

Introduction to Research in Communicative Disorders

COMD 6230 – CRN 33635

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Class Meetings: ECERC 228

DESCRIPTION

Students will learn how to conduct and evaluate quasi-experimental and experimental research in Communicative Sciences and Disorders. Students will also learn a framework known as Evidence-Based Practice (EBP) that is useful for making assessment and intervention decisions. We will explore ways to integrate evidence from multiple sources in order to make sound diagnostic and treatment decisions.

Student Learning Objectives/Outcomes

This course has been designed to ensure that students in speech-language pathology demonstrate required knowledge and skills as outlined in the Standards and Implementation Guidelines for the Certificate of Clinical Competence in Speech-Language Pathology.

Standard IV-A

- The student will demonstrate prerequisite knowledge of statistics.
- The student will demonstrate prerequisite knowledge of the social/behavioral sciences.

Standard IV-C: Speech, Language, Hearing, Communication, and Swallowing Disorders and Differences

- 1) The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: phonology, articulation disorders (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)
- 2) The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: fluency disorders (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)
- 3) The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: receptive and expressive language disorders (phonology, morphology, syntax, semantics, pragmatics, prelinguistic communication, and paralinguistic communication) in speaking, listening, reading, writing, and manual modalities (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)
- 4) The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: cognitive aspects of communication (e.g., attention, memory, sequencing, problem solving, executive functioning), including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.
- 5) The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: social aspects of communication (e.g., behavioral and social skills affecting communication), including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.

Standard IV-F: Research

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: processes used in research and integration of research principles into evidence-based clinical

practice.

Standard IV-B: Basic Human Communication Processes

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: neurological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: psychological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: developmental/lifespan bases of human communication.

The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: linguistic bases of human communication.

Research Methods

- 1 Understand key concepts related to basic and applied research – Chapter tests
- 2 Know the ethical issues underlying research with human subjects – CITI module
- 3 Describe the characteristics, strengths and limitations of various types of research designs – Chapter tests
- 4 Assess the validity and reliability of behavioral measures – In-class assignments
- 5 Review the quality of research studies – Critical Appraisal assignments

EBP Applications

- 6 Ask clinical questions that motivate productive searches – In-class assignments
- 7 Conduct efficient and effective electronic searches for external scientific evidence – Literature search assignment
- 8 Understand and apply the criteria for appraising the validity and importance of treatment and diagnostic evidence – Critical Appraisal assignments
- 9 Integrate evidence from external scientific research, clinical practice outcomes, and patient preferences to make a treatment decision – EBP exercises

Essential Objectives

Learning to apply course material to improve thinking, problem solving and decisions.

Learning how to find and use resources for answering questions or solving problems.

Learning to analyze and critically evaluate ideas, arguments and points of view.

***In this course each student will be provided with an opportunity to demonstrate required knowledge and/or skill development. These knowledge and skills will be assessed as delineated in the syllabus (by examination, paper, presentation, project, etc.). ASHA has specified that in order to be competent, you must achieve a level of 80% or better on each KASA item. See COMD-DE website for policy on remediation.

Course Technology Requirements

Canvas is the where course content, grades, and communication will reside for this course.

- <http://online.usu.edu>
 - Your **username** is your **A#**, and your **password** is your global password (the same one you use for Banner or Aggiemail).
- For [Canvas](#), [Passwords](#), or any other computer-related technical support contact the [IT Service Desk](#).
 - 435 797-4357 (797-HELP)
 - 877 878-8325
 - <http://it.usu.edu>

- o servicedesk@usu.edu

Readings

Textbook

Orlikoff, R.F., Schiavetti, N., & Metz, D.E., (2015). *Evaluating Research in Communicative Disorders* (7th edition). Boston: Pearson.

The on-line version of the Orlikoff book can be rented for \$73.99 at <http://www.coursesmart.com/evaluating-research-in-communication-disorders/robert-f-orlikoff-nicholas-schiavetti-dale/dp/9780133551785>

Articles on Canvas

Borrie, S.A., & Liss, J.M. (2014). Rhythm as a coordinating device: Entrainment with disordered speech. *Journal of Speech, Language and Hearing Research*, 57, 815-824. DOI: 10.1044/2014_JSLHR-S-13-0149.

Gillam, R.B., Peña, E.D., Bedore, L.M., Bohman, T.M., & Mendez-Perez, A. (2013). Identification of Specific Language Impairment in Bilingual Children, Part 1: Assessment in English. *Journal of Speech, Language, and Hearing Research*, 56, 1813-1823; DOI:10.1044/1092-4388(2013/12-0056).

Cirrin, F., & Gillam, R.B. (2008). Language intervention practices with school-age children with spoken language impairments: A systematic review. *Language, Speech, and Hearing Services in Schools*, 39, 1 (Supplement), S110-S137.

Gillam, R.B., Loeb, D.F., Hoffman, L.M., Bohman, T., Champlin, C., Thibodeau, L., Widen, Brandl, L., & Friel-Patti, S. (2008). The Efficacy of Fast ForWord-Language Intervention in School-Age Children with Language Impairment: A Randomized Clinical Trial, *Journal of Speech-Language-Hearing Research*.

Gillam, S.L., & Gillam, R.B. (2008). Teaching Graduate Students to Make Evidence-Based Intervention Decisions: Application of a Seven-Step Process Within an Authentic Learning Context. *Topics in Language Disorders*, 28, 212-223.

Gillam, S.L., Olszewski, A., Fargo, J., Gillam, & R. B. (2014). Classroom-Based Narrative and Vocabulary Instruction: Results of an Early-Stage, Nonrandomized Comparison Study. *Language, Speech & Hearing Services in Schools*, 45(3), 204-219. doi: 10.1044/2014_LSHSS-13-0008

Milman, L.H., Dickey, M.W., & Thompson, C.K. (2008). A psychometric analysis of functional category production in English agrammatic narratives. *Brain and Language*, 105, 18-31.

Milman, L., Vega-Mendoza, M., & Clendenen, D. (2014). Integrated training for aphasia: An application of part-whole learning to treat lexical retrieval, sentence production, and discourse-level communications in three cases of nonfluent aphasia. *American Journal of Speech-Language Pathology*, 23, 105-119.

COURSE REQUIREMENTS

Quizzes

1. Chapters 1 – 2 on-line (20 points)
2. Chapters 3 – 4 on-line (20 points)
3. Chapters 5 – 6 on-line (20 points)
4. Chapters 7 – 8 on-line (20 points)
5. Chapters 9 – 10 on-line (20 points)

Students may take each quiz twice. I recommend reading the chapters and taking each quiz once during May. If you are not happy with your quiz score, take the quiz again after we discuss the chapters in class. The last date to take a chapter quiz will be midnight, June 21st.

Final Exam – 100 points

There is an in-class final exam on June 25th. Students will read a research paper and will answer a variety of short-answer essay questions about it.

Homework Assignments

1. CITI module – on-line (20 points) complete by June 21st

All students must complete the CITI training on Social & Behavioral Research on the web at <https://www.citiprogram.org/default.asp>.

To conduct research with human participants at Utah State University, the Institutional Review Board (IRB) requires that all researchers be certified via the [CITI program](#). The CITI Program provides research ethics education to all members of the research community. The only module required for USU researchers is **Social & Behavioral Research Investigators and Key Personnel, Basic Course**.

You are new users, so you will create an account. Follow the CITI training instructions on how to enroll in a CITI course for the first time at <http://irb.usu.edu/htm/training/certification-procedures>.

Once completed, CITI will issue you a “completion certificate” and notify the Utah State University IRB. At that point, your name and certification expiration date (3 years) will be entered in the database on the Utah State University IRB list of [Faculty Staff and Student Certifications](#). Send your score to me at ron.gillam@usu.edu.

2. Literature search (20 points) – due June 12

Students will ask a PICO question and will conduct a literature search to find articles that are relevant to the question. Provide the question and an annotated bibliography (citation + abstract) of the 10 articles that are most relevant to your question. No more than five of the articles can be descriptive in nature.

3. Critical Appraisals (40 points) In-class presentations on 6/17

Each group will present 2 critical appraisals. Each presentation will be worth 20 points. Appraisal topics will be assigned from the following list:

- Critical Appraisal of a Descriptive Study
- Critical Appraisal of Single-Subject Evidence
- Critical Appraisal of an RCT
- Critical Appraisal of Diagnostic Evidence

Groups will find a journal article of the type assigned, read it, critically appraise it, create a 2-page class handout, and present their appraisal to the class in a 15-minute presentation on 6/17. Each person in the group will receive the same score.

4. EBP In-class Assignments (20 points)

Students will complete EBP decision-making assignments during class on 6/23 and 6/24.

ACADEMIC POLICIES

Regular attendance is required. If you are going to miss a class, you should send the instructor an e-mail explaining why you will not be in attendance. Students are responsible for reading the assigned material before each meeting and should come to class prepared to answer questions about the readings and to make meaningful contributions to group discussions.

Academic Integrity - "The Honor System"

Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to establish the higher level of conduct expected and required of all Utah State University students.

The Honor Pledge: To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity." A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

Grievance Process (Student Code)

Students who feel they have been unfairly treated in matters other than (i) discipline or (ii) admission, residency, employment, traffic, and parking - which are addressed by procedures separate and independent from the Student Code, may file a grievance through the channels and procedures described in the Student Code: http://studentlife.tsc.usu.edu/stuserv/pdf/student_code.pdf (Article VII. Grievances, pages 25-30).

Plagiarism

Plagiarism includes knowingly "representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials." The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

Sexual Harassment

Sexual harassment is defined by the Affirmative Action/Equal Employment Opportunity Commission as any "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature." If you feel you are a victim of sexual harassment, you may talk to or file a complaint with the Affirmative Action/Equal Employment Opportunity Office located in Old Main, Room 161, or call the AA/EEO Office at 797-1266.

Students with Disabilities

The Americans with Disabilities Act states: "Reasonable accommodation will be provided for all persons with disabilities in order to ensure equal participation within the program. If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center (797-2444), preferably during the first week of the course. Any request for special consideration relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative format, large print, audio, diskette, or Braille."

Incomplete (I) Grade

Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term "extenuating" circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter course schedule to secure employment, (4) change in work schedule as required by employer, or (5) if there are other emergencies that students think necessitate an incomplete grade, then students will need approval from both the instructor and the department head.

Emergency Preparedness

In the case of a drill or real emergency, classes will be notified to evacuate the building by the sound of the fire/emergency alarm system or by a building representative. In the event of a disaster that may interfere with either notification, evacuate as the situation dictates (i.e., in an earthquake when shaking ceases or immediately when a fire is discovered). Turn off computers and take any personal items with you. Elevators should not be used; instead, use the closest stairs.

Course Etiquette

Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, or demeaning. The instructor has primary responsibility for and control over classroom behavior and maintenance of academic integrity.

Attendance and professionalism are expected. Scholarly discourse is the basis for this course, thus it is important that you are prepared and participate in class in a professional manner. Lack of professionalism (see professionalism rubric for standards), repeated absences, and/or tardiness will reflect your participation grade. If you have questions or concerns regarding your class participation please notify me prior to midterm.

Syllabus Changes

This syllabus is subject to change. I will notify the class regarding all changes. In the event of any discrepancy between this syllabus and content found in Canvas, the information in **CANVAS WILL TAKE PRECEDENCE**.

Submitting Electronic Files

All electronic files must be submitted in word(.doc, .docx) or rich text file (.rtf) format, unless otherwise stated. Please name your file in the using the following convention: *Assignmentname_Yourname.doc*. Files in formats other than doc, docx, rtf and/or without the proper naming convention (or at least a reasonable attempt) will be returned to the student and additional handling charges (lost points) may apply.

Late Work

Failure to complete assignment **on time** will result in lowering of your grade one level per day or portion thereof. Exceptions to this rule must be discussed with me no less than one week prior to the due date. Exceptions due to time constraints/requirements for another class will not be accepted as a legitimate exception.

COURSE SCHEDULE

Date	Topic	Readings
6/1	Basic Research Concepts What is Evidence-based Practice?	Orlikoff Chapters 1&2 Gillam & Gillam (2008)
6/2	Research Strategies, Literature searches	Orlikoff 3 & 4
6/3	Descriptive Research, Diagnostic Research	Borrie & Liss (2014) Milman, et al. (2008)
6/8	Experimental Research Single-subject, quasi-experimental designs and RCTs	Orlikoff 5 & 6 Milman, et al. (2014) Gillam et al. (2008)
6/9	The Results Section	Orlikoff Chapter 7 & 8
6/10	Statistical Inferences	Orlikoff Chapter 8
6/11	Discussion and Clinical Decision Making	Orlikoff Chapters 9,10
6/12	No class – CITI Module Literature Search Papers Due	
6/15	Dr. Christi Blaiser presentation (8:30 – 4)	
6/16	Dr. Scott Yaruss presentation (8:30 – 4)	
6/17 (9 – 4)	Presentations: Critical appraisal of descriptive studies Presentations: Critical appraisal of diagnostic studies Presentations: Critical appraisal of single-subject design studies Presentations: Critical appraisal of RCTs	
6/18	Dr. Edith Strand presentation (8:30 – 4)	
6/19	Dr. Jim Coyle presentation (8:30 – 4)	
6/22	Systematic Reviews and Meta-analyses	Cirrin & Gillam (2008)
6/23	Evidence-based practice decisions	
6/24	Evidence-based practice decisions	
6/25	In-class Final Exam	Gillam, et.al. (2013) Gillam, et al. (in press)