

SPLH 660: Research methods in Speech-Language-Hearing

Fall 2017

Class Meetings: Tuesdays and Thursdays 11:00 to 12:15; Dole 2094

Class Instructor: Nancy Brady, Ph.D.; nbrady@ku.edu; 785-864-0762

Office location: 3008 Dole

Office hours: Mondays 1-2; Tuesdays 10-11

Preferred Reference: Dr Brady; she her and hers.

Contact Policy: I will make every attempt to respond to your email messages within 24 hours. If I do not respond within 24 hours, feel free to re-send your message. I want to hear from you.

GTA: Shadi Pir Hosseinloo, shadi@ku.edu

Office location: 3025 Dole

Office Hours: by appt

Preferred Reference: Shadi

Contact Policy:



Pre-/Co-requisites: English 102 and 9 credits of SPLH coursework

This course will be conducted in an atmosphere of mutual respect of all gender expressions and identities. Please address us as indicated by our preferred names and pronouns (as listed above). We were provided with a class roster with student names as they appear in enroll and pay. We will learn your name and pronoun preferences indicated through a first day survey.

Cell Phone Policy: There will be activities in class that require use of smart phones/cell phones or a computer application. There will also be some in-class time devoted to literature searches that will require use of computer search engines. Outside of these activities, **please do not text or check facebook or shop during class because these activities are very distracting to myself and other students.** In addition, these activities are negatively correlated with class performance.

Course Description:

This course is about the methods used to conduct, describe and evaluate science in communication disorders. The fields of speech pathology and audiology are built upon notions of science and objectivity. Current practices are based on previous studies that have addressed questions such as: Is someone's communication difference a disorder or just a difference that would be considered within normal variation? What types of interventions have been proven to benefit individuals with various types of communication disorders? How much improvement should I expect with a given treatment? Who is likely to respond to a specific type of treatment? Which treatment is best for a particular type of disorder? Is there an association between certain illnesses or disorders and communication disorders?

An important emphasis of this course is how to use your knowledge of research methods to evaluate current or proposed interventions in communication disorders. You will practice summarizing research results in order to present these results to consumers.

The emphasis of this class is on how research can lead to better clinical services. Goals for this class include:

1. To evaluate research, including:
 - Identifying the parts of a research study
 - Evaluating how well researchers planned and conducted research
 - Determining if the reported effects are significant
 - Determining if reported results are important (e.g., should they be used in clinical settings or to guide future research?)
 - Examine diversity and equity variables in research

2. To summarize and describe research in a particular area, including:
 - Finding research for a literature review
 - Synthesizing research for a literature review
 - Communicating research to others including patients, parents, insurance companies, or other relevant stakeholders.

3. To plan a research study that will address a specific question or problem in communication disorders, including:
 - Formulating a specific testable hypothesis
 - Designing a study to minimize threats to external and internal validity
 - Describing methods in sufficient detail to facilitate replication
 - Gathering data that can be used to inform clinical decisions
 - Following ethical practices
 - Measuring reliability
 - Communicating results in a clear concise manner

Course Materials:

Required texts:

Patten, M. (2009). *Understanding Research Methods*. Pyczak Publishing, Glendale, CA. The page numbers in the syllabus correspond to the 9th edition, but there is little variation between editions so you can use edition 8, 9, or 10, just match up the topics (italicized page numbers correspond to the 8th edition).

Offit, P. (2008). *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure*. Columbia University Press, New York.

On-line Resources:

1. Blackboard course website at <http://courseware.ku.edu>
2. Readings, recorded lectures, quizzes and additional readings and resources will be posted at the Blackboard site.
3. Writing assignments will be entered to the Peerceptiv website: <http://www.peerceptiv.com/>
Course name in Peerceptive is: SPLH 660, Research Methods, Fall 2017
The class code that you will need for logging in is: **think70**
There is a one time \$8.25 charge for accessing Peerceptiv so please have your credit cards available when you log in.
Answers to Frequently Asked Questions by Students are available at the website:
<http://www.peerceptiv.com/wordpress/help/>
Further instruction on using Peerceptiv will be forthcoming

Course Content: The following calendar represents the planned course of events, but we may need to shift some dates as the course progresses. Any changes will be posted on blackboard and announced in class. The regular text corresponds to the 9th edition of Understanding Research Methods and the *italicized* text corresponds to the 8th edition.

Date	Topic	Readings and Recorded Lectures	Assignment- note quizzes are to be completed before class
August 22	Course introduction	None	None
August 24	The Scientific Method; Experimental vs. nonexperimental research	Patten pp. 1-10 <i>pp. 1-10</i> Recorded lecture: experimental and nonexperimental research	Complete interests and pre-course knowledge surveys Quiz 1 in Blackboard
August 29	Variables in experimental and nonexperimental studies	Patten pp. 11-14 <i>pp. 11-14</i> <i>Class attendance optional</i>	Quiz 2 BB worksheet on paper topic <i>Homework from recorded lecture- 5 points.</i>
August 31	Research hypotheses	Patten pp.15-18 <i>pp.15-18</i> Recorded lecture on hypotheses	Quiz 3 Submit paper topic on BB by 11:00 p.m.- 2 points <i>In class experiment on variables and hypotheses (paper airplanes)-10 points</i>
September 5	Operational Definitions	Patten pp. 17-18 <i>pp. 17-18</i> BB reading: "How to Read a Research Article" Recorded lecture: How to Read a Research Article Choose 1 of the articles in BB and complete the worksheet on the article before class	Quiz 4 <i>Homework answering questions about research article in BB -7 points.</i>
Sept 7	In class discussion of Autism's False Prophets	Autism's False Prophets pp. xi-82 "Facilitated Communication – what harm can it do" –on Blackboard	No quiz due today In class discussion of Autism's False Prophets pages xi – p. 82. Complete Discussion Questions before class
September 12	Reviewing research -finding <i>good</i> articles	Patten pp. 31-35 <i>pp. 31-35</i>	Quiz 5 Class meets in Clark Instructional Center, Watson library
Sept 14	Writing literature reviews	Patten pp. 35-42 <i>pp. 35-42</i> Patten pp. 185-188 <i>pp. 175-178</i>	Quiz 6 <i>In class activity on organizing a literature review- 5 points</i>

		Organizing a literature review	
Sept 19	Survey Research	BB reading: Blessing (2013). Survey Research BB reading: Blood, et al., (2010) Written language disorders... Recorded lecture	Quiz 7 Writing project part 1 due by 11:00 pm to Peereceptiv <i>In-class activity, "The teacup Olympics" 2 points</i>
Sept 21	Qualitative Research	Patten pp. 19-22 <i>pp. 19-22</i> Quantitative vs. qualitative research; BB reading: Yorkston (2001). Communication in context	Quiz 8 Qualitative Research <i>Complete survey about holiday wishes before 8:00 a.m.</i>
Sept 26	Ethical considerations in research Peer reviewing	Patten pp. 25-26 <i>pp. 25-26</i> www.peerceptiv.com Go to help, then Be a good reviewer, also see the video on peer reviewing HSCL tutorial	Quiz 9 Ethics video shown in class
Sept 28	Sampling characteristics; Sampling demographics and sample size	Patten pp. 55-64- sampling <i>pp. 45-54</i> Patten pp. 65-68 <i>pp. 55-58</i>	Quiz 10 Undergraduate advising <i>In-class sampling activity: the luck of the Irish- 6 points</i>
October 3	Validity	Patten pp. 71-77 <i>pp. 61-67</i> BB reading: Lincoln et al., Social validity of a stuttering intervention Recorded lecture.	Quiz 11 Peer Reviews of writing project part 1 due by 11:00 pm <i>Homework for validity assignment due by 12:15 pm Oct 5 –10 pts. In-class time devoted to working on validity assignment</i>
October 5	Reliability	Patten pp. 83-90 <i>pp. 73-80</i> BB reading: Sigafos, et al. 2003	Quiz 12 <i>In-class activity on reliability- 5 points</i>
October 10	AFP discussion Review in class experiment	Autism's False Prophets pages 83-164	No quiz due today. In class discussion of Autism's False Prophets pages 83-164 In class advising
October 12 Mass.	In-class group assignment on conducting an experiment- part 1	Review notes and reading materials up through 10/18 Recorded lecture on how to complete the in-class experiment	Back reviews due to Peervceptiv by 11:00 pm October 12 <i>In-class group experiment assignment part 1</i>

	This counts as the midterm		
October 19 <i>Illinois</i>	In-class group assignment on conducting an experiment- part 2 This counts as the midterm		<i>In-class group experiment assignment part 2 – 10 % grade</i>
October 24	Single Subject Designs-1	BB reading: Cardon& Azuma (2011)	
October 26	Single subject designs-2	BB reading: Koegel&Koegel, (1986); Kern et al., (2005) Sample figure graphs	Quiz 13 <i>In-class post-test for single subject research designs – 10 points</i>
October 31	Group experimental designs; threats to internal and external validity	Patten pp. 99-104 True Experimental Designs; Threats to Internal and External Validity	Quiz 14 <i>In-class activity Finding Threats to validity – 5 points</i>
Nov 2	Revising your writing Understanding statistics & the null hypothesis Scales of measurement	Patten pp. 181-186 on Describing Participants; Describing Measures; Reporting research results Patten pp. 113-120	Quiz 15 –understanding statistics and the null hypothesis <i>Homework: describe measures in SPLH that are 1)nominal 2) ordinal 3) interval and 4)ratio 4 points.</i>
Nov 7	Chi Square tests; Shapes of distributions	Patten pp 121-130 Chi Square, distributions and Mean, median and mode For writing assignment, review content from these sites: http:// writing.ku.edu/revising-content http:// writing.ku.edu/revising-organization	Quiz 16- Mean, Median and Mode and Quiz 17 Chi Square And Quiz 17 on Chi squares and distributions * Writing assignment parts 1 & 2 due by 11:00 pm
Nov 9	Autism False Prophets in class discussion	Autism's False Prophets pp. 130- 175	In class discussion of Autism's False Prophets pp. 165-247

Nov 14	Measures of association (Pearson r) Correlations	Patten pp. 133-135 <i>pp. 123-125</i> BB reading: Tomblin et al., 2003 BB recorded lecture Class attendance optional	Quiz 18 <i>Homework on correlations – 7 points</i>
Nov 16	No class- ASHA convention	Review content from these sites: http:// writing.ku.edu/revising-content http:// writing.ku.edu/revising-organization	
Nov 21	t tests	Patten pp 135-136 <i>pp. 125-126</i> BB reading: Bastian et al., 2014	Quiz 19 <i>In class experiment-choc. Chips – 5 points.</i> *Reviews of Writing assignment parts 1 & 2 by 11:00 pm*
Nov 28	ANOVAs	Patten pp. 137-140 <i>pp. 127-130</i>	Quiz 20 <i>In-class experiment-gummy bears- 5 points</i>
Nov 30	Practical significance and effect size Building an evidence base in SPLH	Patten pp. 141-150 <i>pp. 131-140</i> BB reading: Nippold BB reading by Meline & Paradiso (2003) BB reading by Sapir et al. (2007) BB recorded lecture	Quiz 21 *Back reviews due by 11:00 pm* <i>In-class project on evaluating assessments and treatments-part 1</i>
Dec 5	Meta analyses	Patten pp. 151-156 <i>pp. 141-146</i> BB: Sample group project Gillam, S. and Gillam, R. (2006). Making evidence-based decisions about child language intervention in schools. BB: recorded lecture	Quiz 22 <i>In-class group project on evaluating assessments and treatments-part 2</i>
Dec 7	Evaluating research in speech path and audiology/ Review for Final	Gillam, S. and Gillam, R. (2006). Making evidence-based decisions about child language intervention in schools.	Quiz 23 <i>In-class group project on evaluating assessments and treatments- part 3, class presentations and 1 page info sheet due-10% grade.</i> * Revised Final project write up due -turn in through Peerceptiv by 11:00 pm

Tuesday Dec 12 10:30 – 1:00	Final Exam	Final Exam	Final Exam

Graded Assignments:

Quizzes. There will be 23 short quizzes available on Blackboard, approximately one per class meeting. The quizzes will be available and must be completed *before* the class meeting. For example, the quiz for August 24 needs to be completed prior to 11:00 on August 24. This is to ensure that each student is familiar with the topics before class. In addition, some quizzes will include material from the previous class, to ensure that topics are understood before moving on to another topic. The quizzes can be taken twice and the best score is entered. You will have up to 30 minutes to take each quiz. Quizzes will worth 10% of your final grade

In class assignments and homework: There will be assignments during most classes and occasional graded homework assignments. In-class assignments must be completed during class time. Cumulatively these are worth 10% of your grade.

In-class Midterm Experiment. This group experiment will be completed over 2 class periods and is worth 10% your grade.

Class Discussion: Discussion guides will be provided to students before each discussion session of Autism’s False Prophets. Participation points will be provided to students that complete these guides, bring them to class and participate in discussions. **5** points per session or **15** points total are available. **Discussion points are worth 15% final grade.**

Final exam: The final will also be given in class. It will consist of problems and assess the cumulative information taught in this course. The final exam will be worth 10% of your final grade.

In-class final group project. This group project will be a summary of the evidence in support of a particular assessment or intervention practice. It will take place the last 3 class periods and is worth 10% of your final grade.

Written Paper (3 parts):

Writing Assignment Part 1: Literature review—A brief review of literature relevant to your topic area. Double-spaced with 11 or 12-point font, and one inch margins at the top, bottom, left and right of the page. Review 4 - 6 articles (**note:** you will have to skim through many articles to find 4 - 6 articles that work for your topic). The goal is to integrate information from these 4 - 6 articles into a summary with one or two main points. Examples are provided in Appendix B of Patten, and on Blackboard. Additional examples and grading criteria will be provided in class. The last sentence or two of your literature review should describe a research question or hypothesis (Option A) or the proposed treatment trial (Option B) that logically flows from your review. References should be typed using APA style guide, available at <http://writing.ku.edu/apa-format-0>. The suggested length for part 1 of the writing assignment is 3 - 4 double-spaced pages. Use 11 or 12 point font, and one inch margins at top, bottom, left and right.

You will submit your paper to the Peerceptiv website (more info to follow). **It is critical to submit papers on time.** Late papers will not be accepted or graded. All the papers will be peer-reviewed anonymously.

Peer reviews: Each student will review 3 papers from your fellow students. Your reviews will consist of numerical ratings, as well as written comments on what the strengths and weaknesses are for each paper, including how the author might improve his or her paper. You will be graded on the quality of your reviews in two ways. First, the consistency of the numerical ratings that you assign will be graded. For example, if you give ratings that are all too high or all too low, or if you don't seem to be able to tell the difference between good papers and poor papers, then you will get a low review grade. Second, you will be graded on how helpful your written comments are to the authors. This will be through a process of **back reviews**. You will each have a chance to tell your peer reviewers how helpful you found their reviews through the back review process. Reviews must be completed by the due date. There is a 1-day grace period for emergencies, but reviews submitted during the grace period receive a 5% reduction. Reviews will not be accepted after the grace period.

Your grade for the first part of the writing assignment is made up of the score you are given for the draft of the paper you write **plus** your reviewing grade **plus** your back reviews **minus** any points deducted for being late. **This combined grade is worth 12% your total grade in the course.**

Writing Assignment Part 2: Literature review plus methods (participants, instrumentation, Procedure, reliability measurement plan, data analysis). You will revise part 1 of your writing assignment based on peer reviewer's feedback and **add a Methods section** describing the participants, instrumentation, procedures and data analysis (design) to address the research question/treatment proposal that you created at the end of your literature review (writing assignment part 1). Sufficient detail should be provided that someone could implement the methods you describe. Your fellow students (peer reviewers) will be judging how well they could carry out the methods you describe. The suggested length for Part 2 is 2 - 4 double-spaced pages.

Peer reviews: You will review papers from 3 fellow students and a teacher as you did for Part 1. The same grading criteria will be used in this round of peer reviews along with new criteria specific to the Methods section.

Your grade for the second part of the writing assignment is made up of the score you are given for the draft of the paper you write based on peer reviews **plus** your reviewing grade **plus** your back reviews **minus** any points deducted for being late. **This combined grade is worth 12% your total grade in the course.**

Revised Final Paper that contains both the literature review and the methods and is responsive to peer reviews. After receiving feedback from peer reviews you will have an opportunity to make additional revisions, and turn a final copy of your paper via Peerceptiv. Dr. Brady will grade this final version of your paper and it **is worth 12% of your total grade in the course.**

A note about plagiarism: Plagiarism involves any copying of text from a source without proper citation. **All papers will be checked for plagiarism using Safe Assign.** If plagiarism is detected you will receive a score of 0 on the assignment and cited for academic misconduct according to the University's code of academic misconduct:

http://www.writing.ku.edu/instructors/guides/academic_misconduct.shtml

Cumulative Final Exam. The cumulative final exam will be given in class during the assigned time. It is worth 9% your final grade. Practice exams will be made available through BB and extra credit will be available for completing these practice exams.

Make up exams: A make-up exam will only be given if the student contacts the teacher prior to the exam. The student must provide proof (e.g., a doctor's note) stating that there was a medical emergency that prevented completing the exam on the assigned date.

Grading Summary:

Quizzes	10%
Paper part 1	12%
Paper part 2	12%
Paper part 3	12%
Discussions of Autism's False Prophets	15%
In- class experiment (midterm)	10%
In-class final project	10%
Homework and in-class activities	10%
Cumulative final	9%
Total	100%

A plus/minus grading system is used based on the % total points earned in the course. At the end of the course I will weight the points for quizzes, midterm, final, discussion and each part of the paper as described above and add these weighted scores. The following scale will be used to determine a final grade:

Letter grade percentage range:

Grade	Percentage Points
A	93.50 and above
A–	90.00–93.49
B+	86.50–89.99
B	83.50–86.49
B–	80.00–83.49
C+	76.50–79.99
C	73.50–76.49
C–	70.00–73.49
D+	66.50–69.99
D	63.50–66.49
D–	60.00–63.49
F	59.99 and below

How to calculate your grade at any point in the class: You can follow the instructions on this wiki to determine your current weighted grade, using the information provided in BB:
<http://www.wikihow.com/Calculate-Weighted-Average>

Course Policies

Accommodations

<http://access.ku.edu/syllabus-statement-0>

"The Academic Achievement and Access Center (AAAC) coordinates academic accommodations and services for all eligible KU students with disabilities. If you have a disability for which you wish to request accommodations and have not contacted the AAAC, please do so as soon as possible. They are located in 22 Strong Hall and can be reached at 785-864-4064 (V/TTY). Information about their services can be found at <http://www.access.ku.edu>. Please contact me privately in regard to your needs in this course."

Religious Observances

<http://policy.ku.edu/governance/USRR#art1sect4> www.peerceptiv

Should the examination schedule for this course conflict with your mandated religious observance, please contact me at the beginning of the semester so that we can schedule a make-up exam at a mutually acceptable time. In addition, students will not be penalized for absence from regularly scheduled class activities which conflict with mandated religious observances. Students are responsible for initiating discussion with the instructor to reach a mutually acceptable solution.

Concealed Carry

Individuals who choose to carry concealed handguns are solely responsible to do so in a safe and secure manner in strict conformity with state and federal laws and KU weapons policy. Safety measures outlined in the KU weapons policy specify that a concealed handgun:

Must be under the constant control of the carrier.

Must be out of view, concealed either on the body of the carrier, or backpack, purse, or bag that remains under the constant control of the carrier.

Must be in a holster that covers the trigger area and secures any external hammer in an uncocked position

Must have the safety on, and have no round in the chamber.

Tests and quizzes

Instructors are allowed by Kansas Board of Regents policy, to require backpacks, purses and other bags be placed (LOCATION) during exams and quizzes, and as such those items will not be under the constant control of the individual. Students who choose to carry a concealed handgun in a purse, backpack, or bag must review and plan each day accordingly, and are responsible for making alternate arrangements as necessary. The university does not provide appropriate secured storage for concealed handguns.

Individuals who violate the KU weapons policy may be asked to leave campus with the weapon and may face disciplinary action under the appropriate university code of conduct