DARTMOUTH COLLEGE
☙ EDUCATION 64 ❧
DEVELOPMENT IN THE EXCEPTIONAL CHILD

Winter Term 2017
Period 9L
Mondays, Wednesdays, & Fridays, 8:50 to 9:55 am
X-period: Thursdays, *8:50* to 9:55 am
Moore Hall, room 202

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Office Hours: drop in, appointment

> *Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities…. [One purpose of this Act is] to ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for employment and independent living.*
>
> Individuals with Disabilities Education Act Amendments of 1997 (pp. 4, 8)

> *… knowledge determines our attitude towards complicated individuals of this [autistic] and other types. It also gives us the right and the duty to speak out for these children with the whole force of our personality.*
>
> Asperger, H. (1944/1991). 'Autistic psychopathology' in childhood. In U. Frith (Ed. & Trans.), *Autism and Asperger syndrome* (p. 90). Cambridge: Cambridge University Press.

☙ Course Description

Who is an "exceptional" child? How might an exceptional child think about and experience school and the rest of the world? What is happening inside the brain of an exceptional child? There are many kinds of exceptionality and many atypical developmental pathways, but in the world of education, the Individuals with Disabilities Education Act (IDEA) defines which children are exceptional or "disabled" and, thus, which children are eligible for special education services in public schools. In this course, we will review some specific types of exceptionality included in the IDEA, focusing on the behaviors, both strengths and weaknesses, that define the exceptional child; different approaches to learning, viewing the world, and interacting with others that characterize exceptional children; methods for successfully interacting with and educating exceptional children; and the brain bases of atypical or exceptional development in children.

☙ Goals and Objectives

For each student, the goals of the course are to (1) become familiar with exceptionality as defined by federal law in the IDEA; (2) be able to recognize and identify exceptional behaviors; (3) understand current scientific knowledge about exceptional children; (4) begin to use the behavioral and neuroscientific evidence to learn how best to support the development of exceptional children; (5) develop writing skills and the skills involved in locating, critically reading, and analyzing research articles; and (6) recognize the relevance of much of the course material to life outside of this class.

☙ Required Reading

- All readings for the course are available on-line, at the address provided in the syllabus (a link can also be found on the Canvas site), through searching the Dartmouth Digital Library (designated 🖧), or through Electronic Course Reserves (designated ®, linked through the Canvas site).
- All readings listed are required reading for the course unless designated [optional reading].

☙ General Requirements and Expectations

- All students are expected to read the material indicated in the *Schedule* and *Reading List by Class* below before each class and be prepared to discuss that material in class.
- All students are expected to attend class regularly (including x-periods), on time, and each student is responsible for all material presented and discussed in every class. If you must miss a class, it is your responsibility to borrow the notes from another student, acquire any materials that were handed out, and learn if changes have been made to the syllabus.
- Each student may have two excused absences from class. An absence is excused if an appropriate note or e-mail is provided in a timely manner. All other absences (but see next item) are considered unexcused and will negatively affect the portion of the grade related to attendance and class participation.
- I recognize that some students may wish to take part in religious observances that occur during this academic term. Should you have a religious observance that conflicts with your participation in the course, please speak with me early in the term to discuss appropriate accommodations.
- All students are expected to hand in the assignments outlined below at the beginning of class on the dates specified below and in the *Schedule*. No extensions of deadlines will be granted without a dean's letter or other similarly documented excuse. Any late assignment will be accepted only at my discretion, with a loss of at least two points.
- All students are expected to uphold all aspects of the Academic Honor Principle (refer to http://www.dartmouth.edu/~uja/honor). Your work should be your own and should be prepared specifically for this class. Whenever you make use of outside sources for findings, facts, language, or ideas (including websites, books, articles, roommates, etc.), you must acknowledge them in formal APA citations (see below for information on APA style). Failure to do so constitutes plagiarism, a serious academic offense that can involve suspension from the College. If you have questions about how or when to cite, please talk with me before handing in your paper. Any violation of the Academic Honor Principle regarding your work in this course will result in failure of the course.
- Students with disabilities enrolled in this course who may need disability-related academic adjustments and services are encouraged to see me privately as early as possible in the term. Students requiring disability-related accommodations must consult the Student Accessibility Services (SAS) office (205 Collis Student Center, 603.646.9900, Student.Accessibility.Services@Dartmouth.edu). Once SAS has authorized services, please share with me the SAS Services and Consent Form so that we can implement appropriate accommodations in the course. As a first step, if students have questions about whether they qualify to receive academic adjustments and services, they should contact the SAS office. All inquiries and discussions will remain confidential.

☙ Assignments

Four (4) short papers are due throughout the term, as indicated in the *Schedule* below. Paper 1 is due at the beginning of class on 23 January and should reflect material covered in the *Introduction* or *The Brain* classes and readings. Paper 2 is due at the beginning of class on 06 February and should reflect material covered in

the *Atypical Senses, Atypical Attention,* or *Atypical Social Interaction* classes and readings. Paper 3 is due at the beginning of class on 20 February and should reflect material covered in the *Atypical Mood, Atypical Environment,* or *Atypical Mathematics* classes and readings. Paper 4 is due at the beginning of class on 08 March and should reflect material covered in the *Atypical Language, Atypical Reading,* or *Atypical Writing* classes and readings.

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 reminded you of a classmate who always…? What part surprised you? In short, what part really resonated with you and made you think? Choose one specific aspect of the materials covered in class or in readings to write about. Once you have chosen what to write about, find two peer-reviewed, primary source research articles (not reviewed in class or in readings) relevant to your topic and incorporate information from those articles into your 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.

There are a number of ways to locate research articles for your papers. Dartmouth has an impressive Digital Library (http://library.dartmouth.edu) that makes locating articles easy and is more reliable than a general search engine like Google Scholar. Through the Library, you can access relevant databases such as Medline, PsycInfo, ERIC, or EBSCO Academic Search Premier. By conducting a subject or keyword search within these databases, you can find articles related to your topic of choice. Articles should be primary source research articles (*not* commentaries or opinion pieces, research reviews, or meta-analyses) and should be published in peer-reviewed journals (check the box next to "Peer Reviewed").

- 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 and all pages should be numbered and stapled (not paper-clipped) together. Double-sided printing is acceptable.
- 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 for the course (available on the Canvas site) or directly to *The Publication Manual of the American Psychological Association, 6th Ed.* (2010).
- A copy of the first page, including abstract, of any referenced article should be turned in with your paper. Please turn in 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.
- Papers will be graded based on content (engagement and demonstrated understanding of the material, appropriate use of research materials, etc.) and style (spelling, grammar, organization, etc.). Please proofread and edit your assignments carefully before turning them in. For details about grading for each assignment, refer to the Grading Criteria document available on the Canvas site; it will be helpful to refer to this document as you work on each paper.
- Papers are due at the beginning of class–before lecture or activities begin–on each due date. Graded papers will be returned in class (Paper 4 will be returned at the final exam).
- Share with your classmates what you discovered during each paper assignment by posting a summary in the Paper Discussion on the Canvas site after you hand in your paper and before the beginning of the next class.
- 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 before or after class, stop by my office, or make an appointment to meet 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.

☙ Canvas (https://canvas.dartmouth.edu/)

- Numerous class resources can be found on the Canvas site for the course, including a copy of the Syllabus, the APA Style Summary Sheet, the Paper Grading Criteria summary sheet, Electronic Course Reserves, and links to readings on the web outside of the Digital Library.
- Lecture outlines for each topic will be posted on the site prior to the beginning of each unit. The outlines may be printed and brought to class, and may be helpful in organizing your notes.
- The Discussion function on the Canvas site is enabled. Discussion allows you to reflect on material from readings and class (and materials from outside class) with other students. You may contribute by posting ideas, questions, news, or reflections and by replying to others' comments. Take advantage of the Discussion function in order to engage people you might not otherwise talk with outside of class and to ask for and offer help. This is your shared space to continue a discussion that was just getting interesting as class ended, to start a discussion that we didn't have in class, to hear the opinions of all of your classmates, and to learn from your classmates outside of class time.

☙ Quizzes and Final Exam

- There will be a number of unannounced quizzes throughout the term, with short questions based on the assigned readings/activities for that day. These will take about five minutes at the beginning or end of class. It may be helpful to read the research articles with the following questions in mind: What was the authors' question and why was it important? What did the authors do to answer their question? What did the authors find and why was it important? For class purposes, read the assigned materials for the main ideas (for papers, you will need to read at a different level of detail). There are no "make up" opportunities for missed quizzes.
- There will be a cumulative final exam consisting of multiple choice, fill-in-the-blank, short answer, and essay questions. You may refer to handwritten notes on one side of one sheet of standard 8½ × 11-inch paper during the exam; these notes must be handed in with the exam and will not be returned. The final exam will be given during exam period, on Monday 13 March at 11:30 am, and, in accordance with College regulations, cannot be taken at any other time.

☙ Course Grade

Grades for the course are based on class attendance and participation, including meaningful participation in Canvas Discussions (13%); grades on each of the four papers due throughout the term (15% each); grades on the quizzes (12%); and the grade on the final exam (15%). Grading is consistent with the ORC description of scholarship ratings (http://www.dartmouth.edu/~reg/transcript/grade_descriptions.html).

SCHEDULE[§]

DATE	TOPIC(S)	WHAT TO READ[†]	WHAT'S DUE
Week One			
04 January	Introduction to the Course	Syllabus, Warby, Burns, Alberts	post
06 January	Introduction: Nature & Nurture	Bruer, Murray, Black, Canli	
Week Two			
09 January	Introduction: Strengths & Weaknesses	Gardner, Levine, Mayer, Dweck, Begley	
11 January	Introduction: IDEA & IEPs	Heward, Weissman, Brown-Chidsey, Fuchs, NICHCY, OSERS	
12 January	*Ghost in your genes*	*[In-class film]*	
13 January	Introduction: IDEA & IEPs	deBettencourt, Yell, McGuire, Raskind	
Week Three			
16 January	*No class: Martin Luther King, Jr. Day*	*No class*	
18 January	The Brain: Neuroanatomy	Byrnes, Gazzaniga	
19 January	The Brain: Neuro & Techniques	Rose & Meyer, Poldrack, Cicchetti	
20 January	Atypical Senses: Deafness	Pakulski, Cohen, Finney	
Week Four			
23 January	Atypical Attention: ADD/ADHD	Barkley, Hallowell, Mather, Dawson	Paper 1
25 January	Atypical Attention: ADD/ADHD	Biederman, Hallowell, Shaw, Gallo, Couzin, Young, Vastag	post
26 January	*Odd kid out*	*[In-class film]*	
27 January	Atypical Social Interaction: Autism	Hughes, Beals, Bernstein, Grandin, Silberman	
Week Five			
30 January	Atypical Social Interaction: Autism	Lovaas, Dawson, Flynn & Healy, Green	
01 February	Atypical Social Interaction: Autism	Hill & Frith, Ramachandran, Young, Wickelgren	
02 February	*Reaching the autistic mind*	*[In-class film]*	
03 February	Atypical Mood: Depression	Wright-Strawderman, Crundwell, Solomon, Holden	
Week Six			
06 February	Atypical Mood: Depression	Davidson, Sheline, Couzin, Jamison, Bostic	Paper 2
08 February	Atypical Mood: EBD	Mathur, Frey, Niesyn, Rappaport, Blake, Sugai	post
10 February	Atypical Environment: Stress & Abuse	Sapolsky, Freyd, Yanowitz, Hart, NH	
Week Seven			
13 February	Atypical Mathematics: Dyscalculia	Abeel, Geary, Griffin, Kaufmann, Rattan	
15 February	Atypical Mathematics: Dyscalculia	Flora, Butterworth, Dehaene, Isaacs, Price	
16 February	*Thinking with numbers*	*[In-class film]*	
17 February	Atypical Language: SLI or LD	Dollaghan, Leonard (2), Schuele, Bishop	
Week Eight			
20 February	Atypical Language: SLI or LD	Rice, Tallal, Gillam, RALLI	Paper 3
22 February	Atypical Language: SLI or LD	Wang, Shafer, Gauger	post
24 February	Atypical Reading: Dyslexia and RD	Morris, Simpson, IDA, Mather, Fink	
Week Nine			
27 February	Atypical Reading: Dyslexia and RD	Lyon, Shaywitz, Deeney, Stein	
01 March	Atypical Reading: Dyslexia and RD	Murphy, Eden, Shaywitz, Temple	
03 March	*A dyslexic family diary*	*[In-class film]*	
Week Ten			
06 March	Atypical Writing: Dysgraphia	Richards, NCLD, Tyre, Rosenblum, Graham, Menon	
08 March	Summary and Review	Kagan	Paper 4, post 2
Final Exams			
11-14 March	Final Exam: 13 March at 11:30 am		

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

READING LIST BY CLASS

® designates readings available on-line through **Electronic Course Reserves** (link through Canvas site)
🖧 designates readings available on-line at the **address provided** (links can also be found on the Canvas site) or, if no address is provided, available through the **Dartmouth Digital Library**
**The Neurodevelopmental Disorders section of the DSM-V is available on-line (link through Canvas) at: http://dsm.psychiatryonline.org/doi/full/10.1176/appi.books.9780890425596.dsm01

Week One

Wednesday, 04 January – Introduction to the Course
POST AN INTRODUCTION
An overview of the course content, structure, and requirements. Please read the Syllabus carefully and introduce yourself to your classmates by posting to the Welcome and Introductions Discussion on our Canvas site. The readings for today help to set the conceptual stage for the course: Warby et al. (1999) review how to read a research article, specifically in terms of making connections between research findings and classroom practice; Burns and Ysseldyke (2009) discuss using evidence-based practices in special education; and Alberts (2009) argues for a science of education. *NB:* Read for the main ideas.
🖧 Warby, D. B., Greene, M. T., Higgins, K., & Lovitt, T. C. (1999). Suggestions for translating research into classroom practices. *Intervention in School & Clinic, 34*(4), 205-212. doi: 10.1177/105345129903400402
🖧 Burns, M. K., & Ysseldyke, J. E. (2009). Reported prevalence of evidence-based instructional practices in special education. *The Journal of Special Education, 43*(1), 3-11. doi: 10.1177/0022466908315563
🖧 Alberts, B. (2009). Making a science of education. *Science, 323,* 15. doi: 10.1126/science.1169941

Friday, 06 January – Introduction: Nature & Nurture
An introduction to issues surrounding biology, environment, and individual differences as they relate to typical and atypical human development; connections between brain science and education. *NB:* This may look like a lot of reading, but each article is quite short.
🖧 Bruer, J. T. (2002). Avoiding the pediatrician's error: how neuroscientists can help educators (and themselves). *Nature Neuroscience, 5*, 1031-1033. doi: 10.1038/nn934
® Murray, B. (2000). From brain scan to lesson plan. *Monitor on Psychology, 31*(3).
🖧 Black, J. E. (1998). How a child builds its brain: some lessons from animal studies of neural plasticity. *Preventive Medicine, 27*, 168-171. doi: 10.1006/pmed.1998.0271
🖧 Canli, T., Sivers, H., Whitfield, S. L., Gotlib, I. H., & Gabrieli, J. D. E. (2002). Amygdala response to happy faces as a function of extraversion. *Science, 296*, 2191. doi: 10.1126/science.1068749

Week Two

Monday, 09 January – Introduction: Strengths & Weaknesses
An introduction to thinking about exceptionality in terms of strengths and weaknesses; the role of beliefs and expectations.
® Gardner, H. (1999). *Intelligence reframed: multiple intelligences for the 21st century*. New York: Basic Books. Chapter 3: The theory of multiple intelligences: a personal perspective (pp. 27-46).
® Levine, M. (2002). *A mind at a time*. New York: Simon & Schuster. Chapter 2: The ways of learning (pp. 27-50).
🖧 Mayer, R. E. (2009). Advances in applying the science of learning and instruction to education. *Psychological Science in the Public Interest, 9*(3), i-ii. doi: 10.1111/j.1539-6053.2009.01037.x
🖧 Dweck, C. S. (2007). The perils and promises of praise. *Educational Leadership, 65*(2), 34-39.
🖧 Begley, S. (2007). The puzzle of hidden ability. *Newsweek, 150*(8/9), 50-51.

Wednesday, 11 January – Introduction: The Individuals with Disabilities Education Act (IDEA) & Individualized Education Plans (IEPs)

An introduction to special education law in terms of IDEA, the categories and labels included in IDEA, and the process of creating documents (IEPs) that outline types of special education for exceptional children.

® Heward, W. L. (2013). *Exceptional children: an introduction to special education* (10th Ed.). Boston, MA: Pearson. Chapter 1: The purpose and promise of special education (pp. 4-41). *NB:* For purposes of the course, it is unnecessary to memorize the legislation regarding special education listed in this chapter; concentrate on the main ideas in the main text.

Weissman, M. M. (2001). Stigma. *Journal of the American Medical Association, 285*(3), 261-262. doi: 10.1001/jama.285.3.261

Brown-Chidsey, R. (2007). No more "waiting to fail". *Educational Leadership, 65*(2), 40-46.

Fuchs, D., Fuchs, L. S., & Vaughn, S. (2014). What is intensive instruction and why is it important? *Teaching Exceptional Children, 46*(4), 13-18. doi: 10.1177/0040059914522966

Categories of disabilities under IDEA (April 2009). National Dissemination Center for Children with Disabilities (NICHCY). This brochure can be found at http://www.parentcenterhub.org/wp-content/uploads/repo_items/gr3.pdf

A guide to the individualized education program (July 2000). Office of Special Education and Rehabilitative Services, US Department of Education. Sample IEP Form (pp. 17-21). This document can be found at http://www2.ed.gov/parents/needs/speced/iepguide/iepguide.pdf

Hyman, S. (April, 2011). Diagnosing the DSM: diagnostic classification needs fundamental reform. *Cerebrum*. This article can be found at http://www.dana.org/news/cerebrum/detail.aspx?id=32066 [optional reading]

***Thursday, 12 January – Introduction: Nature & Nurture revisited**

X-period. We will be viewing the program *Ghost in your genes* today in class (56 min.).

Holt, S., & Paterson, N. (Producers and Directors). (2006). *Ghost in your genes* [Motion picture]. United States and Britain: A NOVA Production by Holt Productions LLC and the BBC. (Available from Shop.WGBH.org, P.O. Box 2284, South Burlington, VT, 05407).

Buchen, L. (2010). In their nurture. *Nature, 467,* 146-148. doi: 10.1038/467146a [optional reading]

Mansuy, I. M., & Mohanna, S. (2011). Epigenetics and the human brain: where nurture meets nature. *Cerebrum*. This article can be found at http://www.dana.org/news/cerebrum/detail.aspx?id=32670 [optional reading]

Keating, D. P. (2016). Transformative role of epigenetics in child development research: commentary on the special section. *Child Development, 87*(1), 135-142. doi: 10.1111/cdev.12488 [optional reading]

Friday, 13 January – Introduction: The Individuals with Disabilities Education Act (IDEA) & Individualized Education Plans (IEPs)

Continued discussion of IDEA and IEPs, including a comparison with a revised version of the IDEA (IDEIA), and a consideration of universal design.

deBettencourt, L. U. (2002). Understanding the differences between IDEA and Section 504. *Teaching Exceptional Children, 34*(3), 16-23.

® Yell, M. L., Katsiyannis, A., Ryan, J. B., McDuffie, K. A., & Mattocks, L. (2008). Ensure compliance with the Individuals with Disabilities Education Improvement Act of 2004. *Intervention in School & Clinic, 44*(1), 45-51. doi: 10.1177/1053451208318875

McGuire, J. M., Scott, S. S., & Shaw, S. F. (2006). Universal Design and its application in educational environments. *Remedial and Special Education, 27*(3), 166-175. doi: 10.1177/07419325060270030501

Raskind, M. H., Goldberg, R. J., Higgins, E. L., & Herman, K. L. (2002). Teaching "life success" to students with LD: lessons learned from a 20-year study. *Intervention in School & Clinic, 37*(4), 201-208. doi: 10.1177/105345120203700402

🖧 Tanis, B. (2014-2015, Winter). Pushing back against high stakes for students with disabilities. *American Educator, 38*(4) 19-23. [optional reading]

*Week Three*_____

Monday, 16 January – *No class: Martin Luther King, Jr. Day*

Wednesday, 18 January – The Brain: Neuroanatomy

An introduction to basic neuroanatomy and brain function. *NB:* The Gazzaniga et al. (2002) chapter is quite dense. You do not need to memorize the information in this chapter. The chapter is provided so that you will have a resource to which to refer when we read neuroscientific articles later in the course. For now, work through it at a cursory level after reading Byrnes as background to gain a general idea of the type of information that it reviews so that you know when to use it in the future.

® 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).

® 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).

***Thursday, 19 January – The Brain: Neuroanatomy & Techniques**

Continued discussion of basic neuroanatomy, with application to development and education.

® Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age: universal design for learning.* Alexandria, VA: Association for Supervision and Curriculum Development. Chapter 2: What brain research tells us about learner differences (pp. 11-39).

🖧 Poldrack, R. A. (2009, 27 May). Neuroimaging: separating the promise from the pipe dreams. *Cerebrum.* This article can be found at http://www.dana.org/news/cerebrum/detail.aspx?id=22220

🖧 Cicchetti, D., & Dawson, G. (2002). Editorial: multiple levels of analysis. *Development and Psychopathology, 14,* 417-420. doi: 10.1017/S0954579402003012

Friday, 20 January – Atypical Senses: Deafness

Deafness is one of the sensory disability categories identified in the IDEA; we will briefly review some of the related educational and neural literature. *NB*: Read the technical reports for the main ideas.

🖧 Pakulski, L. A. & Kaderavek, J. N. (2002). Children with minimal hearing loss: interventions in the classroom. *Intervention in School & Clinic, 38*(2), 96-103. doi: 10.1177/10534512020380020501

® Cohen, L. H. (1994). *Train go sorry: inside a deaf world.* Boston: Houghton Mifflin Company. Chapter 4: Least restrictive environment (pp. 49-65).

🖧 Finney, E. M., Clementz, B. A., Hickok, G., & Dobkins, K. R. (2003). Visual stimuli activate auditory cortex in deaf subjects: evidence from MEG. *NeuroReport, 14*(11), 1425-1427. doi: 10.1097/00001756-200308060-00004

🖧 Aronson, J. (Director), & Weisberg, R. (Producer). (2000). *Sound and fury: the communication wars of the deaf* [Motion picture]. New York, NY: Filmmakers Library. [optional, 80 minutes, available streaming through the Library]

*Week Four*_____

Monday, 23 January – Atypical Attention: Attention-Deficit/Hyperactivity Disorder (ADD/ADHD)

PAPER 1 DUE TODAY

An introduction to the definition, behavioral characteristics, and treatment of ADHD.

🖧 Barkley, R. A., Cook, E. H., Dulcan, M., Campbell, S., Prior, M., Atkins, M., et al. (2002). Consensus statement on ADHD. *European Child & Adolescent Psychiatry, 11*(2), 96-98. doi: 10.1097/00004583-200212000-00001

® Hallowell, E. M., & Ratey, J. J. (1994). *Driven to distraction: recognizing and coping with attention deficit disorder from childhood through adulthood*. New York: Simon & Schuster. Chapter 2: "I sang in my chains like the sea": the child with ADD (pp. 41-69).

® Mather, N., & Goldstein, S. (2008). *Learning disabilities and challenging behaviors: a guide for intervention and classroom management (2nd Ed.)*. Baltimore: Paul H. Brookes. Chapter 4: Attention and self-regulation: understanding and managing students with hyperactivity and poor attention, planning, and impulse control (pp. 67-109).

® Dawson, P., & Guare, R. (2004). *Executive skills in children and adolescents: a practical guide to assessment and intervention*. New York: Guilford Press. Chapter 1: Overview of executive skills (pp. 1-10).

Wednesday, 25 January – Atypical Attention: Attention-Deficit/Hyperactivity Disorder (ADD/ADHD)

POST A SUMMARY OF YOUR PAPER 1 TOPIC/FINDINGS/CONCLUSIONS

What might be happening in the brain of a child with ADHD? Further consideration of treatment. *NB:* The Gallo and Posner (2016) article is challenging; read for the main ideas (e.g., updates to the first three articles) and note that we will not be following up on either genetic or molecular mechanisms in class.

🖧 Biederman, J. (2005). Attention-deficit/hyperactivity disorder: a selective overview. *Biological Psychiatry, 57,* 1215-1220. doi: 10.1016/j.biopsych.2004.10.020

® Hallowell, E. M., & Ratey, J. J. (1994). *Driven to distraction: recognizing and coping with attention deficit disorder from childhood through adulthood*. New York: Simon & Schuster. Chapter 9: A local habitation and a name: the biology of ADD (pp. 269-285).

🖧 Shaw, P., Eckstrand, K., Sharp, W., Blumenthal, J., Lerch, J. P., et al. (2007). Attention-deficit/hyperactivity disorder is characterized by a delay in cortical maturation. *Proceedings of the National Academy of Sciences, 104*(49), 19649-19654. doi: 10.1073/pnas.0707741104

🖧 Gallo, E. F., & Posner, J. (2016). Moving towards causality in attention-deficit-hyperactivity disorder: overview of neural and genetic mechanisms. *Lancet Psychiatry, 3*(6), 555-567. doi: 10.1016/S2215-0366(16)00096-1

🖧 Couzin, J. (2004). Pediatric study of ADHD drug draws high-level public review. *Science, 305,* 1088-1089. doi: 10.1126/science.305.5687.1088a

🖧 Vastag, B. (2001). Pay attention: Ritalin acts much like cocaine. *Journal of the American Medical Association, 286*(8), 905-906. doi: 10.1001/jama.286.8.905

🖧 Young, S., & Amarasinghe, M. (2010). Practitioner review: non-pharmacological treatments for ADHD: a lifespan approach. *Journal of Child Psychology and Psychiatry, 51*(2), 116-133. doi: 10.1111/j.1469-7610.2009.02191.x

🖧 Shaw, P. (2013). ADHD: 10 years later. *Cerebrum*. This article is available at http://www.dana.org/Cerebrum/2013/ADHD__10_Years_Later/ [optional reading]

🖧 Subcommittee on Attention-Deficit/Hyperactivity Disorder, Steering Committee on Quality Improvement and Management. (2011). ADHD: clinical practice guidelines for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Pediatrics, 128*(5), 1-15. doi: 10.1542/peds.2011-2654 [optional reading]

***Thursday, 26 January – Atypical Attention: Attention Deficit/Hyperactivity Disorder (ADD/ADHD)**

X-period. We will be viewing the film *Odd kid out: living with attention deficit disorder* today in class (52 min.).

O'Donnell, K. (Producer & Director). (2004). *Odd kid out: living with attention deficit disorder* [Motion picture]. United States: Aquarius Productions. (Available from Aquarius Productions, Inc., 18 North Main St., P.O. Box 1159, Sherborn, MA, 01770).

Friday, 27 January – Atypical Social Interaction: Autism

An introduction to the definitions and behavioral characteristics of autism spectrum disorder.

🖧 Watch the short film *Autism every day* (13 min.) available on the web at http://www.youtube.com/watch?v=O0vCz2KWMM0

🖧 Hughes, V. (2012). Complex disorder. *Nature, 491*(7422), S2-S3.
🖧 Beals, K. P. (2003). The ethics of autism: What's wrong with the dominant paradigms and how to fix them. *Mental Retardation and Developmental Disabilities Research Reviews, 9*, 32-39. doi: 10.1002/mrdd.10058
🖧 Bernstein, N. (2004, June). A father's fight. *Health, 18*(5), pp. 128-133, 178-182.
® Grandin, T. (1995). *Thinking in pictures and other reports from my life with autism*. New York: Vintage Books. Chapter 5: The ways of the world: developing autistic talent (pp. 96-110).
🖧 Silberman, S. (2001, December). The geek syndrome. *Wired, 9*. This article can be found at https://www.wired.com/2001/12/aspergers/

Week Five

Monday, 30 January – Atypical Social Interaction: Autism

A discussion about treatment approaches for children with autism.
® Green, G. (1996). Evaluating claims about treatments for autism. In C. Maurice, G. Green, & S. C. Luce (Eds.), *Behavioral intervention for young children with autism: a manual for parents and professionals* (pp. 15-28). Austin, TX: Pro-Ed.
🖧 Lovaas, O. I. (1987). Behavioral treatment and normal educational and intellectual functioning in young autistic children. *Journal of Consulting and Clinical Psychology, 55*(1), 3-9. doi: 10.1037//0022-006X.55.1.3
🖧 Dawson, G., Rogers, S., Munson, J., Smith, M., Winter, J., Greenson, J., Donaldson, A., & Varley, J. (2010). Randomized, controlled trial of an intervention for toddlers with autism: the Early Start Denver model. *Pediatrics, 125*(1), e17-e23. doi: 10.1542/peds.2009-0958
🖧 Flynn, L., & Healy, O. (2012). A review of treatments for deficits in social skills and self-help skills in autism spectrum disorder. *Research in Autism Spectrum Disorders, 6*, 431-441. doi: 10.1016/j.rasd.2011.06.016

Wednesday, 01 February – Atypical Social Interaction: Autism

What might be happening in the brain of a child with autism? There are a number of theories, some more general and others more specific; the readings for today provide a small sample.
🖧 Hill, E. L., & Frith, U. (2003). Understanding autism: insights from mind and brain. *Philosophical Transactions of the Royal Society of London B, 358*(1430), 281-289. doi: 10.1098/rstb.2002.1209 This article can be found at http://www.jstor.org/stable/3558141
🖧 Ramachandran, V. S., & Oberman, L. M. (2006). Broken mirrors: a theory of autism. *Scientific American, 295*(5), 63-69. doi: 10.1038/scientificamerican0607-20sp
🖧 Wickelgren, I. (2005). Autistic brains out of synch? *Science, 308,* 1856-1858. doi: 10.1126/science.308.5730.1856
🖧 Young, L. J., & Barrett, C. E. (2015). Can oxytocin treat autism? *Science, 347*, 825-826. doi: 10.1126/science.aaa8120
🖧 Carver, L. J., & Dawson, G. (2002). Development and neural bases of face recognition in autism. *Molecular Psychiatry, 7*, S18-S20. doi: 10.1038/sj.mp.4001168 [Choose Supplement 2][optional reading]

***Thursday, 02 February – Atypical Social Interaction: Autism**

X-period. We will be viewing the film *Reaching the autistic mind: an educational challenge* today in class (62 min.).
D'Agostino, P., Mitrotti, R., & Hajdinjak, C. (Producers) & Mitrotti, R., & VanAlkemade, R. (Directors). (2002). *Reaching the autistic mind: an educational challenge* [Motion picture]. United States: RPM Media Productions. (Available from RPM Media, Inc., 5-28 51 Avenue, Long Island City, NY, 11101).

Friday, 03 February – Atypical Mood: Depression

An introduction to the definition and behavioral characteristics of depression. *NB:* The Solomon (2001) chapter is lengthy, but written for a popular audience.

- Wright-Strawderman, C., & Lindsey, P. (1996). Depression in students with disabilities: recognition and intervention strategies. *Intervention in School & Clinic, 31*(5), 261-275. doi: 10.1177/105345129603100503
- Crundwell, R. M. A., & Killu, K. (2010). Responding to a student's depression. *Educational Leadership, 68*(2), 46-51.
® Solomon, A. (2001). *The noonday demon: an atlas of depression*. New York: Simon & Schuster. Chapter 5: Populations (pp. 173-215).
- Holden, C. (2008). Poles apart. *Science, 321,* 193-195. doi: 10.1126/science.321.5886.193

*Week Six*_____

Monday, 06 February – Atypical Mood: Depression
PAPER 2 DUE TODAY
What might be happening in the brain of a child with depression? Depression is often a contributing factor to suicide.
- Davidson, R. J., & Slagter, H. A. (2000). Probing emotion in the developing brain: functional neuroimaging in the assessment of the neural substrates of emotion in normal and disordered children and adolescents. *Mental Retardation and Developmental Disabilities Research Reviews, 6*, 166-170. doi: 10.1002/1098-2779(2000)6:3<166::AID-MRDD3>3.3.CO;2-F
- Sheline, Y. I., Gado, M. H., & Kraemer, H. C. (2003). Untreated depression and hippocampal volume loss. *American Journal of Psychiatry, 160,* 1516-1518. doi: 10.1176/appi.ajp.160.8.1516
- Couzin, J. (2004). Volatile chemistry: children and antidepressants. *Science, 305,* 468-470. doi: 10.1126/science.305.5683.468
® Jamison, K. R. (1999). *Night falls fast: understanding suicide*. New York: Vintage Books. Chapter 9: As a society: the public health (pp. 264-289).
- Bostic, J. Q., Rustuccia, C., & Schlozman, S. C. (2001). The suicidal student. *Educational Leadership, 59*(2), 81-82.

Wednesday, 08 February – Atypical Mood: Emotional and Behavioral Disorders (EBD)
POST A SUMMARY OF YOUR PAPER 2 TOPIC/FINDINGS/CONCLUSIONS
Expanding beyond depression as an example within the IDEA "Emotional Disturbance" category, a look at the broader label of "EBD" often used in education. We will have small group discussions based on the articles assigned for today, so be sure to come to class prepared.
- Mathur, S. R. (2007). Understanding emotional and behavioral disorders: are we paying the cost of borderline ethics? *Education and Treatment of Children, 30*(4), 11-26. doi: 10.1353/etc.2007.0028
- Frey, A., & George-Nichols, N. (2003). Intervention practices for students with emotional and behavioral disorders: using research to inform school social work practice. *Children & Schools, 25*(2), 97-104.
- Niesyn, M. E. (2009). Strategies for success: evidence-based instructional practices for students with emotional and behavioral disorders. *Preventing School Failure, 53*(4), 227-233. doi: 10.3200/PSFL.53.4.227-234
- Rappaport, N., & Minahan, J. (2012, October). Cracking the behavior code. *Educational Leadership, 70*(2), 18-25.
- Blake, C., & Monahan, E. C. (2007). Rethinking teacher preparation for EBD students: towards a partnership model. *Support for Learning, 22*(2), 60-65. doi: 10.1111/j.1467-9604.2007.00448.x
® Sugai, G., & Horner, R. (2002). The evolution of discipline practices: school-wide positive behavioral supports. *Child & Family Behavior Therapy, 24*(1-2), 23-50. doi: 10.1300/J019v24n01_03
- Merrell, K. W., & Walker, H. M. (2004). Deconstructing a definition: social maladjustment versus emotional disturbance and moving the EBD field forward. *Psychology in the Schools, 41*(8), 899-910. doi: 10.1002/pits.20046 [optional reading]

Friday, 10 February – Atypical Environment: Stress & Abuse

An introduction to the effects of stress and abuse on the human brain. Anyone who works with children is required by law to report suspected cases of child abuse or neglect–what are the signs? *NB:* Focus on the recognizing and reporting sections of the 2002 NH report, highlighting the responsibilities of anyone who works with children; focus on the main ideas in the Hart and Rubia (2012) review.

- Sapolsky, R. M. (1996). Why stress is bad for your brain. *Science, 273*, 749-750. doi: 10.1126/science.273.5276.749. This article can be found at http://www.jstor.org/stable/2890868
- Sapolsky, R. M. (2005, December). Sick of poverty. *Scientific American, 293*(6), 92-99. doi: 10.1038/scientificamerican1205-92
- Freyd, J. J., Putnam, F. W., Lyon, T. D., Becker-Blease, K. A., Cheit, R. E., Siegel, N. B., & Pezdek, K. (2005). The science of child sexual abuse. *Science, 308*, 501. doi: 10.1126/science.1108066
- Yanowitz, K. L., Monte, E., & Tribble, J. R. (2003). Teachers' beliefs about the effects of child abuse. *Child Abuse & Neglect, 27,* 483-488. doi: 10.1016/S0145-2134(03)00033-4
- Hart, H., & Rubia, K. (2012). Neuroimaging of child abuse: a critical review. *Frontiers in Human Neuroscience, 6*(52). doi: 10.3389/fnhum.2012.00052
- *Child abuse and neglect: guidelines for New Hampshire school employees: recognizing and reporting suspected child abuse and neglect* (2002). State of New Hampshire, Attorney General's Task Force on Child Abuse and Neglect. This document can be found at http://doj.nh.gov/criminal/victim-assistance/documents/child-abuse-education-protocol.pdf; especially note Appendices H, I, J, K (pp. 33-39)

*Week Seven*_____

Monday, 13 February – Atypical Mathematics: Dyscalculia or Mathematics Disability

An introduction to the definition and behavioral characteristics of the learning disability dyscalculia with an emphasis on the foundational concept of number sense. What role might teachers play?

® Abeel, S. (2003). *My thirteenth winter*. New York: Scholastic Inc. Chapters Prelude (pp. 43-53) and An answer (pp. 88-100).

- Geary, D. C. (2004). Mathematics and learning disabilities. *Journal of Learning Disabilities, 37*(1), 4-15. doi: 10.1177/00222194040370010201
- Griffin, S. (2004). Teaching number sense. *Educational Leadership, 61*(5), 39-42.
- Kaufmann, L., Mazzocco, M. M., Dowker, A., von Aster, M., Göbel, S. M…. Nuerk, H.-C. (2013). Dyscalculia from a developmental and differential perspective. *Frontiers in Psychology, 4*(516), 1-5. doi: 10.3389/fpsyg.2013.00516
- Rattan, A., Good, C., & Dweck, C.S. (2012). "It's ok - Not everyone can be good at math": Instructors with an entity theory comfort (and demotivate) students. *Journal of Experimental Social Psychology, 48,* 731-737. doi: 10.1016/j.jesp.2011.12.012
- Gersten, R., & Chard, D. (1999). Number sense: rethinking arithmetic instruction for students with mathematical disabilities. *Journal of Special Education, 33*(1), 18-28. doi: 10.1177/002246699903300102 [optional reading]

Wednesday, 15 February – Atypical Mathematics: Dyscalculia or Mathematics Disability

A continuation of our discussion about children who struggle with mathematics. What happens in the brain as mathematical information is processed? What might happen in the brains of children with mathematical difficulties? We will review some of the evidence.

- Flora, C. (2013, July/August). No head for numbers. *Discover Magazine, 34*(6), 86-88.
- Butterworth, B., Varma, S., & Laurillard, D. (2011). Dyscalculia: from brain to education. *Science, 332,* 1049-1053. doi: 10.1126/science.1201536
- Dehaene, S., Spelke, E., Pinel, P., Stanescu, R., & Tsivkin, S. (1999). Sources of mathematical thinking: behavioral and brain-imaging evidence. *Science, 284*, 970-974. doi: 10.1126/science.284.5416.970
- Isaacs, E. B., Edmonds, C. J., Lucas, A., & Gadian, D. G. (2001). Calculation difficulties in children of very low birthweight: a neural correlate. *Brain, 124,* 1701-1707. doi: 10.1093/brain/124.9.1701

Price, G. R., Holloway, I., Räsänen, P., Vesterinen, M., & Ansari, D. (2007). Impaired parietal magnitude processing in developmental dyscalculia. *Current Biology, 17*(24), R1042-R1043. doi: 10.1016/j.cub.2007.10.013

***Thursday, 16 February – Atypical Mathematics: Dyscalculia or Mathematics Disability**

X-period. We will be viewing the program *Developing minds: thinking with numbers* today in class (52 min.).

WGBH (Producer). (2002). *Developing minds: thinking with numbers* [Motion picture]. United States: WGBH. (Available from Shop.WGBH.org, P.O. Box 2284, South Burlington, VT, 05407).

Friday, 17 February – Atypical Language: Specific Language Impairment (SLI) or Language Disorder (LD)

An introduction to the definition and behavioral characteristics of the learning disability and/or communication disorder SLI; as you will discover, the definition is not always clear.

® Dollaghan, C. (1998). Late talker or SLI?: The story of Jay X. *Seminars in Speech and Language, 19*(1), 7-14.

® Leonard, L. B. (1998). *Children with specific language impairment*. Cambridge, MA: MIT Press. Chapter 1: Introduction (pp. 3-25).

® Schuele, C. M., & Hadley, P. A. (1999). Potential advantages of introducing Specific Language Impairment to families. *American Journal of Speech-Language Pathology, 8,* 11-22.

Bishop, D. V. M. (2006). What causes specific language impairment in children? *Current Directions in Psychological Science, 15*(5), 217-221. doi: 10.1111/j.1467-8721.2006.00439.x

Leonard, L. B. (2014). Specific Language Impairment across languages. *Child Development Perspectives, 8*(1), 1-5. doi: 10.1111/cdep.12053

Week Eight

Monday, 20 February – Atypical Language: Specific Language Impairment (SLI) or Language Disorder (LD)

PAPER 3 DUE TODAY

There are numerous approaches to helping children with SLI develop typical language skills, ranging from traditional sessions with an SLP to classroom accommodations to "science-based" computer programs.

Rice, M. L. (1997). Specific language impairments: in search of diagnostic markers and genetic contributions. *Mental Retardation and Developmental Disabilities Research Reviews, 3*, 350-357. doi: 10.1002/(SICI)1098-2779(1997)3:4<350::AID-MRDD10>3.0.CO;2-U

Tallal, P., Miller, S. L., Bedi, G., Byma, G., Wang, X., Nagarajan, S. S., Schreiner, C., Jenkins, W. M., & Merzenich, M. M. (1996). Language comprehension in language-learning impaired children improved with acoustically modified speech. *Science, 271*, 81-84. doi: 10.1126/science.271.5245.81 This article can be found at http://www.jstor.org/stable/2890378

Gillam, R. B. (1999). Computer-assisted language intervention using Fast ForWord®: Theoretical and empirical considerations for clinical decision-making. *Language, Speech, and Hearing Services in Schools, 30*, 363-370.

Watch two short clips from RALLI (Raising Awareness of Language Learning Impairments):
http://www.youtube.com/watch?v=2yPR1UUtjec&feature=c4-overview&list=UU5J2oZIiKfB4VG0Zq_xabUA (2:53)
http://www.youtube.com/watch?v=MNf-VHzClPE&list=UU5J2oZIiKfB4VG0Zq_xabUA (3:24)

Wednesday, 22 February – Atypical Language: Specific Language Impairment (SLI) or Language Disorder (LD)

POST A SUMMARY OF YOUR PAPER 3 TOPIC/FINDINGS/CONCLUSIONS

What might be happening in the brain of a child with SLI? There is little evidence, some of which we will review. *NB:* The Gauger et al. article is dense; read for the main idea.

🖧 Wang, X. (2004). The unexpected consequences of a noisy environment. *Trends in Neurosciences, 27*(7), 364-366. doi: 10.1016/j.tins.2004.04.012
🖧 Shafer, V. L., Schwartz, R. G., Morr, M. L., Kessler, K. L., & Kurtzberg, D. (2000). Deviant neurophysiological asymmetry in children with language impairment. *NeuroReport, 11,* 3715-3718. doi: 10.1097/00001756-200011270-00025
🖧 Gauger, L. M., Lombardino, L. J., & Leonard, C. M. (1997). Brain morphology in children with specific language impairment. *Journal of Speech, Language, and Hearing Research, 40*(6), 1272-1284.

Friday, 24 February – Atypical Reading: Dyslexia or Reading Disability

An introduction to the definition and behavioral characteristics of the learning disability dyslexia.

🖧 Morris, B., Munoz, L., & Neering, P. (2002, 13 May). Overcoming dyslexia. *Fortune, 145*(10).
® Simpson, E. (1991). *Reversals: a personal account of victory over dyslexia*. New York: The Noonday Press. Chapter 5 (pp. 73-84).
🖧 International Dyslexia Association. (2000). *Just the facts: dyslexia basics*. This document can be found at https://app.box.com/s/3f36hzaedlnzq96v2xsz6a4uqxc7fkwt
® 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).
🖧 Fink, R. P. (1995/1996). Successful dyslexics: a constructivist study of passionate interest reading. *Journal of Adolescent & Adult Literacy, 39*(4), 268-280.

Week Nine

Monday, 27 February – Atypical Reading: Dyslexia or Reading Disability

There are multiple theories about the underlying cause of dyslexia; you will read about a phonological deficit (Lyon, Shaywitz), a magnocellular deficit (Stein), and a naming speed deficit (Deeney et al.) in dyslexia.

🖧 Lyon, G. R., Shaywitz, S. E., & Shaywitz, B. A. (2003). Part 1: Defining dyslexia, comorbidity, teachers' knowledge of language and reading: a definition of dyslexia. *Annals of Dyslexia, 53,* 1-14. doi: 10.1007/s11881-003-0001-9
🖧 Shaywitz, S. E. (1996, November). Dyslexia. *Scientific American, 275*(5), 98-104. doi: 10.1038/scientificamerican1196-98
🖧 Deeney, T., Wolf, M., & O'Rourke, A. G. (2001). "I like to take my own sweet time": case study of a child with naming-speed deficits and reading disabilities. *The Journal of Special Education, 35*(3), 145-155. doi: 10.1177/002246690103500304
® Stein, J. (2001). The neurobiology of reading difficulties. In M. Wolf (Ed.), *Dyslexia, fluency, and the brain* (pp. 3-21). Timonium, MD: York Press.

Wednesday, 01 March – Atypical Reading: Dyslexia or Reading Disability

Dyslexia is perhaps the most researched of the disabilities that we will discuss, both behaviorally and neuroscientifically. Indeed, some interventions for dyslexia claim to be based on brain data. The first two readings are brief review articles; the next two discuss specific research programs and findings; and the final, optional reading addresses the discrepancy principle through neuroscience.

🖧 Murphy, G. (2003). Lost for words. *Nature, 425,* 340-342. doi: 10.1038/425340a
🖧 Eden, G. F., & Moats, L. (2002). The role of neuroscience in the remediation of students with dyslexia. *Nature Neuroscience, 5*(11), 1080-1084. doi: 10.1038/nn946
® Shaywitz, S. E. (2003). *Overcoming dyslexia: a new and complete science-based program for reading problems at any level*. New York: Alfred A. Knopf. Chapter 7: The working brain reads (pp. 71-89).
🖧 Temple, E., Deutsch, G. K., Poldrack, R. A., Miller, S. L., Tallal, P., Merzenich, M. M., & Gabrieli, J. D. E. (2003). Neural deficits in children with dyslexia ameliorated by behavioral remediation: evidence from functional MRI. *Proceedings of the National Academy of Sciences, 100*(5), 2860-2865. doi: 10.1073/pnas.0030098100

- Tanaka, H., Black, J. M., Hulme, C., Stanley, L. M. Kesler, S. R., Whitfield-Gabrieli, S.,…Hoeft, F. (2011). The brain basis of the phonological deficit in dyslexia is independent of IQ. *Psychological Science, 22*(11), 1442-1451. doi: 10.1177/0956797611419521 [optional reading]

Friday, 03 March – Atypical Reading: Dyslexia or Reading Disability

We will be viewing the film *A dyslexic family diary* today in class (53 min.).

Tod, D. (Producer & Director). (1999). *A dyslexic family diary* [Motion picture]. United States: Dorothy Tod Films. (Available from Dorothy Tod Films, 41 Hazel Brown Road, Warren, VT, 05674).

Week Ten

Monday, 06 March – Atypical Writing: Dysgraphia

There is relatively little research concerning the learning disability dysgraphia. We will review the definition and behavioral characteristics of dysgraphia and some data on writing and the brain.

- Richards, R. G. (2008). *A student's perspective on writing*. LD Online website. This article is available at http://www.ldonline.org/article/22746?theme=print
- National Center for Learning Disabilities. (2009, 6 March) *Dysgraphia*. This fact sheet can be found at http://www.ncld.org/types-learning-disabilities/dysgraphia/what-is-dysgraphia
- Tyre, P. (2012, October). The writing revolution. *Atlantic Magazine*. This article can be found at http://www.theatlantic.com/magazine/archive/2012/10/the-writing-revolution/309090/
- Rosenblum, S., Weiss, P. L., & Parush, S. (2004). Handwriting evaluation for developmental dysgraphia: process versus product. *Reading and Writing, 17*(5), 433-458. doi: 10.1023/B:READ.0000044596.91833.55
- Graham, S., Harris, K. R., & Larsen, L. (2001). Prevention and intervention of writing difficulties for students with learning disabilities. *Learning Disabilities Research & Practice, 16*(2), 74-84. doi: 10.1111/0938-8982.00009
- Menon, V., & Desmond, J. E. (2001). Left superior parietal cortex involvement in writing: integrating fMRI with lesion evidence. *Cognitive Brain Research, 12*(2), 337-340. doi: 10.1016/S0926-6410(01)00063-5

Wednesday, 08 March – Summary of the Course

PAPER 4 DUE TODAY

POST A SUMMARY OF YOUR PAPER 4 TOPIC/FINDINGS/CONCLUSIONS

POST A REVIEW/EXAM QUESTION

Finish up, wrap up, and review.

- Kagan, J. (2008, 10 November). The meaning of psychological abnormality. *Cerebrum*. This article is available at http://www.dana.org/news/cerebrum/detail.aspx?id=13800