ICT 610/690; LIS 690: Exploring and Analyzing ICTs: Methodological Approaches

Day/Time: Monday 5:30-8:30

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COURSE DESCRIPTION

Information and Communication Technologies (ICTs) are pervasive in our increasingly global society and, importantly, have the potential to improve lives and society. This course is designed to provide you with a sophisticated understanding of the philosophy, theory, design, and analysis of both qualitative and quantitative research in communication. During this course you will be exposed to a variety of methodological designs and statistical procedures to allow you to complete your own research projects during your time as a graduate student here at the University of Kentucky.

Using a variety of methods ranging from the foundational (e.g., interviews, surveys) to cutting edge (e.g., big data analysis, geospatial mapping) and readings from a variety of contexts (e.g., education, healthcare, risk and crisis), this course is designed to equip you with the research and methodological tools to understand how ICTs affect individuals, relationships, groups, organizations, social movements, and policies and to use these methodological tools in applied settings.

STUDENT LEARNING OUTCOMES

After taking this course, students will be able to:

1. Compare and contrast quantitative and qualitative methodologies
2. Demonstrate understanding of research ethics
3. Conceptualize a study from beginning to end including research questions, rationale, research design, recruitment, and data analysis
4. Conduct correct data analysis using SPSS
5. Write, revise, and present scholarly research

REQUIRED MATERIALS

- A laptop with SPSS (http://www.uky.edu/ukat/help/software) downloaded. Bring laptops to every class.

- Selected readings (provided on Canvas) from:
    - Frey, L. R., Botan, C. H., & Kreps, G. L. (1999). *Investigating Communication: An Introduction to Research Methods.*
    - Rogers, Y., Sharp, H., & Preece, J. (2012). *Interaction Design: Beyond Human-Computer Interaction.*
    - Morgan, S. E., Reichert, T., & Harrison, T. R. (2002). *From numbers to words: Reporting statistical results for the social sciences.* Boston, MA: Allyn and Bacon.
    - APA Manual 6th edition.

Journal article PDFs posted to Canvas

Data Sets (On days when we work with data, you should check your email for a data set)

EXPECTATIONS AND POLICIES

Attendance
It is truly in your best interest to attend every class. Given the limited number of days that we have to meet, there should be NO unexcused absences. You should be on time and stay for the entire time during each class period. You may have 2 excused absences. If you choose to use the excused absences you should give advanced notice and complete an additional assignment related to the readings for that day.

Participation
You are expected to read all of the assigned readings prior to coming to class. Class discussions will extend the information covered in the assigned readings. You are responsible for knowing this information to the extent that you are able to fully discuss it. You will engage fully in every discussion demonstrating knowledge and critical thought about readings, lecture materials, and asking thought provoking questions. Your participation in the classroom is valued and benefits the entire classroom.

Written Work
As graduate students, you are expected to have developed a strong foundation in writing at this point in your academic career. Further, as graduate students, you are expected to demonstrate continued improvement of your writing skills. All papers must follow APA 6th edition. The writing style, mechanics, and content are equally important.

Oral Presentations
As graduate students, you are expected to have developed a strong foundation in oral communication skills. Throughout the course, you will have multiple opportunities to demonstrate your oral communication competencies (e.g., classroom discussion, final presentation). Your oral presentations should consider the purpose, topic, audience, and message in order to effectively create shared meaning in a clear and concise manner.

Assignment Submission
All assignments should be submitted via Canvas. The assignment should be attached in a word file (.doc or .docx only). You <u>MUST</u> confirm that the assignment was submitted and that it will open. <u>Any file that is attached, but unable to be opened, will be treated as if it were not submitted. All assignments will be due before class begins unless otherwise noted.</u>

Late/Make Up Work
Late work will <u>NOT</u> be accepted. Any work that is turned in late will receive <u>ZERO</u> points. Work may only be made up if the absence is pre-approved by the instructor (at least 48 hours notice). Due dates will not be arranged around due dates in other courses.

Student Behavior
You are expected to arrive to class on time and stay the entire time. We will maintain an open, yet respectful, and engaged, classroom environment. The respect should extend to those who are in the classroom (e.g., myself, other students) as well as those who are not a typical classroom member (e.g., other professors, guest speakers). A respectful and engaged environment is one where electronic devices are put away and side conversations do not occur. Students who engage in disruptive behavior may be directed to leave the class for the remainder of the class period. See the UKY's Code of Student Conduct for further information on prohibited conduct.

For the purposes of this class, this policy on behavior must also extend to the electronic classroom on Canvas, or appropriate behaviors otherwise known as netiquette. Your interactions should remain professional and focused on learning without resorting to personal attacks, unsupported claims, or irrelevant conversations.

If you are ever uncomfortable or upset by something that happens in the classroom or on Canvas, please come see me.

Plagiarism
Part II of Student Rights and Responsibilities (6.3.1; online at http://www.uky.edu/StudentAffairs/Code/part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self–expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission. When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or another source, including the Internet. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Plagiarism also includes using someone else's work during an oral presentation without properly citing that work in the form of an oral footnote.

Whenever you use outside sources or information, you must carefully acknowledge exactly what, where and how you have employed them. If the words of someone else are used, you must put quotation marks around the passage in question and add an appropriate indication of its origin. Plagiarism also includes making simple changes while leaving the organization, content and phraseology intact. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain.

ASSIGNMENTS

Quizzes (25 points each, 100 points total)

Quizzes will test both conceptual and applied knowledge and may consist of multiple choice, true/false, and open ended questions. Additionally, quizzes may include skills in data analysis (e.g., coding, SPSS). Quizzes will only include information covered prior to the quiz and may include cumulative information.

Article Selection and Discussion Facilitation (50 points)

At one point during the semester, each student will select one article they consider exemplary for that day's methodological approach and will lead a 30 minute discussion to conclude the class. First, the facilitator should select the article and make it available on the course site for all other students 1 week in advance of the discussion day (by emailing the article to the co-instructor). The discussion facilitator is expected to prepare 5-6 discussion questions (submitted to the instructr 48 hours in advance of class) and to use those questions to engage the entire class in critical thinking and analysis of the methodology and implications of the article.

Discussion facilitators will select presentation days on the first day of class to fill in the schedule.

Method Critique (50 points)

Each student should select a reading already included in the reading list. You will critique a method on a different day than on your discussion facilitation assignment. First, the student should briefly summarize the method used in the article. Then, using knowledge gleaned from our class and other readings, you should critique the article. You may comment on issues of recruitment, sampling, ethics, reliability, internal and external validity, design, analysis, or any other issue with the research. End the critique with 2 specific and research supported suggestions to improve the study. *Note:* You may not critique things that are already addressed in the limitation section.

The critique should be 4-5 pages long and you will summarize and explain your critique to the class in a 5-7 minute mini-presentation at the beginning of class.

You will select critique/mini-presentation days on the first day of class to fill in the schedule.

Abbreviated Rationale/Literature Review (100 points)

In 6-8 pages, each student will submit a fully developed literature review/rationale for studying a topic of your choice. This document should include a strong argument supported by exhaustive and up to date relevant literature which is logically organized to lead to appropriate research questions and/or hypotheses to test and/or examine a socially significant issue or technology related product.

Method Section (100 points)

In 4-5 pages, the student will submit a fully developed method section for studying the topic covered in your rationale/literature review. This document should include information on sampling, participants, ethical and methodological considerations, applicable research instruments (e.g., scales, interview questions), and a data analysis plan. The methodological decisions should not only be sound, but supported by course readings and other literature.

Final Presentation (100 points)

Each student will present his or her complete prospectus (rationale and proposed method) to the class and other ICT faculty guests and CJT graduate student guests in a conference style 10 minute poster presentation. Following the series of 10 minute presentations, guests will be invited to interact with the presenters and to engage in one-on-one question and answer sessions.

GRADING

When grading assignments and projects for a course, it is only possible to grade an actual product. Similarly, putting in a certain amount of time or "effort" on a project does not guarantee a high grade. Only meeting the established criteria can earn an acceptable grade (C). If you intend to earn higher than a C, then this will constitute above average (B) or excellent (A) work that exceeds expectations. All grading rubrics are included on pages 13-17 of this syllabus. Further, I do not GIVE grades, you EARN grades. Thus, do not ask me to bump a grade or offer extra credit to improve your grade.

Assignment	Points Possible	Points Earned
Quizzes	Q1: 25 Q2: 25 Q3: 25 Q4: 25	Q1: Q2: Q3: Q4:
Article/Facilitation	50	
Method Critique	50	
Rationale/Literature Review	100	
Method Section	100	
Final Poster Presentation	100	
TOTAL	**500**	

TENTATIVE SCHEDULE

IC = Investigating Communication, ID = Interaction Design, NW = Numbers to Words,

DATE	TOPIC	READINGS/ASSIGNMENTS
UNIT ONE: FOUNDATIONS		
August 29	Introduction to Studying ICT, Research Ethics, and Quantitative vs. Qualitative Approaches	Walsham (2012) Sale, Lohfeld, and Brazil (2002) Mahoney & Goertz (2006) IC 6 (pp. 146-166)
Sept 5	**Labor Day – No Class**	
September 12	Conceptualization, Research Questions, Hypotheses, Variables and Levels of Measurement	IC Chapter 2 & 4 (pp. 81-96) ID 7
UNIT 2: QUALITATIVE APPROACHES		
Sept 19	Interviews/Focus Groups (Mr. Tatum Leads)	Clark, Demont-Heinrich, & Weber (2005) Qiu (2008) Kania-Lundholm & Torres (2015) Agosto, Abbas, & Naughton (2012) **Unit 1 Quiz** **Discussion Facilitation: _____** **Method Critique: _____**
September 26	Professional Panel of Guest Speakers Observations and Case Study	Cifuentes & Vanderlinde (2015) Schoon (2014) Rangaswamy & Nair (2012) **Discussion Facilitation: _____** **Method Critique: _____**
October 3	Ethnography, Coding and Intercoder Reliability/Agreement Guest Speaker: Dr. David Nemer	ID 8 (pp. 269-273 & pp. 285-315) Golafshani (2003)

		Hayes & Krippendorff (2007)
		Browning & Sornes (2008)
		Discussion Facilitation: _____
		Method Critique: _____
UNIT 3: QUANTITATIVE APPROACHES		
October 10	Recruitment, Sampling, and Survey Design (Mr. Tatum Lead)	Anderson (2005)
		IC 4 (pp. 96-108), 5 (pp. 125-133), and 8
		Unit 2 Quiz
		Discussion Facilitation: _____
		Method Critique: _____
October 17	Experimental Design	Maxian (2014)
		Lu, Chorus, & Wee (2014)
		IC 7
		Lit Review/Rationale
		Discussion Facilitation: _____
		Method Critique: _____
October 24	Big Data and Databases	Kuiler (2014)
		Honavar (2014)
		Assunção, Calheiros, Bianchi, Netto, & Buyya (2015)
		Discussion Facilitation: _____
		Method Critique: _____

October 31	Usability Testing	ID 12 Liu, Lo, & Wang (2013) Svanæs, Alsos, & Dahl (2010) Weinerth, Koenig, Brunner, & Martin (2014) **Discussion Facilitation:** _____ **Method Critique:** _____
November 7	Geo-spatial Mapping and Social Media Guest Speaker: Dr. Sean Burns	Favier & Van der Schee (2014) Doran & Daniel (2014) Aslan (2015) Longo (2014) **Discussion Facilitation:** _____ **Method Critique:** _____
UNIT 4: DATA ANALYSIS, INTERPRETATION, AND REPORTING		
November 14	Descriptive Statistics, Frequencies, Reliability, and Validity (Mr. Tatum Lead)	IC 5 (pp. 109-125) and 11 NW 3 Cortina (1993) **Unit 3 Quiz**
November 21	Relationships and Group Differences: Correlations, T-tests, and (M)ANOVA	IC 14 NW 5, 6, & 7
November 28	Predictive Modeling: Regressions, SEM, and Path Models	ID 15 NW 7 **Method Section Due**

December 5	From Numbers to Arguments: Inferring from Data and Presenting Data Textually and Visually (Mr. Tatum Lead)	NW 8 **Unit 4 Quiz**
December 12	Final Project Presentations	**Final Presentations Due**

Readings (See Canvas Modules)

Agosto, D. E., Abbas, J., & Naughton, R. (2012). Relationships and social rules: Teens' social network and other ICT selection practices. *Journal Of The American Society For Information Science & Technology*,*63*(6), 1108-1124.

Anderson, B. (2005). The value of mixed-method longitudinal panel studies in ICT research. *Information, Communication, and Society, 8*, 343-367.

Aslan, B. (2015). The mobilization process of Syria's activists: The symbiotic relationship between the use of ICTs and the political culture. *International Journal of Communication, 92*, 507-2525.

Assunção, M. D., Calheiros, R. N., Bianchi, S., Netto, M. A., & Buyya, R. (2015). Big data computing and clouds: Trends and future directions. *Journal Of Parallel & Distributed Computing*, *79/803*-15.

Browning, L. D., & Sornes, J. O. (2008). The challenge of doing corporatized research: An ethnography of ICT use. *Qualitative Inquiry, 14*, 1223- 1244.

Cifuentes, G., & Vanderlinde, R. (2015). ICT Leadership in higher education: A multiple case study in Colombia. *Comunicar*, *23*(45), 133-141.

Clark, L. S., Demont-Heinrich, C., & Webber, S. (2005). Parents, ICTs, and Children's Prospects for Success: Interviews along the Digital "Access Rainbow". *Critical Studies In Media Communication*, *22*, 409-426.

Cortina, J. M. (1993). What is coefficient alpha: An examination of theory and applications. *Journal of Applied Psychology, 78*, 98-104.

Doran, M., & Daniel, S. (2014). Geomatics and Smart City: A transversal contribution to the Smart City development. *Information Polity: The International Journal Of Government & Democracy In The Information Age*, *19*, 57-72.

Favier, T. T., & van der Schee, J. A. (2014). The effects of geography lessons with geospatial technologies on the development of high school students' relational thinking. *Computers & Education*, *76,* 225-236.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The

Qualitative Report, 8, 597-607.

Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures, 1*, 77-89.

Honavar, V. G. (2014). The promise and potential of big data: A case for discovery informatics. *Review Of Policy Research*, *31*(4), 326-330.

Kania-Lundholm, M., & Torres, S. (2015). The divide within: Older active ICT users position themselves against different 'Others'. *Journal Of Aging Studies*, *35*26-36. doi:10.1016/j.jaging.2015.07.008

Kuiler, E. W. (2014). From big data to knowledge: An ontological approach to big data analytics. *Review Of Policy Research*, *31*(4), 311-318.

Liu, G., Lo, H., & Wang, H. (2013). Design and usability testing of a learning and plagiarism avoidance tutorial system for paraphrasing and citing in English: A case study. *Computers & Education*, *69*1-14.

Lu, R., Chorus, C., & Wee, B. v. (2014). Travelers' use of ICT under conditions of risk and constraints: an empirical study based on stated and induced preferences. *Environment & Planning B: Planning & Design*,*41*, 928-944.

Longo, B. (2014). Using social media for collective knowledge-making: Technical communication between the global north and south. *Technical Communication Quarterly*, *23*, 22-34.

Mahoney, J. & Goertz, G. (2006). A tale of two cultures: Contrasting quantitative and qualitative research. *Political Analysis, 14*, 227-249.

Maxian, W. (2014). Power to the people? Emotional components of media power, mobile ICTs, and their potential to alter individual-media dependency relations. *Mass Communication & Society*, *17*, 274-298.

Qiu, J. L. (2008). Working-class ICTs, migrants, and empowerment in South China. *Asian Journal Of Communication*, *18*(4), 333-347. doi:10.1080/01292980802344232

Rangaswamy, N. & Nair, S. (2012). The PC in an Indian urban slum: enterprise and entrepreneurship in ICT4D 2.0. *Information Technology for Development, 18*, 163-180.

Sale, J. M., Lohfeld, L. H., & Brazil, K. (2002). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality & Quantity*, *36*, 43-53.

Schoon, A. (2014). Digital hustling: ICT practices of hip hop artists in Grahamstown. *Technoetic Arts: A Journal Of Speculative Research*, *12*, 207-217.

Svanaes, D., Alsos, O. A., & Dahl, Y. (2010). Usability testing of mobile ICT for clinical settings: Methodological and practical challenges. *International Journal of Medical Informatics, 79*, 24-34.

Walsham, G. (2012). Are we making a better world with ICTs? Reflections on a future agenda for the IS field. *Journal of Information Technology, 27*, 87-93.

Weinerth, K., Koenig, V., Brunner, M., & Martin, R. (2014). Concept maps: A useful and usable tool for computer-based knowledge assessment? A literature review with a focus on usability. *Computers & Education*, *78*201-209.

Article Selection and Discussion Facilitation Grading Rubric

Criteria	Score and Comments
Article selected is relevant, appropriate, and complementary to topic and other readings. Posted 2 weeks prior to discussion.	1 2 3 4 5 6 7 8 9 10 Comments:
Discussion questions are open ended and thoughtful. Submitted 48 hours in advance.	1 2 3 4 5 6 7 8 9 10 Comments:
Effectively engages peers in the conversation	1 2 3 4 5 6 7 8 9 10 Comments:
Makes direct connections to other readings for the day	1 2 3 4 5 6 7 8 9 10 Comments:
Demonstrates preparedness and credibility in discussion facilitation	1 2 3 4 5 6 7 8 9 10 Comments:

Grade: ____/50

Method Critique Grading Rubric

Criteria	Score and Critique
Includes a summary of the methods and results.	1 2 3 4 5 Comments:
Critiques the methodological decisions and/or data analyses used by the authors using class readings and discussions to support your critiques.	1 2 3 4 5 6 7 8 9 10 Comments:
Thoroughly and accurately applies course concepts and "best practices" for effective research design and analyses.	1 2 3 4 5 6 7 8 9 10 Comments:
Offers at least two suggestions for improvement that you believe are feasible and will address the major flaws you identify with the method/analyses.	1 2 3 4 5 Comments:
The writing is concise, accurate, error-free, and organized. All APA conventions are followed. The writing reads like typical scholarly/academic writing.	1 2 3 4 5 6 7 8 9 10 Comments:
Presentation to the class is organized and credible. It is thorough and informative and applies course concepts in a way that engages your classmates.	1 2 3 4 5 6 7 8 9 10 Comments:

GRADE: _____/50

Literature Review/Rationale Grading Rubric

Criteria	Feedback/Grade
Content (70 points):	
Compelling Introduction; and study timeliness and publication worthiness	1 2 3 4 5 6 7 8 9 10
Thoroughly summarizes theory or framework of study	1 2 3 4 5 6 7 8 9 10
Conceptualizes and reviews relevant constructs	1 2 3 4 5 6 7 8 9 10
Contextualizes study in existing research and as socially significant	1 2 3 4 5 6 7 8 9 10
Uses synthesized empirical support	1 2 3 4 5 6 7 8 9 10
Strong arguments with evidence	1 2 3 4 5 6 7 8 9 10
Proposes logical research questions and/or hypotheses	1 2 3 4 5 6 7 8 9 10 Comments:
Writing and APA (30 points): Writing should be error free and organized	1 2 3 4 5 6 7 8 9 10
Correct APA formatting	1 2 3 4 5 6 7 8 9 10
Clear, concise, and scholarly in tone/language	1 2 3 4 5 6 7 8 9 10 Comments:

GRADE: ____/100

Method Section Grading Rubric

Content	Points and Critique (70 points)
Includes all parts of a complete method section	1 2 3 4 5 6 7 8 9 10
Clear and feasible recruitment procedures	1 2 3 4 5 6 7 8 9 10
Clear and replicable study procedures	1 2 3 4 5 6 7 8 9 10
Research instrument/protocol descriptions/appendices	1 2 3 4 5 6 7 8 9 10
Correct data analysis plan for RQs and hypotheses and for data type collected	1 2 3 4 5 6 7 8 9 10
Method selected is appropriate for proposed research questions/hypotheses	1 2 3 4 5 6 7 8 9 10
Provides arguments/rationale where appropriate to support methodological decisions	1 2 3 4 5 6 7 8 9 10 Comments:
Writing and APA	**Points and Critique (30 points)**
Writing should be error free and organized	1 2 3 4 5 6 7 8 9 10
Correct APA formatting	1 2 3 4 5 6 7 8 9 10
Clear, concise, and scholarly in tone/language	1 2 3 4 5 6 7 8 9 10 Comments:

Grade: ____/100

Presentation Grading Rubric

Content (50 points)										
Presents a summary of the theory and topic area while building an argument for the study.	1	2	3	4	5	6	7	8	9	10
Defines important terms so that the audience can understand what is being discussed.	1	2	3	4	5	6	7	8	9	10
Presents the research questions and/or hypotheses.	1	2	3	4	5	6	7	8	9	10
Discusses methodological decisions	1	2	3	4	5	6	7	8	9	10
Discusses implications, strengths, weaknesses, and future directions.	1	2	3	4	5	6	7	8	9	10

Structure (15 points)					
The presentation has a clear introduction (attention getter, credibility, relevance, thesis, and preview)	1	2	3	4	5
Clear main points with transitions	1	2	3	4	5
Memorable conclusion (restatement of thesis, review of main points, and clinching statement).	1	2	3	4	5

Delivery (20 points)					
The presentation is delivered in an engaging, conversational, and natural way.	1	2	3	4	5
Strong eye contact	1	2	3	4	5
Avoids nervous movements or verbal fillers.	1	2	3	4	5
Interaction with audience after presentation	1	2	3	4	5

Poster (15 points)					
Effective and easy to read	1	2	3	4	5
engaging, visually appealing, and enhancing	1	2	3	4	5
integrated into the presentation	1	2	3	4	5

Comments:

Presentation Time: **Presentation Grade: _____/100**