nature Reviews Genetics</i>
4/1	<p>SOCIAL COGNITION</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Selcuk, B., Gonultas, S., & Ekerim-Akbulut, M. (2022). Development and use of theory of mind in social and cultural context. <i>Child Development Perspectives</i>. Cowell, J.M., Lee, K., Malcolm-Smith, S., Selcuk, B., Zhou, X., & Decety, J. (2017). The development of generosity and moral cognition across five cultures. <i>Developmental Science</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> Kärtner, J., Schuhmacher, N., & Torrén, M.G. (2020). Culture and early social-cognitive development. <i>Progress in Brain Research</i>
4/8	<p>CULTURE & COGNITION</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Neha, et al., (2020). The Role of Whānau (New Zealand Māori Families) for Māori Children's Early Learning. <i>Developmental Psychology</i> Espinás, D. R., & Fuchs, L. S. (2022). The effects of language instruction on math development. <i>Child Development Perspectives</i> <p><u>Optional Readings:</u></p> <ul style="list-style-type: none"> Vélez-Agosto, et al., (2017). Bronfenbrenner's Bioecological Theory Revision: Moving Culture from the Macro into the Micro. <i>Perspectives on Psychological Science</i>
4/15	<p>COGNITIVE DEVELOPMENT & POLICY</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Dinsmore, D.L., & Fryer, L.K. (2019). Developing Learners' Cognitive Strategies and the Motivation to Use Them: Rethinking Education Policy. <i>Policy Insights from the Behavioral and Brain Sciences</i>. Scott, L. & Brito, N.H. (2022). Supporting healthy brain and behavioral development during infancy. <i>Policy Insights from the Behavioral & Brain Sciences</i>

	<p><u>Optional:</u></p> <ul style="list-style-type: none"> • Spotify Podcast: The Kids' Table – Poverty and Social Policy with Dr. Jill Gandhi • Spotify Podcast: The Kids' Table – Early Childcare Policy with Dr. Sam Melvin
<p>4/22</p>	<p>FUTURE OF COGNITIVE DEVELOPMENT</p> <p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> • Witherspoon, et al., (2020). Hidden Populations: Uncovering the Developmental Experiences of Minoritized Populations Across Contexts. <i>Developmental Psychology</i> • Young, E. S., Frankenhuis, W. E., DelPriore, D. J., & Ellis, B. J. (2022). Hidden talents in context: Cognitive performance with abstract versus ecological stimuli among adversity-exposed youth. <i>Child development</i>. <p><u>Optional:</u></p> <ul style="list-style-type: none"> • DeJoseph, et al., (2024). The promise and pitfalls of a strength-based approach to child poverty and neurocognitive development: Implications for policy.
<p>4/29</p>	<p>WRAP UP</p>