

**Teaching Portfolio**  
**Carol Perryman**

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This document is available online: <http://cperryman.com/PerrymanTeachingPortfolio.pdf>

## Teaching Reflection

As a teacher, practitioner, and researcher in Library and Information Science, my particular interest is to enable the continuation and growth of a community of learning. Our discipline has been slow in developing its own research and decision support resources, perhaps because we are focused toward those we serve. One result has been that as practitioners, we develop subject expertise in areas that concern those populations, at the expense of our own. At the same time, due to changes in our contexts of practice, librarians are faced with issues such as the repurposing of libraries as places, re- and up-skilling of both professional and paraprofessional staff, and an increasingly contested base of financial support.

My intention is to integrate ongoing discussion about the field into my teaching, whatever the topic, in order to prepare LIS students to become active in lifelong learning and the process of change within practice environments. Ideally, students educated in the basics of research in LIS will enter the job market prepared to locate, evaluate, and apply the best information available for practice decisions..

These goals are not confined to pragmatic skills, although they form the center of our work-setting practices. It is critical thinking and the ability to adapt that is most important, in an ever-changing environment, as there will always be new resources and technologies, now-unimaginable combinations of media and access points. New practitioners will help guide and support the inevitable change process, so learning and teaching should be interactive, inspirational, and rigorous. I think I'm beginning to achieve that, when I ask students to read, reflect, interact, and build from there as we explore new models for research (see the Evidence-based Library and Information Practice (EBL or EBLIP) syllabus, for examples of this).

Students are learners *and* teachers, bringing as much as they take away – or more, since they inevitably bring life experiences, new skills and ideas in serving populations. As a teacher/learner, I am open to questions – I must model what we can be as colleagues, and work to remain responsive to changes brought to the classroom (wherever it may be) by new learners. One example of this is my use of the Blackboard site's bulletin board for the EBL class, where we encouraged students to monitor listserves and share new sites and articles they find in the their studies. I am still getting e-mails from those students with new materials and questions, which I consider to be an indicator of some success: I have sparked interest in ideas and possibilities. When I next teach this course, I will place more emphasis on this type of participation.

In my work in Second Life, the online virtual community, I am challenged to experiment with teaching learners who are globally distributed and whose literacy needs are often widely divergent. I have had the opportunity to explore ideas about collaboration with educators in different fields and with consumers, engaging health support groups in planning and conducting educational events or to create interactive and educational displays. I have moved beyond a conventional classroom setting, and am challenged to discover what works – for outreach, marketing, technology, content creation, outcome evaluation, and planning. I have begun to recruit other librarians to work with me, teaching them about consumer health information in a virtual world.

How does this personal view incorporate itself into the reality of time constraints, the need to achieve some kind of demonstrable objectives? I feel this should be manifested in challenging, well-planned lessons designed to engage critical thinking, a high standard of expectations conveyed and modeled, clear objectives, and explicit rubrics so that there is no mystery involved in how students are being assessed. These concepts are universal, independent of platform or subject.

My earlier experiences of teaching include many years spent training library staff and the public in two public library systems, as well as managers, residents, allied health professionals, and non-clinical staff as the lead medical librarian in a large teaching hospital. Due to my interest and 9-year history of involvement with the hospital's Patient and Family Education Committee, I was a regular invited speaker in the annual Nurse Educator Research Forum, helping to inform those who teach others about the services and resources we could provide. I also worked with the hospital's hospice and parish nursing programs to orient volunteers to the use of our resources, and designed a hands-on, web-based training unit that became one component of a mandatory series of new manager orientation sessions that merged online with in-person teaching. Continuing to develop web-based resources, I later worked as a grant-funded contract librarian to create unit web pages and a modular tutorial for patient education using tablet PCs at the bedside.

What I have learned from working as an adult educator is that learning is an active process that rewards all those involved - but only if they really *are* involved. It helps no one to render the teaching/learning experience immobile by failing to engage participants. Equally, helping to establish links between the student's own context of practice and new knowledge makes learning come alive, and enhances retention. While working to orient and then support volunteers in the parish nursing program, for example, I encouraged participants to share their successes, uncertainties, and problems with the entire group, so we could all learn from one another's experiences.

Included in this portfolio is the newest iteration of the syllabus for Evidence-based Library and Information Practice, which has continued to be improved over several years. Offered this semester through the WISE consortium, the course is built around a core of critical evaluation of the literature, and places high importance on the opportunities to learn, explore, reflect, and engage in discourse about what has been observed. It is being taught both asynchronously and using teleconferencing, with Blackboard for content management. Students are both LS and IS focused, from backgrounds in law and education, with an interest in doctoral studies and with an eye toward their upcoming master's papers. I can say with confidence that after taking the class, they will bring a different perspective to our knowledge base.

# Evidence-based Library & Information Practice: Spring 2009

## Course Syllabus

### Course description and objectives

Revised 12/12/08

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*The challenge for the future will be to develop increasingly sophisticated research techniques that will allow us to continue to build the best possible library and information services over time. Our ability to use ongoing evaluation to improve our services will keep us out in front in the increasingly competitive world of information providers and will determine our ultimate success as library and information professionals.*

*Joanne Gard Marshall, New Zealand Library Association Keynote Address, 2003.*

**Course description:** Evidence-based practice (EBP) is being adopted by a variety of professions as a way of identifying and using the best available research evidence for decision making. As such, EBP can be seen as a tool for linking research to practice and promoting innovation and change.

This course will explore the origins of evidence-based practice in general and its current application in library and information science. Students will have an opportunity to explore the state of EBP in a number of fields and to discuss the applicability of the concept to LIS. Based on this exploration the students will have the opportunity to gather and evaluate evidence that can be applied to practice.

**Prerequisite knowledge and skills:** Familiarity with basic search techniques, and access to LIS bibliographic databases, particularly the CSA LISA database.

**Course texts and resources:** Whenever possible, the full text of assigned readings will be made available as electronic copies through the Blackboard site, where a full bibliography can be found. Other materials are available through the UNC libraries.

**Other resources found through the Blackboard sclass site:**

- Glossary of terms related to evidence-based practice, including types of studies (under 'Glossary')
- Critical evaluation tools (under 'Evaluation Tools')
- Bibliography: The bibliography is a work in progress, and will be amended through the semester. Please feel free to suggest additions, since this is intended not only as a resource for the course, but for your further exploration. Included here:
  - o Course readings
  - o Evidence-based medicine
  - o Evidence-based library and information practice
  - o Library association research policies

**The following texts and resources are of key importance to this growing area of LIS:**

Booth A & Brice A. (2004). Evidence-based practice for information professionals: a handbook. London, England: Facet Publications.

Connor E. (2007). Evidence-based librarianship: Case studies and active learning exercises. Oxford : Chandos.

University of Alberta Libraries. Evidence based library and information practice [electronic resource]. 2006 – present. Available online:  
<http://ejournals.library.ualberta.ca.libproxy.lib.unc.edu/index.php/EBLIP>

McClure CR & Herson, P. (1991). Library and information science research: perspectives and strategies for improvement. Norwood, N.J: Ablex Pub. Corp.

**Course Objectives**

The purpose of the course is to provide you with a basic familiarity with the concepts and practices of Evidence-based Library and Information Practice (EBLIP). By the time you have finished this class, you should be able to plan and conduct a course of research using principles of evidence-based practice by

- constructing a well built question that will serve as the basis for your practice-based research activities;
- locating and evaluating the best evidence to support your research and practice;
- critically evaluating evidence using provided tools;
- creating a report synthesizing best evidence for your question;
- proposing further steps for application, evaluation, and dissemination of your findings.

During the course,we will also work to

- evaluate processes and resources with regard to their ability to assist in the search for 'best evidence';
- continuously practice critical evaluation skills as a group and individually;

- compare the model for EBLIP with those created for other professions;
- consider resources currently available to support your evidence-based practice;
- discuss barriers to and potential benefits from the implementation of evidence-based practice for your setting, and finally;
- reflect on the experience and model for EBLIP as a way to bridge the gap between research and practice.

## Class Plan

### Class 1

#### Activities:

- Introductions
- Class overview

#### Assignments:

- Begin thinking about: EBP in other disciplines (brief paper), due prior to class 7. Assignment description is available on the class Blackboard site.
- Read through the EBLIP Tutorial, Module 1 for an overview of EBM, following the links provided.
- Consider questions of interest for your final paper and annotated bibliography.
- Complete the student bio document (attached) and paste the text to the discussion board under Student Bio Postings by the next class date.
- Read Booth A. (2003) Bridging the research-practice gap? The role of evidence based librarianship. *New Review of Information and Library Research*, 9(1):3-23. Be prepared to discuss your thoughts about this article, and more general reflections on research in LIS practice at our next class meeting.

### Class 2

#### Activities:

- Review of Booth article, discussion.
- Overview of the EBL model.

What's the basis for Evidence-based Library and Information Practice (EBLIP)? How might it compare to what you have just read about the model for EBM?

Discussion:

- What are your initial thoughts about the applicability of this model to LIS?
- What is your awareness of (or experience with) research in LIS settings?

#### Assignments:

- Read: Haddow, G. and Klobas, J.E. (2004). Communication of research to practice in library and information science: closing the gap. *Library and Information Science Research*, 26(1):29-43.
- Choose a specific setting for your final paper, and for journal club discussions. Post your brief description to the Discussion Board under Practice setting descriptions by class time next week.
- Read through the EBLIP tutorial module 5, Critical Appraisal of the Evidence. Keep this in mind as you read the following:

Brown, Cecilia M. and Ortega, Lina. Information-seeking behavior of physical science librarians: does research inform practice? *College & Research Libraries* (2005). 66:231-247. Please note that we will be using this last article to begin practicing critical evaluation techniques. Please pay particular attention to the methods section.

### Class 3

**Focus:** Critical evaluation, process and tools. How do you decide if an article or other resource is 'valid' or applicable to your own practice setting? We'll be looking at tools to assist with the process of critical evaluation.

**Activities:**

Journal club 1: Brown & Ortega article. Discussion leader: Carol. Hands-on practice using critical evaluation tool to assess the Brown & Ortega article.

**Assignments:**

- Paper: Evidence-based Practice in another discipline (see Assignment descriptions for more information) Due prior to class time, class 6.
- EBLIP journal evidence summaries and our Evidence summary assignment. Due prior to class time, Class 11.
- Read for discussion: Haddow, G. and Klobas, J.E. (2004). Communication of research to practice in library and information science: closing the gap. *Library and Information Science Research*, 26(1):29-43.
- Read and critically evaluate the journal club article using one of the tools provided: (Case study): Burright MA, Hahn, TB, & Antonisse MJ. (2005). Understanding information use in a multidisciplinary field: A local citation analysis of neuroscience research. *College & Research Libraries*, 66(3):198-210.

### Class 4

**Activities:**

- Journal club 2: Burright, et al. article Discussion leader:
- Question building: slides, EBLIP Tutorial Module 3 (bottom of page)

**Assignments:**

- Read and critically evaluate the assigned journal club article (controlled comparison or case control study): McKnight M. (2000, Jul). Interlibrary loan availability of nursing journals through DOCLINE and OCLC: a five-state survey. *Bulletin of the Medical Library Association*, 88(3):254-5.
- Consider an answerable question in LIS of interest to you personally. With this 'naïve question,' construct a 'well-built question.' This should be a practice-focused question, as opposed to a more theoretical one: remember that EBLIP is intended to support practitioner decision making! We'll discuss and improve them (if needed) next week, so post the question to the Discussion board under Well-built questions.
- Read: Booth, A. (2006). Clear and present questions: Formulating questions for evidence based practice. *Library Hi Tech*, 24(3):355-368.

### Class 5

**Activities:**

- Journal club: McKnight article Discussion leader:
- Review & discuss 'well built questions'
- EBLIP Tutorial, Module 4:
- Search grids
- The Beverly search filters
- Critically evaluated bibliography, assignment description/discussion

**Assignments:**

- Conduct a search in the LISA and the Library Literature databases based upon your well-built question.
- Create a search grid using the question for all pertinent search terms, and note any barriers you find to comprehensive or focused retrieval. See the grid in the EBLIP tutorial, module 4.
- Select citations from your retrieval for the critically evaluated bibliography (no more than 15 citations) you feel most pertinent to your question .
- Plan ahead: think now about which single article from the above set you'd like to use for writing an evidence summary paper (due October 9).
- Try the LISA filter created by Catherine Beverly (Booth and Brice, Ch.8, Searching the library and information science literature, and also made available in the EBLIP tutorial, module 4) and consider its use as a tool in finding more on-point materials in answer to LIS research questions. Post your thoughts to the class discussion board under Reflections on Process.
- Journal club reading: Read and critically evaluate the assigned journal club article: Koufogiannakis D & Slater L. (2004). A content analysis of librarianship research. Journal of Information Science, 30(3):227-239.

<b>Class 6</b>
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**DUE: Search grid****Activities:**

- Journal club 4: Koufogiannakis article Discussion leader:
- The LISA study (Carol)
- Discussion: Finding the evidence. What has your experience been with the library literature?
- (As time allows): Levels of evidence part 1: The evidence pyramid: likelihood of bias (slides)

**Assignments:**

- Read and critically evaluate the assigned journal club article:
- Using your search results, identify research methods; suggest evaluative tools
- for each.
- Read The structured abstract: an essential tool for researchers  
[http://research.mlanet.org/structured\\_abstract.html](http://research.mlanet.org/structured_abstract.html)

<b>Class 7</b>
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**DUE: EBP in another discipline**

**Activities:**

- Journal club:
- Presentations: Evidence-based practice in another discipline (casual, round-table style)
- The evidence pyramid
- The structured abstract
- Discuss: Evidence summary paper assignment

**Assignments:**

Read:

- The structured abstract: an essential tool for researchers
- Select one of the more pertinent items from the search you conducted to answer your well-built question for critical evaluation. Using the EBLIP journal's articles categorized as Evidence Summaries, and the journal's publication manual as a model, prepare an evidence summary of the article. (Due date: Prior to class time, class 9)
- Again following the guidelines for the Evidence Summaries, create a structured abstract for your chosen article. Post it to the class Discussion Board under Structured abstracts before class next week.
- Journal club reading: Gonzalez-Alcaide G, Castello-Cogolles, L, Navarro-Molina C, et al. (2008). Library and information science research areas: analysis of journal articles in LISA. Journal of the American Society for Information Science and Technology, 59(1):150-54.

**Class 8****Activities:**

- Journal club: Gonzalez-Alcaide article
- Discussion: Structured abstracts, process

**Assignments:**

- Read and critically evaluate the assigned journal club article: McKnight S. & Berrington, M. (2008, March). Improving Customer Satisfaction: Changes as a Result of Customer Value Discovery. Evidence Based Library and Information Practice, 3(1):33-52. Available online
- Read: Rubin. R.J. Demonstrating results using outcome measurement in your library. Chicago: ALA, 2006. (Z678.R793 2006)

**Class 9****DUE: Critically evaluated bibliography****Activities:**

- Journal club 6 McKnight & Berrington Discussion leader:
- Evaluating outcomes . Libqual, Servqual, and more

**Assignments:**

- Read and critically evaluate the assigned journal club article: Brettle A. (2003). Information skills training: a systematic review of the literature. Health Information & Libraries Journal, 20(Suppl. 1):3-9. (systematic review)

**Class 10**

**Activities:**

- Journal club 7: Brettle Discussion leader:
- Outcomes evaluation, continued. Standards for practice.

**Assignments:**

- Read: McClure, C.R. & Herson, P. (Eds.). Library and Information Science Research: Perspectives and Strategies for Improvement. Norwood, N.J. : Ablex Pub. Corp., 1991. p.163-203.
- Explore: MLA Research Statement, SLA Research Statement, ALA

<b>Class 11</b>
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**DUE: Evidence summary paper****Activities:**

- Presentations: Share the results of your evidence summary and process with the class
- Discussion: Beyond dissemination. From continuing education to action and beyond – how can LIS bridge the research-practice gap? Draw on our readings from McClure & Herson, as well as your observations from the various association statements (and more) for this round-table.

**Assignments:**

- Read and critically evaluate the assigned journal club article (mixed methodologies): Gollop CJ. (1997, April). Health information-seeking behavior and older African American women. Bulletin of the Medical Library Association, 85(2):141-6.
- Choose one of the following sites/resources to 'tour' and come prepared to share with the class:
  - EBLIP journal: <http://ejournals.library.ualberta.ca/index.php/EBLIP>
  - EBLIP conferences
  - Libraries Using Evidence - [eblip.net.au](http://eblip.net.au)
  - EBLIP toolkit:  
<http://www.newcastle.edu.au/service/library/gosford/ebl/toolkit/>
  - Booth A & Brice A. (2004). Evidence-based practice for information professionals: a handbook. London, England: Facet Publications.
  - Strategies for finding LIS information  
<http://www.library.uiuc.edu/lisx/StrategiesForFindingLISInformation.htm>
  - any of the resources named as 'key' readings in the syllabus not mentioned here.

<b>Class 12</b>
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**Activities:**

- Journal club 9: Gollop article Discussion leader:
- Share the results of your resource 'tour'.
- Evaluating outcomes: LibQual, ServQual & more

**Assignments:**

- Read and critically evaluate the assigned journal club article: Marshall JG. (1992, Apr). The impact of the hospital library on clinical decision making: the Rochester study. Bulletin of the Medical Library Association, 80(2):169-78. (Randomized controlled trial)

Class 13

**Activities:**

- Journal club 10 Marshall Discussion leader:
- Discussion: Follow-up to the Rochester study
- Final paper presentations

**Assignments and Activities - Detailed Descriptions****Course assignment guidelines**

All assignments should be sent electronically to [marshall@ils.unc.edu](mailto:marshall@ils.unc.edu) and [cp1757@gmail.com](mailto:cp1757@gmail.com).

Students are expected to follow the practices described in the UNC Honor Code, found here: <http://honor.unc.edu/students/index.html>

**Document Form and Style**

Students should use the rules for the preparation of manuscripts, including the bibliographic style described in the Publication Manual of the American Psychological Society (<http://www.apastyle.org/>). Use of a common bibliographic style will facilitate the preparation of a combined bibliography of EBP implementation in a variety of fields that can be shared with all participants in the course. One tool you may find helpful is the Citation Builder from NC State University: <http://www.lib.ncsu.edu/lobo2/citationbuilder/citationbuilder.php>

**Assignment: EBP in Another Discipline****Comparative Evidence-based Practice**

The summary of EBP in another disciplinary area is intended to be a succinct overview of EBP in another discipline, such as nursing and other allied health disciplines, social work, or education. In order to do this, there will need to be a fair amount of documentation about EBP available.

The objective for this assignment is to gain additional perspective by considering how the context for practice (such as regulation, education, and available resources) might affect the model or its use.

In the case of nursing, for example, a 2005 study in AJN increased awareness of the barriers experienced by this group, including lack of training (Pravikoff, Tanner, & Pierce, 2005).

Other questions for consideration might include definitions for EBP, champions, oft-cited texts, expressed need for improvement, practitioner readiness, and the continued need for adaptation of the model to practitioners. Finally, you are asked to reflect on similarities and implications from what you have seen in this study to the practice contexts for LIS

The value of this particular assignment is to consider how different professions have adopted/adapted the EBP model, so that we can understand particular regulatory, cultural, or other contextual issues that affect ways in which it has been adapted. In the case of social work, for example, practice manuals were created for field workers to assist with the process of applying research findings to the (community) practice environment.

In many areas of healthcare, dissemination of EBP may be enforced by the presence of standards for practice. This is a large assignment, potentially, but you are not asked to be comprehensive. Instead, you should try to find resources that summarize the EBP resources, and use these as a guide in your exploration. It may help to think of this paper as an entry in an encyclopedia about EBP across the disciplines!

The paper should incorporate the following elements, which will also comprise the rubric for grading:

- Format and style that are polished and consistent;
- Succinct explanation of the model for EBP in the profession of interest, including definition of EBP, and steps for practice;
- Key resources supporting EBP in the profession of interest;
- Champions (or leaders) of the EBP initiative;
- Discussion of contextual issues that may affect the structure and adoption of EBP;
- Reflection on similarities and differences between the profession of interest and LIS.

### **Assignment: Evidence Summary Paper**

The evidence summary paper is an assignment designed to familiarize you with the practice of written critical evaluation. The template provided is the evidence summaries published in the online journal, EBLIP (<http://ejournals.library.ualberta.ca/index.php/EBLIP/index>), and the guidelines are made available in the Blackboard course bibliography, as the first item on the list. Further information about formatting is available on the EBLIP journal site, under 'Submissions.'

These documents are expected to be concise (around 3 pages, single-spaced). In past semesters, the editors of the journal have agreed to consider student papers for publication; we will explore this possibility with interested students in the current class, as well. Your articles must be approved by course instructors prior to completion of the assignment.

Evaluation of this paper will involve the extent to which you fulfill the following criteria:

- Format and style that are polished and consistent with the publication manual for the EBLIP journal;
- Selection of an appropriate evaluative tool to assess your chosen article;
- Your careful and methodical examination of the chosen article;
- Pertinent and supportive suggestions for improvement or extension of the research described.

**Assignment resources:**

- [guidelines for evidence summaries.doc](#) (32.5 Kb) - Resource is linked through the class Blackboard site. This Word document is provided to members of the Evidence Summary Team for the journal, Evidence-based Library and Information Practice. It gives guidelines you will be following for the Evidence Summary assignment. Examples of other Evidence Summaries are found on the journal's website, <http://ejournals.library.ualberta.ca/index.php/EBLIP>
- EBLIP journal publishing manual [EBLIP Publishing ManualV2.doc](#) (349.5 Kb). This document is a more recent and comprehensive set of overall guidelines for the EBLIP journal.

### **Assignment: Annotated Bibliography**

The annotated bibliography assignment will serve as an in-process summary of your progress toward identifying and critically evaluating research literature in support of your final paper. In this assignment, you will provide a compilation of citations, accompanied with comments about your initial impressions of the studies' validity and which critical evaluation checklist might be most suitable to assessing the research.

The document should not include more than 10 citations. While this is not a formal document, the bibliography should be consistently formatted and professionally presented. These materials will comprise the literature review component for your final paper. The document will be evaluated based upon:

- The pertinence, currency, and apparent comprehensiveness of materials chosen with regard to your chosen topic: do they appear to address key areas of concern?
- Formatting and consistency of the bibliography;
- Appropriateness of the critical evaluation tools for the type of study;
- Your initial assessment of the validity of the studies.

### **Assignment: Final Paper**

The final paper will be a culmination of what you have learned about the EBP process by hands-on application. It will be possible to enter the class with a good idea about a topic for focused inquiry, and use this topic as your focus for both the evidence summary paper and the annotated bibliography assignment, then to use the results of both these assignments in the creation of the final paper.

Topics will be approved by the instructors for suitability. You will need to have a particular setting in mind (e.g., a mid-sized public library) as it will greatly help you to construct your question, evaluate the literature, and reflect on its applicability.

The paper should incorporate the following elements, which will also comprise the rubric for grading:

- As this is a final semester paper, it is expected to demonstrate your understanding and application of the EBLIP model, as well as your reflections on the process.
- Formatting for the introduction, literature review, discussion section, and bibliography for this work should be polished and consistent. While there is not a set length for this paper, it should be long enough to discuss the issues of concern.

- A well-built question that clarifies your specific area of concern (e.g., ‘In a mid-sized public library, how can we improve processing workflows so that materials reach the patrons quickly?’). Your use of the PICO, SPICE, or ECLIPSE question-building model should be evident.
- A setting description including sufficient detail to allow you to think more concretely about the research question. This does not need to be an extensive description but the more real it is to your mind, the better. This might be some place you have worked, or would like to work: public library; school library media center, college, university, or other academic library, special library, or other information agency.
- A literature review section:
  - Content here will be around materials drawn from your earlier annotated bibliography that you have critically evaluated with regard to methodological quality and generalizability, using appropriate tools we have used through the semester.
  - Since there will be times when less-than-perfect evidence is the only evidence available, you should discuss how the evaluated literature can be used to support practice with full awareness of both flaws in methodology, and differences between the setting in which the research was conducted, and your own practice setting. For example, a study on the design of long-term, high-density library storage facilities may be applicable to your library only in part, because the available space is quite different, but the methods used to determine need, process, costs, and more may be replicable in your own setting.
  - You are not expected to incorporate an extensive evaluation of each document, but your critical consideration of the methodology and other elements should be evident in your discussion.
  - Be sure to cite the critical evaluation tools you have used in your bibliography.
- Suggestions for further research, including your ideas for evaluating the outcome of application to the practice environment.
- Discussion section about the process you have experienced in researching and writing this paper.
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<b>Assignment: Structured Abstract</b>
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See page 6-7 in the EBLIP Publishing Manual (available through the class Blackboard site in the Bibliography section) for complete description and examples.

<b>Activity: Weekly and Journal Club Readings</b>
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Weekly and journal club readings will be used in two ways. First, we will use readings to learn about the EBLIP model, its development, and application, and second, we will conduct an ongoing journal club as a way to practice critical evaluation skills on research publications.

Journal club will be facilitated by each of us on a rotating basis. Class members will be assigned to facilitate discussion about the article and the critical evaluation process and results. In order to prepare for the journal club discussions, all class members will use one or more critical evaluation tools to assess the assigned reading.

Note: In the case of an absence, class participants are responsible for getting the completed critical evaluation to the instructors so that discussion can continue.

The process of critical evaluation is one we will practice in class, together, before you are asked to do it alone:

- Read through the article, highlighting and annotating key elements if they are not clear, making brief notes about questions you might have. These are for your own use only, during discussion.
- Decide what kind of research study you are reading: qualitative, quantitative, mixed method? Is it a case study, a systematic review? Use the EBL Glossary if you're not sure.
- Next, determine which critical evaluation tool you will use to assess this work. You'll find these listed on the Blackboard site by clicking on the 'Evaluation Tools' button to the left. None of them may be a good 'fit,' so be prepared to tailor a tool as you go!
- Note: Evaluating both the tools and the process of critical evaluation itself is very much a part of our learning process. In past classes, we found, for example, that none of the tools work well with bibliometric studies. Obviously this means something should be devised and tested – and we can begin that process in the class.
- Now read through the material again, considering and answering the questions posed by your chosen evaluative tool.
- Your thoughts about the process of evaluation are important contributions! As you proceed, be sure to note such thoughts as how well the tool works for the document evaluation, your ease or difficulty in applying it, whether you had to amend the tool, whether there are other criteria you felt should be used in evaluation, and even broader thoughts about LIS research quality issues.

### **Activity: Class Presentations**

These are an informal opportunity to share the results of your work for the various projects, and your thoughts about the applicability of evidence-based practice for your own purposes. Your attentive and informed participation is really key to our collaborative learning process.

### **Critical Appraisal Resources**

Abbasi, K. and Smith, R. (1999). Education group guidelines on evaluation. Guidelines for evaluating papers on educational interventions. *BMJ*, 318:1265-67.

Booth A. and Brice A. (2004) Appraising the evidence. In Booth A and Brice A (eds). Evidence based practice for information professionals: a handbook, London: Facet Publishing: 104-118.

Critical appraisal skills programme (CASP) critical appraisal tools based on study type  
<http://www.phru.nhs.uk/Pages/PHD/resources.htm>

Clyde AL (2005) The basis for evidence based practice: evaluating the research evidence. Paper presented at the 7th IFLA Conference: Libraries a voyage of discovery, 14-18 August 2005.

<http://www.ifla.org/IV/ifla71/papers/050e-Clyde.pdf>

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*Note: Critical Skills Training in Appraisal for Librarians (CriSTAL) tools were developed by Andrew Booth of SchHARR\*, University of Sheffield, UK (and he is not coincidentally one of the leading pioneers in EBLIP, of course!) More information (but not much) is here:*

*<http://www.shef.ac.uk/scharr/eblib/>*

\*SchHARR: School of Health and Related Research

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*The components of this text are available as a published text and online:*

*<http://www.health.library.mcgill.ca/ebm/greenhalgh.htm>*

[guidelines for evidence summaries.doc](#) (32.5 Kb) Available on Blackboard class site.

This Word document is provided to members of the Evidence Summary Team for the journal, Evidence-based Library and Information Practice. It gives guidelines you will be following for the Evidence Summary assignment. Examples of other Evidence Summaries are found on the journal's website,

<http://ejournals.library.ualberta.ca/index.php/EBLIP>

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Health Care Practice R&D Unit Critical appraisal templates for quantitative, qualitative and mixed method studies, as well as outcome measures and economic evaluations.

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Sections:

1. Course Readings
2. Evidence-based Medicine  
Background reading for evidence-based library and information practice - *where it all began*. Citations marked with an asterisk designate key readings.
3. Evidence-based Library & Information Practice Readings from the pioneers of the EBLIP initiative, and research studies examining the current status of research and publication by LIS practitioners. Citations marked with an asterisk designate key readings.
4. Library Association Research Policies

COURSES > SPRING 2009 ADVANCED SEL TOPICS.INLS890.096 >  
BIBLIOGRAPHY > COURSE READINGS



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#### 4th International Conference on Evidence-based Library and Information Practice

Provides links to full text content



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## Evidence-based Practice Glossary of Terms



### Spring 2009 Advanced Sel Topics.inls890.096 Glossary

The Spring 2009 Advanced Sel Topics.inls890.096 Glossary contains 34 terms.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9

#### ▲ A

#### Applicability

Questions of applicability ask whether the intervention being tested has made a measurable difference for the chosen population and in the particular setting. Often, this difference is expressed statistically. One of three important considerations in critical appraisal of research literature.

#### ▲ C

#### Case control study

An observational study in which the cases have the issue of interest (e.g. successful literature searching) in common, but the controls do not (Booth & Brice, 2004).

#### Case report or case study

A description of a particular service or event, often focusing on unusual aspects of the reported situation or adverse occurrences (Booth & Brice, 2004).

#### Case series

A description of more than one case (Booth & Brice, 2004).

Case study	<p>Case study refers to the collection and presentation of detailed information about a particular participant or small group, frequently including the accounts of subjects themselves. A form of qualitative descriptive research, the case study looks intensely at an individual or small participant pool, drawing conclusions only about that participant or group and only in that specific context. Researchers do not focus on the discovery of a universal, generalizable truth, nor do they typically look for cause-effect relationships; instead, emphasis is placed on exploration and description.</p> <p>Colorado State University, Case Study: Introduction and Definition. Retrieved 10/1/2008 from <a href="http://writing.colostate.edu/guides/research/casestudy/pop2a.cfm">http://writing.colostate.edu/guides/research/casestudy/pop2a.cfm</a></p>
Cochrane Collaborative	<p>An international non-profit and independent organisation [that] produces and disseminates systematic reviews of healthcare interventions and promotes the search for evidence in the form of clinical trials and other studies of interventions. The Cochrane Collaboration was founded in 1993 and named for the British epidemiologist, Archie Cochrane. The major product of the Collaboration is the Cochrane Database of Systematic Reviews which is published quarterly as part of The Cochrane Library. (from the Cochrane site)</p>
Cohort study	<p>An observational study of a particular group over a period of time (Booth &amp; Brice, 2004).</p>
Comparative study	<p>Comparison of two or more qualitative studies. (paraphrased from Booth &amp; Brice, 2004).</p>
Comparison	<p>An alternative service or action that may or may not achieve similar outcomes (Booth &amp; Brice, 2004). One of four parts to the PICO 'well-built' question.</p>
▲D	
Descriptive survey	<p>Aimed at describing certain attributes of a population, specifying associations between variables, or searching out hypotheses to be tested, but which are not primarily intended for establishing cause-and-effect relationships or actually testing hypotheses (Miller &amp; Wilson, 1983).</p>
▲E	
Epidemiology	<p>Field of medicine concerned with the study of epidemics, outbreaks of disease that affect large numbers of people. Using sophisticated statistical analyses, field investigations, and complex laboratory techniques, epidemiologists investigate the cause of a disease, its distribution (geographic, ecological, and ethnic), method of spread, and measures for control and prevention. Epidemiological investigations once concentrated on such communicable diseases as tuberculosis, influenza, and cholera, but now also encompass cancer, heart disease, and other diseases affecting large numbers of people. Columbia</p>

Electronic Encyclopedia, Sixth Edition Copyright © 2003, Columbia University Press.

Evidence-based health care (EBHC)	EBHC extends the application of the principles of evidence-based medicine (see below) to all professions associated with health care, including purchasing and management (Booth & Brice, 2004).
Evidence-based Librarianship (EBL)	EBL is a means to improve the profession of librarianship by asking questions as well as finding, critically appraising, and incorporating research evidence from library science (and other disciplines) into daily practice. It also involves encouraging librarians to conduct high quality qualitative and quantitative research. (Eldredge, 2002).
Evidence-based medicine (EBM)	"The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine requires the integration of individual clinical expertise with the best available external clinical evidence from systematic research and our patient's unique values and circumstances" (Booth & Brice, 2004).
Expert opinion	Expert opinion offered without rendering any supportive evidence. (Booth & Brice, 2004).
Exploration questions	Exploration questions are generally open-ended, often beginning with 'why'. They're particularly suited to qualitative research.
▲H	
Hedges or filters	Hedges, also called filters, are a series of search statements intended to gather subject headings and keywords that describe a particular concept (such as the research methods used) into a set. As a research tool, hedges can be saved and re-used. Depending upon how they're built, their purpose is to enhance the specificity or the comprehensiveness of search retrieval. For examples, see Module 4 .
▲I	
Intervention	The service or planned action to be delivered to the population (Booth, p. 63 in Booth & Brice, 2004). One of four parts to the PICO 'well-built' question.
Intervention questions	Intervention questions compare different actions with respect to achievement of an intended goal (or outcome) (Crumley & Koufogiannakis, 2002).
▲L	
Library domains	Proposed taxonomy of 6 broad and inclusive areas of library science: Reference/inquiry, Collections, Information access and retrieval, Education, Management, and Marketing/promotion. (Crumley & Koufogiannakis, 2002).
▲M	
Meta-analysis	A method of synthesizing the data from more than one study, in order to

produce a summary statistic (Booth & Brice, 2004).

▲O

**Outcome** The ways in which the service or action can be measured to establish whether it has had a desired effect (Booth & Brice, 2004). One of four parts to the PICO 'well-built' question.

▲P

**PICO** An acronym for Population or Problem, Intervention, Comparison, and Outcome. Intended to help construct a 'well-built' question

**Population** Recipients or potential beneficiaries of a service or intervention (Booth, p. 63 in Booth & Brice, 2004). One of four parts to the PICO 'well-built' question

**Prospective cohort study** A research study that follows over time groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and those who do not smoke) and compares them for a particular outcome (such as lung cancer). National Cancer Institute, National Cancer Institute, Dictionary of Cancer Terms. [http://www.cancer.gov/templates/db\\_alpha.aspx?CdrID=286693](http://www.cancer.gov/templates/db_alpha.aspx?CdrID=286693)

▲Q

**Qualitative research or Qualitative studies** A broad term describing research methodologies which generally do not depend upon statistical analysis, and which may use any of a number of different methods of inquiry, including ethnographies, interviews, historical narratives, discourse analyses, or observational descriptions.

▲R

**Randomized control clinical trial (RCT)** In RCTs, participants are randomly allocated into an experimental group or a control group and followed over time for the variables/outcomes of interest (Booth & Brice, 2004).

**Reliability** Reliability concerns the 'trustworthiness' of a study's results - in other words, whether the study would obtain the same (or similar) results if the same conditions were replicated (reproducibility). One of three important considerations in critical appraisal of research literature.

**Retrospective cohort study** A research study in which the medical records of groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and those who do not smoke) are compared for a particular outcome (such as lung cancer). Also called a historic cohort study. National Cancer Institute, Dictionary of Cancer Terms. [http://www.cancer.gov/Templates/db\\_alpha.aspx?CdrID=286525](http://www.cancer.gov/Templates/db_alpha.aspx?CdrID=286525)

▲S

**SPICE** A mnemonic for Setting, Perspective, Intervention, Comparison, and Evaluation. Like PICO, this serves as a model for building the 'well-built question.'

Summing up	Synthesis of data gathered from exploratory studies, a method of systematic review. Cited in Booth & Brice, 2004, in reference to the book, Summing Up (Light and Pellemer, 1984).
Systematic review	Tries to answer a clear question by finding and describing all published, and if possible, unpublished work, on a topic. [It] uses explicit methods to perform a thorough literature search and critical appraisal of individual studies and uses appropriate statistical techniques to combine these valid studies (Booth & Brice, 2004).
▲V	
Validity	Freedom from bias, one of three important considerations in critical appraisal of research literature.
▲W	
Well-built question	Also called the 'clinical question', this is a query that's been carefully constructed to focus on the four crucial elements of PICO.

## Evidence-based Library and Information Practice Tutorial Module 5

### The Process of EBL: Critical Appraisal of the Evidence

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#### Tutorial goals applicable to this lesson:

- Evaluate the applicability of evidence-based practice for your setting.

#### Objectives met by this lesson:

- Critically appraise resource documents and data for their validity and applicability to your setting.
- Discuss barriers to implementation of evidence-based practice for your setting.

**Total time required:** 30 minutes for prerequisite reading; 20 minutes for reading through the module, and 90 minutes for the hands-on component.

**Reading assignments prior to module:** Booth & Brice Ch. 9: Appraising the Evidence

Greenhalgh T, Taylor R. How to read a paper. BMJ series. Assessing the methodological quality of published papers  
<http://bmj.bmjournals.com/cgi/content/full/315/7103/305>

*NOTE: This series, available entirely online (see the EBM section of the tutorial's Bibliography page for the series URL) may help you to consider and evaluate how the LIS question sets were created. You will be asked later to reflect on how well the questions provided here work. In addition to evaluating the usefulness of the question sets, you are requested to reflect on how such questions might help to evaluate the sources we use frequently, such as surveys on listserves and 'how we done it good' articles that are not scholarly.*

---

Take a minute to write about a recent experience you have had (or are aware of) where you or others used published LIS literature to support decision-making. How were you made aware of the information? Was the information directly applicable to your own situation? **(short essay question box here)**

This module is all about finding and then evaluating what you find, in order to avoid 'reinventing the wheel' with library projects. Why not use what you can of others' experiences? We do that all the time anyhow, sharing experiences

and lessons learned at conferences, on listserves, and (less often) more formally, through published literature.

By the time you finish the module, you'll be able to critically appraise published LIS research for its validity and applicability. Following your hands-on practice of these skills, you will reflect on your experiences and assess how well the proposed evaluative questions function with LIS literature. You'll also have an opportunity to assess their use with information available through other, frequently-used channels, such as LIS listserves.

---

Remember the 5-step process of EBL as it has been described:

1. Formulate a clearly-stated, answerable question
2. Track down the best evidence
- 3. Critically appraise the evidence**
4. Apply to clinical practice
5. Evaluate performance

Recall that in the hands-on component of the previous module, you constructed a search grid, proposed search terms and phrases, and ran a quick search in CSA LISA to see what your search strategy would retrieve. You also evaluated the performance of the resource (LISA), reflecting on the experience, how the 'well built question' functioned to assist in the process, and how you might improve on your retrieval.

In this module, we'll build directly on the previous hands-on experience, adding in the next step: critical evaluation of what you find.

Unlike the field of medicine, the literature with potential application to LIS practices is not overwhelmingly vast. As discussed in the previous module, it is more likely to be scattered among the resources of disparate disciplines than to be concentrated in a few, highly-regarded repositories. No matter where it's located, its application to practice must be preceded by a critical appraisal process – or we risk accepting biased information, potentially wasting time and resources. The usefulness of any evidence is directly related to its validity, reliability, and applicability. *Validity* concerns the amount of freedom from bias. *Reliability* is about the 'trustworthiness' of a study's results - in other words, whether the study would obtain the same (or similar) results if the same conditions were replicated (reproducibility). Questions of *applicability* ask whether the intervention being tested has made a measurable difference for the chosen population and in the particular setting. Often, this difference is expressed statistically.

An important thing to note, especially if little evidence can be found, is that even a poorly designed or less than rigorously conducted research study may still provide useful information. Being aware of a study's weaknesses (and

most or all studies have them!) is just part of the process involved in assessment. Of course, a major 'weakness' if it can be called that, is that research findings from other locations can never perfectly match your own setting, and so must be appraised with the important question in mind about how the findings from another setting may be applied to your own.

Checklists for critical appraisal have been created in every field doing evidence-based practice, and are a key component of the model. The existence of such carefully-created criteria for evaluation assists the reader in a number of ways, including helping to remember important criteria, reducing uncertainty, and providing ways to measure or evaluate a body of data using uniform standards. In fact, previously established methods for appraisal have led to the creation of guidelines and standards, as is the case in EBM, where uniform critical appraisals of sets of research findings (for example, **systematic reviews** or even **meta-analyses**) have helped to establish "gold standards" for diagnosis and treatment. Perhaps you can understand, reading this, why it would be difficult to overstate the importance of critical appraisal!

This tutorial *does not* address methods of evaluating statistical data, though future changes may include it.

The checklist included here is from Evidence-based Practice for Information Professionals: a handbook, chapter 9 (Booth & Brice, 2004). It's most suitable to the evaluation of a **user study**.

**Twelve questions to help you make sense of a user study**

**A. Is the study a close representation of the truth?**

1. Does the study address a closely focused issue?
2. Does the study position itself in the context of other studies?
3. Is there a direct comparison that provides an additional frame of reference?
4. Were those involved in collection of data also involved in delivering a service to the user group?
5. Were the methods used in selecting the users appropriate and clearly described?
6. Was the planned sample of users representative of all users (actual and eligible) who might be included in the study?

**B. Are the results credible and repeatable?**

7. What was the response rate and how representative was is of the population under study?
8. Are the results complete and have they been analyzed in an easily interpretable way?
9. Are any limitations in the methodology (that might have influenced results) identified and discussed?

**C. Will the results help you in your own practice?**

10. Can the results be applied to your local population?
11. What are the implications of the study for your practice?
  - in terms of current deployment of services?
  - in terms of cost?

- in terms of the expectations or needs of your users?
  - 12. What additional information do you need to obtain locally to assist you in responding to the findings of this study?
- Other questions to ask:**
- 13. Does the research design appear to fit the topic of the study?
  - 14. What, if any, potential bias could be present?
  - 15. Does the author discuss and account for weaknesses of the study?
  - 16. Are methods discussed in a transparent fashion, so that the study can be evaluated on that basis?

A second checklist is intended for use in evaluating a **needs analysis** (from Booth & Brice, 2004).

**Twelve questions to help you make sense of a needs analysis.**

**A. Is the study a close representation of the truth?**

- 1. Does the study address a closely focused issue?
- 2. Does the study position itself in the context of other studies?
- 3. Is there a direct comparison that provides an additional frame of reference?
- 4. Were those involved in collection of data also involved in delivering a service to the user group?
- 5. Were the methods used in selecting the users appropriate and clearly described?
- 6. Was the planned sample of users representative of all users (actual and eligible) who might be included in the study?

**B. Are the results credible and repeatable?**

- 7. What was the response rate and how representative was is of the population under study?
- 8. Are the results complete and have they been analyzed in an easily interpretable way?
- 9. What attempts have been made to ensure reliability of responses?

**C. Will the results help you in your own practice?**

- 10. Can the results be applied to your local population?
- 11. What are the implications of the study for your practice?
  - in terms of current deployment of services?
  - in terms of cost?
  - in terms of the expectations or needs of your users?
- 12. What additional information do you need to obtain locally to assist you in responding to the findings of this study?

A third set, adapted from Trisha Greenhalgh's critical evaluation article paper on assessing clinical **systematic reviews**, is still under development for LIS studies:

**Twelve questions to help you make sense of a **systematic review**.**

A. Is the study a close representation of the truth?

1. Can you find an important question which the systematic review addressed?

2. Does the review address a closely focused issue?

3. Was a thorough search done of the appropriate databases, and were other potentially important sources explored?

4. Were the methods used in selecting the studies appropriate and clearly described?

5. Was the planned sample of studies representative of all studies (actual and eligible) that might be included in the review?

B. Are the results credible and repeatable?

6. Was methodological quality assessed and the trials weighted accordingly?

7. How sensitive are the results to the way the review has been done?

8. Have the numerical results been interpreted with common sense and due regard to the broader aspects of the problem?

9. Are the results complete and have they been analyzed in an easily interpretable way?

10. Are weaknesses such as biased sampling methods discussed in assessing the studies included in the review?

C. Will the results help you in your own practice?

10. Can the results be applied to your local population?

11. What are the implications of the study for your practice?

- in terms of current deployment of services?

- in terms of cost?

- in terms of the expectations or needs of your users?

12. What information do you need to obtain locally to assist you in responding to the findings of this study?

**Hands-on practice**

This hands-on experience is intended to build directly on the hands-on exercise you did for the last module, where you built a search grid, proposed terms and phrases, and conducted several short searches in order to evaluate that part of the process. Now, you are asked to select two of the articles you found during your search, and – using one or more of the evaluative question sets you just saw in the main part of this module – critically evaluate them. Finally, you will once again reflect on your experiences, sharing those thoughts with others through the class bulletin board.

**Instructions for this assignment**

Your responses should be brief but comprehensive, covering each of the questions asked by the question set you decide to use. Use a word processing program to complete this assignment. When you're done, post your document to the bulletin board ([link](#)).

What should be included in your response:

Looking back at module 3, determine what type of research study would be most appropriate to the well-built question: Explain your choice.

- Provide the citation and abstract for your chosen article.
- List the evaluative question set you consider appropriate.
- Using a critical appraisal checklist, evaluate the research study. It will help with this process if you copy and paste your chosen checklist to a Word document.
- What is your conclusion about the validity, reliability, and applicability of this research article in answering your question? Please support your answer with direct references to the text of the article when possible and appropriate.
- How well do you think the proposed evaluative questions function with LIS literature?
- Lastly, use what you have practiced in evaluating published LIS literature by considering **one** of these documents, each the result of surveys conducted on the MedLib-L listserv:

1. <http://listserv.buffalo.edu/cgi-bin/wa?A2=ind0103B&L=MEDLIB-L&P=R5865&I=-3>

2. <http://listserv.buffalo.edu/cgi-bin/wa?A2=ind0506A&L=MEDLIB-L&P=R3408&I=-3>

3. <http://listserv.buffalo.edu/cgi-bin/wa?A2=ind0201B&L=MEDLIB-L&P=R607&I=-3>

- Summarize your thoughts about the process of evaluation for the information in these survey response documents. Be sure to include the URL of your chosen document with your summary. Answer the following questions:
  - o Could you answer all the questions from any of the evaluative question lists?
  - o What is your evaluation of the evidence provided?
  - o How would you use the evidence provided?

### **Evaluation of the assignment**

Your work will be assessed based on its content, organization, and clarity. I have provided the form I'll be using to perform that assessment, below.

*Possible points: 100*

A 86-100 points

- B 70-85 points
- C 58-69 points
- D 50-57 points

Note: This tutorial is intended to encourage thought and discussion, so there is no 'grade' assigned except to allow you to self-assess your learning. If you are not satisfied with your performance, you may wish to review the concepts we've covered in the pertinent areas.

### Assessment Criteria

	<b>Points:</b>	<b>10</b>	<b>5</b>	<b>1</b>
<b>10 points</b>	Extent to which the directions for the assignment are followed (e.g., pasting in citations)	All directions are followed completely.	Most directions are followed (no more than 2 missing).	Few of the directions are followed (more than 2 are missing).
<b>10 points</b>	Completeness of responses to the evaluative questions, and extent to which responses are supported by reference to the text as appropriate.	For the question sets, every question is considered. When this is not possible, there is an explanation provided. Responses are well supported by references to the text as appropriate.	For the question sets, some questions are not answered (1-2) without explanation. Responses are sometimes supported by direct references to the text.	For the question sets, some questions are not answered (more than 2) without explanation. Responses are not supported by direct references to the text.
<b>10 points</b>	Evidence of well thought-out evaluations and responses to the questions.	Answers to the evaluative questions are accurate in reflecting the quality of evidence provided by the materials being evaluated.	Answers to the evaluative questions are usually accurate in reflecting the quality of evidence provided by the materials being evaluated.	Answers to the evaluative questions are often inaccurate in reflecting the quality of evidence provided by the materials being evaluated.
	<b>Points:</b>	<b>10</b>	<b>5</b>	<b>1</b>
<b>10 points</b>	Extent to which reflective statements incorporate consideration of the key issues	Answers clearly reflect consideration of the key issues discussed thus far in the tutorial and readings.	While answers reflect some consideration of key issues discussed thus far in the tutorial and readings,	Answers show little or no consideration of key issues discussed thus far in the

	discussed thus far in the tutorial and readings.		they are incomplete.	tutorial and readings.
<b>10 points</b>	Assessment of the chosen article's validity, reliability, and applicability.	Summary is complete and well-considered, incorporating all of the findings of the critical evaluation process.	Summary is incomplete but well-considered, incorporating most of the findings of the critical evaluation process.	Summary is both incomplete and ill-considered, failing to incorporate many elements of the critical evaluation process.
10 points	Assessment of non-published evidence.	Summary is complete and well-considered, answering all questions thoughtfully.	Summary is incomplete but well-considered, or does not attempt to answer all the questions.	Summary is both incomplete and ill-considered, or does not attempt to answer most of the questions.
10 points	Choice of type of research study for the question	Choice is logical and well-supported.	Choice is logical but not well-supported.	Choice is neither logical nor well-supported.
10 points	Suitability of evaluative question set for the need	Choice is logical and well-supported.	Choice is logical but not well-supported.	Choice is neither logical nor well-supported.
Organization and clarity <b>10 points</b>	Extent to which the document organizes responses.	The document is well-organized, systematically addressing questions posed by the assignment.	The document is mostly well-organized, but could be improved upon.	The document is not well-organized, failing to systematically address questions posed by the assignment.
10 points	Clarity with which responses are written, easily comprehensible by the reader.	The writing is clear and ideas are easily comprehensible.	The writing is not easily comprehensible, making it harder to understand the points being made.	The writing is unclear and confusing, leaving the reader in doubt about the writer's conclusions.