

## EDHD 662: Research Methods in Education Settings

Fall 2016

Tuesdays, 4:30 - 7:15 pm

Universities at Shady Grove, Building III, Room 4203

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### COURSE DESCRIPTION

EDHD 662 is a research practicum in which students will learn about research methods associated with studying the development, achievement, and school adjustment of children and adolescents in educational settings, with an emphasis on quantitative methodologies. Students will become familiar with how and why such educational research is conducted and presented, and with the critical analysis of educational research literature. They will develop and present a formal research proposal for the study of a research question that is of specific interest to them.

### REQUIRED READINGS

Textbooks:

Springer, K. (2010). *Educational research: A contextual approach*. Hoboken, NJ: John Wiley & Sons.

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Additional readings are indicated in the syllabus. They are all available electronically through the UMD University Libraries.

### COURSE OBJECTIVES

Students will:

- Gain an understanding of the basic components of the research process, including development of research questions and hypotheses, data collection, data analysis and interpretation, and presentation of research findings.
- Gain familiarity with measurement and ethical issues that arise in educational research.
- Develop an understanding of the criteria by which research is judged, an appreciation of the potential contribution of research to educational practice, and the capacity to read educational research literature critically.
- Develop familiarity with doing the type of writing involved in summarizing and critiquing educational research and the type of writing involved in writing a research proposal.
- Use their acquired knowledge to design a research project on an educational topic of personal interest and to write up a formal proposal for their project.

### REQUIREMENTS

- **Class participation (45 points):** Students are responsible for reading all assigned texts, for participating in class discussions of the texts, and for completing all in-class activities. Students are expected to attend all classes and to arrive on time.

- **Question generation (40 points):** Students are expected to generate at least four thoughtful and relevant questions for the research articles assigned for in-class discussion (as indicated in the course outline). Hard copies (print-outs, not handwritten copies) of questions for the readings should be brought to class, to be handed in at the end of class.
- **Article summaries (20 points each):** Students are expected to write a complete and accurate summary of the key information presented in the major sections of three of the research articles read for class (as indicated in the course outline). A template and models will be provided, and in-class practice on summary writing will take place before students do this independently. Summaries should be emailed to the instructor by the Sunday after the class in which the article is discussed.
- **Article critique (45 points):** This task is intended to promote further experience with analysis and critical evaluation of published educational research, and application of acquired knowledge about educational research methods. Students are expected to write an in-depth critique of one of the research articles read for class (as indicated in the course outline) that evaluates how well the article fulfills standard evaluative criteria (connection of research questions/hypotheses to theoretical framework; research design, methods, and data sources; results and conclusions; scholarly, scientific, or practical significance). A template and model will be provided, and in-class practice on what goes into a critique will take place before students do this independently. A grading rubric will be provided. The critique should be emailed to the instructor by **November 20** (the Sunday after the class in which the article is discussed).
- **Research Proposal (100 points):** This task is intended to provide an opportunity for demonstration of mastery of content knowledge regarding research methods in educational settings. Using the principles and knowledge developed in this class, students are expected to write a research proposal for a study *that will follow up on a published study*, and present it to their peers at the end of the course. Implementation of the actual study is not a requirement for this course (i.e., no actual data collection is necessary), although it is necessary to include a description of how the data needed for answering the proposed research question(s) would be collected, analyzed, and interpreted. This proposed follow-up study must be scientifically defensible and contribute to scientific knowledge and educational practice. More information on the specific parts of this project and a grading rubric will be provided in class. **A paragraph identifying the published study the research proposal will be following up and stating the proposed research question(s) is due (to be handed in during class) on October 4.** (It is worth 5 points toward the grade on the research proposal, and will be graded for completion.) A model and grading rubric will be provided, and opportunities to work on the proposal during class and get feedback will be provided. The completed proposal is to be emailed to the instructor by **December 11.**
- **Proposal sharing and handout (10 points):** Students are expected to share their plan for their research proposal in a roundtable format on the final day of class. To support this discussion, students will need to create a poster-format handout. More information regarding expectations, a template, a model, and a grading rubric will be provided in class. The handout is to be emailed to the instructor by **December 11.**

## GRADING

There are a total of 300 points available in this course.

>98%	A+	78%-79.99%	C+
92%-97.99%	A	72%-77.99%	C
90%-91.99%	A-	70%-71.99%	C-
88%-889.99%	B+	68%-69.99%	D+
82%-87.99%	B	62%-67.99%	D
80%-81.99%	B-	60%-61.99%	D-
		<60%	F

### Grading Scales

#### *Participation*

**41-45 points** - The student consistently shows a high level of productive engagement in both small-group activities and large group discussions, through asking topic-related questions, providing thoughtful responses, participating in collaborative conversations, and staying on-task. Attends class regularly and arrives on time.

**36-40 points** - The student often shows a high level of productive engagement in small-group activities and large group discussions, through asking topic-related questions, providing thoughtful responses, participating in collaborative conversations, and staying on-task. Attends class regularly and arrives on time.

**32-36 points** - The student sometimes shows a high level of productive engagement in small-group activities or large group discussions, through asking topic-related questions, providing thoughtful responses, participating in collaborative conversations, and staying on-task.

**< 32 points** - The student rarely shows a high level of productive engagement in small-group activities or large group discussions, through asking topic-related questions, providing thoughtful responses, participating in collaborative conversations, and staying on-task.

The grading scales for the questions, summaries, critique, and final paper will be provided during the semester, along with more detailed descriptions of the assignments.

#### **EXTRA CREDIT**

There are two options available for obtaining extra credit in this course: completion of online CITI training or doing a class presentation. Only one of these options may be used per student.

**Satisfactory Completion of CITI Training:** To receive extra credit, the student must provide the instructor with evidence that he or she has independently and successfully completed the *CITI Training Program for Social and Behavioral Research Investigators*. The program provides a completion certificate that can be printed out. This evidence must be provided no later than **November 15**.

Information about the CITI Training Program is available at the University of Maryland IRB website: <http://www.umresearch.umd.edu/RCO/New/IRBTraining.html>

To set up an account and complete the program, go to: <https://www.citiprogram.org/>.

About CITI Training: CITI (Collaborative Institutional Training Initiative) Training is widely considered the gold standard in online human subjects research training. The CITI training that can be completed for extra credit in this course covers protection of human research subjects when conducting social and behavioral research. As of February 1, 2010, Principal Investigators, Co-PIs and research team members at the University of Maryland must have completed CITI Training in order to receive IRB Approval. Completion of CITI training is therefore an essential step in training to become an educational researcher.

We will cover certain components that are addressed in the CITI training in this course, but the CITI training is more rigorous and more complete, covering all possible relevant aspects of protection of human subjects. Completion of the online CITI training involves reading the material presented in the training modules and completing a follow-up quiz for each module with a satisfactory score, with the option to re-read the material and re-take the quiz to improve your score. There are 12 brief modules in the social/behavioral research training program. It does not have to be completed all at one sitting.

Students will earn 15 points for successfully completing this training.

**Class Presentation:** To receive extra credit, the student must create and present a 1-2 page handout covering supplementary material relevant for the course. Options for supplementary material to cover will be provided by the instructor. Students must schedule their presentation with the instructor at least two weeks in advance; presentations must take place during one of the class meetings in November. Evaluation guidelines for the handout and presentation will be provided.

Students will earn a maximum of 15 points for an excellent handout/presentation to the class.

## CLASS POLICIES

**Assignment format:** All handed-in and e-mailed assignments should be in the form of a typed Word document, double-spaced, with the student's name, assignment type, and due date in the header.

**Attendance:** Students are expected to attend all classes. If, for some unavoidable reason other than illness, a class must be missed, the student must contact the instructor **before** the absence. If a class is missed due to illness, the student is expected to attempt to inform the instructor of the illness prior to the missed class.

**Late Assignments:** The points earned for late assignments will be reduced in proportion to their lateness.

**Academic integrity:** The University of Maryland, College Park has a student-administered Honor Code and Honor Pledge. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://shc.umd.edu/SHC/>. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. The code prohibits students from cheating, fabrication, facilitating academic dishonesty, and plagiarism. Instances of this include submitting someone else's work as your own, submitting your own work completed for another class without permission, or failing to properly cite information other than your own (found in journals, books, online, or otherwise). Any form of academic dishonesty will not be tolerated, and any sign of academic dishonesty will be reported to the appropriate University officials. Absolutely no credit will be given for work that involves any form of cheating or academic dishonesty. In particular, **any written work that includes direct quotes or words copied verbatim from texts or articles without proper documentation or attribution will be considered plagiarism. Please refer to the APA publication manual for guidelines for quoting and citing the work of others.** In addition, papers submitted to meet the requirements for other courses cannot be submitted to fulfill requirements for this course.

**Special needs:** If you have a registered disability that will require accommodation, please see the instructor so necessary arrangements can be made. If you have a disability and have not yet registered with the University, please contact Disability Support Services in the Shoemaker Building (301.314.7682, or 301.405.7683 TTD) as soon as possible.

**Religious observances:** The University of Maryland policy on religious observances states that students not be penalized in any way for participation in religious observances. Students shall be allowed, whenever possible, to make up academic assignments that are missed due to such absences. However, they must contact the instructor **before** the absence, and arrangements will be made for make-up work or examinations.

**Course evaluations:** As members of our academic community, students have a number of important responsibilities. One of these responsibilities is to submit course evaluations each term through CourseEvalUM in order to help faculty and administrators improve teaching and learning at Maryland. All information submitted to CourseEvalUM is confidential. Campus will notify you when CourseEvalUM is open for you to complete your evaluations for fall semester courses. Please go directly to the website ([www.courseevalum.umd.edu](http://www.courseevalum.umd.edu)) to complete your evaluations.

## COURSE OUTLINE

<i>Date</i>	<i>Topic</i>	<i>Readings &amp; Assignments</i>
9/6	Introduction Reading and conducting research to inform teaching	<b>Article 1:</b> Schmertzing, R. (2007). Expert researchers and school practitioners: An historical perspective on the marginalization of practitioner research and the silencing of practitioner voices. <i>Journal of Education</i> , 188(1), 1-24.  <i>[No discussion questions this week]</i>
9/13	The nature of research and overview of the research process, developing a research question	<b>Springer: Chapter 1</b> (pp. 1-27); <b>Chapter 2</b> (pp. 31-46, 54-60 — skip the section on "Where to Find Research") <b>APA Manual: Chapter 1</b> (pp. 9-11 - read the intro paragraph and the part about Types of Articles); <b>Chapter 8</b> (pp. 225-228 — stop at "Author Responsibilities")  <i>[No article or discussion questions this week]</i>
9/20	Parts of a research report, writing like a researcher	<b>Springer: Chapter 3</b> (pp. 63-88) <b>APA Manual: Chapter 2</b> (pp. 23-37 — stop at "References"); <b>Appendix - JARS Table 1</b> (pp. 247-248); <b>Chapter 3</b> (pp. 61-77 — stop at "Grammar and Usage" ); <b>Chapter 6</b> (pp. 169-174 — stop at "Citing References in Text")  <b>Article 2:</b> Triona, L. M., & Klahr, D. (2003). Point and click or grab and heft: Comparing the influence of physical and virtual instructional materials on elementary school students' ability to design experiments. <i>Cognition and Instruction</i> , 21, 149-173.  <i>Four discussion questions for article 2</i>
9/27	Measurement, validity and reliability	<b>Springer: Chapter 5</b> (pp. 121-148); <b>Chapter 6</b> (pp. 151-171)  <b>Article 3:</b> Ter Laak, J., de Goede, M., Aleva, A., & van Rijswijk, P. (2005). The Draw-A-Person Test: An indicator of children's cognitive and socioemotional adaptation? <i>The Journal of Genetic Psychology</i> , 166(1), 77-93.  <i>Four discussion questions for article 3</i>
10/4	Sampling and ethics	<b>Springer: Chapter 4</b> (pp. 91-117)

		<p><b>APA Manual: Chapter 1</b> (pp. 16-18 — read "Protecting the Rights and Welfare of Research Participants")</p> <p><b>Article 4:</b> Carreón, G. P., Drake, C., &amp; Barton, A. C. (2005). The importance of presence: Immigrant parents' school engagement experiences. <i>American Educational Research Journal</i>, 42, 465-498.</p> <p><b>Four discussion questions for article 4</b>  <b>Paragraph about potential follow-up study and research questions for research proposal</b></p>
10/11	Research designs - Experimental	<p><b>Springer: Chapter 7</b> (pp. 175-200, 207-209 — skip the section on Factorial Designs on pp. 200-207)</p> <p><b>APA Manual: Appendix - JARS Tables 2, 3</b> (pp. 249-250)</p> <p><b>Article 5:</b> Schellenberg, E. G. (2004). Music lessons enhance IQ. <i>Psychological Science</i>, 15(8), 511-514.</p> <p><b>Four discussion questions for article 5</b>  <b>Summary for article 5 due 10/16</b></p>
10/18	Non-experimental and other research designs	<p><b>Springer: Chapter 9</b> (pp. 231-258)</p> <p><b>Article 6:</b> Jameson, M. M. (2014). Contextual factors related to math anxiety in second-grade children. <i>The Journal of Experimental Education</i>, 82(4), 518-536.</p> <p><b>Four discussion questions for article 6</b>  <b>Summary for article 6 due 10/23</b></p>
10/25	Data analysis - Inferential	<p><b>Springer: Chapter 11</b> (pp. 293-339); <b>Chapter 7</b> (pp. 200-207 — the section on Factorial Designs, which goes with the discussion of multifactorial ANOVAs that begins on page 322 in Chapter 11)</p> <p><b>APA Manual: Chapter 4</b> (pp. 116-117 — stop at "Statistical Symbols")</p> <p><b>Article 7:</b> Wissinger, D. R., &amp; De La Paz, S. (2016). Effects of critical discussions on middle school students' written historical arguments. <i>Journal of Educational Psychology</i>, 108, 43-59.</p> <p><b>Four discussion questions for article 7</b></p>
11/1	Qualitative research	<p><b>Springer: Chapter 13</b> (pp. 381-413)</p> <p><b>Article 8:</b> Downing, J. E., &amp; Peckham-Hardin, K. D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities? <i>Research &amp; Practice for Persons with Severe Disabilities</i>, 32(1), 16-30.</p> <p><b>Four discussion questions for article 8</b>  <b>Summary for article 8 due 11/6</b></p>
11/8	Data analysis - Descriptive and qualitative	<p><b>Springer: Chapter 10</b> (pp. 263-289)</p> <p><b>Article 9:</b> Patrick, H., &amp; Ryan, A. M. (2008). What do students think about when evaluating their classroom's mastery goal structure? <i>The Journal of Experimental Education</i>, 77(2), 99-123.</p> <p><b>Four discussion questions for article 9</b></p>

11/15	Mixed-method research	<p><b>Springer: Chapter 15</b> (pp. 435-454)</p> <p><b>Article 10:</b> Kostos, K., &amp; Shin, E. (2010). Using math journals to enhance second graders' communication of mathematical thinking. <i>Early Childhood Education Journal</i>, 38(3), 223-231.</p> <p><i>Four discussion questions for article 10</i>  <i>Critique for article 10 due 11/20</i>  <i>[CITI completion deadline]</i></p>
11/22	Representing data	<p><b>Springer: Chapter 12</b> (pp. 345-380)</p> <p><b>APA Manual: Chapter 5</b> (read sections 5.01-5.03, 5.18-5.23)</p> <p><b>Article 11:</b> Bluth, K., &amp; Blanton, P. W. (2014). Mindfulness and self-compassion: Exploring pathways to adolescent emotional well-being. <i>Journal of Child and Family Studies</i>, 23, 1298-1309.</p> <p><i>Four discussion questions for article 11</i></p>
11/29	Action research / research into practice	<p><b>Chapter 16</b> (pp. 457-474)</p> <p><b>Article 12:</b> Avramides, K., Hunter, J., Oliver, M., &amp; Luckin, R. (2015). A method for teacher inquiry in cross-curricular projects: Lessons from a case study. <i>British Journal of Educational Technology</i>, 46(2), 249-264.</p> <p><i>Four discussion questions for article 12</i></p>
12/6	Proposal sharing	<p><b>Roundtable presentation of proposal posters</b></p> <p><b>* Proposals and poster handouts emailed to instructor no later than 12/11</b></p>