DARTMOUTH COLLEGE
ꕥ EDUCATION 50 ꕥ
THE READING BRAIN: EDUCATION AND DEVELOPMENT

Spring Term 2021
Period BL (MWF 8:55-10:00 AM/x-hour: R 9:10-10:00 AM)
Asynchronous lecture
Synchronous groupwork
On-line: https://canvas.dartmouth.edu/

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Office Hours: your schedule:
e-mail to set appointment

There is no Frigate like a Book
To take us Lands away
Nor any Coursers like a Page
Of prancing Poetry –
Emily Dickinson

And so to completely analyze what we do when we read would almost be the acme of a psychologist's achievements, for it would be to describe very many of the most intricate workings of the human mind, as well as to unravel the tangled story of the most remarkable specific performance that civilization has learned in all its history.
Huey, E.B. (1908/1968). *The psychology and pedagogy of reading* (p. 6). Cambridge: MIT Press.

ꕥ Course Description

Many children entering first grade do not know how to read; most children leaving first grade do know how to read, at least at a basic level. Further development of reading skills continues throughout the school years. What is involved in the amazing development of the ability to make meaning of marks on a page? What goes on in the brain during reading and learning to read? What might be happening (or not happening) in the behaviors and brains of children who have difficulty learning how to read? In this course, we will explore answers to all of these questions and more. The course is designed as an introduction to reading development – from orthography and phonology to semantics, syntax, and comprehension – from the multiple perspectives of education, neuroscience, linguistics, and psychology.

ꕥ Goals and Expectations

- **This course is designed to provide you with opportunities to:**
    - appreciate the astonishing complexity of the ability to read text

    - be able to identify and understand multiple skills and systems involved in reading and learning to read at the behavioral and neural levels
    - recognize the components critical to learning to read and building a reading brain
    - understand how evidence from behavioral and brain research informs the practice of teaching reading
    - develop both writing skills and skills involved in critically reading and analyzing research articles, and
    - recognize the relevance of the course material to life outside of this class.
- **My expectations for me as a teacher:**
    - to share knowledge with you in an organized, principled, evidence-based, accessible, and clear way
    - to support you in your learning, helping you to understand new information and make connections between old and new information as you build your knowledge base about reading development and learning to read
    - to encourage you to be an engaged and active learner in all aspects of the course, and
    - to be available to you: I deeply value interactions with students and believe that such interactions are a foundation for learning (both yours and mine).
- **My expectations for you as a learner:**
    - that you successfully build a useable knowledge base about reading development and learning to read
    - that you speak with me and your classmates in order to support your learning
    - that you ask questions both when you don't understand something and when you are curious to learn more
    - that you work through our course in a timely manner, as described below (in the next section on Course Organization and Canvas)
    - that you conduct your work for this course with integrity, and
    - that you participate fully as an engaged and active learner, contributing to our shared conversations as a community of learners (in Discussions and groupwork) and using the papers as meaningful learning opportunities.
- **My expectations for us as a learning community:**
    - that we support each other as we learn together
    - that our interactions are respectful and civil
    - that we will both choose our language carefully and acknowledge when we have made poor choices
    - that we will give and receive feedback that is thoughtful and conducive to learning
    - that we will recognize that realizing bias can be difficult but is part of the learning process, and
    - that, together, we create a safe, evidence-based learning environment that supports a diversity of thoughts, perspectives, and experiences and honors our intersectional identities.

∞ Organization of the Course via Canvas (https://canvas.dartmouth.edu)

- **Office hours**

Office hours are on your schedule, not mine. Rather than holding set office hours, which will invariably conflict with your schedules, please e-mail me (donna.coch@dartmouth.edu) to find a time that works for you for us to talk via Zoom or phone. Please feel free to schedule to talk with me whether you have specific questions or not.

- **Canvas**
  - Class will be conducted primarily through Canvas. Lectures, readings, Discussions, and groupwork are organized into Modules by topic. Assignments will be submitted through the Assignments function.
  - Lecture outlines for each topic will be posted at the beginning of each Module. The outlines will be helpful in organizing your notes.
- **A/synchronicity and timing**
  - The lecture component of the course is offered asynchronously, whereas the groupwork components will happen synchronously, in real time (at the scheduled class time). This design allows for some flexibility in timing in completing lecture classes. However, **this flexibility is limited: Please plan to have all components of each lecture class day completed before the start of the next class day**.
  - For each class, I will make the assigned readings available one class day in advance and will make the rest of the class – lectures, discussions, activities, etc. – available at our scheduled class meeting time (if not before).
  - I will monitor the Canvas Discussions for a given lecture class only during the time between when they become available and when the next class materials become available (e.g., Monday at 8:55 AM EST to Wednesday at 8:55 AM EST); be sure to post and respond within this time window.

∞ Assignment Information

- **Research-based papers**
  - Four short, research-based papers are due throughout the term:
    - Paper 1 is due by 8:55 AM EST on Monday, 19 April and should reflect material in the *Introduction*, *Pre-Readers*, or *Orthography* Modules.
    - Paper 2 is due by 8:55 AM EST on Wednesday, 05 May and should reflect material in the *Phonology, Morphology,* or *Semantics* Modules.
    - Paper 3 is due by 8:55 AM EST on Monday, 17 May and should reflect material in the *Syntax, Context, Fluency,* or *Comprehension* Modules.
    - Paper 4 is due by 8:55 AM EST on Wednesday, 02 June and should reflect material covered in the *Teaching* or *Dyslexia and Poor Reading* Modules.
  - Each paper is on a topic of your choice, based on the readings and classes from the preceding weeks. What was the most interesting part of the readings or classes? What part did you completely disagree with and why? What part surprised you? What part do you want to know more about? In short, what part really resonated with you and made you think? Your topic idea can come from multiple sources; for example, a footnote in a reading, a word you didn't know before, or an experience you have had. Your topic should be intriguing to you – something that you want to delve further into and find out more about.

- Choose one specific aspect of the materials covered in class or readings to write about. Be careful to choose a specific (not general) topic suited to a 3- to 4-page paper. Each paper is a creative opportunity for you to do further research on a specific topic of most interest to you; each is a chance to demonstrate your own learning and understanding and build on class materials.
- Once you have chosen what to write about, find two contemporary, peer-reviewed, primary source research articles (not discussed in class or assigned readings) relevant to your topic, read them carefully and critically, and incorporate information from those articles into your paper.
    - Dartmouth has an impressive Digital Library (http://library.dartmouth.edu) that makes locating articles easy.
    - Through the Library, you can access relevant databases such as Medline, PsycINFO, or ERIC.
    - By conducting a subject or keyword search within these databases, you can find articles related to your topic of choice.
    - Articles should be contemporary primary source research articles (*not* opinion pieces or commentaries, dissertations, research reviews, or meta-analyses) and should be published in peer-reviewed journals (when searching databases, check the box next to "Peer Reviewed").
- Papers should be clearly written in the context of this course, connecting to reading development and learning to read.
- Each paper should be typed in a conventional 12-point font (like Times New Roman) and double-spaced, with one inch margins on all sides (note that this is not the default for Word). Each paper should be 3 to 4 pages in length.
- In-text citations should be in APA Style and a reference list in APA Style should be included at the end of the text (the reference list is not included in the page limit). For details about APA Style, refer to the APA Style Summary Sheet or directly to *The Publication Manual of the American Psychological Association, 7th Ed.* (2020).
- A copy of the first page, including the abstract, of any referenced article should be submitted with your paper. Please submit the first page of the actual article, not the results of a database search. You do not need to include a copy of the first page of any article or chapter included in the reading list for the course when you make references to course materials.
- Refer to the Research-based Paper Guidelines document for further details; it will be helpful to refer to this document, along with the APA Style Summary Sheet, as you work on each paper.
- For students who are (or are thinking about becoming) Neuroscience majors: In order for this course to count as an elective for the major, your papers must have a neuroscience focus; note that this does not mean that your papers cannot also include behavioral and educational aspects (they should), but that you must consistently and meaningfully engage with the neuroscience aspect in order for the course to count towards your Neuroscience major. Please write "Neuroscience" at the end of your text, just before the reference list, for each of your papers if you intend the course to count towards your Neuroscience major.

- If you are finding the papers difficult or frustrating in some way, please talk with me. It is very likely that we will be able to find strategies that will make the papers a more enjoyable learning experience for you.

- **Reflection papers**
  - There are two reflections papers for this course, which act as bookends to your thinking. One is due at the beginning of the term and the other is due at the end of the term.
  - **Initial reflection:** A relatively informal written reflection on what is involved in learning to read, teaching reading, and reading development. Same formatting as Research-based Papers, but 1- to 2-page length. Due by 8:55 AM EST on Wednesday, 31 March.
  - **Final reflection:** A formal written reflection on your thoughts about what is involved in learning to read, teaching reading, and reading development – and how your thoughts have changed, having spent the term immersed in this world. Concrete examples should support your points/arguments and class materials should be integrated throughout (to be clear, this means that your final reflection should include citations and references; use research evidence from course materials to both support your claims and bridge research and practice). Same formatting as Research-based Papers, 3- to 4-page length. Due by 1:00 PM Saturday, 05 June.
- **Groupwork**
  - Groupwork will be conducted synchronously, during the scheduled class time. Groupwork assignments are due at the end of class for the day (10:00 AM EST).
  - I will assign students to groups after the first week of classes; you will remain in the same group throughout the term.
  - You will meet with the members of your group virtually, through Zoom meetings that you will record (see https://services.dartmouth.edu/TDClient/1806/Portal/KB/ArticleDet?ID=65470).
  - One member from each group will submit the group's discussion video and written responses through a Canvas Assignment. The quality of both the discussion and the written responses is important; engagement with key ideas, use of course vocabulary, meaningful contributions from all members, and support of learning should be evident in both.
  - If you save your discussion video to the Zoom cloud, you may send me a link to the video (paste the link at the top of your written responses) rather than upload the .mp4 file to Canvas. Just make sure that I can download the video.
  - Each member of a group will receive the same grade for a given activity unless, in my judgment, a member did not contribute meaningfully. In general, by choosing not to participate, you affect your own learning; but for groupwork, you also compromise others' learning because your groupmates are robbed of the opportunity to benefit from your insight and perspective in the same way that you have from theirs.
  - One goal of the groupwork is to have meaningful real-time discussions and engage with the materials as a collaborative group. In order for that to happen (and for everyone to be able to have a shared foundation in terms of background knowledge from the course), all group members will need to have completed all previous work up to each groupwork component before participating in the groupwork. Plan ahead.
- **Canvas Discussions: posts and responses**

- We will use the Canvas Discussion function to interact with each other asynchronously during lecture. Multiples discussion posts will be required for each topic Module in response to prompts from me during the lectures (e.g., briefly responding to a question, making a prediction, connecting to other material).
- In addition, you are expected to respond to posts from fellow students in meaningful ways for each topic Module.
- Your posts and responses should be similar to what your responses to a question from me or a comment from a classmate would be in an in-person class. Quality is more important than length. As a learning opportunity, aim for meaningful depth (e.g., *that's interesting because…* rather than *I agree!*) in your responses.
- I will respond to direct questions posted in the Discussions, add comments, and follow responses both to my queries and to student posts.
- To best use the Discussions, you will need to return after your initial posts. This does not need to involve a lengthy time commitment. You can think of it as the in-person equivalent to talking about the course material with a classmate before class begins, as you walk together to your next class, or over a meal.
- I will not favorably view waiting until the last minute to complete the lecture component of the Modules, posting and responding with little meaningful interaction or learning value.
- I will monitor Discussions for a class until the next class; this is the time window within which all of us should expect to meaningfully participate in each topic discussion (barring extenuating circumstances).

- **Required readings**
  - All readings will be available through Canvas. However, you may prefer to purchase the two books that we will use for the course:
    - Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. (e.g., at Amazon)
    - Adams, M.J. (1994). *Beginning to read: thinking and learning about print*. Cambridge, MA: MIT Press. (e.g., at Amazon)
  - Links to the daily assigned readings (as listed in the syllabus in the *Schedule* and *Reading List by Module/Class*) will be provided within each Module and will be available at least one class day before the rest of the materials for that class.
  - All readings listed in the syllabus and linked on the Canvas site are required reading for the course unless marked [optional]. Optional readings are worthy of your time, if you have time.
  - The readings were carefully chosen to help you establish background knowledge and familiarity with key concepts and issues and they provide a basic foundation upon which class will build each day.
  - You are expected to complete the assigned readings before starting the rest of the Module for a class day and you should be prepared to discuss the readings in the Module.
- **Late policy**
  - If you anticipate not being able to meet a submission deadline for a research-based paper or reflection paper, please contact me at least 24 hours in advance; no late assignments

will be accepted unless we have spoken and come to an agreement at least 24 hours in advance.
    - There are no late submissions for groupwork. If a member of your group is unexpectedly unavailable, please proceed to meet with the group members who are available at the scheduled time and submit your work on time. If you must miss scheduled groupwork, please contact both me and the other members of your group at least 24 hours in advance.
    - There are no late submissions for Canvas Discussions; posts and responses should be completed before the start of the next class (barring extenuating circumstances).

ꕥ Course Grade

- Course grades are based on your work outside of class (60%) and your work in class (40%).
    - Out-of-class work:
        - Initial reflection paper (2%)
        - Final reflection paper (10%)
        - 4 research-based papers at 12% each (48%)
    - In-class work:
        - Groupwork: 7 sessions at 2% each (14%)
        - 13 Modules to post responses at 1% each (13%)
        - 13 Modules to respond to other students' posts at 1% each (13%)
- Grading is consistent with the ORC description of scholarship ratings (see http://www.dartmouth.edu/~reg/transcript/grade_descriptions.html).

ꕥ Responsibilities

- **Academic Honor Principle: working with integrity**
    - All students are expected to uphold all aspects of the Academic Honor Principle (refer to http://www.dartmouth.edu/~uja/honor).
    - Please make sure that you are familiar with the Honor Principle, including that all work should be your own (or your groups') and properly cited, and make sure to ask questions if you are uncertain about how it applies in this course.
    - Any violation of the Academic Honor Principle regarding your work in this course will result in a zero on the assignment and referral to Judicial Affairs.
- **Community Standards of Conduct: responsibility and respect**

  All students are expected to accept individual responsibility for their actions and to respect the rights of others, and to uphold all aspects of our community standards of conduct (refer to https://students.dartmouth.edu/community-standards/).
- **Rules for recording**
    - Consent to recording of course meetings and office hours that are open to multiple students. By enrolling in this course, I affirm the following:
        - I affirm my understanding that the instructor may record meetings of this course and any associated meetings open to multiple students and the instructor, including but not limited to scheduled and ad hoc office hours and other consultations, within any digital platform, including those used to offer remote instruction for this course;

    - I further affirm that the instructor owns the copyright to their instructional materials, of which these recordings constitute a part, and my distribution of any of these recordings in whole or in part (or any other instructional materials for this course) to any person or entity other than other members of the class without prior written consent of the instructor may be subject to discipline by Dartmouth up to and including separation from Dartmouth.
  - Requirement of consent to one-on-one recording
    - By enrolling in this course, I hereby affirm that I will not make a recording in any medium of any one-on-one meeting with the instructor or another member of the class or group of members of the class without obtaining the prior written consent of all those participating, and I understand that if I violate this prohibition, I will be subject to discipline by Dartmouth up to and including separation from Dartmouth, as well as any other civil or criminal penalties under applicable law. I understand that an exception to this consent applies to accommodations approved by SAS for a student's disability, and that one or more students in a class may record class lectures, discussions, lab sessions, and review sessions and take pictures of essential information, and/or be provided class notes for personal study use only.
- **Religious observances**

  I recognize that some students may wish to take part in religious observances that occur during this academic term. If you have a religious observance that conflicts with your participation in this course, it is your responsibility to please let me know before the end of the first week of the term so that we can discuss appropriate accommodations.

ꕥ Resources

- **Disability-related accommodations and services**

  I encourage you to schedule a phone/video meeting with me as early in the term as possible if you are requesting disability-related accommodations and services for this course. This conversation will help me to know what supports to build into our on-line course. In order for accommodations to be authorized, students are required to consult with Student Accessibility Services (SAS, https://students.dartmouth.edu/student-accessibility/students/working-sas/getting-started, Student.Accessibility.Services@Dartmouth.edu, 603.646.9900) and to request that an accommodation e-mail be sent to me. We will then work together with SAS if accommodations need to be modified based on the learning environment. If you have questions about whether you are eligible for accommodations, contact the SAS office. All inquiries and discussions will remain confidential.
- **Efficient/effective learning**

  If you feel that your learning is not as efficient or effective as you would like it to be, please talk with me about approaches to this course and consider using the resources available through the Academic Skills Center (https://students.dartmouth.edu/academic-skills/about/about-asc/services), including tutoring and learning skills trainings.
- **Research and writing skills**

If you would like to further develop your research and writing skills as you work on your papers, consider taking advantage of the services offered through the Student Center for Research, Writing, and Information Technology (RWIT, http://writing-speech.dartmouth.edu/learning/rwit). RWIT is a free service dedicated to helping members of the Dartmouth community develop more effective strategies for generating and organizing ideas, finding and evaluating research sources, and presenting and revising compositions in a variety of media.

- **Organization and time management**

  If you, like many, are finding it challenging to stay organized and manage your time effectively in this remote teaching environment, there are a number of resources to help:

  - The Academic Skills Center offers a remote learning guide, suggestions for making a schedule, a video on time management, and some time management tips.
  - Your Undergraduate Deans have offered tips on successful remote learning.
  - And do not hesitate to talk with me!

- **Wellness**

  I recognize that the academic environment at Dartmouth is challenging, that remote learning can come with additional difficulties, that our terms are intensive, and that classes are not the only demanding part of your life. There are a number of resources available to you to support your wellness, including:

  - your undergraduate dean (http://www.dartmouth.edu/~upperde/),
  - Counseling and Human Development (http://www.dartmouth.edu/~chd/), and
  - the Student Wellness Center (http://www.dartmouth.edu/~healthed/).

  I encourage you to use these resources to take care of yourself throughout the term, and to speak with me if you are experiencing difficulties.

- **Sexual safety**

  If you do not feel sexually safe, the Sexual Respect Website at Dartmouth (https://sexual-respect.dartmouth.edu) provides information about your rights with regard to sexual safety and resources that are available to you. Some of those resources are summarized here. Please note that, as a faculty member, I am obligated to share disclosures regarding conduct under Title IX with Dartmouth's Title IX Coordinator. Confidential resources are also available, including licensed medical or counseling professionals, staff members of organizations recognized as rape crisis centers under state law (e.g., WISE), or ordained clergy. Please do reach out to speak with someone if you do not feel safe.

SCHEDULE[§]

DATE	MODULE/TOPIC	WHAT TO READ[†]	WHAT'S DUE
Week One			
29 March	1: Introduction to the Course	Syllabus, Bean, Duke	
31 March	2: Introduction: Reading and Language	Moats (1)	Init Refl
02 April	3.1: Introduction: Brain & Methodology	Byrnes	
Week Two			
05 April	3.2: Introduction: Brain & Methodology	Gazzaniga	
07 April	4.1: Pre-readers	Adams (4, 13), Treiman	
09 April	4.2: Pre-readers	Strickland, Arnold, Hindman, O'Neil	
Week Three			
12 April	5: Pre-readers Groupwork	Reading Rockets (4), Balanced Literacy Diet	
14 April	6.1: Orthography	Adams (6), Grainger, Bosse	
16 April	6.2: Orthography	Blythe, McCandliss	
Week Four			
19 April	7.1: Phonology	Moats (2), Anthony, Stainthorp, Curzan	RPaper 1
21 April	7.2: Phonology	Adams (8, *12*), Castro-Caldas, Frith	
23 April	8: Ortho/Phono Groupwork	Reading Rockets (4)	
Week Five			
26 April	9: Morphology	Moats (5), Bryant, Rastle, Claravall	
28 April	10.1: Semantics	Hart, Adams (7), Moats (7), Templeton	
30 April	10.2: Semantics	Cunningham, Taylor, Kutas	
Week Six			
03 May	11: Morph/Semantics Groupwork	Reading Rockets (3)	
05 May	12: Syntax	Moats (6), Friederici, Fang, Frantz	RPaper 2
07 May	13: Context	Spear-Swerling, Nation, Wigfield, Nieuwland	
Week Seven			
10 May	14: Fluency	Kuhn, Rasinski (2)	
12 May	15: Comprehension	Pressley, Pardo, Hulme, Rapp, Connor, Maguire	
14 May	16: Comprehension Groupwork	Reading Rockets (3)	
Week Eight			
17 May	17: Teaching Reading: Theories	Adams (2, 15), ILA, Goodman, Iaquinta, Hernández, Pondiscio	RPaper 3
19 May	18: Teaching Reading: Groupwork	BBC, Moats (8); Moats, Drake, Connor, Stahl, NIFL, Willingham	
21 May	19: Teaching Reading: FoRT Groupwork	FoRT, Treiman, ILA	FoRT
Week Nine			
24 May	20.1: Dyslexia & Poor Reading	Mather, Ferrer, Melby-Lervåg, Wolter, Hanford	
26 May	20.2: Dyslexia & Poor Reading	Vellutino, Eden, Gabrieli, Wallace, Editorial	
28 May	20.3: Dyslexia & Poor Reading	Sherman, Heim, Shaywitz, Olulade	
Week Ten			
31 May	*No class: Memorial Day*		
02 June	21: All Together: Plasticity Groupwork	*Secret Life of the Brain*, Hurford	RPaper 4
Final Exams			
04-07 June	Due by Saturday, 05 June at 1:00 PM		Final Refl

[§] *note that the Schedule is subject to change* [†] *see detailed list below*

READING LIST BY CLASS

Links to the assigned readings are posted in each Module on Canvas. The readings were carefully chosen to help you establish background knowledge and familiarity with key concepts and issues, a basic foundation upon which class will build each day. You may need to copy-and-paste some links into your browser. If a link returns a page of nonsense in your browser window, highlight (double-click on) the address in your browser and hit return. If a link should fail, use Google or search the Library to locate the reading.

*Week One*_____

Monday, 29 March – Module 1: Introduction to the Course
An overview of the course content, structure, and requirements.

- Syllabus
- Bean, J.C. (2011). *Engaging ideas: the professor's guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco CA: Jossey-Bass. Excerpt from Chapter 9: Helping students read difficult texts (pp. 161-166).
- Duke, N.K., & Martin, N.M. (2011). 10 things every literacy educator should know about research. *The Reading Teacher, 65*(1), 9-22. https://doi.org/10.1598/RT.65.1.2

Wednesday, 31 March – Module 2: Introduction: Reading and Language
INITIAL REFLECTION DUE TODAY
Please submit your Initial Reflection *before* reading the chapter assigned for today.
There is a direct and critical connection between language and reading. This chapter outlines why it is necessary to study language in order to understand reading, one of the themes of the course.

- Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. Chapter 1: Why study language? (pp. 1-22 book, 22-46 on-line).

Friday, 02 April – Module 3, class 1: Introduction: The Brain and Methodology
In order to talk about what happens in the brain when children and adults are reading, we need to become familiar with some brain basics. This chapter serves as an introduction to basic neuroanatomy, brain function, and methods for studying the brain and includes arguments for and against the relevance of brain research to education.

- Byrnes, J.P. (2001). *Minds, brains, and learning: understanding the psychological and educational relevance of neuroscientific research.* New York: Guilford Press. Chapter 1: Introduction (pp. 1-23).

*Week Two*_____

Monday, 05 April – Module 3, class 2: Introduction: The Brain and Methodology
Continued introduction to basic neuroanatomy, brain function, and methods for studying the brain.
NB: This chapter is quite dense; skim it for the main ideas using Byrnes as background and plan to use it as a resource and reference throughout the course (i.e., you do not need to memorize the contents of this chapter – just be familiar with what it offers so you can refer back to it in the future).

- Gazzaniga, M.S., Ivry, R.B., & Mangun, G.R. (2002). *Cognitive neuroscience: the biology of the mind* (2nd ed.). New York: W.W. Norton. Chapter 3: Gross and functional anatomy of cognition (pp. 62-95).

Wednesday, 07 April – Module 4, class 1: Pre-readers

Knowledge about speech and print in pre-readers serves as a foundation for the later development of reading skills in many ways. These readings provide an overview of some of the important language and reading experiences that some children have before they even begin school.

- Adams, M.J. (1994). *Beginning to read: thinking and learning about print*. Cambridge, MA: MIT Press. Chapters 4: Research on prereaders (pp. 55-91) and 13: Learning about print: the first steps (pp. 333-374).
- Treiman, R. (2000). The foundations of literacy. *Current Directions in Psychological Science, 9*(3), 89-92. https://doi.org/10.1111/1467-8721.00067

Friday, 09 April – Module 4, class 2: Pre-readers

Continued discussion of important pre-reading skills, with more specifics about development in typical and at-risk children.

- Strickland, D.S., & Riley-Ayers, S. (2006, April). *Early literacy: policy and practice in the preschool years*. NIEER Policy Brief, Issue 10. http://nieer.org/wp-content/uploads/2016/08/10.pdf
- Arnold, D.H., Lonigan, C.J., Whitehurst, G.J., & Epstein, J.N. (1994). Accelerating language development through picture book reading: replication and extension to a videotape training format. *Journal of Educational Psychology, 86*(2), 235-243. https://doi.org/10.1037//0022-0663.86.2.235
- Hindman, A.H., Wasik, B.A., & Snell, E.K. (2016). Closing the 30 million word gap: next steps in designing research to inform practice. *Child Development Perspectives, 10*(2), 134-139. https://doi.org/10.1111/cdep.12177
- O'Neil, J. (2006, 4 October). Early repairs in foundation for reading. *New York Times*, p. B7. https://www.nytimes.com/2006/10/04/nyregion/04READING.html

*Week Three*_____

Monday, 12 April – Module 5: Pre-readers Groupwork

A closer look at pre-reader skills inside and outside the classroom.

- Reading Rockets. (19 May, 2008). Becoming aware of print (4:10). https://www.youtube.com/watch?list=PLLxDwKxHx1yJTsTEnSok3vev8O3HjofhS&v=2Yti78OGxg0&feature=emb_logo
- The Balanced Literacy Diet (27 November, 2011). Counting words: developing concepts of print (1:49) https://www.youtube.com/watch?v=6SJPNrqyzp0&feature=emb_logo
- Reading Rockets (16 April, 2014). Tuning in to speech sounds (2:40). https://www.youtube.com/watch?list=PLLxDwKxHx1yLqjuaMwOn-nV1n4up1VbLG&v=WvM5bqUsbu8&feature=emb_logo

- Reading Rockets. (15 April, 2014). Fun with phonemes (1:39). https://www.youtube.com/watch?list=PLLxDwKxHx1yKsSp83ZnNUABPjv0S3X-q2&v=QsWRWqzD8-w&feature=emb_logo
- Reading Rockets. (12 March, 2014). Pre-reader assessment (3:44). https://www.youtube.com/watch?list=PLLxDwKxHx1yJTsTEnSok3vev8O3HjofhS&v=-DeJFqj22WQ&feature=emb_logo

Wednesday, 14 April – Module 6, class 1: Orthography

Orthography involves the visual look and spelling of a word – from single letters to patterns of letters to the whole word. As would be expected, the visual system is heavily involved in the reading process. Readings for today review how orthographic processing plays a role in reading and how orthographic rules influence knowledge about how to spell words, even in young spellers and readers.

- Adams, M.J. (1994). *Beginning to read: thinking and learning about print*. Cambridge, MA: MIT Press. Chapter 6: Analyzing the reading process: orthographic processing (pp. 107-135).
- Grainger, J., & Whitney, C. (2004). Does the huamn mnid raed wrods as a wlohe? *Trends in Cognitive Sciences, 8*(2), 58-59. https://doi.org/10.1016/j.tics.2003.11.006
- Bosse, M.-L. (2015). Learning to read and spell: how children acquire word orthographic knowledge. *Child Development Perspectives, 9*(4), 222-226. https://doi.org/10.1111/cdep.12133

Friday, 16 April – Module 6, class 2: Orthography

Continued discussion of how regions and systems in the brain that are involved in visual processing are also involved in the process of reading. *NB*: Remember to read for the main ideas.

- Blythe, H.I. (2014). Developmental changes in eye movements and visual information encoding associated with learning to read. *Current Directions in Psychological Science, 23*(3), 201-207. https://doi.org/10.1177/0963721414530145
- McCandliss, B.D., Cohen, L., & Dehaene, S. (2003). The visual word form area: expertise for reading in the fusiform gyrus. *Trends in Cognitive Sciences, 7*(7), 293-299. https://doi.org/10.1016/S1364-6613(03)00134-7
- Dehaene, S., Pegado, F., Braga, L.W., Ventura, P., Filho, G.N., Jobert, A. … Cohen, L. (2010). How learning to read changes the cortical networks for vision and language. *Science, 330*(6009), 1359-1364. https://doi.org/10.1126/science.1194140 [optional]

*Week Four*_____

Monday, 19 April – Module 7, class 1: Phonology

PAPER 1 DUE TODAY

The auditory system is also involved in reading. Put another way, the sounds of language are related to reading. Moats reviews how phonemes are classified and categorized, Anthony and Francis review the critical concept of phonological awareness from a developmental perspective, and Stainthorp and Curzan address phonology in adults. *NB*: You do not need to memorize the phonetic alphabet for purposes of this course.

- Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. Chapter 2: Phonetics: the sounds of speech (pp. 25-51 book, 47-73 on-line).

- Anthony, J.L., & Francis, D.J. (2005). Development of phonological awareness. *Current Directions in Psychological Science, 14*(5), 255-259. https://doi.org/10.1111/j.0963-7214.2005.00376.x
- Stainthorp, R. (2003, March). Use it or lose it. *Literacy Today, 34,* 16-17. http://search.ebscohost.com.dartmouth.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=a9h&AN=12329889&site=ehost-live&scope=site
- Curzan, A. (2014, September 26). Pausing over pronunciation. *The Chronicle of Higher Education*. http://chronicle.com/blogs/linguafranca/2014/09/26/pausing-over-pronunciation/

Wednesday, 21 April – Module 7, class 2: Phonology

Continued discussion of the role of phonology in reading, with a closer look at phonological processing in the brain.

- Adams, M.J. (1994). *Beginning to read: thinking and learning about print*. Cambridge, MA: MIT Press. Chapters 8: Adding the phonological processor: how the whole system works together (pp. 157-191) and 12: Phonological prerequisites: becoming aware of spoken words, syllables, and phonemes (pp. 293-308 only).
- Castro-Caldas, A., Petersson, K.M., Reis, A., Stone-Elander, S., & Ingvar, M. (1998). The illiterate brain: Learning to read and write during childhood influences the functional organization of the adult brain. *Brain, 121*(6), 1053-1063. https://doi.org/10.1093/brain/121.6.1053
- Frith, U. (1998). Literally changing the brain. *Brain, 121*(6), 1011-1012. https://doi.org/10.1093/brain/121.6.1011

Friday, 23 April – Module 8: Orthography/Phonology Groupwork

A closer look at connecting orthography (graphemes) and phonology (phonemes) in the classroom.

- Reading Rockets. (3 April, 2014). Spelling patterns (3:42). https://www.youtube.com/watch?list=PLLxDwKxHx1yJROcQQ_zAG56m0R-vsax2Y&v=yzEkNbpeKB0&feature=emb_logo
- Reading Rockets. (3 April, 2014). Invented spelling (3:59). https://www.youtube.com/watch?list=PLLxDwKxHx1yJROcQQ_zAG56m0R-vsax2Y&v=CDlrJqX5_q4&feature=emb_logo
- Reading Rockets. (3 April, 2014). Letters & sounds (4:38). https://www.youtube.com/watch?list=PLLxDwKxHx1yKsSp83ZnNUABPjv0S3X-q2&v=K4CjJvU9mYA&feature=emb_logo

- Reading Rockets (31 May, 2011). The alphabetic principle (3:02). https://www.youtube.com/watch?list=PLLxDwKxHx1yJkYIQG0dPrPdIpzj5uE2pu&v=rRk__-hEOU&feature=emb_logo

*Week Five*_____

Monday, 26 April – Module 9: Morphology

A review of evidence on the role of morphological knowledge in reading and learning to read. How are little meaningful bits of language – morphemes like *-ed* or *-ing* or *pre-* – important to reading? Is there any evidence for a neural morphological system?

- Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. Chapter 5: Morphology for reading, spelling, and vocabulary (pp. 133-177 book, 160-210 on-line).
- Bryant, P., Nunes, T., & Snaith, R. (2000). Children learn an untaught rule of spelling. *Nature, 403,* 157-158. https://doi.org/10.1038/35003114
- Rastle, K. (2019). The place of morphology in learning to read in English. *Cortex,* 1-10. https://doi.org/10.1016/j.cortex.2018.02.008
- Claravall, E.B. (2016). Integrating morphological knowledge in literacy instruction. *Teaching Exceptional Children, 48*(4), 195-203. https://doi.org/10.1177/0040059915623526
- Pinker, S., & Ullman, M.T. (2002). The past and future of past tense. *Trends in Cognitive Sciences, 6*(11), 456-463. https://doi.org/10.1016/S1364-6613(02)01990-3 [this article is an optional reading on a classic debate]

Wednesday, 28 April – Module 10, class 1: Semantics

Reading is not only a process of decoding – the crux of single-word reading is making meaning of the marks on the page. What do we know about how word meanings are organized and used in reading, and how best to teach and learn new words? *NB*: This is quite a bit of reading, but all of it is accessible; remember to read primarily for the main ideas. Also, in the Adams chapter, focus on the parts about meaning.

- Hart, B., & Risley, T.R. (2003, Spring). The early catastrophe: the 30 million word gap by age 3. *American Educator, 27*(1), 4-9. https://www.aft.org/sites/default/files/periodicals/TheEarlyCatastrophe.pdf
- Adams, M.J. (1994). *Beginning to read: thinking and learning about print*. Cambridge, MA: MIT Press. Chapter 7: Analyzing the reading process: use and uses of meaning (pp. 137-156).
- Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. Chapter 7: Semantics: word and sentence meaning (pp. 215-235 book, 250-272 on-line – up to the section on sentential semantics).
- Templeton, S., Bear, D.R., Invernizzi, M., Johnston, F., Flanigan, K., Townsend, D.R. … Hayes, L. (2015). *Vocabulary their way: word study with middle and secondary students* (2nd ed.). Boston, MA: Pearson. Chapter 1: What every teacher needs to know about words and about teaching them (pp. 1-15).

Friday, 30 April – Module 10, class 2: Semantics

Continued discussion of vocabulary knowledge, word meanings, and semantic systems in the brain.

- Cunningham, A.E., & Stanovich, K.E. (1998, Spring/Summer). What reading does for the mind. *American Educator, 22*(1&2), 1-8. http://www.aft.org/pdfs/americaneducator/springsummer1998/cunningham.pdf
- Taylor, J.S.H., Duff, F.J., Woollams, A.M., Monaghan, P., & Ricketts, J. (2015). How word meaning influences word reading. *Current Directions in Psychological Science, 24*(4), 322-328. https://doi.org/10.1177/0963721415574980
- Kutas, M., & Hillyard, S.A. (1980). Reading senseless sentences: brain potentials reflect semantic incongruity. *Science, 207*(4427), 203-205. https://doi.org/10.1126/science.7350657

- Seidenberg, M.S. (2005). Connectionist models of word reading. *Current Directions in Psychological Science, 14*(5), 238-242. https://doi.org/10.1111/j.0963-7214.2005.00372.x [optional reading – for those of you who would like a computational model or framework to fit the pieces together]
- Mitchell, T.M., Shinkareva, S.V., Carlson, A., Chang, K.-M., Malave, V.L., Mason, R.A., & Just, M.A. (2008). Predicting human brain activity associated with the meanings of nouns. *Science, 320*(5880), 1191-1195. https://doi.org/10.1126/science.1152876 [optional reading – computational and pretty neat]

*Week Six*_____

Monday, 03 May: Module 11: Morphology/Semantics Groupwork
A closer look at direct vocabulary instruction in the classroom.

- Reading Rockets. (1 July, 2011). List-group-label (8:00). https://www.youtube.com/watch?list=PLLxDwKxHx1yJUpXMVaifE1Ord_4J4ai0k&v=K731qicwYcY&feature=emb_logo
- Reading Rockets. (1 July, 2011). Semantic labels (7:08). https://www.youtube.com/watch?list=PLLxDwKxHx1yJUpXMVaifE1Ord_4J4ai0k&v=zTaYuYw8GNc&feature=emb_logo
- Reading Rockets. (1 July, 2011). Concept sort (6:03). https://www.youtube.com/watch?list=PLLxDwKxHx1yJUpXMVaifE1Ord_4J4ai0k&v=d_R5wfmWIlQ&feature=emb_logo

Wednesday, 05 May – Module 12: Syntax
PAPER 2 DUE TODAY
Words are organized into phrases, sentences, paragraphs, and texts. We will discuss syntactic processing in terms of the rules governing how words can be combined; the increasing syntactic complexity of speech and text with development; and how, when, and where syntactic information might be processed in the brain.

- Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. Chapter 6: Syntax: how sentences work (pp. 179-213 book, 211-249 on-line).
- Friederici, A.D. (2002). Towards a neural basis of auditory sentence processing. *Trends in Cognitive Sciences, 6*(2), 78-84. https://doi.org/10.1016/S1364-6613(00)01839-8
- Fang, Z. (2008). Going beyond the fab five: helping students cope with the unique linguistic challenges of expository reading in intermediate grades. *Journal of Adolescent & Adult Literacy, 51*(6), 476-487. https://doi.org/10.1598/JAAL.51.6.4
- Frantz, R.S., Starr, L.E., & Bailey, A.L. (2015). Syntactic complexity as an aspect of text complexity. *Educational Researcher, 44*(7), 387-393. https://doi.org/10.3102/0013189X15603980

Friday, 07 May – Module 13: Context
Readers rarely read single, isolated words; instead, words typically appear on a page with other print and images. We will discuss the role of context in reading and how contextual influence might change over developmental time. *NB:* The Nieuwland and Van Berkum article is dense but fun – read for the main idea.

- Spear-Swerling, L. (2006). *The use of context cues in reading.* http://www.readingrockets.org/article/use-context-cues-reading
- Nation, K. (2017). Nurturing a lexical legacy: reading experience is critical for the development of word reading skill. *npj Science of Learning, 2*(1), 1-4. https://doi.org/10.1038/s41539-017-0004-7
- Wigfield, A., Gladstone, J.R., Turci, L. (2016). Beyond cognition: reading motivation and reading comprehension. *Child Development Perspectives, 10*(3), 190-195. https://doi.org/10.1111/cdep.12184
- Nieuwland, M.S., & Van Berkum, J.J.A. (2006). When peanuts fall in love: N400 evidence for the power of discourse. *Journal of Cognitive Neuroscience, 18*(7), 1098-1111. https://doi.org/10.1162/jocn.2006.18.7.1098

*Week Seven*_____

Monday, 10 May – Module 14: Fluency

The concept of fluency in reading encompasses the idea of fast, automatic, effortless processing of words and texts. Fluency is critical to becoming a skilled reader, yet there is very little research on exactly what fluency is and how best to develop it.

- Kuhn, M.R., Schwanenflugel, P.J., & Meisinger, E.B. (2010). Aligning theory and assessment of reading fluency: automaticity, prosody, and definitions of fluency. *Reading Research Quarterly, 45*(2), 230-251. https://doi.org/10.1598/RRQ.45.2.4
- Rasinski, T. (2004). Creating fluent readers. *Educational Leadership, 61*(6), 46-51. http://search.ebscohost.com.dartmouth.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=a9h&AN=12472243&site=ehost-live&scope=site
- Rasinski, T. (2014, April/May). Delivering supportive fluency instruction - especially for students who struggle. *Reading Today, 31*(5), 26-28. http://search.ebscohost.com.dartmouth.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=a9h&AN=95547474&site=ehost-live&scope=site

Wednesday, 12 May – Module 15: Comprehension

Finally (!) we arrive at the true goal of reading: comprehension. Comprehension involves connecting what you are reading to what you already know and increasing your knowledge at the same time. How does comprehension interact with all the other reading components that we have learned about? What do we know about the comprehending brain?

- Pressley, M. (1998). *Reading instruction that works: the case for balanced teaching.* New York: Guilford Press. Chapter 7: The development of literacy, part 4: The need for increased comprehension instruction in upper-elementary grades (pp. 192-227).
- Pardo, L.S. (2004). What every teacher needs to know about comprehension. *The Reading Teacher, 58*(3), 272-280. http://search.ebscohost.com.dartmouth.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=a9h&AN=15021416&site=ehost-live&scope=site
- Hulme, C., & Snowling, M.J. (2011). Children's reading comprehension difficulties: nature, causes, and treatments. *Current Directions in Psychological Science, 20*(3), 139-142. https://doi.org/10.1177/0963721411408673

- Rapp, D.N., & van den Broek, P. (2005). Dynamic text comprehension: an integrative view of reading. *Current Directions in Psychological Science, 14*(5), 276-279. https://doi.org/10.1111/j.0963-7214.2005.00380.x
- Connor, C.M. (2016). A lattice model of the development of reading comprehension. *Child Development Perspectives, 10*(4), 269-274. https://doi.org/10.1111/cdep.12200
- Maguire, E.A., Frith, C.D., & Morris, R.G.M. (1999). The functional neuroanatomy of comprehension and memory: the importance of prior knowledge. *Brain, 122*(10), 1839-1850. https://doi.org/10.1093/brain/122.10.1839

Friday, 14 May – Module 16: Comprehension Groupwork
A closer look at comprehension in the classroom.

- Reading Rockets. (16 February, 2012). Jigsaw (9:19). https://www.youtube.com/watch?list=PLLxDwKxHx1yLuGsYgW_v43wF3qVGj5LMx&v=mtm5_w6JthA&feature=emb_logo
- Reading Rockets. (15 April, 2014). Students take charge: reciprocal teaching (2:16). https://www.youtube.com/watch?list=PLLxDwKxHx1yLuGsYgW_v43wF3qVGj5LMx&v=My68SDGeTHI&feature=emb_logo
- Reading Rockets. (29 January, 2013). Think-pair-share (5:42). https://www.youtube.com/watch?list=PLLxDwKxHx1yLuGsYgW_v43wF3qVGj5LMx&v=-9AWNl-A-34&feature=emb_logo

*Week Eight*_____

Monday, 17 May – Module 17: Teaching Reading: Theories
PAPER 3 DUE TODAY
In general, there are two overarching approaches to teaching reading: one involves phonics and the other involves whole language. What do these two approaches entail? How are they related to what we have learned in this class so far? Are the two approaches so different that some integration cannot be accomplished, and would there be advantages to such an integrated approach?

- Adams, M.J. (1994). *Beginning to read: thinking and learning about print*. Cambridge, MA: MIT Press. Chapters 2: Reading words and meaning: from an age-old problem to a contemporary crisis (pp. 13-28) and 15: The proper place of phonics (pp. 409-424).
- International Literacy Association. (2018). *Explaining phonics instruction: an educator's guide* [Literacy Leadership Brief]. Newark, DE: Author. https://literacyworldwide.org/docs/default-source/where-we-stand/ila-explaining-phonics-instruction-an-educators-guide.pdf
- Goodman, K.S., & Goodman, Y.M. (1979). Learning to read is natural. In L.B. Resnick & P.A. Weaver (Eds.), *Theory and practice of early reading* (Vol. 1, pp. 137-154). Hillsdale, NJ: Erlbaum.
- Iaquinta, A. (2006). Guided reading: a research-based response to the challenges of early reading instruction. *Early Childhood Education Journal, 33*(6), 413-418. https://doi.org/10.1007/s10643-006-0074-2
- Hernández, J.C. (2014, June 26). New York schools chief advocates more "balanced literacy". *The New York Times*. http://nyti.ms/TARA2O
- Pondiscio, R. (2014, July 3). Why Johnny won't learn to read: balanced literacy is baaaack. *New York Daily News*. http://nydn.us/1jL2SZp

Wednesday, 19 May – Module 18: Teaching Reading Groupwork

A discussion about the development of reading skills, the design of reading programs, and the education of teachers who teach reading (that is, all teachers). What do teachers need to know about reading and the brain? Why? What are the elements of a good reading program and how would you design the ideal reading program? Why?

- BBC News. (31 October, 2017). The Americans who can't read. https://www.youtube.com/watch?v=9UdvAg9SA14
- Moats, L.C. (2020). *Speech to print: language essentials for teachers* (3rd ed.). Baltimore MD: Paul H. Brookes. Chapter 8: Structured language and literacy instruction (pp. 253-275 book, 292-317 on-line).

Divide the other readings for today among group members so that everyone is bringing something to the discussion.

- Moats, L.C. (1999). *Teaching reading **is** rocket science: What expert teachers of reading should know and be able to do*. American Federation of Teachers. http://www.aft.org/sites/default/files/reading_rocketscience_2004.pdf
- Drake, G., & Walsh, K. (2020). *2020 Teacher prep review: Program performance in early reading instruction.* National Council on Teacher Quality. https://www.nctq.org/dmsView/NCTQ_2020_Teacher_Prep_Review_Program_Performance_in_Early_Reading_Instruction
- Stahl, K.A.D. (2011). Applying new visions of reading development in today's classrooms. *The Reading Teacher, 65*(1), 52-56. https://doi.org/10.1598/RT.65.1.7
- Connor, C.M., Morrison, F.J., Fishman, B.J., Schatschneider, C., & Underwood, P. (2007). Algorithm-guided individualized reading instruction. *Science, 315*(5811), 464-465. https://doi.org/10.1126/science.1134513
- Willingham, D.T. (2015, Spring). For the love of reading: engaging students in a lifelong pursuit. *American Educator*, 4-13, 43. https://files.eric.ed.gov/fulltext/EJ1063918.pdf
- National Institute for Literacy (2007). What content-area teachers should know about adolescent literacy (Contract No. ED-04-CO-0094). http://lincs.ed.gov/publications/pdf/adolescent_literacy07.pdf

Friday, 21 May – Module 19: Teaching Reading FoRT Groupwork

Complete the FoRT practice test and submit your Excel answer sheet to me before the beginning of class. In class, discuss the FoRT as an assessment and any specific questions that were interesting. In addition, consider Treiman (2017) in the context of what we know from class (e.g., consider how reading this article now is different than if it had been the first reading in our course and consider what connections to class you can make).

- Pearson Education. (2013). *Foundations of Reading Practice Test*. Author. Practice test. Answer sheet.
- Treiman, R. (2017). Learning to spell words: findings, theories, and issues. *Scientific Studies of Reading, 21*(4), 265-276. https://doi.org/10.1080/10888438.2017.1296449
- International Literacy Association. (2019). *Teaching and assessing spelling* [Literacy Leadership Brief]. Newark, DE: Author. https://www.literacyworldwide.org/docs/default-source/where-we-stand/ila-teaching-and-assessing-spelling.pdf

Week Nine

Monday, 24 May – Module 20, class 1: Dyslexia and Poor Reading

Readings for today primarily serve as an introduction to the definition and behavioral characteristics of dyslexia or specific reading disability; Melby-Lervåg and Lervåg review another way of being a poor reader. In class, we will discuss multiple ways of being a poor reader.

- Mather, N., & Goldstein, S. (2001). *Learning disabilities and challenging behaviors: a guide for intervention and classroom management*. Baltimore: Paul H. Brookes. Chapter 7: Visual, auditory, and motor processing (pp. 165-186).
- Ferrer, E., Shaywitz, B.A., Holahan, J.M., Marchione, K.E., Michaels, R., & Shaywitz, S.E. (2015). Achievement gap in reading is present as early as first grade and persists through adolescence. *The Journal of Pediatrics, 167*(5), 1121-1125.e2. https://doi.org/10.1016/j.jpeds.2015.07.045
- Melby-Lervåg, M., & Lervåg, A. (2014). Effects of educational interventions targeting reading comprehension and underlying components. *Child Development Perspectives, 8*(2), 96-100. https://doi.org/10.1111/cdep.12068
- Wolter, D.L. (2016, November/December). Skirting questions: how good literacy specialists use professional judgement to avoid unnecessarily labeling students. *Literacy Today, 34*(3), 10-11. http://search.ebscohost.com.dartmouth.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=a9h&AN=119313590&site=ehost-live&scope=site
- Hanford, E. (2017, November). *Why getting help for kids with dyslexia is difficult*. KQED. https://www.kqed.org/mindshift/49548/why-getting-help-for-kids-with-dyslexia-is-difficult?
- Spear-Swerling, L., & Sternberg, R.J. (1996). *Off-track: when poor readers become "learning disabled."* Boulder, CO: Westview Press. Chapter 7: Educational practices for children with reading disability (pp. 185-228). [optional reading that provides connections]

Wednesday, 26 May – Module 20, class 2: Dyslexia and Poor Reading

There are multiple theories about the underlying nature and cause(s) of dyslexia; today, you will read about some of the neuroscience of dyslexia (Eden & Moats, Gabrieli), a potential mapping deficit (Wallace), and two things that are not likely causes of dyslexia. *NB*: There is some overlap across these readings; spend less time on the familiar.

- Vellutino, F.R., & Fletcher, J.M. (2005). Developmental dyslexia. In M. J. Snowling, & C. Hulme (Eds.), *The science of reading: a handbook* (pp. 362-378). Malden, MA: Blackwell Publishing.
- Eden, G.F., & Moats, L. (2002). The role of neuroscience in the remediation of students with dyslexia. *Nature Neuroscience, 5*(11), 1080-1084. https://doi.org/10.1038/nn946
- Gabrieli, J.D.E. (2009). Dyslexia: a new synergy between education and cognitive neuroscience. *Science, 325*(5938), 280-283. https://doi.org/10.1126/science.1171999
- Wallace, M.T. (2009). Dyslexia: bridging the gap between hearing and reading. *Current Biology, 19*(6), R260-R262. https://doi.org/10.1016/j.cub.2009.01.025
- Editorial. (2007). A cure for dyslexia? *Nature Neuroscience, 10*(2), 135. https://doi.org/10.1038/nn0207-135

Friday, 28 May – Module 20, class 3: Dyslexia and Poor Reading

What can neuroscience contribute to our understanding of dyslexia and to intervention and remediation approaches? What is happening in poorly reading brains?

- Sherman, C. (2011, 25 March). *Visualizing how we read*. Cerebrum. http://www.dana.org/news/features/detail.aspx?id=31068
- Heim, S., & Grande, M. (2012). Fingerprints of developmental dyslexia. *Trends in Neuroscience and Education, 1,* 10-14. https://doi.org/10.1016/j.tine.2012.09.001
- Shaywitz, S.E., Mody, M., & Shaywitz, B.E. (2006). Neural mechanisms in dyslexia. *Current Directions in Psychological Science, 15*(6), 278-281. https://doi.org/10.1111/j.1467-8721.2006.00452.x
- Olulade, O.A., Napoliello, E.M., & Eden, G.F. (2013). Abnormal visual motion processing is not a cause of dyslexia. *Neuron, 79*(1), 180-190. https://doi.org/10.1016/j.neuron.2013.05.002

*Week Ten*_____

Monday, 31 May – *No class: Memorial Day (first day of reading period)*

Wednesday, 02 June – Module 21: Putting it all Together: Plasticity and Development Groupwork
PAPER 4 DUE TODAY
Today we will be returning to the beginning, revisiting pre-reader skills and working our way back up through beginning reading skills, then on to dyslexia. The theme is the incredible plasticity that allows us to develop – as readers and as teachers – brains that can read.

- Thirteen/WNET New York (Producer). (2001). *The secret life of the brain* [Motion picture]. United States: PBS Home Video. Episode 2: *The child's brain: from syllable to sound* (52 min.).
- Hurford, D.P., Hurford, J.D., Head, K.L., Keiper, M.M., Nitcher, S.P., & Renner, L.P. (2016). The dyslexia dilemma: a history of ignorance, complacency and resistance in colleges of education. Journal of Childhood & Developmental Disorders, 2(3), 1-6. https://doi.org/10.4172/2472-1786.100034

*Final Exams (04-07 June)*_____

Saturday, 05 June
Your **FINAL REFLECTION** is due by 1:00 PM EST on Saturday, 05 June.