The University of Tennessee
College of Social Work
Ph.D. Program
Fall 2018

SWK 626: Critical Reasoning for Science and Research
(3 credits)

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Location: TBA
Email: spilkay@vols.utk.edu

Class: Tuesdays, 1:25 – 4:25pm

“It is better to debate a question without settling it than to settle a question without debating it.”
Joseph Joubert, Pensees of Joubert, 1896

Ph.D. Program Mission
The purpose of social work education at the doctoral level is to develop an understanding and appreciation of the scientific method so that graduates can improve and extend the knowledge base of social work practice, and inform social policy, through empirical research. Graduates of doctoral programs assume leadership roles in social work education, research, and practice.

The Ph.D. program in social work provides training in social and behavioral science research methods and the opportunity for students to apply these methods to social problems and social work practice areas. Doctoral research is directed toward developing knowledge that can be used by social work educators, practitioners, administrators, and policy makers. Graduates of the Ph.D. program are prepared to contribute to the improvement of the design and implementation of social services and to develop and disseminate social work knowledge through research and teaching.

Ph.D. Program Competencies
Upon completion of the UT CSW Ph.D. program, students will be able to:

1. Demonstrate expert knowledge in a focused substantive area relevant to social work.
2. Conduct independent and original scientific research that advances knowledge in a substantive area.
3. Communicate scientific findings in an effective way to a range of audiences (from lay persons to other scientists).
4. Secure funding for a substantive research agenda.
5. Teach students the knowledge, skills, and values they need to be proficient social workers in a substantive area.
Code of Conduct
It is the student’s responsibility to have read the College of Social Work Ethical Academic and Professional Conduct Code that is in the College of Social Work Ph.D. Student Handbook (www.csw.utk.edu).

The Honor Statement
An essential feature of the University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.

University Civility Statement
Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other’s well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus (http://civility.utk.edu/)

Disability Services
If you need course adaptation or accommodations because of a documented disability or if you have emergency information to share, please contact the Office of Disability Services at 100 Dunford Hall at 974-6087. This will ensure that you are properly registered for services.

Dimensions of Diversity
The College of Social Work and the University of Tennessee welcome and honor all people. In accordance with the U.S. Council on Social Work Education and the U.S. National Association of Social Workers, the College of Social Work defines “the dimensions of diversity as the intersectionality of multiple factors, including” age, class, color, culture, mental or physical disability, ethnicity, gender, gender expression, gender identity, immigration status, marital status, national origin, political ideology, race, religion, sex, and sexual orientation. The College values intellectual curiosity, pursuit of knowledge, and academic freedom and integrity. A person’s diverse life experiences may include oppression, poverty, marginalization, and alienation as well as privilege, power, and acclaim. The College of Social Work promotes social justice and social change, and strives to end discrimination, oppression, poverty, and other forms of social injustice.

COURSE DESCRIPTION
Within a student’s substantive area, identification of assumptions and premises upon which an argument is based. Application of concepts within a particular model and the development of a statement of a predicted research outcome and/or research hypothesis that tests the empirical validity of the model.

Instructor’s Overview
A knowledge base can only be as good as its assumptions and premises. A knowledge base built upon flawed assumptions and premises, explicit or implicit, will inevitably result in research that eventually supports its falsely derived hypotheses. For example, in the first half of the 20th Century, citing evidence of the sexualized behaviors of sexually abused children, clinicians and
researchers determined that these sexualized behaviors caused their fathers to sexually abuse these children. Partially because of findings such as this, Freud repudiated his previous hypothesis stating that child sexual abuse led to many long-term effects and in its place developed the Oedipus and Electra Complex in which children were purportedly sexually attracted to their opposite sex parents. Children’s fantasies about these sexual relationships with their parents, he hypothesized, were instead the cause of their symptoms. “He thus effectively colluded with a society that wished to deny the existence of child sexual abuse, while modeling a pattern of removing blame from the offender and placing it on the victim…. Possibly in no other clinical population has one person had such a significant and detrimental effect on the outcome of so many” (p. 20)\(^1\). Thus, flawed underlying assumptions and premises inevitably contribute to flawed theoretical perspectives and models, from which flawed hypotheses are constructed, from which legitimate research findings are interpreted to support these flawed models, upon which a flawed knowledge base is built.

The purpose of this course is to provide students with knowledge, tools, and experiences for: reasoning critically and analytically; applying logical and rational deductive and inductive reasoning; and developing theoretical models in which underlying assumptions and premises are explicit, testable and logically derived; and from which testable primary and alternative hypotheses can be explicated and tested, with implications from these findings contributing to a richer and stronger knowledge base.

**COURSE COMPETENCIES**

1. Identify the assumptions and premises upon which an argument is based.
2. Identify and make conditional statements.
3. Elaborate on the implications of a theoretical statement within the context of a particular substantive area.
4. Identify flaws in a logical argument.
5. Make a deductively valid argument.
6. Begin with a set of assumptions and premises, link a series of conditional statements to these assumptions and premises, and use the conditional statements to lead to a logical conclusion, that is, the statement of a predicted research outcome and/or research hypothesis.
7. Articulate alternative explanations for a research outcome, and then (a) make a case for the alternative explanations, and (b) make a case against the alternative explanations.
8. Elaborate, in a logical manner, the implications of a set of research outcomes for social work practice, policy, and for further research.
9. Using the concepts within a particular model and the logical relationships between these concepts, apply these to a specific research context, with the result being a model-based forecast of research outcomes that serve as a test of the empirical validity of the model.

**REQUIRED MATERIALS**

**Textbooks**


NOTE: You may use either edition. Chapters are same. Page numbers are from 2002.


Weekly Readings
In addition to readings from the text, other required papers can be located on the Blackboard site for the class.

Required Software
Rationale Education Extra ($39.00 for a year’s license) or equivalent. To make your decision about the software you plan to use, please go to the Rationale website and review what it can do. Equivalent programs are those that can draw the boxes, connect them, make comments on or near the connecting lines, and embed stand-alone information. You are responsible for choosing and learning the software sufficiently that logical arguments can be portrayed visually similarly to that in Rationale. [https://www.rationaleonline.com/accounts/upgrade/educational](https://www.rationaleonline.com/accounts/upgrade/educational)

PLAGIARISM AND ACADEMIC DISHONESTY
It is assumed that all of your work is original for every assignment, including online, and that you are aware of appropriate citation rules. If you are not completely familiar with citation rules, please review them at the UT Library web site: [http://writingcenter.utk.edu/for-students/citingsources/](http://writingcenter.utk.edu/for-students/citingsources/) This website has other links as well. Please be aware that copying material verbatim from the web is considered plagiarism unless it is appropriately cited as verbatim material. Blackboard now provides the means for automatically scanning submitted assignments to determine if they include plagiarized material. Please assume that your material will be automatically scanned when it is submitted.

GRADING CRITERIA
The following grading scale will be used for the final grade:

<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
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<tr>
<td>94 – 100</td>
<td>A</td>
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<tr>
<td>90 – 93</td>
<td>A-</td>
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<td>87 – 89</td>
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<td>77 – 79</td>
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<td>74 – 76</td>
<td>C</td>
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<td>70 – 73</td>
<td>C-</td>
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<td>&lt;70</td>
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<td>&lt;60</td>
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COURSE REQUIREMENTS
Participation (15 points)
This course is taught primarily as a seminar, placing great responsibility upon class members for coming fully prepared to class to engage in discussions regarding the required readings and any supplemental readings you find applicable or interesting, and to discuss that week’s assignments. This class can be a fascinating exploration of the intersection of the mechanisms of scientific thought, ways of knowing and its generated knowledge, and culture, but the quality
of this class is primarily dependent upon your preparedness and willingness to engage in thoughtful discussion and raise challenging questions. For this reason, a significant portion of your grade is based upon your participation in class, including your attendance, the quality of your discussion of required readings, your capacity to discuss and integrate related readings, including those in your topic area, and assigned work.

Note: All assignments (below) will be handed in through Safe Assign in Blackboard using the following format for the file name: LastName_Week_# (example Pilkay 3.fileextension or Pilkay_3.fileextension). If you have multiple papers to hand in, you may either create a single file for them (preference) or add a suffix to the name (e.g., Pilkay 3a.docx, Pilkay 3b.docx, etc.). When citing or paraphrasing text from papers to support your rationale or for other reasons, please use the following format (author, year, page number, paragraph number [starting from first paragraph on page], and line number [starting from the top line in paragraph] if applicable). Also add a reference section with references in APA 6 style for those papers you used. For papers in your topic area, please attach copies of these papers as a pdf file and highlight, if possible, the portions of the papers you reference.

Weekly Assignments

ALL ASSIGNMENTS ARE DUE BEFORE CLASS.

Week 1 Due Aug. 28 Points 0
a. Make decision about whether you will Rationale or another equivalent program.
   Install software and, if necessary, learn how to use it.

Week 2 Due Sept. 4 Points 0
a. Locate and download at least 3 papers in one or two closely related topic areas of interest, attempting to find papers with different theoretical viewpoints. Hand in a reference list of these papers. Begin to formalize area you will concentrate on for this class.

Week 3 Due Sept. 11 Points 7
a. Locate and download at least 3 papers in one or two topic areas of interest, attempting to find papers with different theoretical viewpoints. Hand in a reference list of these papers. Continue formalizing area you will concentrate on for this class.
b. Identify implicit and explicit assumptions and premises of the theoretical context in the Schumm et al. (2012) paper. Support the evidence you used to make your decisions. (Use software to map these.)
c. In the papers for your topic area, choose two different theoretical viewpoints. For each, identify and explicate assumptions and premises, also identifying whether they are explicit or implicit. Support the evidence you used to make your decisions. (Use software to map your thought.)

Week 4 Due Sept. 18 Points 7
a. Continue to download more papers in your topic area, prioritizing those papers that explicate, compare, and test theoretical perspectives.
b. Identify at least two conditional statements found in the Ferraro (2005) paper and develop at least two more conditional statements that follow from assumptions and premises delineated in the paper. Support the evidence you used to make your decisions. (Use software to map your thought.)
To complete this assignment, the format should be:

1. Conditional statement found in paper
   a. Supportive evidence (can be one of their premises or findings)
2. Conditional statement found in paper (you may use more than 2)
   a. Supportive evidence
3. Conditional statement that follows from assumptions and premises
   a. Supportive evidence
4. Conditional statement that follows from assumptions and premises
   a. Supportive evidence

c. Choosing two different papers in your topic area, identify conditional statements in
these papers and make at least two more conditional statements that follow from
assumptions and premises delineated in the paper. Support the evidence you used
to make your decisions. (Use software to map your thought.)

Week 5    Due Sept. 25    Points 8
a. Continue to draw papers as needed.
b. Identify at least two theoretical statements, and their deduced conclusions,
   mentioned in the Ferraro (2005) paper. Add two further policy, practice, or research
   implications from these or other theoretical statements. Support the evidence you
   used to make your decisions. (Use software.)
c. Choosing one or two papers in your topic area, identify theoretical statements and
   their deduced conclusions that are stated in these papers. Add two further policy,
   practice, or research implications from these or other theoretical statements. Support
   the evidence you used to make your decisions. (Use software.)

Week 6    Due Oct. 2    Points 8
a. Continue to draw papers as needed.
b. In the Hodge (2005) paper, identify logical fallacies made by the authors, the types of
   logical fallacies, and why they are examples of those logical fallacies (i.e., why they
   are illogical). Support the evidence you used to make your decisions. (You may write
   these in a word document.)
c. In one or two papers in your topic area, identify logical fallacies made by the authors,
   the types of logical fallacies, and why they are examples of those logical fallacies
   (i.e., why they are illogical). Support the evidence you used to make your decisions.
   (You may write these in a word document.)

Week 7    Due Oct. 9    Points 8
a. For this and remaining weeks, supplement papers drawn based on need.
b. In the Allison (2013) paper, make testable deductively valid arguments that derive
   from the theories presented in the paper. Support the evidence you used to make
   your decisions. (Use software.)
c. In one or two conceptual/theoretical or qualitative papers in your topic area, make
   testable deductively valid arguments that derive from the (emergent) theoretical
   model. Support the evidence you used to make your decisions. (Use software.)

Week 8    Due Oct. 16    Points 8
a. In the Allison (2013) paper, articulate an alternative explanation (other than the
   theories mentioned) for the hypothesized research outcome. Using the assigned
paper or other literature, support the evidence that led to your decision. What would you need to do to rule in this alternative explanation and to rule out the primary hypothesis? (Use software.)

b. In a paper in your topic area, articulate an alternative explanation for the hypothesized research outcome. Using the topic paper or other literature, support the evidence that led to your decision. What would you need to do to rule in this alternative explanation and to rule out the primary hypothesis? (Use software.)

Week 9 Due Oct. 23 Points 8

a. For the Mendle (2013) paper, articulate a main hypothesis/theory and an alternative one. Make a case against the alternative explanation. Using the assigned paper or other literature, support the evidence that led to your decision. What would you need to do to rule out this alternative explanation? (Use software)

b. For the topic paper used in week 8, make a case against the alternative explanation. Using the topic paper or other literature, support the evidence that led to your decision. What would you need to do to rule out this alternative explanation? (Using your Week 8 map, alter it to capture your thought.)

Week 10 Due Oct. 30 Points 8

a. For the primary/research and alternative hypotheses in Mendle (2006) and Allison (2013) papers, develop implications for practice, policy, and research for each. Defend your choices. (Using the Week 9 maps, alter them to capture your thought.)

b. For the primary/research and alternative hypotheses in the topic paper used in weeks 8 and 9, develop implications for practice, policy, and research for each. Defend your choices. (Using your Week 9 map, alter it to capture your thought.)

Week 11 Due Nov. 6 Points 8

a. Using a theory in your topic area that is applied to a particular phenomenon/construct of interest (e.g., substance abuse, effects of maltreatment, organizational culture), identify the primary constructs/concepts/variables included within this theory and the logical relationships among them. Draw a visual depiction of these relationships. (You may use any software program to do so.) Be prepared to present it informally to the class.

Week 12 Due Nov. 13 Points 0

a. Develop a visual depiction of a model in your topic area that captures multiple hypothesized relationships, preferably including the theory (and its depiction), of the particular phenomenon/construct of interest in your topic area. As compared to the assignment for week 11, this model may use more than a single theory to explain the phenomenon and should attempt to include some original thought. The model will be a visual depiction of your thinking. Be prepared to present it to the class, justifying the relationships in the model. This week’s assignment allows you to talk through your own developing logic and analysis with your peers, justify the model and its relationships, discuss alternative perspectives, and get feedback from your peers before finalizing your model next week. This must not be a simpler regurgitation of the literature.

Week 13 Due Nov. 20 Points 15

b. Prepare and present a 15-minute, professional-quality presentation of the revised model presented in Week 12. Your presentation will be a discussion
and justification of the model and its relationships. The assignment will be graded on both the quality of the content and the quality of the presentation.
<table>
<thead>
<tr>
<th>Week</th>
<th>Assignment Due that Week</th>
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<tbody>
<tr>
<td>Week 1* August 28</td>
<td>Have <em>Rationale</em> or other program installed on computer; Bring computer to class</td>
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<tr>
<td>Week 2* Sept. 4</td>
<td>Identify topic area for course</td>
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<tr>
<td>Week 3* Sept. 11</td>
<td>Get 5+ papers in topic area representing various viewpoints; identify assumptions &amp; premises in assigned paper(s) &amp; in 2 topic papers with different theoretical contexts</td>
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<tr>
<td>Week 4* Sept. 18</td>
<td>Identify conditional statements in topic area papers &amp; assigned paper(s); continue to draw more papers</td>
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<tr>
<td>Week 5* Sept. 25</td>
<td>Determine implications &amp; conclusions of theoretical statements in topic area &amp; in assigned paper(s); draw papers as needed</td>
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<td>Week 6 Oct. 2</td>
<td>Identify logical arguments in topic area &amp; determine whether flaws exist; draw more papers if needed; identify logical arguments &amp; flaws in assigned paper(s)</td>
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<tr>
<td>Week 7 Oct. 9</td>
<td>Make deductively valid arguments in topic area papers and assigned paper(s); supplement papers drawn based on need</td>
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<tr>
<td>Week 8 Oct. 16</td>
<td>Articulate alternative explanations for research outcomes in topic area &amp; assigned paper(s)</td>
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<tr>
<td>Week 9 Oct. 23</td>
<td>Make case for &amp; against alternative explanations defined in week 8 for topic area &amp; papers assigned in week 8</td>
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<tr>
<td>Week 10 Oct 30</td>
<td>Develop implications for practice, policy, and research in topic area and papers assigned in week 8</td>
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<tr>
<td>Week 11 Nov. 6</td>
<td>Develop model in topic area based on previous assignments; add unique ideas to it based on deconstruction of this literature</td>
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<tr>
<td>Week 12 Nov. 13</td>
<td>Student casual presentation of model</td>
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<tr>
<td>Week 13 Nov. 20</td>
<td>15-minute professional-quality presentation of revised model</td>
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COURSE OUTLINE

Week 1  Introduction & review of course; Social work profession

  - Preface (pp. ix – xi)
  - Preparing the mind for logic (pp. 1 – 22)
  - Preface (pp. ix – xiii)
  - Introduction (pp. 3 – 5)
  - The nature of understanding (pp. 6 – 21)
  - Reading and writing about theories (pp. 331 – 346)

Week 2  Identify assumptions, premises, and definitions; Science of SW and its evolution

Okasha, S. (2002). Scientific reasoning (pp. 18 – 39)
  - Science as an approach to understanding (pp. 22 – 36)
  - Grounded and emergent theory (pp. 277 – 280).
McInerny, D. Q. (2002). The basic principles of logic. (pp. 25 – 40).

Week 3  Identify/make conditional statements; Evidence-based practice

Jaccard & Jacoby, (2010). Focusing concepts (pp. 75 – 90)
Okasha, S. (2002). Explanation in science (pp. 40 – 57)
  - The basic principles of logic. (pp. 41 – 44).
  - Argument: The language of logic (pp. 47 – 67).
Week 4  Conclusions and implications of theoretical statement; Epistemology


Okasha, S. (2002). Realism and anti-realism (pp. 58 – 77)


Week 5  Identify flaws in logical argument; Value-based practice & research


Okasha, S. (2002). Scientific change and scientific revolutions (pp. 77 – 94)


Principle forms of illogical thinking (pp. 103 – 129).


Week 6  Make deductively valid argument; Conservative Christianity and social work


Week 7  Articulate alternative explanation for research outcome; Practice wisdom


Jaccard & Jacoby, (2010). Creativity and the generation of ideas (pp. 39 – 74)

Okasha, S. (2002). Science and its critics (pp. 120 – 134)


Week 8  Make case for/against alternative explanation; Causality; Professional identity


Jaccard & Jacoby (2010). Causal models (pp. 137 – 155)


**Week 9**

Logically elaborate implications of outcomes; Causality (cont.); Practice Issues – Compensation, Turnover, Naming the Client


**Week 10**

Development of models: Theory building


Jaccard & Jacoby, (2010). Grounded and emergent theory (pp. 281 – 294)  
Reading and writing about theories (pp. 331 – 346) [reread]
Week 11  Articulation of theoretical models; Barriers to research


Jaccard & Jacoby, (2010). Mathematical modeling (pp. 177 – 236) [skim]


Week 12  Student presentations; Gendered social work; Bridging the gap


Week 13  Student presentations; Doctoral education; Summary


Fong, R. (2014). Framing doctoral education for a science of social work: Positioning students for the scientific career, promoting scholars for the academy,

Other optional papers on the social work profession:


Felkner, W. J. (2009). Poor rigor and political obduracy: Which is the horse and which is the cart in social work education? *Research on Social Work Practice*, 19(1), 121-123.


