RUTGERS
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Rutgers, The State University of New Jersey

15:262:625:01 Design Research Practicum
Spring 2018
Mondays 4:50 PM - 7:30 PM
Academic Building 1100

Instructor: Eli M. Silk	Email: eli.silk@gse.rutgers.edu
Office Phone: 848-932-0827	Office Location: GSE 321B
Office Hours: By arrangement (both before and after class are possible)	Prerequisites or other limitations: Admission in the Ed.D. program at Rutgers GSE or special permission of the instructor.
Mode of Instruction: ___ Lecture _X_ Seminar ___ Hybrid ___ Online ___ Other	Permission required: __ No _X_Yes Directions about where to get permission numbers: Office of Academic Services, Ericka Diaz, ericka.diaz@gse.rutgers.edu

Important Note: This syllabus—including assignments, readings, and due dates—are subject to change. Any major changes will be clearly noted in a course announcement.

Course Description

Course Catalog Description:

The purpose of this course is to provide students with an experiential opportunity to begin conducting their own research. The primary goal will be for students to plan, implement, and analyze a series of small-scale pilot studies. The course will be held in a workshop format in which students will present regularly and get feedback from the instructor and their peers. The students will learn to justify their methodological choices by drawing from and citing prior published research. These methodological choices include the use of particular samples, measures, procedures, research designs, and analysis plans. Students will also get experience analyzing their data and presenting the results both in written and oral form.

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Learning Goals for the Course:

The learning goals for this course were developed to align with the Design of Learning Environments (DLE) concentration of the Education Doctorate (EdD) program. The course goals, their alignment with program and concentration goals, and how each goal will be assessed in the course, are as follows:

Course Goals	Program / Concentration Goals	Course Assessment
DRP 1: Learn how to write a successful dissertation proposal.	*EdD 2:* Use theory and research to frame, diagnose, and respond to problems of practice. *DLE 4:* Understand how to conduct design-based research. *DLE 5:* Design, evaluate, and revise existing learning environment designs enacted in real settings.	Readings Discussions Pilot Data Collections, Analyses, and Write-ups Study Proposal Method Section Draft IRB Proposal Submission Draft
DRP 2: Develop the knowledge base of theory and empirical research needed to justify the design of a DLE dissertation study.	*EdD 3:* Develop a professional knowledge base that integrates practical and research knowledge. *DLE 2:* Know the theoretical foundation and empirical support for common learning environment approaches or features.	Readings Discussions Pilot Data Collections, Analyses, and Write-ups Study Proposal Method Section Draft
DRP 3: Gather pilot data and use the results to improve your dissertation project.	*EdD 4:* Conduct research to guide improvement and inform policy, programs, and practice. *DLE 4:* Understand how to conduct design-based research.	Pilot Data Collections, Analyses, and Write-ups

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Class Materials/Textbooks

There is no required textbook to purchase for this course. All of the required articles and chapters will be posted online on the class website. Readings will be tailored to students' interests and needs. The readings will be assigned one week in advance. However, a useful text to have is the American Psychological Association (APA) publication manual:

American Psychological Association (2013). *Publication manual of the American Psychological Association, Sixth Edition.* Washington, DC: American Psychological Association.

In this class, and for all courses in the GSE program, you should pay attention to and put in effort to carefully craft how you express and communicate your ideas in written form. Each major assignment should be (a) clear and well organized, (b) well connected internally (ideas within the paper) and externally (ideas in the literature), and (c) largely free of technical errors while conforming to the formal standards articulated by the American Psychological Association (APA) for a manuscript. Those standards include, but are not limited to:

- Times New Roman, 12-point font throughout
- One-inch margins on all sides
- Title page that includes title, course, student(s), professor, date
- Running header that includes short title left-aligned and page numbers right-aligned
- Double spaced lines with only one hard return between indented paragraphs
- Leveled headings to make the organization and structure clear to the reader
- Complete list of references cited in text and their appropriate full citations

Refer to the APA manual for further details. Also, the following website is a good resource, although it is not as complete as the manual: https://owl.english.purdue.edu/owl/resource/560/01/

Website

http://sakai.rutgers.edu

Grading Policy

Grading Breakdown by Course Assignment:

1.	Pilot 1 Proposal	Optional, Not Graded	Due 1/28
2.	CITI Basic Course	5%	Due 1/28
3.	Pilot 1 Data Collection, Analysis, and Write-up	20%	Due 2/25
4.	Pilot 2 Data Collection, Analysis, and Write-up	20%	Due 4/8
5.	Study Proposal Method Section Draft	20%	Due 4/22
6.	IRB Proposal Submission Draft	20%	Due 5/6
7.	Attendance and Participation	15%	Weekly

Grading Scale:

- A = 90-100
- B+ = 85-89
- B = 80-84
- C+ = 75-79
- C = 70-74
- F = Below 70

Academic Integrity Policy

I expect that you will comply with standards of academic integrity in this course. If you need assistance in understanding an assignment or course content, please seek assistance from other appropriate resources or me. Assignments, however, should be your own work. The consequence for violating policies of academic integrity and other elements of the student code of conduct are serious and can have a tremendous negative impact on your academic progress and future career. The Office of Student Conduct supervises issues related to violations of academic integrity (see http://academicintegrity.rutgers.edu). Please familiarize yourself with the university policy on academic integrity (http://academicintegrity.rutgers.edu/academic-integrity-policy/).

Office of Disability Services

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: https://ods.rutgers.edu/students/documentation-guidelines. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: https://ods.rutgers.edu/students/registration-form.

Course Structure and Assignments

1. Pilot 1 Proposal

This assignment is an opportunity to get guidance about what kinds of pilot work might be most useful for you to try out in this course. You will provide a brief description of alternative ideas you are considering and what you hope to learn, and I will provide feedback and suggestions about what directions might be most productive and feasible to pursue within the context and constraints of the course.

2. CITI Basic Course

GSE students must have their human subjects research approved by the Rutgers University Institutional Review Board (IRB, https://orra.rutgers.edu/hspp). As a first step in this process, you will be expected to complete the Collaborative Institutional Training Initiative (CITI) Basic Course. For more information on how to create an account on the CITI website, how to affiliate yourself with Rutgers, and how to complete the Basic Course, see the following website:

https://orra.rutgers.edu/citi

3. Pilot 1 Data Collection, Analysis, and Write-up

This assignment involves:

1. Planning a pilot project;
2. Developing all materials, documents, and activities needed for the pilot project;
3. Implementing the pilot project;
4. Making presentations on pilot project plans and results in class; and
5. Handing in a formal write-up of the pilot project.

Assessment will NOT be based on whether the results come out as you hope or expected. Instead, your work will be evaluated on:

(i) How well prepared and well-grounded in the literature the pilot activities are;
(ii) How well aligned your questions and methods are with each other; and
(iii) How thoroughly you consider the results and learn from them.

You should use this as an opportunity to try out different ideas that you are considering, and also to see how you might analyze the data to test your ideas. It is acceptable and recommended (although not required) to use the class (me and your classmates) as your participants and to use class time during your designated presentation time to implement your pilot project. It is also acceptable in this first pilot project to only use small portions of your designed learning environment or even to do no intervention at all and simply focus on piloting measurement instruments (e.g., pre- or post-tests, surveys, interview protocols, etc.).

4. Pilot 2 Data Collection, Analysis, and Write-up

This assignment involves all the same things as the first pilot project. I encourage you to use this second project to build off the results of the first pilot project and to improve or refine your methods or materials. You may also use this second pilot project as an opportunity to expand your pilot work into other aspects of your dissertation project that you may not have gotten to in the first pilot project (e.g., more of your designed learning environment). For this second pilot project, it is still acceptable and recommended (although not required) to use the class (me and your classmates) as your participants and to use class time during your designated presentation time to implement your pilot project.

5. Study Proposal Method Section Draft

Your will be expected to provide write-ups of your work throughout the course in planning, implementing, and analyzing your pilot studies. These write-ups will help to build a foundation from which to draft a Method chapter for a dissertation study proposal.

6. IRB Proposal Submission Draft

This assignment involves preparing a proposal to submit to the IRB so that you can understand the process and what is required. When you submit the IRB will be between you and your dissertation chair, but note that the Rutgers IRB provides the following guidelines on pilot work:

> ***Pilot Studies.*** *A pilot study is typically defined as an initial or smaller-scale investigation or a study to either test out new experimental designs (including survey or instrument development) or methods of treatment. Pilot studies are synonymous with feasibility studies, where the investigation proposed is planned to identify various issues (e.g., relating to design of an instrument, analysis of power concerns and recruitment strategies) to determine that the larger study of the same subject matter has the greatest potential to successfully test the intended research hypotheses. Pilot studies involving human subjects are considered human subject research and require IRB review. A researcher planning to conduct a pilot study must provide sufficient details to address how a smaller scale investigation is worth pursuing with a goal of obtaining results that may add to the generalizable knowledge while minimizing any anticipated risks to the subjects. There must be a well-detailed literature review and most importantly, the researcher must justify the need for the number of subjects required.*
> (Source: https://orra.rutgers.edu/irb-review)

7. Attendance and Participation

You are expected to attend class on time and be actively engaged in discussions each week. We will discuss your various projects, assigned readings, and other aspects of collecting and analyzing data. I expect that your participation in class discussions will show that you have read all required readings and are actively trying to connect them to your own project and to the projects of your classmates. Most class discussions will involve discussing components of each other's projects, and so it is essential that you are active in providing critical but supportive feedback to your classmates to help them move their projects forward. You will also be expected to select readings aligned with your own interests for the class to read and discuss together.

Every week, I expect that you will have made some progress on your pilot work. On some weeks, you will be expected to share your progress as a designated presenter. Sometimes you may use that time as a working session in which you pilot data instruments with the rest of the class as test participants. Other times you should make a formal presentation about the current state of your research design, data, and analysis from your pilot work.

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Data Collection and Results Presentations Schedule

Each student will be the designated presenter 4 times throughout the course. This will be an opportunity for you to collect pilot data from the rest of the class and to present results of your pilot projects. Although I expect that you have worked hard to develop your ideas, you can and should use these sessions to get feedback on your ideas or materials, and to work through analyses. The schedule for presentations will be worked out in the first few weeks of class, but will include:

1. Pilot 1 Data Collection (Presentation 1) - Collect data for first pilot
2. Pilot 1 Results Presentation (Presentation 2) - Present analysis from first pilot
3. Pilot 2 Data Collection (Presentation 3) - Collect data for second pilot
4. Pilot 2 Results Presentation (Presentation 4) - Present analysis from second pilot

Assigned Presentation IDs

The following Presentations IDs were assigned randomly. The Presentation IDs determine the days you will be required to conduct your pilot data collection and present your results. You are welcome to switch with another student if both of you agree. If so, please let me know.

(1)	Student 1	(5)	Student 5	(9)	Student 9	(13)	Student 13
(2)	Student 2	(6)	Student 6	(10)	Student 10	(14)	Student 14
(3)	Student 3	(7)	Student 7	(11)	Student 11	(15)	Student 15
(4)	Student 4	(8)	Student 8	(12)	Student 12	(16)	Student 16

Course Schedule by Week

* *Note:* All assignments are due on Sunday evening (11:55 PM) prior to the Monday class of the week that assignment is listed.

Week	Topics	Readings	Assignments*	Presenters
1: 1/22	Intro to Course Goals & Planning	No readings		
2: 1/29	Surveys and Questionnaires	(Entwistle & McCune, 2004) (Papinczak, Young, Groves, & Haynes, 2008)	*Pilot 1 Proposal* *CITI Basic Course*	
3: 2/5	Experience-Sampling Method	(Csikszentmihalyi & Larson, 1987) (Shernoff & Vandell, 2007)		*Pilot 1 Data Collection (1) – (8)*

Week	Topics	Readings	Assignments*	Presenters
4: 2/12	Focus Groups	(Ryan, Gandha, Culbertson, & Carlson, 2014) (Nadal et al., 2015)		*Pilot 1 Data Collection (9) – (16)*
5: 2/19		*Student-Chosen Readings* (15) Student 15 (16) Student 16		
6: 2/26		*Student-Chosen Readings* (13) Student 13 (14) Student 14	*Pilot 1 Write-up*	*Pilot 1 Results Presentations (1) – (8)*
7: 3/5		*Student-Chosen Readings* (11) Student 11 (12) Student 12		*Pilot 1 Results Presentations (9) – (16)*
Spring Break				
8: 3/19	Mental Models & Conceptual Change	(Vosniadou, 1994) (Vosniadou, Ioannides, Dimitrakopoulou, & Papademetriou, 2001)		*Pilot 1 Data Collection (1) – (8)*
9: 3/26	Coding Talk	(Land & Zimmerman, 2015) (Allen, 2002)		*Pilot 1 Data Collection (9) – (16)*
10: 4/2		*Student-Chosen Readings* (9) Student 9 (10) Student 10		
11: 4/9		*Student-Chosen Readings* (7) Student 7 (8) Student 8	*Pilot 2 Write-up*	*Pilot 2 Results Presentations (1) – (8)*
12: 4/16		*Student-Chosen Readings* (5) Student 5 (6) Student 6		*Pilot 2 Results Presentations (9) – (16)*
13: 4/23		*Student-Chosen Readings* (3) Student 3 (4) Student 4	*Study Proposal Method Section Draft*	
14: 4/30		*Student-Chosen Readings* (1) Student 1 (2) Student 2		

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Week	Topics	Readings	Assignments*	Presenters
15: 5/7	Reflection	No readings	*IRB Proposal Submission Draft*	

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