

**University of North Texas at Dallas
Fall Semester 2019**

**SYLLABUS
PLDR 5300 Data Analytics and Research Methods I
3 Credit Hours**

Department of	Public Leadership	School of	Liberal Arts & Science
Instructor Name:	Dr. Janiece Upshaw		
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Office Hours:	Monday: 3:00 – 5:00 Tuesday: 3:00 – 5:00 Wednesday: 2:00 – 5:00		
Classroom Location:	Dal 1 244		
Class Meeting Days & Times:	Wednesday 6:00 – 8:50 p.m.		
Course Catalog Description:	Key computational and data competencies needed by administrators to fulfill the informational needs of decision making at all levels of an organization. Using and applying analytical and statistical tools understand the impact of quantitative data and decision making.		
Prerequisites:	PADM 5510		
Required Text:	<i>Publication Manual of the American Psychological Association</i> , 6 th Edition by American Psychological Association ISBN-13:9781433805615, Publisher: American Psychological Association, July 7, 2009. Brown, M., & Hale, K. (2014) <i>Applied Research Methods in Public & Nonprofit Organizations</i> . Jossey-Bass, San Francisco, CA. Ruane, J.R. (2016) <i>Introducing Social Research Methods</i> . John Wiley & Sons, West Sussex, UK. ISBN: 9781118874240		
Suggested Texts:	APA: the Easy Way! A Quick and Simplified Guide to the APA Writing Style , 2 nd Edition by Peggy M. Houghton and Timothy J. Houghton, Publisher:		
Access to Learning Resources:	UNT Dallas Library: phone: (972) 780-1616 web: http://www.untdallas.edu/library email: library@untdallas.edu UNT Dallas Bookstore: phone: (972) 780-3652 web: http://www.untdallas.edu/bookstore e-mail: untdallas@bkstr.com		
Additional Online Resources	<i>ICAAP: Resources for Methods</i> http://gsociology.icaap.org/methods <i>Online Evaluation Resource Library</i> http://oerl.sri.com/ <i>Research Methods Knowledge Base</i> http://www.socialresearchmethods.net/kb/index.php <i>American Evaluation Association:</i> http://www.eval.org/		

Canadian International Development Agency:
<http://documents.reflectlearn.org/Offline%20Docs%20for%20Your%20Introductory%20Guide%20to%20OA/OA%20Guide-E.pdf>

Course Goals or Overview: The goals of this course are as follows -

1. to introduce students to the field of program evaluation – its methods, and professional standards; its role in nonprofit and public agencies; and
2. to provide students with practical experience in performing a program evaluation within the community.

Learning Objectives/Outcomes: At the end of this course, students will be able to:

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| 1 | Be able to classify the key elements of administrative research and note why it is important. |
| 2 | Produce information that shows understanding of the scientific method is and why it issued by decision makers. |
| 3 | Prepare a list of the goals of basic and applied research and to understand how these are related; |
| 4 | Illustrate how to conduct, evaluate and critically evaluate research |
| 5 | The course is designed to enhance critical thinking through inquiry and analysis and the creative linking of disparate or similar concepts. |
| 6 | The course is designed to enhance written, oral and reading skills to promote communication. |
| 7 | The course is designed to ensure UNT Dallas graduates use socially responsible research methods, and through various design approaches underlying administrative leadership and policy. |
| 8 | The course promotes personal responsibility through discussions of ethical problems and reasoning in the public sphere. |
| 9 | Taken together, these general education objectives are designed to achieve the ultimate goal of the university, to provide a foundation and skills for you to continue learning long after you have left the university. |

Online/Hybrid Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated in class or via class email or Blackboard announcement. Additional readings and activities may be added, these will be noted in the Readings and Activities/Assignments sections.

Schedule	Topic	Activities	Due Date
Aug 28	Peer Reviewed Research Annotated Bibliography Outline of Research Paper	Overview of Research Process Case Studies Ruane: Chapter 1	
Sept 4		Ruane: Chapter 2 & 3	Complete CITI Human Subjects Training Due 9/4 by 6:00 p.m. Submit Certificate to Canvas
Sept 11	Developing useful questions, empirical theories, testable hypotheses	Brown & Hale: Chapter 1 Ruane Chapter 3	Assignment #1A Research Process Outline Worksheet & Questions due 9/11 by 6:00 p.m. Bring Questions to Class to review in small groups

Sept 18	Research Design, validity, reliability and error, sampling strategies Reliability Validity Populations & Samples	Ruane: Chapter 5 & 6 Brown & Hale: Chapter 2	Assignment #1B Topic Selection Due 9/18
Sept 25 ONLINE Activity in lieu of face to face class	Research Design, validity, reliability and error, sampling strategies Reliability Validity Populations & Samples	Frontline Video: https://www.youtube.com/watch?v=CzCGux7qD1c Watch video and answer questions Extra reading on subject: Jacobson, J. W., Mulick, J. A., & Schwartz, A. A. (1995). A history of facilitated communication: Science pseudoscience, and antiscience. <i>American Psychologist, 50</i> , 750-765. Brown & Hale: Chapter 3 Ruane: Chapter 11	Online Video Activity Due by 9:00 p.m. 9/25 Assignment #2 Annotated Bib & Questions Due 10/2
Oct 2	Data Collection	Brown & Hale: Chapter 4	
Oct 9	Data Collection	Brown & Hale: Chapter 4	Assignment #3 Research Design & Questions Due 10/9
Oct 16	Data Collection	Brown & Hale: Chapter 4	Assignment #4 Data Collection Park A & Questions Due 10/23
Oct 23	Survey Research	Brown & Hale: Chapter 5 Ruane: Chapter 8	
Oct 30	Survey Research	Brown & Hale: Chapter 5 Ruane: Chapter 9 & 10	Assignment #5 Data Collection Part B & Questions Due 11/6.
Nov 6	Analyzing Data	Brown & Hale: Chapter 6	
Nov 13	Analyzing Data	Brown & Hale: Chapter 6 Ruane: Chapter 12	Assignment #6 Data Analysis & Questions Due Nov. 20
Nov 20	Writing & Presenting Findings	Brown & Hale: Chapter 6 Ruane: Chapter 13 Review IRB Application Process	
Nov 27	No Class (Happy Thanksgiving!)		
Dec 4	Institutional Review Board	Ruane: Chapter 13	Assignment #7 Research Presentation Due Dec. 4
Dec 11 Online		Final Essay Questions Posted on Canvas 12/5 at 5:00 p.m.	

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course. All assignments must be submitted electronically by due date and time as stated in syllabus.

Online Activity: (To be completed Sept. 25, in lieu of Class)

Frontline Video: *Prisoners of Silence* <https://www.youtube.com/watch?v=5sO9LyXuOQY>

Instructions: After watching *Prisoners of Silence*, answer the following questions.

1. Provide a "description" of the phenomenon of facilitated communication based on what you objectively observed in the video.
2. What was the hypothesized explanation given by Bicklin as to why it worked? What are problems with his explanation?
3. How does Biklin address them? How do you respond?
4. What empirical tests can you suggest to rule out alternative explanations for the phenomenon of facilitated communication?
5. Why is the "controlled experimentation of psychology" necessary to validate such claims (in other words, why was everyone so ready to believe the results)?

Assignments:

Assignment #1A: Research Process & Chapter 1 Questions

Chapter One Discussion Questions for Brown & Hale

1. Which stage of the research process is most important? Why?
2. Kuhn states that when paradigm shifts occur, they are controversial and demand debate, each side presenting its evidence, sure of the accuracy of its findings, and rejecting as incomplete that of the other. This is possible because "no paradigm ever solves all the problems it defines and since no two paradigms leave all the same problems unsolved, paradigm debates always involve the question: Which problem is it more significant to have solved?" (Kuhn 1970, 110).
Thinking about Kuhn's proposition, identify an area of public service or public policy (domestic violence, drug use, elections, economic development, education, housing, criminal justice, or another area) and discuss the paradigm that you believe defines the way that knowledge is understood in this area. What are the problems that this paradigm defines, and what are some of the problems that it does not? Are any of the unexamined problems more important than those that are incorporated into the paradigm? Are there other ways that we "should" look at this area of public service?
3. Why are double-blind peer-reviewed resources preferable to other types of information? Do you think it is possible for the double-blind process to be corrupted? How could this happen?
4. What ethical concerns might we encounter in conducting research focused on public administration or nonprofit management? What steps could we take to minimize risks associated with these types of projects?

Research Process Outline Worksheet

Read the final report for the Alabama needs assessment study of women age sixty-five and older:
Brown, Mitchell, and Kathleen Hale. 2011. *State-Wide Assessment of Alabama Women 65+: Organizations, Practices, and Participant Perspectives. Final Report to the Alabama Women's Commission*. Auburn, AL: Auburn University.
Following the research process outlined in Chapter One of your textbook (Brown, M., & Hale, K. (2014) *Applied Research Methods in Public & Nonprofit Organizations*. Jossey-Bass, San Francisco, CA), lay out the components in the worksheet attached.

1. For “Ideas and Questions,” what is the research question or problem that motivated the study?
2. For “Theory Development,” identify the focus and types of literature used early in the report to describe the problems.
3. For “Research Design,” summarize the design decisions made by the authors.
4. For “Conducting Research,” lay out where the primary data came from and how they were collected.
5. For “Data Analysis,” describe how the data were analyzed.
6. For “Conclusions and Reflections,” summarize the overarching findings and implications of the study.

Assignment #1B

Topic Selection

Utilizing what you learned in Chapter 1 (Hale & Brown), make a list of two topics that you might be most interested in studying. For each, identify the subfield into which it best fits. Then, using the library resources, identify a few academic (peer-reviewed) articles or academic press books on the topic and read them. On the basis of your readings, refine your topics, thinking about what we know, what we do not know, and other possible ways the topics could be studied. I suggest you make time to go to the library and work on this assignment so that you have access to the librarian who can help you locate the articles you need. (This assignment will most likely take several days, do not procrastinate.)

Assignment #2

Chapter Two Discussion Questions for Brown & Hale

1. Discuss the links between research questions, empirical theories, and research expectations or hypotheses.
2. What might the impact on research be if we did not include the step of developing empirical theories?
3. Is there really a difference between research expectations and hypotheses?
Explain your answer.
4. Pick a concept that you would like to measure. Some examples are poverty, need, achievement, or accuracy. Operationalize this concept in six different ways; use secondary data sources for three, and original data for the remaining three. Identify and describe the strengths and weaknesses of each of your operationalization approaches. For each, also indicate whether the scheme can be replicated over time and whether that aspect is important.
5. Why would articulating assumptions about a theory of change be important?

Annotated Bibliography

On the basis of your work on the Topic Selection, select the topic that best passes the “Who cares?” test and is testable. Develop a research question from the topic. Then identify at least ten academic, peer-reviewed resources on that (or a similar) topic. Create an annotated bibliography for these sources. Using what you have written in the annotated bibliography, attempt to develop an empirical theory for how the phenomenon you are studying ought to work, culminating in a hypothesis or statement of research expectations. Identify and operationalize at least one dependent variable and one independent variable, and explain how you will measure these. When this is complete, go back to the research question and make sure that the question, the empirical theory, and the hypothesis or hypotheses all fit together. Revise each component as necessary.

Assignment #3

Chapter Three Discussion Questions

1. What role does error or bias play in research? Why is it important?
2. Should nonexperimental research be used for purposes other than descriptive or exploratory research? Why or why not?
3. Think through the difference between the different forms of nonprobability sampling. Which form would produce more error or bias? Why?
4. Compare availability sampling to the other sampling strategies. Are the other strategies simply different justifications or rationalizations for an availability approach? Justify your response.

Research Design

Given your research question and hypotheses developed from Chapter Two, develop a research design, keeping in mind that you will actually conduct this research. First, determine what approach makes the most sense—experimental, quasi-experimental, or nonexperimental. Identify the strengths and weaknesses of the approach that you select. Then identify how and what kinds of data will be collected. Next identify the unit of observation and the population. Then determine whether or not you can collect population data or if you need to collect sample data. If you need to draw a sample, determine whether or not you can take a random sampling approach. Then identify your sampling strategy and develop a plan that includes the number of observations on which you will collect data and the strengths and weaknesses of the sampling approach.

Assignment #4

Chapter Four Discussion Questions

1. Do you think that the concerns about biased knowledge production in a society in which there is a hegemonic group are founded? Why or why not?
2. Of the data collection approaches described in this chapter, which has the most validity? Reliability? Why? Which has the greatest potential for bias? Why?
3. Can the data collected through any of the approaches in this chapter be used for quantitative analysis? Why or why not? If yes, which?
4. Do you think it is possible to replicate any of these data collection methods in a meaningful way? Why or why not?

Data Collection Part A

You should begin this linked assignment by reflecting on and refining your research design. First, identify how you will collect data, and identify the strengths and weaknesses of your selected approach. Second, develop a protocol for data collection, including detailed plans about what data will be collected, from where and whom, when, and how. If any processes need to be followed (approaching people, observing a phenomenon, recording information, and so on), list those processes in chronological order. If any questions need to be asked of people, draft these. Next, pilot these processes and questions with one to two cases. When the pilot is completed, write up what you did and what the results were. Then modify the processes and instruments as needed. Finally, collect the data.

Assignment #5

Chapter Five Discussion Questions

1. From your perspective, are there any substantive differences between survey research and interviewing? If no, why not? If yes, what are they?
2. What types of information can you *not* collect from surveys? How does this diminish its utility as a tool for collecting data?

3. Of all of the forms of data collection discussed in this book, which types have the most error? The least? Where does survey research fall on this continuum?
4. Why are decreasing survey response rates seen as problematic? What other reasons can you think of, other than those given in this chapter, for decreasing response rates?

Data Collection Part B

You should begin this linked assignment by identifying the major concepts that you are planning to study and turning these into preliminary research questions. Then determine how you will field the surveys—written on the Web, written on paper, or verbally. Then design a draft questionnaire, including all of the components described in this chapter. Next, pilot the process for data collection and the instrument/questionnaire with a few people. After the pilot is completed, write up what you did and what the results were. Then modify the processes and instruments as needed. Finally, collect the data.

Assignment #6

Chapter Six Discussion Questions

1. Why do we not use the range with nominal data?
2. What are the limitations of bivariate analyses generally? Which of the conditions of causality do these types of analysis violate? Given that, why do we bother with bivariate analysis?
3. In what ways could descriptive statistics be useful for nonprofit organizations? Bivariate analysis? Multivariate analysis?
4. What would happen if the unit of observation for two different variables in an analysis you are trying to conduct is not the same?
5. If your data collection efforts have low validity and reliability, what impact would this have on your quantitative data analysis calculations? On the conclusions you draw from the study?
6. What are the possible limitations of qualitative data analysis? What value does this approach add, and particularly for applied research?

Data Analyzation

In this assignment, you will analyze the data you collected in the assignment from either Chapter Four or Chapter Five. First, determine whether quantitative or qualitative analysis is the best approach to analyze the type of data you have. Explain which approach you take and why. Second, analyze the data. If you have qualitative data, use each of the three approaches (coding, patterns, and trends) and some form of data display to summarize your information. If you have quantitative data, develop a codebook, develop a database, perform descriptive analysis, and either perform bivariate analysis or discuss what tests could be used and why. Third, interpret your findings in light of your research question.

Assignment #7

Chapter Seven Discussion Questions

1. Consider the writing you have done in the past. What processes and steps did you follow that led to a successful product? When you have produced suboptimal written products, what process or steps did you follow in those cases? What is different between them?
2. Reflect on the last time someone provided criticism of your writing. How did you react? What could you do to make your reaction more positive?

3. Thinking about the different forms of writing described in this chapter, identify the common elements among all (or almost all) of them. What differentiates each type of writing from the others?
4. What purpose do Gantt charts and budget narratives serve in grant proposals? Imagine that you are a funder of a grant program. What would you look for in a Gantt chart and in a budget narrative when determining which proposals to fund? Why?
5. Think about past presentations that you have seen. What separated the good ones from the bad ones? What engaged you and kept you interested in the material? How could you emulate that?

Research Presentation

The last of the assignments is perhaps the hardest. You will need to pull together each of the steps in the research process in an oral presentation accompanied by a PowerPoint or slide presentation. The materials should consist of the following:

1. The research question and a brief discussion of why it is interesting
2. An empirical theory developed out of the relevant literature
3. Hypotheses or research expectations
4. A discussion of the research design
5. An overview of the findings
6. Conclusions about the topic from the findings, and suggestions for additional ways to examine and/or further develop the research question

Although normally a research presentation takes 45', due to the large # in class, each student will be limited to 15' for the oral presentation. You should not limit the thoroughness of your PowerPoint or slide presentation, as it will be graded on each key concept. You will complete a research paper utilizing these assignments for Data Analytics and Research Methods II, due in the Spring Semester. (Be sure to keep all the information from these assignments!)

Grading Matrix:

Activities/Assignments	Points	Value (percentages)
Assignment #1A	50	8.3%
Assignment #1B	50	8.3%
Assignment #2	50	8.3%
Assignment #3	50	8.3%
Assignment #4	50	8.3%
Assignment #5	50	8.3%
Assignment #6	50	8.3%
Assignment #7	100	16.7%
Frontline Video Online Assignment	25	4.2%
Graduate Project		16.7%
CITI Training	25	
Survey Training	25	
Project Participation	50	
Class Participation & Attendance	25	4.2%
Total:	600	100%

Grade Determination

A = 90% or better
B = 80 – 89 %
C = 70 – 79 %
D = 60 – 69 %
F = less than 60%

Late Assignments:

All assignments are to be submitted online at Canvas. **It is the student's responsibility to ensure the assignment is submitted successfully.** All assignments should be submitted as word documents or PDFs. Do not submit an assignment as an image, as it is difficult, and at times impossible to review. Canvas will time stamp each document. Late work will receive a grade penalty. Work that is turned in at any time during the first 24 hours after the date and time the assignment is due will receive no higher than a grade of B. Work that is turned in at any time during the second 24 hours after a paper is due will receive no higher than a grade of C. Student work will not be accepted under any circumstances more than 48 hours after the assigned due date and time. You will receive a 0 for the assignment.

University Policies and Procedures

Students with Disabilities (ADA Compliance):

Chapter 7(7.004) Disability Accommodations for Students:

The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see [Disability Services Office](#). You may also contact them by phone at 972-338-1777; by email at UNTDisability@untdallas.edu or at Building 2, room 204.

Canvas Instructure Accessibility Statement:

University of North Texas at Dallas is committed to ensuring its online and hybrid courses are usable by all students and faculty including those with disabilities. If you encounter any difficulties with technologies, please contact our ITSS Department. To better assist them, you would want to have the operating system, web browser and information on any assistive technology being used. [Canvas Instructure Accessibility Statement is also provided.](#)

NOTE: Additional instructional technology tools, such as Turnitin, Respondus, Panopto, and publisher cartridge content (i.e. MyLab, Pearson, etc.) may NOT be fully ADA compliant. Please contact our Disability Office should you require additional assistance utilizing any of these tools.

Course Evaluation Policy:

Student's evaluations of teaching effectiveness is a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester, providing you a chance to

comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider students' evaluations to be an important part of your participation in this class.

Assignment Policy: (According to the instructor's discretion while working in concert with the division/program's guidelines).

Exam Policy: (Online exams and the ability to retake is solely at the instructor's discretion). NOTE: Online exams may be proctored on campus per instructor's discretion.

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to [UNT Dallas' Student Code of Academic Integrity](#) for complete provisions of this code.

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

Web-based Plagiarism Detection: Please be aware in some online or hybrid courses, students may be required to submit written assignments to Turnitin, a web-based plagiarism detection service, or another method. If submitting to Turnitin, please remove your title page and other personal information.

Classroom Policies

Online Attendance and Participation:

The University attendance policy is in effect for this course. Class attendance in the Canvas classroom and participation is expected because the class is designed as a shared learning experience, and because essential information not in the textbook will be discussed in the discussion board. Online presence and participation in all class discussions is essential to the integration of course material and your ability to demonstrate proficiency.

Attendance for this online or hybrid course is considered when you are logged in and active in Canvas, i.e., posting assignments, taking quizzes, or completing Discussion Boards. To maintain financial aid award eligibility, activity must occur before the census date of the session or term of the course. Refer to [UNT Dallas' Registrar](#) for specific dates. If you are absent/not active in the course shell, it is YOUR responsibility to let the instructor know immediately, upon your return, the reason for your absence if it is to be excused. All instructors must follow university policy 7.005 covering excused absences; however, it is the instructor's discretion, as outlined in the course syllabus, of how unexcused absences may or may not count against successful completion of the course.

Inclement Weather and Online Classes: Online classes may or may not be effected by campus closures due to inclement weather. Unless otherwise notified by your instructor via e-mail, online messaging, or

online announcement, students should assume that assignments are due as scheduled.

Online “Netiquette”:

In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. Emails, Discussion Board messages and/or any other forms of written communication in the online environment should use proper “netiquette” (i.e., no writing in all caps (usually denotes yelling), no curse words, and no “flaming” messages (angry, personal attacks).

Racial, ethnic, or gender slurs will not be tolerated, nor will pornography of any kind.

Any violation of online netiquette may result in a loss of points or removal from the course and referral to the Dean of Students, including warnings and other sanctions in accordance with the University’s policies and procedures. Refer to [UNT Dallas Student Code of Conduct](#). Respect is a given principle in all online communication. Therefore, please be sure to proofread all of your written communication prior to submission.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions in the online environment. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Dean of Students as the instructor deems appropriate.

Technology Assistance: In order to successfully access the materials in an online or hybrid course, UNT Dallas advises that your computer be equipped with the minimum system requirements listed on the first page of the syllabus.

If you experience difficulty accessing or using components of the course, try using Google Chrome browser. If you still experience technical difficulties, first, notify your instructor.

If the problem is still not resolved, call Student Assistance (Distance Learning) at the phone number listed on the first page of the syllabus. Also, no matter what browser you use, always enable pop-ups. For more information see:

- [UNT Dallas Canvas Technical Requirements](#)
- [Canvas Instructure Supported & Unsupported Operating Systems](#)