

**Psychology 4210: Speech development**  
Spring 2017

**Class meetings:** Monday 15:00-17:50 D633  
**Office:** C876, University Hall  
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**Course description:** This is an advanced seminar course on child speech acquisition. The course will introduce basic concepts in speech science, evaluate classical theories and recent findings in child phonological development, and provide hands-on practice in the application of acoustic analytical tools.

**Textbook:**

Marilyn M. Vihman (2014) *Phonological development: The first two years*. 2<sup>nd</sup> Edition. Blackwell Publishers.

**Coursework and grading:**

Your final grade is accumulated through several components. First, you will be assigned four labs throughout the semester, with each of them worth 7%. Second, as this is a seminar course, you are expected to actively participate in all aspects of this course, i.e., raising intelligent questions, offering critiques to the readings, relating the course materials to major social issues, etc (5%). Third, each of you will be responsible to lead discussions on selected articles (10%). In addition, you will be quizzed over some critical concepts introduced in class (12%). Finally, you are required to conduct a child language project, for which you'll present your findings orally (7%) and through a poster (8%), as well as to turn in a one-page proposal (5%), a consent form (5%), and a two-page summary report for your findings of each part of the study (15%).

Labs	4*7 = 28 %
Participation	5 %
Discussion leading	10 %
Oral presentation	7 %
Poster presentation	8 %
Written reports	30%
Quizzes	3*4%=12 %
Total	100 %

**Grading scale:**

A+	95 – 100	B+	80 – 84.9	C+	67 – 69.9	D+	55 – 59.9	F	0 -49.9
A	90 – 94.9	B	75 – 79.9	C	63 – 66.9	D	50 – 54.9		
A-	85 – 89.9	B-	70 – 74.9	C-	60 – 62.9				

**Labs:** We will have four lab sessions with associated assignments throughout this semester. These labs are designed to equip you with hands-on experiences of using *Praat* to analyze children's data. The lab sessions will be held in a computer lab. The assignment will be distributed in class time. During each lab, please bring with you a set of earphones and a thumb drive.

**Thought questions:** For each class, you are required to bring a list of at least three thought questions related to the course materials to be discussed. The questions can be anything that came up during your reading of the assigned material, such as difficulty in understanding a particular concept, a methodological detail, or on experimental designs and statistical analysis. The questions can also reflect your deeper thinking of the reading and may relate to your own previous experience or larger social issues. Coming to class with the prepared thought questions will allow you to ask better questions during class and gain a deeper understanding of the materials during in-class discussion. These questions will be collected at the end of each class.

**Leading discussions:** Every student is required to lead discussions on selected papers. You will FAIL the course if you are absent on your scheduled discussion-leading day. Be creative on the format of discussion. No matter how you organize it, however, you should cover three major aspects. First, you should make sure all students have a basic understanding of the article to be discussed. To achieve this end, you are encouraged to bring out questions related to the main points of the article. Second, you should check with the audience whether they have any questions in regard to the technical jargons in the article. And if they do, you can either clarify them yourself or invite others to make comments. Last but not least, you should prepare some major theme questions to propose to the audience. The theme questions could be about the implications of the work and its relation to a larger topic. At any rate, remember that when leading a discussion, you are not to lecture, but to facilitate a conversation. Therefore, you will need to find ways to encourage people to think and talk.

***Child language project:***

Part 1 -- You are expected to work in pairs (choosing your own partner) to conduct an interview with people who have children or who work with children. They can be parents, daycare teachers, clinicians, etc. The interview can be unstructured, surrounding a broad topic on the challenges of communicating with children and lessons learned based on their experience with children. You'll report the interview through an oral presentation of 20 minutes (including the question period).

Part 2 -- You are also expected to gather information about a single child's speech production by observing them interacting with their peers, parents, or teachers in their natural environment. If you have no access to children, you can discuss the speech development profile of a specific child population by reviewing some literature or by interviewing more people who have children or work with children. The kind of information you'll need to report include the sounds that children can make (or cannot make), the words they are able to produce, grammatical formations of words and sentences, sentence length, the use of pragmatics, and the gestures they use, whenever applicable. You can target at typical- or atypical-developing children or children from

minority background such as immigrants, refugee, or First Nations. You'll need to present it in the format of a poster presentation on the last day of class.

Written assignments – You'll need to submit a one-page proposal and consent form(s) BEFORE conducting your project. After each presentation, you should submit a two-page summary. Although you'll work in pairs for the interview/observation and presentations, each of you has to submit the summaries independently. Your summary should be written in academic English with formal writing style, free of grammatical errors, and synthesize succinctly and comprehensively of your findings.

**Important to note:** All written assignments have to be typed. No handwritten work is accepted.

**Late and make-up policy:** There is a late submission penalty for lab assignments and the final research proposal (50% reduction to your received grade if received within one week; no credits thereafter). In order to avoid the disadvantage of this policy, please provide official written documents to justify your absence or late submission. No make-up quiz will be offered without valid excuses accompanied by supporting documentations.

**Students with Special Needs:** If you have any special needs that require accommodation, it is your responsibility to contact Counseling Services to acquire an official letter concerning your situation. Accommodations will only be given upon receiving the official notification from that office.

**Academic misconduct:** I am required by my contract with the university to report suspected cases of academic misconduct to the University. The most common form of misconduct is plagiarism. Remember that any time you use the ideas or the statements of someone else, you must acknowledge the source in a citation.

### **Reading list:**

Curtin, S., Fennell, C., & Escudero, P. (2009). Weighting of vowel cues explains patterns of word-object associative learning. *Developmental Science*, 12(5), 725-731.

Fennell, C., & Waxman, S. R. (2010). What paradox? Referential cues allow for infant use of phonetic detail in word learning. *Child Development*, 81, 1376-1383.

Flege, J. E. (1995). Second-language speech learning: Theory, findings, and problems. In W. Strange (Ed.), *Speech Perception and Linguistic Experience* (pp. 233-277). Timonium, MD: York Press. ([http://jimflege.com/files/Flege\\_in\\_Strange\\_1995.pdf](http://jimflege.com/files/Flege_in_Strange_1995.pdf))

Gibbon, F. (1999). Undifferentiated lingual gestures in children with articulation/phonological disorders. *Journal of Speech, Language, and Hearing Research*, 42, 382-397.

Harada, T. (2007). The production of voice onset time (VOT) by English-speaking children in a Japanese immersion program. *IRAL - International Review of Applied*

Linguistics in Language Teaching, 45, 353–378.

Gonzalez, G. L. R., Li, F., Mills, K. J., Rosen, N., & Gibb, R. L. (2014) Speech in action: Degree of hand preference for grasping predicts speech articulation competence in children. *Frontiers in Psychology*, <http://dx.doi.org/10.3389/fpsyg.2014.01267>.

Iverson, J. M. (2010). Developing language in a developing body: the relationship between motor development and language development. *Journal of Child Language*, 2010, 229-261.

Kuhl, P. K., Andruski, J. E., Chistovich, I. A., Chistovich, L. A., Kozhevnikova, E. V., Ryskina, V. L., Stolyarova, E. I., Sundburg, U., Lacerda, F. (1997). Cross-language analysis of phonetic units in language addressed to infants. *Science*, 277, 684-686.

Li (2002). Language-specific developmental differences in speech production: A cross-Language acoustic study. *Child Development*, 83, 1303-1315.

MacNeilage, P. F., & Davis, B. L. (2005). The frame/content theory of evolution of speech. *Interaction Studies*, 6(2), 173-199.

Nip, I. S. B., Green, J. R., Marx, D. B. (2011) The coemergence of cognition, language, and speech motor control in early development: A longitudinal correlation study, *Journal of Communication Disorders*, 44(2): 149–160.  
doi:10.1016/j.jcomdis.2010.08.002

Pierce, L. J., Klein, D., Chen, J. K., Delcenserie, A., Genesee, F. (2014) Mapping the unconscious maintenance of a lost first language. *Proceedings of the National Academy of Sciences of the United States of America*, 111 (48): 17314–17319.

Stager, C. L., & Werker, J. F. (1997). Infants listen for more phonetic detail in speech perception than in word-learning tasks. *Nature*, 24, 381-382.

Simon, E. (2010). Child L2 development: a longitudinal case study on Voice Onset Times in word-initial stops. *Journal of Child Language*, 37(1), 159–173.

Vouloumanos, A., Hauser, M. D., Werker, J. F., & Martin, A. (2010). The tuning of human neonates' preference for speech. *Child Development*, 81, 517-527.

Werker, J. F., Pons, F., Deitrich, C., Kajakawa, S., Fais, L., & Amano, S. (2007). Infant-directed speech supports phonetic category learning in English and Japanese. *Cognition*, 103, 149-162.

Wilson, S. M., Saygin, A. P., Sereno, M. I., & Iacoboni, M. (2004) Listening to speech activates motor areas involved in speech production. *Nature Neuroscience*, 7, 701-702.

### Tentative weekly schedule

Month	Date	Topic	Reading	Assignment due
Jan	9	Introduction to phonological development	Chapter 1	
	16	Precursors to language	Chapter 1 & 2 Lab tutorial (E640)	Proposal and consent form due
	23	Development in perception	Chapter 3 & 5 Lab 1 (E640)	
	30		Vouloumanos (2010) Stager & Werker (1997) Curtin et al (2009); Fennell & Waxman (2010)	Quiz 1; Lab 1
Feb	6	Development in production	Chapter 4 & 6 Lab 2 (E640)	
	13		Wilson et al. (2004) MacNeilage & Davis (2005) Gibbon (1999) Li (2012)	Quiz 2
	20	<i>No class</i>		
	27	Oral presentation on child worker/parent interview		Lab2
	March	6	Word learning and second language acquisition	Chapter 7 & 8 Lab 3 (E640)
13		Flege (1995) Pierce et al. (2014) Simon (2010) Harada (2007)	Lab 3	
20	Child-directed speech	Kuhl et al. (1997); Werker et al. (2007) Lab 4	Quiz 3	
27	Speech & motor control	Iverson (2010) Gonzalez et al. (2014) Nip, Green, & Marx (2011)	Lab 4	
April	3	Poster presentation of child speech		
	7			Child speech report due