Supporting literature reviews:
Materials for supervisors to use with students

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Contents

Helping students understand how literature reviews are judged

The questions in Handout 1, Marking Guidelines for Literature Reviews, were framed by Christine Bruce to assist in giving feedback to research candidates on their draft literature reviews early in their candidacy. These questions may help students understand the criteria that are commonly applied to judging the quality of literature review chapters of theses.

You should take some time with your students to discuss the question: what is a literature review? The answer in the handout gives you a place to start, but each discipline and, indeed, each project will interpret and expand the general statements in particular ways. This is where your students need you, your experience in your field and your understanding of their project.

Handout 2 lists some of the characteristics of good and poor literature reviews. Again you should discuss these qualities with your students, stressing those matters which are especially important in your field and their work.

Handout 1: Marking Guidelines for Literature Reviews

What is a literature review?

A literature review is a well-organised discussion of published (and sometimes unpublished) research and scholarship relevant to an area of study. The literature review demonstrates that you have acquired a full professional grasp of your research area. A good literature review also puts forward an argument for the research you intend to do; it points the way towards your own work. Your literature review will continue to develop as you progress in your research. Eventually it will probably form a chapter in your thesis. Look at examples of finished theses in your field and study how they present and deal with the literature.

Format

- Are the aims/goals of the literature review included in the introduction? Is the research focus made clear?

- How well is the literature review structured? Are the headings/sub-headings used appropriately to help the reader navigate the subject area?

- Is there a conclusion to the review? Are main points summarised and future research directions suggested?

Content

- Is the nature of the material reviewed appropriate?

- Are important authors/research papers included in the review?

- Is the coverage of the literature sufficient … for the moment? Are there any key items/areas overlooked?

- Have you synthesised the work – providing coherent representation of the field? Or is the review pointing to previous work in a disconnected manner?

- Do you take a critical approach to the literature (identifying important contributions, comparisons, strengths and weaknesses)?

- Does the review show appropriate depth of thinking for the degree being undertaken?

Presentation and Expression

- Is the quality of English expression and punctuation of an appropriate standard?

- Has your chosen referencing system been used correctly?

Handout 2: Characteristics of Strong and Weak Literature Reviews

Does your literature review demonstrate any of the following deficiencies?

Areas in which literature reviews are commonly deficient (Afolabi, 1992) include:

- exclusion of landmark studies
- emphasis on outdated material
- adopting a parochial perspective
- not being critical
- not discriminating between relevant and irrelevant material
- lacking synthesis

Hansford and Maxwell (1993) cite the literature review as the second most frequent chapter of the thesis to be criticised by examiners. They cite these common criticisms:

- failure to use recent literature
- lack of critical assessment
- not relating the literature review to the research questions or hypotheses
- incorrectly interpreting sources

What improvements can you make to ensure the following criteria are met?

- includes current literature as well as material of historical interest
- aims of the review are clearly stated
- the range of resources from which literature has been gathered are identified
- a breadth of knowledge of the area is demonstrated
- a strong argument is developed justifying the nature of the recommended line of research
- organisation and structure of the review are made clear to reader
- the review should be interesting to read

References

Afolabi, M. 1992. The review of related literature in research. *International Journal of Information and Library Research* 4(2), 59-66.

Hansford, B. and Maxwell, T. 1993. A masters degree program: structural components and examiners' comments. *Higher Education Research and Development*, 12 (2), 171-88.

Starting with an annotated bibliography

Rather than just sending a new student to the library to "do your literature review" – a task which many students find overwhelming, you might find it productive to ask your student to begin by preparing an annotated bibliography. You can set weekly or fortnightly targets and monitor progress, helping your students build the bibliography they need for their projects.

This task will require them to think seriously about what sort of resources they currently need most and where to find them. And it requires them to engage in critical reading. But it does not require them to deal with problems such as finding a way to shape and structure the literature review. Thus, they are starting with a task that has somewhat more manageable dimensions and they are less likely to procrastinate about getting started.

Handout 3 will help you make sure students understand what you are asking of them. You should also discuss the following questions:

- What do you know already/what materials do you have that will help you?
- What else do you need to know? What other materials do you need?
- How can you find out about/obtain the above?
- What can you do this week to get started?

Most students will be using software such as ProCite or EndNote which will help them manage their bibliography. You should check to be sure that they are familiar with appropriate software or, if for some reason they cannot use a technological solution, you should help them develop a card file system.

Preparing an annotated bibliography requires students to engage in critical thinking. Handout 4 contains prompts which should help your students approach materials systematically and thoughtfully. Again we encourage supervisors to discuss these handouts with students. For instance, if you begin to discuss how you determine the reliability of a source, you might explain the reviewing practices common in major journals in your field which help ensure (but cannot guarantee) that material published in these journals is reliable. Then questions about materials on the internet might lead to discussion of the reviewing practices of key sites.

Handout 3: Annotated Bibliographies – the basics

The difference between a collection of abstracts and an annotated bibliography

An abstract is an item that stands alone to represent some document. It does not refer to other documents, that is, it does not contain references or refer to other abstracts.

An annotated bibliography is a collection of 'abstracts' that do refer to each other or interconnect in various ways. The annotated bibliography represents an interrelated body of work and states what the relationships are. The individual annotations may not stand alone, but the bibliography as a whole will stand alone.

Referencing

An annotated bibliography should show consistency in the referencing style used. You will find it useful to begin now to use the referencing style you will use for your thesis/project report. Check with your research supervisor if you are not sure which style to use; and obtain a copy of the relevant chapter from the appropriate style manual (e.g. APA, AGPS) or journal 'notes for contributors'.

Suggestions for what to include in the annotation for each paper:

1. The purpose of the paper and its findings – including any hypotheses
2. The theoretical position of the author – may be explicit or implicit [e.g. world views/theoretical position]
3. The type of research [e.g. scientific, naturalistic, interpretive]
4. The research method [e.g. experiment, survey, etc.]
5. The usefulness/validity of the results
6. What further research areas are suggested
7. Contribution to your field of research
8. Relevance to your specific research
9. Relationship to other papers in the annotated bibliography

In summary, the annotations should summarise the content of the papers, indicate the relevance to your research, and interconnect between each other. That is, if one paper builds on the work done in another, or confirms or refutes the results of some other research you should say so.

Handout 4: Annotated Bibliographies – being critical

What questions should I ask when critiquing an article?

- Who is the author?
- What is the motive for writing/doing the research?
- To what audience is the author writing?
- Does the author have a bias?
- What research approach or data-gathering method was used?
- What conclusions does the author arrive at?
- Does the author satisfactorily justify the conclusions?
- How does the study compare with similar studies?

  (Engeldinger, 1988)

What does thinking critically mean? Consider how you would do each of the following:

- Distinguishing between verifiable facts and value claims
- Determining the reliability of a source
- Determining the factual accuracy of a statement
- Distinguishing relevant from irrelevant information, claims or reasons
- Detecting bias
- Identifying unstated assumptions
- Identifying ambiguous claims or arguments
- Recognising logical inconsistencies
- Distinguishing between warranted and unwarranted claims
- Determining the strengths of an argument

  (Beyer, 1985)

How can I approach internet materials critically?

- Is your resource an example of vanity publishing or has it been through a rigorous review process?
- What evidence is there to suggest that the resource is of high quality?
- Who are the 'authors'? What are their credentials?
- How current is the resource? Can you establish when it was last updated?
- How complete is the content of the resource? How unique is the content?
- How easily accessible is the resource?
- Is the resource stable? Is it likely to remain stable?
- How well is the resource regarded? Do other people refer to it regularly? Can you identify how often it has been used?
- Is the resource organised in some way? Is there a contents page, an index?
- Is there an abstract or other summary to communicate the nature of the document?

  (Tillman, 1996)

References

Beyer, B. 1985. Critical thinking: what is it? *Social Education*, 49(4), 270-76.

Engeldinger, E.A. 1988. Bibliographic instruction and critical thinking: the contribution of the annotated bibliography. *RQ* 28(2) 195-202.

Tillman, Hope. 1996. *Evaluating quality on the net*. URL: http://www.tiac.net/users/hope/findqual.html

Introducing a reflective model for reviewing the literature

Handout 5 introduces a reflective model for reviewing the literature. You will need to explain this model to your students and discuss with them how they may use it to enhance all aspects of working on their literature review. The following, taken from Christine Bruce's article "From Neophyte to Expert: Counting on Reflection to Facilitate Complex Conceptions of the Literature Review," explains the model.

The model is cyclical and is made up of two parts: the reflective cycle of planning, acting, recording and reflecting, and the characteristics of the person, which influence the way in which he or she engages in the cycle.

These characteristics, the person's information style and conceptions of the literature review process, will also develop as he or she works with the cycle. Each part of the model is explained below.

Characteristics of the person

Christine Bruce has described six ways in which beginning researchers conceive of a literature review. The six ways students see literature reviews are:

1. As a list

2. As a search

3. As a survey

4. As a vehicle for learning

5. As a research facilitator

6. As a report

Each of these conceptions may be useful at different stages of developing a literature review. What is not useful is for a student to hold only a limited conception of a literature review, for instance as a list, and to fail to recognise that the literature review may help them identify or clarify their research question, and that the review is itself a report needing shape, structure and sophisticated organisation.

It is important to note here that we should not think of individual students as having particular conceptions. Rather they use one or more of the conceptions of which they are aware at a particular time. It is the role of the reflective model to help them expand their repertoire of conceptions and encourage them to think about their literature review as something other than an exercise in literature searching.

The way in which a student will engage in the reflective process will also be influenced by his or her information style. Judith Palmer (1991) describes five different ways in which scientists seek information; the differences in style lead her to label the different types of people as information overlords, information entrepreneurs, information hunters, information plodders and information derelicts. New researchers can be asked to consider their own information style by answering the following questions (adapted from Judith Palmer [1991] and included in Handout 5):

- How active are you in your efforts to find information?

- Are you generally relaxed or anxious about the undersupply or oversupply of your information needs?

- To what extent do you feel the need to be in control of your information environment?

- How broadly do you search electronic- and print-based information access tools?

- How extensive are your formal information networks, i.e. personal contacts, conference attendance etc.?

The cycle of planning, acting, recording and reflecting

Because people do have different information styles, or heuristics, they will enter the cycle at different points. Whether they enter the cycle by devising an elegant plan for a literature search, browsing the library shelves or surfing the Internet, they should continue to systematically work through the cycles as many times as necessary until the literature review is complete.

Planning the literature review will involve determining the goals of the literature review, deciding what questions the literature review will answer, as well as determining what literature searching should be done to gather the database of journal articles, reports, conference papers, books and other material required. Writing goals for the literature review and specifying questions that the review will answer will guide the researcher when he or she is evaluating material found. Due to the cyclical nature of the process, however, these goals and questions will change during the life of the review. Quite early in the process it would also be useful to create a concept map for the review chapter or create a list of possible headings and subheadings. Thinking about the overall purpose of the literature review in this way will also supply guidelines for literature searching. The student should begin to identify key discipline areas, important key words, authors, organisations and seminal works in the field, and plan to create a system that will keep notes and citations organised. In later cycles, planning may involve restructuring the literature review as a result of reflection.
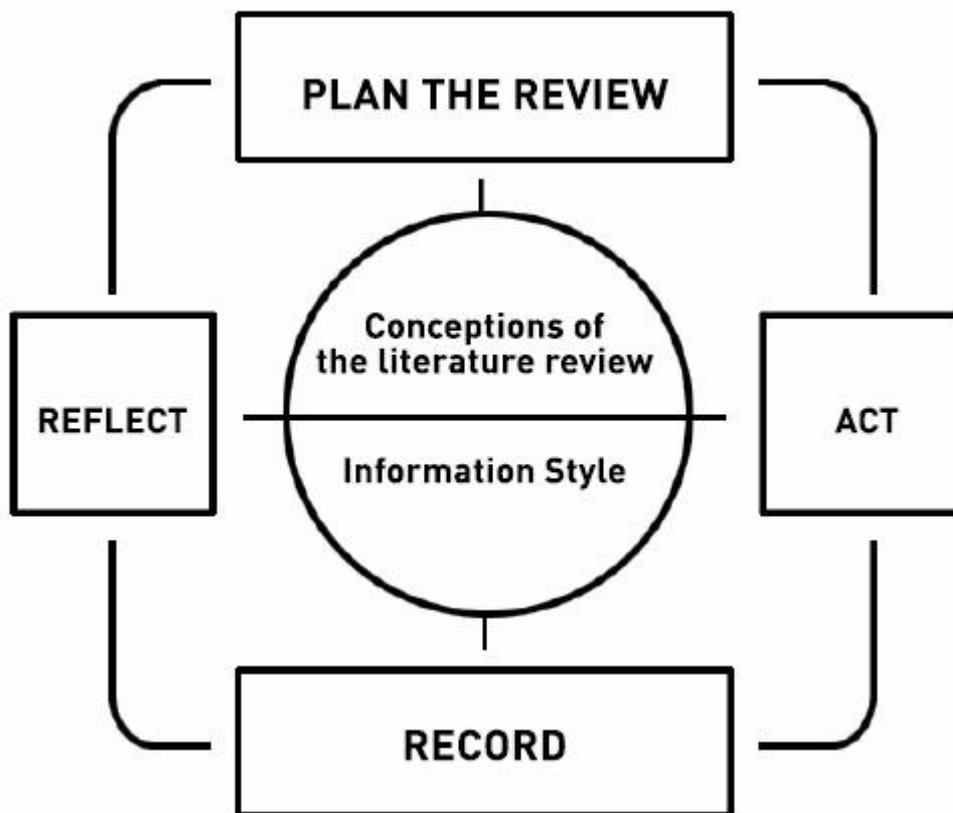
Acting on plans made is the second stage of the process. This means that the student should do whatever is required as a result of the planning stage. This might involve consulting a librarian, conducting a search of the citation indexes to trace a seminal reference, or collecting and analysing papers about the relevant research methodology. Acting on plans includes reading and writing about the literature collected on the basis of the preliminary structure of the literature review set up in the previous stage. It is often easy for students to spend much of their early `activity' in relation to the literature review chasing papers, leaving the reading and writing until a pile of documents have accumulated. Writing in the early cycles will help form their thinking about the content and structure of the literature review, making it possible to influence directions set for subsequent literature searching.

Designing a system for maintaining records of bibliographic references and notes is a critical activity which can require the students to think about the overall structure of his or her literature review. Keywords or a system of notation can be designed to indicate that part of the thesis to which particular papers or notes will contribute.

Recording, or maintaining a diary, is a laborious but critical part of this cycle. It is really a part of the process that should happen in conjunction with making plans, taking action and reflecting. Because we so often do things spontaneously, particularly in the `action' phase, it is useful to regularly ask whether details of what has occurred have been recorded. For example, when browsing indexes for material about teaching art criticism, the student might encounter useful references about the problem of validity in qualitative research. This should be recorded, if only as an aide-de-memoir for the future. Similarly, ideas about what points should be highlighted in the literature review and similar insights that occur as part of the reflection process should be recorded. Students often find it difficult to get in the habit of finding time to keep such records/diaries of their thinking. If they do develop the habit, they invariably find it extremely useful.

Reflecting is that part of the cycle where the student reviews what he or she has done in relation to the literature review and analyses the strengths and weaknesses of that work. It is a precursor to generating ideas for further work that is creating a new set of plans. The conceptions of a literature review discussed earlier provide a framework within which students could reflect about their progress. Each of the following questions (included in Handout 5) has been designed to focus thinking around one of the conceptions. Use of the questions (Bruce, 1994) from the earliest cycles will encourage students to think about the literature review in the full range of ways; it is likely however that more emphasis will be placed on certain questions at different stages of the research process:

- What is the present state of my list of references? Is it up to date in my areas of present interest? Is it adequate?

- What literature searching have I done this fortnight? Are there any new areas that I have become interested in which I may need to search on?

- What have I read recently? Have I found time to read recently?

- What have I learned from the literature this fortnight? Have I changed, in any way, my understanding of the area in which I am working?

- Is what I have read going to influence my research in any way? Has it given me any ideas that I need to consider and incorporate?

- Have I been writing about what I have read? Do I need to reconsider how what I have been reading fits into my research?

Handout 5: Reflective Model for Reviewing the Literature

(Bruce, C.S. 1994. Research students' early experiences of the dissertation literature review. *Studies in Higher Education*, 19(2), 217-229.)

What is your information style?

From Palmer, J. 1991. Scientists and information: using cluster analysis to identify information style. *Journal of Documentation*, 47 (2), 105-129.

- How active are you in your efforts to find information?
- Are you generally relaxed or anxious about the undersupply or oversupply of your information needs?
- To what extent do you feel the need to be in control of your information environment?
- How broadly do you search electronic- and print-based information access tools?
- How extensive are your formal information networks, i.e. personal contacts, conference attendance. etc?

Consider these questions frequently as you work on your literature review:

- What is the present state of my list of references? Is it up to date in my areas of present interest? Is it adequate?

- What literature searching have I done this fortnight? Are there any new areas that I have become interested in which I may need to search on?

- What have I read recently? Have I found time to read recently?

- What have I learned from the literature this fortnight? Have I changed, in any way, my understanding of the area in which I am working?

- Is what I have read going to influence my research in any way? Has it given me any ideas that I need to consider and incorporate?

- Have I been writing about what I have read? Do I need to reconsider how what I have been reading fits into my research?

The literature review reflective cycle

Planning

- What is a literature review?

- Why do we do a literature review?

- What problems are faced by research students doing literature reviews?

- What are the different ways in which research students conceive of literature reviews?

- What are the varying roles of thinking, searching, reading and writing in the process?

Action

- How can you start the writing process?
  (Focus on one or two strategies, work on them and receive peer feedback.)

- How do you decide what to include in the literature review?

Recording

- How can I use a journal to help me with writing my literature review?

Reflection

- What are the features of a good literature review?

- What are the weaknesses associated with poor literature reviews?

- How does your literature review shape up against Cooper's taxonomy of literature reviews? (See Handout 6)

- How does your literature review need to be modified to meet the above criteria?

Planning

- What steps will you take to progress your literature review in the next weeks?

Helping students shape the literature review

We have seen that the criteria for judging literature reviews include the quality of good organisation. Examiners are, after all, readers like anyone else, and value writing that guides them logically through complex ideas. Handout 6 includes some prompts for your discussions with your students about how to find an appropriate form for the literature review and how to design its structure.

Handout 6: Finding form and structure for the literature review

What decisions do I need to make about the form of my literature review?

Use Cooper's taxonomy of literature reviews to help you make decisions about the content and arrangement of your review.

- Focus – What will be the focal elements of your review? These may include research methods, outcomes, theories, etc.

- Goals – What will be the goals of your review? There may be more than one goal such as synthesising previous research, identifying key issues, and critically analysing previous research.

- Perspective – What perspective will you adopt? Will you assume the role of honest broker or that of an advocate arguing for a particular position?

- Coverage – What extent of the literature will you cover? Pivotal works only, works representing particular groupings of the literature, or will you make an attempt at exhaustive coverage?

- Organisation – Will you arrange your review conceptually, historically or methodologically? Perhaps you will need to use more than one organisational technique.

How can I design a structure for my literature review?

Use some of the following prompts to help you create a structure for your literature review:

- Important questions that my literature review will address are:

- Important contrasts I wish to demonstrate are:

- My literature review will argue the following main points:

- The main goal of my literature review is to:

- Some headings and sub-headings for my review could be:

References

Cooper, Harris M. 1989. *Integrating Research: A Guide for Literature Reviews*. Newbury Park: Sage.

Christine Bruce's Developing Students' Library Research Skills (HERDSA Green Guide No 13, 1992) is a useful resource for dealing with matters such as these.