

Evidence-Based Management (Heinz-94-814)

Fall 2024

Course Information	<p><u>Class Meeting:</u> Mondays 6:30-9:20 pm HBH 1204</p> <p><u>Office Hours:</u> Before class, I will be available at my office 2223 HBH at 5:00 and by appointment or phone otherwise.</p> <p><u>Instructor:</u> Professor Denise M. Rousseau (denise@cmu.edu) Voice 412-268-8470 /Cell 412-855-5036 (if you have questions, call me! Don't suffer in silence.)</p> <p><u>Teaching Assistant:</u> Muskan Aggarwal muskana@andrew.cmu.edu</p> <p><u>Course Materials:</u> E. Barends & D.M. Rousseau <i>Evidence-Based Management: How to use evidence to make better organizational decisions</i> (Kogan Page, 2018). Purchase from Amazon</p> <p>Additional Readings and Cases Provided On-line via Canvas.</p> <p>Supplementary Resources: For our Critically Appraised Topics or CATs (and your own professional development), I encourage you to become familiar with original sources of research relevant to management, especially those available electronically through ABIInform, ProQuest, and Web of Science.</p> <p><u>Prerequisites:</u> None</p>
Summary	<p>Contemporary managers are heavily swayed in their thinking and decisions by habit, fads, convention and unrealistic levels of confidence. Practitioners of evidence-based management (EBMgt) learn to rethink their approaches to information to make more effective decisions—and grow their expertise. EBMgt means making decisions based on best available evidence with special emphasis on relevant scientific findings, unbiased organizational facts, stakeholder evidence, and professional expertise. It involves active use of decision practices that reduce bias and judgment errors and give due consideration to ethical concerns. This mini course is designed to promote your understanding and use of EBMgt principles. It guides you in developing the skills and knowledge needed to identify, access, and use quality evidence in making better decisions. The instructor is committed to pursuing an evidence-based approach to the course itself. Scientific evidence strongly supports the effectiveness of participation in learning (Ambrose et al., 2010). Your success in this course entails actively using evidence-based practices.</p> <p>COURSE TOPICS</p> <ul style="list-style-type: none">• What It Means to be an Evidence-Based Manager• Identifying Important Questions for which You as a Manager Want Evidence• Finding, Interpreting, and Using Scientific Evidence as Managers (Critically Appraised Topics or CATs)• Creating Valid Organizational Information from Raw Data• Decision Awareness: Types of Managerial Decisions and Evidence-Based Processes You Can Use To Make Them• Making it Easier to Use Evidence as a Manager: Logic Models, Decision Aids and Communities of Practice• Planning Your On-Going Development as an Evidence-Based Manager

<p>Learning Goals</p>	<p>This class is intended to help you apply the SIX steps of evidence-based practice: 1) asking, 2) acquiring, 3) appraising, 4) aggregating, 5) applying and 6) assessing evidence. These steps apply to all sources of evidence including professional expertise, scientific literature, organizational data, and stakeholder perspectives.</p>
<p>Behavioral Norms</p>	<p>HOW SHOULD YOU CONDUCT YOURSELF IN THIS COURSE?</p> <p>1. You and the Instructor <i>Share Responsibility for Learning</i> Real learning means changing how we think and act. You can expect that this class will challenge your beliefs with scientific findings that you have never seen before.</p> <p>Your job is to actively question your own beliefs (and others' including the instructor's), critically appraise the available evidence, and ask yourself under what conditions you might use this information, and if not, why not.</p> <p>2. Preparation, Participation and Reflection are Key BEFORE EACH CLASS SESSION: YOU ARE EXPECTED TO COMPLETE ALL SCHEDULED OLI MODULES, READINGS, & ASSIGNMENTS.</p> <p>IN CLASS: BE FULLY PRESENT. Attention is required for learning—thus we need your mindful presence (Langer, 1989).</p> <p>3. Ethics: All Work Turned in Must be Original and Your Own. All information sources used are to be cited (documents, websites, people). Please ask your instructor if you have any questions about appropriate citation or academic conduct.</p>
<p>Grading</p>	<p>Individual Work (50% of grade)</p> <p><i>Participation (20 points):</i> Attendance, constructive input to class discussions, completion of all assigned OLI modules, and commenting on our class Discussion Board.</p> <p><i>One-Pagers (30 points total, 10 each)—post to Discussion Board</i></p> <p>#1 What's the Evidence for...? Check out whether scientific evidence exists for the effectiveness of a popular management practice. We will choose one in class (e.g., Balanced Scorecard, 360 feedback, Lean management.).</p> <ul style="list-style-type: none"> ➤ Use ABlinform (on-line via Hunt Library). ➤ Search only PEER REVIEWED articles (check that box) ➤ Try to find at least THREE papers related to the practice. ➤ Write up a one-page summary of how you searched, the articles you found, and what conclusions you draw from their findings. Be sure to indicate your conclusions that is, "Is there evidence that the practice or model is likely to be effective or useful?" Tell us how you arrived at this conclusion. <p>#2 Decision Tools Identify and describe a <i>decision aid or tool</i> that you or someone you know has used. Examples might include a checklist used to guide action or make a decision, a logic model used to organize information about a problem, a formula or model used to guide a decision, etc.</p> <ul style="list-style-type: none"> ➤ What's the purpose of the tool? How is it used? ➤ What's the evidence of the value and validity of the tool? ➤ Describe the user, background and training needed to use tool.

- The strengths and weaknesses of the tool (in the way it is used).
- How might use of such a tool be improved?

#3 Your Role as a Leader Using Evidence-Based Practices
 Leadership plays an important role in shaping the use of evidence-based practices. How might you develop your own leadership practices over the next few years to promote better attention to evidence quality and make better decisions in your organization.

Group Work (n=2-3 people per group—50% of grade)

CAT: *Critically Appraised Topic (Two Part CAT)*

#1 “Scoping CAT” (20 points) Due 11/11

#2 “What Works CAT” --based on Your Scoping CAT (30 points)
 Due 12/9

In your career you will face challenging decisions. Important decisions make it especially worthwhile to obtain the best available evidence in determining a proper course of action. This assignment focuses on obtaining relevant **scientific** evidence. Your group will choose a managerial question (a cause/effect or “what works” question is required for this assignment). Please do so in consultation with the instructor.

An appropriate or What Works question might be something like these: When are distributed teams more likely to perform effectively? When are incentives for working long hours dysfunctional for workers or employers? Would pay-for-performance work in our company? When is investing in workforce training most likely to be financially beneficial?) You will also be given examples of real CATs that companies have used to stimulate your thinking.

In CAT #1 (Scoping CAT, 20 points Due 11/11) you will begin the process of understanding the scope, terminology, and outcomes related to the scientific literature surrounding your managerial question. In CAT #1, you will report on the process you go through to structuring your “final CAT #2 question.” You will present your starting question, what you learned from your literature search, and findings regarding keywords and critical factors associated with your question. In the end you will arrive at the final question for CAT #2, based on revisions and clarifications developed through the Scoping CAT.

In CAT #2 (Your “What Works” CAT, 30 points, Due 12/9) Your task is to evaluate relevant, best available management and social science research to answer a cause/effect question related to management practice (3-4 pp.). This be a question like “what is the effect of non-financial rewards on employee performance or well-being?” Sources used should be cited, per examples given in class. Cite all sources you relied upon in drawing your conclusions and explain your search strategy for finding them. Our grading rubric follows closely the features in our textbook (Ch16: CAT guidelines) so please carefully stick to the format provided.

The grading criterion for CAT #2 is how effectively you marshal the best evidence from the array of relevant research. In addition to using an effective search strategy, a quality CAT #2 *integrates* the evidence across studies so that you appreciate the big picture regarding what the evidence supports and what it does not. (If your report merely states what each study says, you will lose points for not integrating the findings into an overall assessment. See the CAT examples provided.)

	<p>EVIDENCE HIERARCHY IN SCIENTIFIC RESEARCH--(For "WHAT WORKS?" questions)</p> <p>A+ BEST QUALITY: 1) Meta-analyses of research studies, 2) Systematic reviews of research articles—adjusted for the quality of evidence on which 1 or 2 are based.</p> <p>A HIGH QUALITY: 1) Well-controlled longitudinal field studies, 2) randomized controlled interventions, 3) Multiple quasi-experimental studies</p> <p>B MODERATE QUALITY: 1) Cross-sectional studies, especially those with time-lagged outcome data, 2) Controlled case comparisons.</p> <p>C-D DEPENDS ON STATE OF KNOWLEDGE: Case studies and other descriptive research lack controls to rule out the effects of other co-occurring factors. Their value depends on the content/focus of the study relative to the state of knowledge existing at the time. Descriptive studies can be valuable in uncovering problems (supports, barriers, context) in implementing organizational practices In other situations, case and descriptive research can be considered lower quality.</p> <p>F LOWEST QUALITY (NON-EVIDENCE-BASED): 1) Expert opinion (e.g. WSJ, Ladies Home Journal) or consultant hype, 2) Non-expert opinion including newspaper articles and other journalistic reports, pop management books (unless adhering to Rousseau’s Rule #1), etc. and, 3) So-called “best” or popular practices.</p>
<p>Plagiarism and Cheating Notice</p>	<p>Students are subject to Carnegie Mellon University’s policies on academic integrity. Plagiarism is a serious offense that will result in the student failing the course. Note that all academic integrity violations will be reported to the Associate Dean. Additional penalties may be imposed.</p> <p>Plagiarism includes:</p> <ul style="list-style-type: none"> • Presenting another writer’s work as your own • Cutting and pasting content verbatim without using quotation marks to indicate a direct quote • Inserting a direct quote or paraphrasing content without citing the source in-text using footnotes, endnotes, or parenthetical citations with a corresponding Works Cited, References, or Notes page – in a manner consistent with an APA, MLA, or Chicago style guide • Providing incomplete or incorrect information about the source cited • Over-relying on templates or other writers’ phrasing. <p>Also, submitting work written for another course is not acceptable; consequently, a failing grade will be issued for that assignment.</p> <p>The way to avoid plagiarism is to attribute. Attribution is important for its own reasons, but especially in a political setting. Most Members of Congress and most political appointees want to hear different views, but it’s equally important for them to know where those views are coming from. Are they coming from the party leadership? A major business/labor interest? A nonpartisan source such as the Congressional Research Service? Knowledge of the source will often color the Members’/appointees’ reactions and your staff recommendations.</p> <p>This approach to research may run counter to the kind of work you have done in previous university settings, where the aim is to test hypotheses and arrive at firm conclusions. In a political setting, however, there are often several legitimate “firm conclusions” out there, depending upon one’s ideology, one’s constituency, and the circumstances of the day. An unadorned statement of "fact" is of less use to a policymaker than the same statement when attributed to a known source. The bottom line: When in doubt, attribute!</p>

<p>Accommodations for Students with Disabilities</p>	<p>If you have a disability and have an accommodations letter from the Disability Resources office, I shall have received that letter also; and I encourage you to discuss your accommodations and needs with me as early in the mini as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu.</p>
<p>Student Health & Well-being</p>	<p>Graduate school is stressful; take care of yourself! A good diet, exercise, sleep, time to relax or meditate – even outside hobbies - are important parts of a lifestyle that will serve you well, now and throughout life.</p> <p>If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is ready to help. Call 412-268-2922 and visit their website at http://www.cmu.edu/counseling/ . Also, consider reaching out to a friend, faculty, or family member you trust for help getting connected to the support that can help.</p>

CLASS SCHEDULE
Note: Assignments subject to change

<p>October 21</p>	<p>CLASS #1 WHAT IS EBMgt?</p>
<p>Agenda</p>	<p><u>ADVANCE READINGS:</u> Barends & Rousseau, Intro (How to Read this Book) & Chapter 1 (EBMgt: The basic principles)</p> <p><u>TOPICS</u></p> <p>Overview Syllabus/Goals</p> <p>What is EBMgt?</p> <p>Pre-test (baseline) assessment</p> <p>GUEST SPEAKER: CMU Librarian Sarah Young: So you think you know how to search!</p> <p><u>IN-CLASS Discussion</u></p> <ul style="list-style-type: none"> • What key PRACTICES do evidence-based managers use? • What kind of EDUCATION (training or learning) do managers need to be able to engage in evidence-based practice? • How are the practices and education of evidence-based managers DIFFERENT from the norm ("business as usual") today?
<p>Deliverables</p>	<p>HOMEWORK TO PREPARE BEFORE CLASS 2</p> <ol style="list-style-type: none"> 1) You can access OLI modules via https://canvas.cmu.edu/courses/43786 2) Technical questions? Please email oli-help@cmu.edu or click Help at the top of any page. 3) PREPARE ONE-PAGER #1 TO POST TO DISCUSSION BOARD BY CLASS #2 4) BE PREPARED TO TELL US ABOUT YOUR FAVORITE MANAGEMENT BOOK— be ready to tell us how come it's your favorite!
<p>October 28</p>	<p>CLASS #2 EVIDENCE SOURCES, QUALITY AND THE SEARCH PROCESS</p>

<p>Agenda</p>	<p><u>DUE TODAY:</u> <i>One-Pager #1 and Completion of OLI EBMgt modules 1&2</i></p> <p>READING. Zanardelli: "At the intersection of the Academy and Practice at Asbury Heights"</p> <p><u>IN CLASS:</u></p> <p>Syllabus Test</p> <p>Report--Reflections on Your OLI Module 1&2 Experience Report--What you learned from your first evidence search</p> <p>Case: Rocket Cycles.</p> <p>What problem are they trying to solve? What's the evidence for the problem? What evidence is there for the solution(s) they consider?</p>
<p>Deliverables</p>	<p>HOMEWORK TO PREPARE BEFORE CLASS 3</p> <p>Go on-line to http://oli.cmu.edu/ and complete Evidence Module 5, 6 & 7. Module 5-6 are short, but module 7 will take you approximately 3 hours to complete. Please do take time with it as you will learn a lot and it makes later issues much easier to understand.</p>
<p>November 4</p>	<p>CLASS #3 EVIDENCE QUALITY, SEARCH PROCESS—AND YOUR CAT</p>
<p>Agenda</p>	<p><u>DUE TODAY:</u> <i>Completion of OLI EBMgt modules 5-7</i></p> <p>READING. Barends & Rousseau: Chs 5-7 (Evidence from Scientific Literature) & Ch16 (Guidelines for critically appraised topics)</p> <p><u>IN-CLASS:</u></p> <p>Takeways from module 5-7</p> <p>Scientific Evidence: Evidence of Effect vs No Evidence vs Evidence of No Effect</p> <p>Research Design Issues: Evidence of cause & effect or just a relationship?</p> <p>Searching for Quality Evidence</p> <p>How do you assess causality without conducting a true experiment?</p> <p>Strength of effects and consistency across studies</p> <p>Threats to validity of findings</p> <p>Meta-analyses and Systematic Reviews</p>
<p>Deliverables</p>	<p>HOMEWORK TO PREPARE BEFORE CLASS 4</p> <p>Scoping CAT. Team Assignment.</p>
<p>November 11</p>	<p>CLASS #4 PRACTITIONER EVIDENCE</p>
<p>Agenda</p>	<p><u>DUE TODAY</u> CAT #1 (Scoping CAT); OLI Modules 3 & 4 (Acquire & Appraise Practitioner Evidence)</p> <p>READING. Barends & Rousseau, Part One (Evidence from Practitioners, Chs 3-4)</p> <p><u>TOPICS</u></p> <p>Your CAT process</p>

	<p>Practitioner Judgment: How can you determine whether a consultant or a colleague is “expert” on a problem or solution?</p> <p><u>IN-CLASS TASKS</u> Each team reports on the process and findings from CAT#1</p> <p>CASE: RIPARIAN: discussion questions at bottom of case</p>
Deliverables	PREPARE ONE-PAGER #2 TO POST TO DISCUSSION BOARD BY CLASS #5
November 18	Class #5: Organizational and Stakeholder Evidence
Agenda	<p><u>DUE TODAY:</u> One-Pager #2; OLI Modules 8 -10 (Acquiring and Appraising Organizational Evidence. Acquiring Stakeholder Evidence)</p> <p>READING. Barends & Rousseau: Part 3 (Evidence from Organization, Chs 8-9). Part 4 (Evidence from Stakeholders, Chs 10-11)</p> <p>CASE. Huntington Hospital—what kinds of evidence are relevant to the problem of over-use of transfusions?</p> <p>Feedback on CAT#1</p>
Deliverables	PREPARE ONE-PAGER #3 TO POST TO DISCUSSION BOARD BY CLASS #6
November 25	CLASS #6 DECISIONS, TYPES, PROTOCOLS & ROUTINES
Agenda	<p><u>DUE TODAY:</u> One-Pager#3; OLI Modules 12 (AGGREGATE: Weigh and Pull Together Evidence) & 13 (APPLY: Incorporate evidence into the decision-making process)</p> <p>READING. Barends & Rousseau: Ch12 (AGGREGATE: Weighing and pulling together the evidence) & Ch13 (APPLY: Incorporate evidence into the decision process)</p> <p><u>TOPICS</u> Integrating Evidence from Science, Organizations, Stakeholders and Expertise</p> <p>Decision Types: Routine, Complicated, Complex: Effective approaches to different decisions</p> <p>Checklists and logic models for evidence use in decision making</p> <p>Discussion of your learnings from Modules 12 and 13</p> <p>After Action Review FILM</p>
Deliverables	NA
December 2	CLASS #7 Your Career as an Evidence-Based Manager
Agenda	<p><u>DUE TODAY;</u> OLI Modules 14 (ASSESS: Evaluate the outcome of the decision)</p> <p>READINGS. Barends & Rousseau: Ch14 (ASSESS: Evaluate the outcome of the decision) & Ch15 (Building the capacity for EBMgt)</p>

	<p><u>TOPICS:</u></p> <p>Creating an EBMgt Culture</p> <p>Charting Your Route Along the Novice-to-Expert Pathway</p> <p>Developing Expertise over Your Career</p> <p>CATWalk: Teams Report on CATs & Debriefing experiences with CATs</p>
Deliverables	CAT #2 DUE December 9