

**University of Waterloo**  
**Department of Psychology**  
**PSYCH 320: Language Development**  
**Fall 2018**  
**Tuesday and Thursday 11:30-12:50, PAS 2083**

**Instructor and T.A. Information**

Instructor: Katherine White  
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Office Hours: Wednesday 9-11  
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T.A.	Serena McDiarmid	Emily Shiu
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Office Hours	Monday 1-2	Thursday 2-3

**Course Description**

You may not realize it, because you are already a language expert, but human language is incredibly complex. Yet somehow young children learn their native language(s) in just a few short years! How do they do this? In this class, we will consider the steps that children take along the path to learning language, including how they learn about speech sounds, words, sentences, and how to communicate effectively. We will explore factors within the child and his/her environment that make this possible. We will also consider different populations of learners who can provide insight into this remarkable process. In addition to presenting important issues in the field of language development, we will talk about a variety of methods that researchers use to investigate these questions.

**Course News**

It is your responsibility to check LEARN and your official uWaterloo email account regularly for announcements and course material.

**Required Text**

There will be no required textbook for this course. Required research articles and chapters from the list below will be available on the LEARN course website. If you would like further reading, copies of the previous course textbook, Language Development by Erika Hoff, are on reserve at Porter Library.

## Readings Available on LEARN

### General:

- [1] Fromkin & Rodman (1998). *What is language?* Chapter in An Introduction to Language.

### Early preferences and speech perception:

- [2] Werker, J. F. & Desjardins, R. N. (1995). Listening to speech in the 1<sup>st</sup> year of life: Experiential influences on phoneme perception. *Current Directions in Psychological Science*, 4, 76-81.
- [3] Werker, J. F., Pegg, J. E., & McLeod, P. J. (1994). A cross-language investigation of infant preference for infant-directed communication. *Infant Behavior and Development*, 17(3), 323-333.

### Early speech production:

- [4] Petitto, L. & Marentette, P. F. (1991). Babbling in the manual mode: Evidence for the ontogeny of language. *Science*, 251, 1493-1496.
- [5] Goldstein, M. H., & Schwade, J. A. (2008). Social feedback to infants' babbling facilitates rapid phonological learning. *Psychological Science*, 19(5), 515-523.

### Word learning – segmentation:

- [6] Saffran, J. R., Aslin, R. N., & Newport, E. L. (1996). Statistical learning by 8-month-old infants. *Science*, 274, 1926-1928.

### Word learning – meaning:

- [7] Bloom, P. & Markson, L., (1998). Capacities underlying word learning. *Trends in Cognitive Sciences*, 2, 67-73.
- [8] Yurovsky, D., Smith, L. B., & Yu, C. (2013). Statistical word learning at scale: The baby's view is better. *Developmental Science*, 16(6), 959-966.
- [9] Golinkoff, R. M. & Hirsh-Pasek, K. (2008). How toddlers begin to learn verbs. *Trends in Cognitive Sciences*, 12, 397-403.

### Individual and cultural differences in word learning:

- [10] Weisleder, A., & Fernald, A. (2013). Talking to children matters early language experience strengthens processing and builds vocabulary. *Psychological Science*, 24(11), 2143-2152.

- **[11]** Golinkoff, R., Can, S., Soderstrom, J., & Hirsh-Pasek, R. (2015). (Baby)Talk to Me: The Social Context of Infant-Directed Speech and Its Effects on Early Language Acquisition. *Psychological Science*, 24, 339-344.
- **[12]** Yoshida, H., & Smith, L. B. (2001). Early noun lexicons in English and Japanese. *Cognition*, 82(2), B63-B74.

#### **Grammar:**

- **[13]** Pinker, S. (1991). Rules of language. *Science*, 253, 530-535.
- **[14]** Tomasello, M. (2000). The item-based nature of children's early syntactic development. *Trends in Cognitive Sciences*, 4, 156-163.
- **[15]** Gertner, Y., Fisher, C., & Eisengart, J. (2006). Learning words and rules: Abstract knowledge of word order in early sentence comprehension. *Psychological Science*, 17(8), 684-691.

#### **Grammar and input:**

- **[16]** Huttenlocher, J., Vasilyeva, M., Cymerman, E., & Levine, S. (2002). Language input and child syntax. *Cognitive Psychology*, 45(3), 337-374.

#### **Communication:**

- **[17]** Rowe, M. L., Ozcaliskan, S., & Goldin-Meadow, S. (2008). Learning words by hand: Gesture's role in predicting language development. *First Language*, 28, 182-199.

#### **Other animals:**

- **[18]** Call, J. & Tomasello, M. (2008). Does the chimpanzee have a theory of mind? 30 years later. *Trends in Cognitive Sciences*, 12, 187-192.
- **[19]** Kaminski, J., Call, J. & Fischer, J. (2004). Word learning in a domestic dog: Evidence for "Fast mapping". *Science*, 304, 1682-1683.
- **[20]** Elowson, A. M., Snowdon, C. T. & Lazaro-Perea, C. (1998). 'Babbling' and social context in infant monkeys: parallels to human infants. *Trends in Cognitive Sciences*, 2, 31-37.

#### **Brain and critical periods:**

- **[21]** Hickok, G., Bellugi, U. & Klima, E. S. (1998). The neural organization of language: evidence from sign language aphasia. *Trends in Cognitive Sciences*, 2, 129-136.
- **[22]** Newport, E. L. (1990). Maturation constraints on language learning. *Cognitive Science*, 14, 11-28.

**Critical periods and special populations:**

- [23] Senghas, A. & Coppola, M. (2001). Children creating language: How Nicaraguan Sign Language Acquired a Spatial Grammar. *Psychological Science*, 12, 323-328.
- [24] Lenhoff, H. M., Wang, P. P., Greenberg, F. & Bellugi, U. (1997). Williams Syndrome and the brain. *Scientific American*, December, 68-73.
- [25] Marcus, G. F. & Fisher, S. E. (2003). FOXP2 in focus: what can genes tell us about speech and language? *Trends in Cognitive Sciences*, 7, 257-262.

**Bilingualism:**

- [26] Costa, A. & Sebastian-Galles, N. (2014). How does the bilingual experience sculpt the brain? *Nature Perspectives*, 15, 336-345.
- [27] Byers-Heinlein, K., & Werker, J. F. (2009). Monolingual, bilingual, trilingual: infants' language experience influences the development of a word-learning heuristic. *Developmental Science*, 12(5), 815-823.

**Language and Thought:**

- [28] Boroditsky, L. & Schmidt, L. A. (2000). Sex, syntax, and semantics. *Proceedings of the Cognitive Science Society*, 22.
- [29] Davidoff, J. (2001). Language and perceptual categorisation. *Trends in Cognitive Sciences*, 5, 382-387.

**Course Requirements and Assessment**

<b>Assessment</b>	<b>Weighting</b>
Midterm 1	27%
Midterm 2	27%
Midterm 3	27%
Assignment 1	8%
Assignment 2	8%
In class worksheets	1%
Research participation/article summaries	2%
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Total	100%
Additional Research participation/article summaries	up to 2% bonus

## Exams

There will be three non-cumulative in-class midterms, as well as an optional final exam during finals period. Each in-class midterm will cover material from 1/3 of the course. The exams will be a combination of multiple choice, fill-in-the-blank, and short answer questions. They will cover in-class lectures, as well as readings and other supplemental material, such as videos. The optional final can be used in place of the lowest scoring test during the semester. It can also be used to replace a missed midterm (see below). The optional final will be cumulative and longer than the midterms during the semester.

## Assignments

There will be two homework assignments (worth 8 points each) and two in-class worksheets (worth .5 points each). The goal of these assignments is to give you more exposure to primary source literature and child language data. Please note that plagiarism is an academic offense. Your work must be your own and, in cases where research articles are assigned, you may not use material from these articles without appropriate referencing. If you have questions, please ask the instructor or teaching assistants. Assignments are due at the *beginning* of class on the assigned date. An electronic version must be submitted by **the start** of class through the LEARN website.

## Course Outline

Week	Date	Topic	Readings Due
	Thu 9/6	Introduction. What is language?	
	Tue 9/11	The sounds of language	[1]
	Thu 9/13	Perceiving the sounds of language	[2-3]
	Tue 9/18	Producing the sounds of language	[4-5]
	Thu 9/20	First words	In-class worksheet
	Tue 9/25	Word learning: Segmentation	[6]
	Thu 9/27	Word learning: Meaning	[7-9]
	Tue 10/2	Word learning: Trajectories and individual differences	[10-12]
	Thu 10/4	<b>MIDTERM 1</b>	
	Tue 10/9	FALL BREAK	
	Thu 10/11	Grammar	<b>Assignment 1 due</b>
	Tue 10/16	Early grammatical development	In-class worksheet
	Thu 10/18	Nature of grammatical knowledge	[13-15]
	Tue 10/23	Nature of grammatical knowledge	
	Thu 10/25	Input and grammar	[16]
	Tue 10/30	Communication	[17]
	Thu 11/1	Critical periods (movie)	
	Tue 11/6	<b>MIDTERM 2</b>	
	Thu 11/8	Language and biology	[18-20]
	Tue 11/13	Critical periods	[21-22]
	Thu 11/15	Special learner populations 1	[23-25]
	Tue 11/20	Special learner populations 2	<b>Assignment 2 due</b>

Week	Date	Topic	Readings Due
	Thu 11/22	Bilingualism	[26-27]
	Tue 11/27	Language and thought	[28-29]
	Thu 11/29	<b>MIDTERM 3</b>	

### Late Work

Assignments submitted after the start of class, but the same calendar day, will receive a 1-point deduction from the total score (i.e., maximum score of 7 out of 8). Assignments submitted after the due date will receive a zero, except in the case of personal illness or family emergency (see below).

### Accommodation for course requirements

If you miss an assignment deadline or test for a reason other than serious personal illness or family emergency (documentation required in both cases), you will not be granted an extension or be permitted to take a make-up test. The optional final can be used as a make-up test if you do not have appropriate documentation.

- Students requesting accommodation for course requirements (assignments, midterm tests, final exams, etc.) due to illness should do the following:
  - Consult the University's [examination regulations](#) for information about procedures and policies for requesting accommodations
  - seek medical treatment as soon as possible
  - obtain documentation of the illness with a completed uWaterloo [Verification of Illness Form](#)
  - submit that form to the instructor within 48 hours. Students in Centre for Extended Learning (CEL) courses must submit their confirmation of the illness to CEL.
  - (if possible) inform the instructor by the due date for the course requirement that you will be unable to meet the deadline and that documentation will be forthcoming.
- In the case of a missed final exam, the instructor and student will negotiate an extension for the final exam, which will typically be written as soon as possible, but no later than the next offering of the course.
- In the case of a missed assignment deadline, midterm test, or quiz, the instructor will either:
  - waive the course component and re-weight remaining term work as he/she deems fit according to circumstances and the goals of the course, or
  - provide an extension.
- In the case of bereavement, the instructor will provide similar accommodations to those for illness. Appropriate documentation to support the request will be required.
- Students who are experiencing extenuating circumstances should also inform their academic advisors regarding their personal difficulties.
- Elective arrangements such as travel plans are not acceptable grounds for granting accommodations to course requirements per the [uWaterloo Examination Regulations and Related Matters](#).

**Official version of the course outline**

If there is a discrepancy between the hard copy outline (i.e., if students were provided with a hard copy at the first class) and the outline posted on LEARN, the outline on LEARN will be deemed the official version. Outlines on LEARN may change as instructors develop a course, but they become final as of the first class meeting for the term.

## **Mental Health Services**

Mental Health Services aim is to provide holistic programming and services to help you lead a healthy and balanced life. We strive to provide a secure, supportive environment for students of all orientations and backgrounds.

Students suffering from problems with anxiety, depression, problems with sleep, attention, obsessions or compulsions, relationship difficulties, severe winter blues, etc., may make an appointment by phone or in person. Appointments are usually available within two days of initial contact with one of our medical doctors. All contacts are completely confidential.

## **Contact Health Services**

[Health Services Building](#)

Call 519-888-4096 to schedule an appointment

Call 1-866-797-0000 for free 24/7 advice from a health professional

## **Contact Counselling Services**

[Needles Hall Addition, NH 2401](#)

Call 519-888-4567 x 32655 to schedule an appointment

[counserv@uwaterloo.ca](mailto:counserv@uwaterloo.ca)

## **Academic Integrity**

**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity webpage](#) and the [Arts Academic Integrity webpage](#) for more information.

**Discipline:** A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties check [Guidelines for the Assessment of Penalties](#).

## **Concerns About a Course Policy or Decision**

**Informal Stage.** We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Richard Eibach) is available for consultation and to mediate a resolution between the student and instructor: Email: [reibach@uwaterloo.ca](mailto:reibach@uwaterloo.ca); Ph 519-888-4567 ext. 38790



**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt, please be certain to contact Richard Eibach, the Associate Chair for Undergraduate Affairs who will provide further assistance; [reibach@uwaterloo.ca](mailto:reibach@uwaterloo.ca).

**Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

### **Accommodation for Students with Disabilities**

**Note for students with disabilities:** The [AccessAbility Services](#) office, located on the first floor of the Needles Hall extension (1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

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## **Sona and Research Experience Marks Information and Guidelines**

Experiential learning is considered an integral part of the undergraduate program in Psychology. Research participation is one example of this, article review is another. A number of undergraduate courses have been expanded to include opportunities for Psychology students to earn grades while gaining research experience.

Since experiential learning is highly valued in the Department of Psychology, students may earn up to 2% of their final mark in this course through research experience (i.e., course work will make up 98% of the final mark and research experience will make up the other 2% for a maximum grade of 100%). In addition, for those students who wish to sample a wider range of these experiences, a further "bonus" of up to 2% may be earned and will be added to the final grade if/as needed to bring your final grade up to 100%. **In total, students may add up to 4% to their final grade.**

The two options for earning research experience grades (participation in research and article review) are described below. Students may complete any combination of these options to earn research experience grades.

### **Option 1: Participation in Psychology Research**

Research participation is coordinated by the Research Experiences Group (REG). Psychology students may volunteer as research participants in lab and/or online (web-based) studies conducted by students and faculty in the Department of Psychology. Participation enables students to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience. Please be assured that all Psychology studies have been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee.

### ***How to earn extra marks for your Psychology course(s) this term by participating in studies ...***

- You will earn "credits" which will be converted to "marks" (1 credit = 1%)
- You can schedule your LAB and/or ONLINE studies using the "Sona" website.

### ***Educational focus of participation in research***

To maximize the educational benefits of participating in research, students will receive feedback information following their participation in each study detailing the following elements:

- Purpose or objectives of the study
- Dependent and independent variables
- Expected results
- References for at least two related research articles
- Provisions to ensure confidentiality of data
- Contact information of the researcher should the student have further questions about the study
- Contact information for the Chief Ethics Officer of the Office of Research Ethics should the student wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which s/he participated.

Participation in LAB studies has increment values of 0.5 participation credits (grade percentage points) for each 30-minutes of participation. Participation in ONLINE studies has increment values of .25 credits for each 15-minutes of participation. Researchers will record student's participation, and at the end of the term the REG Coordinator will provide the course instructor with a credit report of the total credits earned by each student.

### ***How to participate?***

Study scheduling, participation and grade assignment is managed using the SONA online system. All students enrolled in this course have been set up with a SONA account. You must get started early in the term.

For instructions on how to log in to your SONA account and for a list of important dates and deadlines please, as soon as possible go to:

[Participating/SONA information: How to log in to Sona and sign up for studies](#)

\*\*\* Please do not ask the Course Instructor or REG Coordinator for information unless you have first thoroughly read the information provided on this website.\*\*\*

More information about the REG program in general is available at:

[REG Participants' Homepage](#) or you can check the [Sona FAQ](#) for additional information.

## **Option 2: Article Review as an alternative to participation in research**

Students are not required to participate in research, and not all students wish to do so. As an alternative, students may opt to gain research experience by writing short reviews (1½ to 2 pages) of research articles relevant to the course. The course instructor will specify a suitable source of articles for this course (i.e., scientific journals, newspapers, magazines, other printed media). *You must contact your TA to get approval for the article you have chosen before writing the review.* Each review article counts as one percentage point. To receive credit, you must follow specific guidelines. The article review must:

- **Be submitted before the [last day of lectures](#) . Late submissions will NOT be accepted under ANY circumstances.**
- Be typed
- Fully identify the title, author(s), source and date of the article. A copy of the article must be attached.
- Identify the psychological concepts in the article and indicate the pages in the textbook that are applicable. Critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-effect relations, errors in reasoning, etc. Provide examples whenever possible.
- Clearly evaluate the application or treatment of those concepts in the article.
- Keep a copy of your review in the unlikely event we misplace the original.