Thesis & Dissertation Proposal Guide

For

Graduate Students

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http://www.cust.educ.ubc.ca/wcourses/EDUC500/

FOGS's *Handbook of Graduate Supervision*

(http://www.grad.ubc.ca/students/supervision), recommends the following guidelines for the Thesis or Dissertation Proposal:

The Thesis Proposal
Your thesis proposal should be developed in consultation with your supervisor and committee. The thesis proposal should include:

- ❑ a background theory
- ❑ a working hypothesis
- ❑ a methodology which should be organized under chapter headings
- ❑ a body of work for analysis
- ❑ a bibliography

If your thesis will be presented in an alternate format (such as performance), be sure to include this in your proposal.

Some graduate programs require students to undergo a thesis proposal defense. Check with your graduate program about the type of proposal required.
Documenting the Proposal

In order to save time and stress later, it is important to keep a bibliography of articles and other pieces of information that you come across as you do initial library research for your thesis proposal. Here are a few tips:

- ❑ Always keep full bibliographic information (author, title, place and date of publication) for each source you read.
- ❑ Write a full bibliographic reference on the first page of each article you photocopy.
- ❑ Keep a running bibliography up to date.
- ❑ Use a good bibliographic word-processing package; a librarian can help you choose one.
- ❑ Carry a notebook around with you and jot down new titles or ideas as you come across them.
- ❑ Work collaboratively if you can: ask friends to look out for articles or book chapters that you might be interested in.

However, this is too general for actually assembling a proposal for your research. I recommend these guidelines for the proposal:

Qualitative Research Design Proposal Format*

Title	
Introduction (Brief History of the Problem, Rationale, Theoretical Framings, Positionality— Relation of Self to Problem)	**(1-2 pages)**
Purpose (General Focus) (Why?)	**(1/2 page or less)**
Problem or Focus of Inquiry (What?) Clear Statement—Research Question(s) or Problem(s) (Limitations & Terms if necessary)	**(1-2 pages)**

Review of Literature
        History of the Problem
        Theories
	(6-10 pages)

Method(s) (How?, When?, Where And Who?)
        Appropriateness of and Issues around methods chosen
        Sample (Participants) and Unit(s) of Analysis
        Data Collection & Instrumentation
        Sites (Sources)
        Participant Ethics
	(6-8 pages)

Data Analysis (How?) Analysis, Coding, Instruments, Interview Guides	**(2-5 pages)**

Report of Outcomes
        Recipients of Outcomes
        Utilization of Knowledge
	(1 page or less)

References	**Attach**

Quantitative Research Design Proposal Format*

Title	
Introduction (Brief History of the Problem, Rationale, Theoretical Framings, Positionality— Relation of Self to Problem)	**(1-2 pages)**
Purpose (General Focus) (Why?)	**(1/2 page or less)**
Problem or Focus of Inquiry (What?) Clear Statement— Research Question(s), Hypotheses or Problem(s), Limitations, Terminology	**(1-2 pages)**

Review of Literature
        History of the Problem, Preliminary Studies, Pilots
        Theories
	(6-10 pages)

Method(s) (How?, When?, Where And Who?)
        Appropriateness of and Issues around methods chosen
        Sample (Participants) and Unit(s) of Analysis (**Variables**)
        Data Collection & Instrumentation
        Participant Ethics
	(6-8 pages)

Data Analysis (How?)
        Variables, Statistical Techniques
        Instruments
	(2-5 pages)

Report of Outcomes
        Recipients of Outcomes
        Utilization of Knowledge
	(1 page or less)

References	**Attach**

Conventional Dissertation or Thesis Format

Title Page
Abstract
Table of Contents
List of Tables
List of Figures
Preface (if applicable)
Acknowledgements and/or Dedication

Chap 1   **Introduction**
Background/ Positionality
Rationale
Statement of Purpose
Statement of Problem
Limitations
Definitions (Terminology, etc.)
Organization of Thesis

Chap 2   **Review of Literature**
Introduction
Background
Theoretical Frameworks
Conclusion

Chap 3   **Methodology**
Introduction
Site of Research
Methods (description, criticisms, etc.)
Instrument (if applicable)
Data Collection & Analysis (Ethics, Techniques, etc.)
Conclusion

Chap 4   **Findings**
Introduction
Data Analysis and Examples
Key Findings
Conclusion

Chap 5   **Conclusions, Implications & Recommendations**
Introduction
Summary
Implications
Recommendations
Conclusions

References   **References or Bibliography**
Appendices   **Appendix I** (Instruments, etc.)
Appendix II (Raw Data Samples)
Appendix III (Data Collection Protocols, dates, etc)

SUGGESTED CHAPTERS FOR A THESIS OR DISSERTATION
Gaalen Erickson

NOTE: Doctoral dissertations are personal constructions of a series of arguments ultimately leading to one or more knowledge claims that are judged to be significant and important for the educational community. This community is typically composed of academics, policy makers and practitioners. The dissertation should try to address at least two of these groups. The outline below is only ONE example of how the dissertation might be organized and it is simply a product of Gaalen's experience working with a number of graduate students. It represents a very traditional approach to developing and laying out the claims in a dissertation and follows to some degree Gowin's Knowledge Vee.

Chapter 1 The Problem and Its Context
Introduction to the Chapter
- A short overview of what this chapter will contain

Context or Background to the Problem
- What are the contexts in which the problem is situated?
- How do these contexts influence the problem area

General Problem Area
- What area of educational research is this study addressing

Specific Research Questions
- Identify the specific research question

Methods of the Study
- A very brief overview of how you will address these research questions (Sometimes this information is provided in the General Problem Area section, or other sections. Some people wait until Chapter 3 to discuss methods. I think that it is useful to let your reader know briefly)

Significance of the Problem Area
- Why is this an important problem for educators to address
- How is it situated in the research literature?

Limitations of the Study
- What are the decisions you made and other factors which limit your ability to make knowledge claims or generalizations about your study

Overview of the Dissertation
- Outline briefly the contents of each of the chapters

Chapter 2 Review of Literature
Introduction to the Chapter
- Briefly outline the major headings and issues that you will be addressing in the chapter

The Context of The Research Problem
- Develop in greater detail the discussion about the context presented in Chap 1.

Review of literature in specific problem areas of your study

- This will vary depending upon your specific area of study. But it should include both empirical work as well as any theoretical/conceptual writings on your topic area.
- Make sure that this is a critical review where you comment on the strengths and weaknesses of the articles or books.
- Try to use this review to make an argument for why you are doing your study.
- Possible arguments might be: a) there is a lack of literature in the area; b) there are conflicting reports in the literature and clarification is required; your work is an extension of existing studies in terms of scope and context.
- Review of literature regarding any theoretical perspectives you are using in your study
- Make a connection between this perspective and your own study

Chapter 3 Methodology

Introduction to the Chapter
- Briefly outline the major headings and issues that you will be addressing in the chapter

Design of the Study
- Description of the methods that you used to address the research questions that characterize your stud y (You may wish to repeat the research questions here).
- Discussion of your reasons for selecting the particular methods that you selected (for example, why did you use a questionnaire, or employ a case study or use interviews, etc.

Data Collection
- What data will you collect and what methods will you use to collect these data?

Participants
- What sampling process did you use to select these participants?
- Description of the sample

Data Analysis
- How did you go about analyzing the data

Chapter 4 Findings or Results of the Study

Introduction to the Chapter

- Briefly outline the major headings and issues that you will be addressing in the chapter
- Organize the subheadings and discussion of your results around the research questions, if possible
- The sub-headings here will depend upon the nature of your study.
- The results may be presented in more than one chapter IF it makes sense. For example if you have two lengthy case studies then you might want to have 2 results chapters. OR, you might want to devote a separate chapter to each research question. This is a choice you might want to make with advisors.

Chapter 5 Conclusions, Implications of the Study, and Recommendations

Introduction to the Chapter

- Briefly outline the major headings and issues that you will be addressing in the chapter

Conclusions of the Study

- The conclusions should be orga.'1ized around your research questions and should basically be a sun1mary of the findings reported in your results chapter(s)

Discussion of the Study

- In this section you can discuss some of the findings in terms of the literature review that you carried out in Chap. 2 plus add any issues that you consider to be noteworthy and important to comment on.
- This is a section where you can speculate about your findings without worrying about providing strong evidence of the claims being made

Implications of the Study

- Outline some of the implications of the study for the field. Again, this might mean referring back to your literature review or it may take the form of recommendations for improved practice by researchers, policy makers, or teachers

Future Directions

- Outline some possible research studies that would further extend your work in some important areas
- This is a section that could map out further studies that you hope to do upon graduation OR that another graduate student who is just beginning might consult for guidance.

BIBILOGRAPHY

APPENDICES
- Include Instruments and any other forms, etc. that were used for data collection
- Include components that were not core t the Chapters but that are meaningful for future researchers
- Data samples if relevant

Conventional Masters Thesis Format*

Chapters

1. Introduction and Research Problem— 20-25 pp.
2. Review of Literature— 30 pp.
3. Methodology— 30 pp.
4. Findings and Data— 30 pp.
   - Quantitative Statistics
   - Interview Examples / Samples
   - Analysis of Data (Qualitative or Quantitative)
5. Conclusions, Implications & Recommendations— 20 pp.
- References
- Appendices (As Necessary)

*If you are doing a historical thesis or using an unconventional format, please provide a working Table of Contents with the Proposal.

Research Designs
(For Conventional Theses)
Dr. Stephen Petrina

- Topic (what)- General area of inquiry or study (e.g., immigrant women's rights and independence; second language literacy acquisition; addiction and needle exchange programs; visual communication of pre-K children)

- Purpose (why)- Statement of intent or objective in conducting the research. The statement of purpose tells the audience what the research is likely to accomplish. Research typically involves one of six major purposes: *to describe, explain, evaluate, interpret, deconstruct or predict (or confirm or discriminate). To explore* is also a viable purpose, as is *to emancipate*, especially in qualitative research.

- Problem Statement, Hypothesis or Question (what)- Articulates and focuses the problem to be addressed in a researchable way. Questions have an advantage of sharpening or focusing the topic but declarative statements are more common.
    - ❑ Avoid overly broad problems (i.e., Research topic v. problem), overly narrow, local or trivial problems, and hortatory (i.e., urging specific people to take a specific course of action) problems.
    - ❑ Remember, you will not *prove* anything in research.
    - ❑ The goal is, however, to persuade people through rhetoric.
    - ❑ And good rhetoric requires a shift from a proof & prescriptive mindset to a variant & situative mindset.

- Rationale (why)- Provides a justification for the research, based on personal interests and desires, institutional needs, and, especially, existing research and current theory. In this way, the significance of the research is provided as well. Typically, the rationale suggests your contribution to existing research literature by identifying the significance for practice, policy, action or theory.

Examples of Research Purposes and Problems

Purpose	Problem
Exploratory The purpose is to investigate the little understood phenomenon of… The purpose is to explore categories of meaning in… The purpose is to generate hypotheses for further research related to…	What is happening in Surrey's intervention for sexuality education? What are the salient themes and categories of meaning for participants in Surrey's intervention for sexuality education? How are the patterns in teachers utilization of Surrey's sexuality education materials related to sexuality education programs in other jurisdictions?
Explanatory The purpose is to explain patterns related to… The purpose is to identify plausible relationships shaping…	What are the attitudes and beliefs that Surrey secondary school teachers bring to sexuality education? How are unpreparedness and phobias interacting to create the patterns underlying the use of Surrey's sexuality education materials?
Descriptive The purpose is to document and describe…	What are the salient methods that teachers adopt in Surrey's sexuality education program?
Interpretive The purpose is to interpret the meaning of…	What does sexuality education mean to students? What feelings surface for teachers as they teach about sexuality?
Emancipatory The purpose is to create opportunities and the will to take up action related to…	How can pro-Gay and Lesbian videos, such as *Out*, empower teachers to help BGLT students? How can teachers assist in accepting and celebrating same sex parents?
Expressive The purpose is to express various relationships among…	How are identities manifested within eight visual portraits of sexuality?
Prediction The purpose is to predict the relationship between…	What is the effect of Surrey's sexuality education program on students' understanding of sexuality?
Deconstruction The purpose is to deconstruct (undermine, contradict, etc.) the binaries of…	What are the messages embedded in Surrey's sexuality education materials?

Stating a Thesis
Stephen Petrina
8 January 2008

Although it's not always necessary or desirable to state a thesis and defend it, this convention for writing is prevalent and generally expected in academia. A good argument is *de rigueur* in academia. It is quite common to hear the professor reiterate "what is the thesis?" or the editor impress on the author the "need to state an argument."

Hence, it is crucial that graduate students can confidently write with this convention of stating and defending theses (claim, premise & warrant, argument, etc.).

The purpose of stating a thesis or argument is to provide dialogue (inspire, raise questions, provoke thoughts, etc.) over an idea, issue, data, knowledge, information, etc. that can be demonstrated to be the case, "hold water," be true, considerable, persuasive, understandable, etc. The challenge is to *state and demonstrate* a thesis (i.e., provide evidence for the thesis stated). In this way, all theses are discursive.

In academia, this convention typically implies entering an ongoing (current, timely, historical, etc.) conversation within a discipline, across disciplines, between or among authors, etc. This gives the thesis currency but also means that students have to be finely tuned into the discourse and arguments within disciplines, and clear about who is saying what, and where they said it. Of course, this places a burden on the student of interdisciplinarity to engage with numerous and various discourses and sources. But this interdisciplinarity can be powerful for demonstrating contradictions and shortcomings of ongoing arguments.

This convention is not merely limited to academia. Journalists, for example, commonly draw from, or begin with a clear thesis. Witness Anna Maria Tremonti introducing a program on her show, The Current, on the morning of 8 January 2008:

> Today Mr. Arar is a household name. The ordeals of Abdullah Almalki and Ahmad El Maati have been well documented, including on this program. Mr. Nureddin's case, however, has never generated the same kind of heat. Perhaps it's because his time in a Middle Eastern prison can be measured in weeks rather than months or years. Or perhaps it's because of his reluctance to speak publicly for fear of destroying the life he's trying to rebuild.

Notice how she states the thesis in conversation with the literature and other journalists. "Arar is a household name… ordeals of Abdullah Almalki and Ahmad El Maati have been well documented…"— She sums up the literature review, so to speak. Then she states the thesis: "Mr. Nureddin's case, however, has never generated the same kind of heat. Perhaps it's because his time in a Middle Eastern prison can be measured in weeks rather than months or years. Or perhaps it's because of his reluctance to speak publicly"

Stating and demonstrating a thesis does not imply a defensive or argumentative style. Some defenses of theses truly are arguments and some defenders truly are defensive. However, the vast majority of academic arguments are focused engagements with discourses and ongoing conversations, and range from deadly serious to entirely playful.

Argument Tips

Argument by Symmetry
1. If we are entertaining something called the learning sciences, I will argue here that we have to necessarily entertain what I'll call "the learning arts."

Argument by Extension or Implication
1. If web 2.0 transforms the everyday reader into an everyday writer, then by extension the author must be dead. The reader may not have killed the author, as Bathes implies, but…

Argument by Contra-distinction
1. While Voithofer argues that new media research emerges from the principles of new media (i.e., Manovich, 2001), I argue that new media based research has much less to do with new media than with the rhetorical and spiritual power of the new medium. By new medium I refer to…

2. Contrary to Everett who proposes…, I argue that…

Argument by Corrective
1. Although Hayles attends to the nuances of code representing or embodying the unconscious, my point here is that she fails to distinguish programming code from machine code and thereby overlooks an already fragmented unconscious. The implications are that…
2. I wish to throw into sharp relief Stone's association of the body and embodiment with feminism in order to effectively distinguish liberal from material feminisms in cyberspace.

Argument Traps
1. **Tautological Argument**- Argument based on circular logic
     e.g., Teachers should use technology because the net generation uses technology
2. **Axiomatic Argument**- Argument of or for the obvious (often criticized as trivial, superficial, inconsequential or irrelevant)
     e.g., New media can make a difference in how we learn
3. **Idiosyncratic or Solipsistic Argument**- Argument that is self-centered, self-serving, or overly myopic
     e.g., My students made great progress when I used Moodle
4. *Prima facie* **Argument**- Argument that mistakes surface for depth
     e.g., Young students are digital natives requiring different teaching approaches
5. *Ad hominem* **Argument**- Argument that makes personal attacks
     e.g., N.A. Publication has no credibility here and is otherwise a greedy bureaucrat

6. ***Ad nauseum* Argument-** Argument that unnecessarily extends or prolongs an argument

    e.g., Cognition is a function of the brain.

7. **Redundant Argument**- Argument that has already been made

    e.g., Communities of practice are, by nature, both centralized and decentralized

8. **Red Herring or Straw Man Argument**- Argument that misrepresents, misconstrues or distorts a position for rhetorical advantage

    e.g., Hutchins argues that the brain has no role in cognition

Guides

The *Craft of Research* organizes the convention of stating arguments as follows:

See also:
http://www.logicalfallacies.info/
http://www9.georgetown.edu/faculty/kingch/How_to_Think.htm
http://www.fallacyfiles.org/index.html

Developing & Writing a Theoretical Framework
Stephen Petrina
27 October 2008

1. Theory, Method(s), Data, Self & Site(s)

Principle: Researchers see, and basically find, what they look for.

However simple this truism may be, there is something profound here. This is not to say that researchers will not see or find the unexpected. Rather, this principle addresses the role or purpose of theory in research. What researchers "see" when they peer into classrooms, cyberspace, homes, lakes, museums, offices, or any cultures and ecologies for that matter, are liberated or constrained by what they "look" for. What we gain in analytical purchase through theory, we may give up in narrative. Or are agency, con/text, narrative, and structure more literary than methodological problems (see First Principle)? In other words, is providing a relative balance of theory and descriptive narrative more a literary challenge than a challenge of commensurability?

Among other things, such as providing an imprimatur for research, theory moves us to articulate, effect, join, perceive, depict or predict that which would otherwise be inarticulate, fleeting, isolated, occluded, unimaginable or obscured. Theory helps us represent— describe, explain, evaluate, interpret or deconstruct. Theory makes data, but makes them imperfectly. Data test, challenge, morph and re/produce theory, however imperfectly. Like method, both theory and data are generative.

No observation is theory-free. Or better yet, no participation is neutral. This is to say that (research) practice is never atheoretical. Research may be undertheorized but is never done without some theory of something. This or that theory may be inadequate for the task but research is always shaped by theory, method, data, site and self, however insufficient. Think of a clinic, outdoor centre or school. What do you observe— feel, see or hear— when you walk inside? Think of a corporation. What does it do? Think of a relationship. What does it involve? Think of thinking. What comes to mind?

As you imagine walking into this clinic, outdoor centre, school, corporation or relationship, however open-minded or how you manage expectations, what you (eventually) find (i.e., what is "there") is dependent on who you are (i.e., identity and positionality) and what you theorize(d) (or looked for). The quality of your data and representations are dependent on the quality of your identity, positionality and theorizing, among other things. This is *not* to say that the quality of your data or representations are dependent on the quality of your life. What is "actually" or "really" there *is* "actually" or "really" there, unless you are an ontological relativist. Research is about persuasively representing (i.e., describing, explaining, evaluating, interpreting or deconstructing), not parroting or mirroring, what is there. Of course, when we represent, we change (see next Principle).

Principle: We produce the phenomena we study— and we are co-produced with our phenomena.

Another way of saying this is that identity determines, forms, or shapes observation and representation (of data) but observation and representation (of data) determine, form, or shape identity. This may appear as a paradox but it also suggests that identity (of a researcher) along

with data are interdependent, distributed and malleable. But there is also something durable about identities and data. This is a principle of standpoint epistemology, subjectivity or positionality. The researcher's identity, standpoint, subjectivity or positionality— their ethics and ontologies— matter. Researchers' identities are partially constituted by ability, class, gender, race, and sexuality, which matter. This principle also suggests that there is no such thing as a neutral or objective observer; hence, there is no such thing as a neutral or objective observation (see previous Principle).

Principle: Theory, method, data, site, self.

This principle is more a mantra to be repeated when necessary than a principle. The relationships among theory, method, data, site and self, or among participant-subjects, researchers, methods, theories, data and sites (settings) are interdependent. This is a logical outcome of the previous Principles, which suggest that the various aspects of research do not stand in isolation to each other. Data make sense only in relation to methods, theories and sites (and relative to participants-subjects' and researchers' identities or ethics). Methods and theories determine, form, or shape, data and sites (and relative participant-subjects and researchers) (see Second and Third Principles). Data and sites ground, form, and locate theories and methods (and relative to participant-subjects' and researchers' identities or ethics).

This principle could also be restated as an assertion of the artifacticity (or artifacuality) of research: All data, sites and selves are manipulated (by theories and methods, among other things). This automatically precludes distinctions between "experimental" and "naturalistic" methods, or between "designed" and "emergent" or "grounded" research. Everything and everyone are manipulated. The challenge is identifying the source(rer) and acknowledging complicity (see previous Principles).

Tracking, Mapping & Framing

Researchers in cultural studies and media studies tend to approach events, sites, etc. by tracking, mapping and framing. In fact, these researchers often refer to their frames or framings of data, phenomena, and sites of interest as *frameworks*. Tracking refers to an observation or documentation of trails, traces, performances, etc., while mapping refers to an articulation or coordination (forms of relationships) of beings, things, figures, interests, ideas, ideologies, elements, entities, nodes, etc. Mapping may take a form of modeling (strengths of relationships) and is what it suggests— cultural or social cartography (Paulston, 1977).

Framing refers to influence over meaning or a packaging of meanings, and not merely to a "lens" through which a participant or researcher "views" events, things, data, phenomena, or sites (see Principles). This is one aspect that makes social science so interesting— both research participants and researchers invariably and simultaneously frame or draw on frames to influence, filter, orient, package, or shape data, phenomena, meanings, etc. Erving Goffman (1974), the renowned sociologist and theorist of performance, defined a frame as a "schemata of interpretation…. to locate, perceive, identify, and label," which creates meaning, shapes experience, and gives direction, etc.

"Framing is concerned with the way interests, communicators, sources, and culture combine to yield coherent ways of understanding the world… frames organize by providing identifiable patterns or structures, which can vary in their complexity…. Frames structure. That is, they impose a pattern on the social world, a pattern constituted by any number of symbolic devices" (Reese, Gandy & Grant, 2001, pp. 11, 12, 17).

A theoretical framework necessarily shapes meaning and enables the researcher to collect and order (categorize, code, limit, represent, manipulate, rearrange, select, etc.) data or phenomena for meaning. It frames or composes the reader as well. The point is not to "cast" data, phenomena, etc. into a theoretical framework, but rather to influence, filter, orient, package, or shape data, meanings, etc. The key is to recognize that theoretical frameworks are not *cast* or *fixed* in time or space. As Reese, Gandy and Grant remind us, frames actively "bring otherwise amorphous reality into a meaningful structure, making it more than the simple inclusion or exclusion of information. Thus frames are active, information gathering, as well as screening devices" (p. 11).

2. Examples of Theoretical Frameworks

Example #1: Theorizing Curriculum Innovation

From: Petrina, S. and Dalley, S. (2003). The politics of curriculum reform in Canada: The case of technology education in British Columbia. *Canadian Journal of Science, Mathematics and Technology Education*, *3*(1), 117-144.

In this example, technology education (TE) was addressed as an innovation in the BC school system. The innovation is framed through the work of Goodson (1988), Hall and Hord (1995), Hargreaves (1997), and Rogers (1995):

According to Rogers (1995), there are a series of attributes of an innovation or reform that more or less determine the rate of adoption. The first is relative advantage. TE had the perception that it was better than its predecessor; it had a relative advantage over IE. The reform of IE in England and the USA validate this advantage. The second is compatibility. TE was compatible with the teachers' experiences and values; the reform came from the teachers' everyday practices and lives. The third is complexity. Perhaps TE was too complex, yet it was simple enough that a number of schools and teachers followed through with adoption. Trialability is the fourth attribute and teachers were given as much time as they wanted to experiment on a trial-by-trial basis. The final attribute is observability. Trial sites and demonstrations of TE were made available for any administrator or teacher who wanted to observe TE in action.

Hall and Hord (1987, p. 60) theorized that adopters of reforms, groups and individuals, proceed through a series of "stages of concern." The adoption of reforms, according to Hall and Hord, is dependent on levels of concern about the reform. There are seven levels or stages of concern: awareness, informational, personal, management, consequence, collaboration and refocusing stages. The lower levels, awareness, informational and personal stages relate to the collection of information and assessment of demands. At the middle stage, management concerns shift to adopting or opting into the reform. At the stages of consequence, collaboration and refocusing, concerns shift

again to impacts of the reform, coordination of resources to make the reform work, and ultimately an exploration of the universal benefits and permanent adoption. Collectively, the BCTEA proceeded through each stage of concern, from awareness through a collaborative refocusing of the TE profession toward adoption. Some individual teachers shifted their concerns to refocusing while others maintained concerns at lower stages. Everyone it seemed, was shifting toward higher stages of concern and eventual adoption of TE. But once BC MOE published the TE curriculum, once the reform was sanctioned, the BCTEA downshifted the collective concern to rejection. A host of individual teachers dropped their concern with TE.

TE had all the ingredients of what Hargreaves (1997, p. 114) has called the "New Deal" for educational reform. The TE teachers, more so than other teacher coalitions, were a self-regulating group throughout the 15 years of the reform. As Goodson has argued, interest groups or coalitions have the power to make or break reforms. Historically, technology teachers were not strangers to the reform of their practice. The technology teachers began with a new historical image that was generated and nourished from within their ranks in the mid 1980s. In schools where this occurred, material structures in timetabling and space were shifted to accommodate the reforms. And so on. Yet, even the best of what Hargreaves (1997, pp. 107-117) suggested were the ingredients for wholesome change does not necessarily translate into reform. In the final analysis, we argue, *a la* Hargreaves, that TE was the perfect reform, and question, *contra* Hargreaves, whether the process of reform ought to be privileged over the results.

Hence, we argue that the case of technology education in British Columbia demonstrates quite readily the invulnerability of teachers, as a group, to curriculum reform in Canada. While the BCTEA and its technology teachers have negotiated centralized reform with relative political ease and autonomy, they have been much more vulnerable to cultural, economic and demographic forces. We concur with Goodson who argues that the identity and survival of school subjects do not merely hinge on historical fate. Rather, school subjects require a fair amount of political upkeep.

Goodson, I. (1988). *The making of curriculum*. New York: Falmer Press.

Hall, G. E. and Hord, S. M. (1987). *Change in schools: Facilitating the process*. New York: State University of New York Press.

Hargreaves, A. (1997). From reform to renewal: A new deal for a new age. In A. Hargreaves and R. Evans, Eds., *Beyond educational reform: Bringing teachers back in* (pp. 106-125). Philadelphia: Open University Press.

Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Simon and Schuster.

Example #2: Theorizing Curriculum Change

From: Petrina, S. (2006). C&I high. *Journal of Curriculum and Pedagogy*, *3*(2), 125-147.

In this example, curriculum and instruction in universities was compared to the arrangements of subjects in high schools, which allowed me to draw on theories of curriculum changes dealing with subjects and subject status (e.g., good subjects qua requirements v. bad subjects qua electives, etc.):

Most departments of curriculum studies or C&I in North America were and are organized like an average high school (C&I High). It is unclear whether form follows function or function follows form. Some argue that the primary function of these institutions is re/producing the school subjects, and the bureaucratic form of C&I High logically follows. Others note that the form of C&I High determines its function, re/producing the school subjects. Certainly, it is arguable that C&I High is the bureaucratic form— the (surrogate) parent figure— necessary to re/produce subjects. In this case the child grows desirous, resentful and suspicious of the parent. But like psychoanalysis, this metaphor reduces cultural or social possibilities to familial prohibitions. The high school cannot re/make (it with) C&I High. And C&I High must not defy or invade the high school. Surely more or less bio/logical and re/productive metaphors can be found to capture the uncanny resemblance between C&I High and the schools. Perhaps C&I High is in a parasitic or symbiotic relationship with high schools. Or as Marx and some materialists to follow noted, both of these institutions are superstructural, built on a base of economic circumstance. Their resemblance is less a coincidence or necessity than an achievement.

      Like the average high school, C&I High requires routine political upkeep. The boundaries of what counts as legitimate knowledge, along with a subject's identity, form and scope have to be actively defended and managed. According to Goodson (1992, 1993), proponents for school subjects actively compete or politick for status, which is conferred, not earned, through disciplinary forms. As he concludes, "the battle over the *content* of curriculum whilst often more visible is in many senses less important than the control over its underlying *form*" (1987, p. vii). For Hargreaves (1994), school subject practitioners actively guard against reforms that debalkanize conditions, blur boundaries, and flatten disciplinary status. It is in the interest of subjects with status to establish and maintain privilege, power and rank. Siskin (1994) observed similar activities in maintaining school subjects, and suggested that practitioners defend their subjects' identity to maintain relations with other subjects. On micro levels of decision-making, practitioners— administrators, teachers and professors— of the disciplines or subjects actively compete or politick for power, privilege, and prestige or status (Petrina, 1998). In these types of competitive environments, alternative alliances and structures are established. C&I High endures, but how long can it last?

Goodson, I. (1987). Series editor's preface. In T. Popkewitz (Ed.), *The formation of school subjects* (pp. vii-viii). New York: Falmer Press.

Goodson, I. (1992). On curriculum form: Notes toward a theory of curriculum. *Sociology of Education,* 65(1), 66-75.

Goodson, I. (1993). *School subjects and curriculum change* (3rd edition). London: Falmer Press.

Example #4: Theorizing Literacies

From: Petrina, S. (2000). The politics of technological literacy. *International Journal of Technology and Design Education 10*(2), 181-206.

In this example, technological literacy was reconceptualized as critical literacy, which meant that I had to draw on critical theory and new literacies:

'Technological literacy' rolls off the tongue quite smoothly, much like computer literacy, cultural literacy, ecological literacy, scientific literacy or workplace literacy (Greenwood-Gowan, 1992, 1994; McLaughlin, 1995; Noble, 1984a, 1984b; Orr, 1992; Shamos, 1995; Westbury & Purves, 1988). Although these constructs are nebulous by design, they are *not* impotent or meaningless. These constructs serve as links between action and ideology—they serve to govern some economic, political or social course of action. They are socially distributed and shared ideologically across groups with contradictory articulations and meanings. They help to diffuse a range of motives with popular appeal. This is to say that these constructs are 'always already' political.

For Paulo Freire (1970), literacy was an empowering, consciousness raising process, enabling people to analyse, resist, and transform social conditions which underlay inequality, oppression, and power. Literacy had little meaning for Freire outside of everyday practices, where particular technologies and texts form particular literacies. In Freire's work with underprivileged and disenfranchised adults, literacy was constructed through reading and writing. That which was read and written was selected for its emancipatory, political content. Texts were selected to inspire critical investigations of oppression and possibilities for liberation through collective action. Reading and writing engaged one in critical, conscious action to transform the world— to liberate oneself from oppression and power through praxis or reflective action. As a teacher, Freire recognised the 'always already' political nature of education, and consciously selected tools and texts to expose oppression and oppressors. Critical literacies were counterpoints to domination in practice. The processes of becoming literate—of forming a critical consciousness— and of teaching were, for Freire, overtly ideological and political.

Critical theorists of literacy have generally worked from Freire's ideas to reposition the politics of literacy. No more can literacy be seen as autonomous, neutral and without context. This 'autonomous' view of literacy, which has been the norm in technology education, fails to capture the political nature of reading and writing in practice. Street (1984, p. 95) argues that a much more robust notion can be found in an 'ideological' view of literacy. In this view, there is no essence of literacy— no essential meaning that can be derived through synthetic or interpretive work. Rather, the nature of literacy, or particular literacies, is situated in social practices taking place in specific cultural settings. Literacy is an issue of how reading and writing are constructed and practised through the politics of these settings. These politics involve power that structures inequality or social relations between competing individuals and groups and across class, gender, race, and sexuality (Lankshear & Lawler, 1987, p. 43-52). What literacy is or means depends on the practices whereby one learns, the purposes for which particular literacies are used, and the settings in which this takes place. Being critical generally means that first, 'there is the element of evaluation or judgment'. And second, 'there is the

element of knowing closely and "for what it is" that which is being evaluated: the object of evaluation or judgment' (Peters & Lankshear, 1996, p. 54).

Freire, P.: 1970, *Pedagogy of the Oppressed*, trans. by M.B. Ramos, Continuum, New York.
Lankshear, C. & Lawler, M.: 1987, *Literacy, Schooling and Revolution*, Falmer, New York.
Peters, M. & Lankshear, C.: 1996, 'Critical Literacy and Digital Texts', *Educational Theory* **46**, 51-70.
Street, B.: 1984, *Literacy in Theory and Practice*, Cambridge University Press, New York.

3. Assembling Theoretical Frameworks

1. Theoretical frameworks will always be dependent on the clarity of the thesis— that is, on how well an author articulates an argument or thesis (For directions on stating a thesis, see the *Writing Guide for Graduate Students*). First articulate a thesis, which will shape and be shaped by theory— a theoretical framework will follow in coversation with the thesis.

2. Widely explore theories that seemingly emerge from and resonate with your topic, problem, or data— you want your data to speak to, suggest and give rise to your theory. For example, a research topic or problem focusing on teenage girls could suggest gender theory, media theory and the body, or theories of ennui or liberty (i.e., desire for autonomy and independence). However, there will also be times when you may want to work from a theory (e.g., psychoanalysis) toward generating a topic, problem, or data, etc. (Alert: aim for theory grounded in a topic or data and not grounded theory).

3. Once you have identified theories that are emergent from and appropriate to your topic and data, begin by assembling and articulating the various authors and ideas into a brief (300-400 words or so) summary. Write in conversation with theorists and your thesis. Write to frame the topic or problem— the thesis will focus and the theoretical framework will frame the topic or problem.

4. In this summary of the framework, take the opportunity to clarify theories and concepts. Also write to orient the framework toward the topic or data. Like the thesis, the theoretical framework frames the reader for understanding or making meaning. Think through a rewrite to frame and orient the reader.

5. If writing a scholarly essay, after you have assembled a summary of the theoretical framework, proceed to write iteratively to thread and weave the framework throughout the essay. If conducting research, after you have assembled a summary of the theoretical framework, proceed to write iteratively to thread, weave, and account for the framework throughout the essay. The emphasis in both cases is on framing for meaning-making.

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Paulston, R. (Ed.) (1996). *Social cartography: Mapping ways of seeing social and educational change*. New York: Garland.

Paulston, R. (1977). Social and educational change: Conceptual frameworks. *Comparative Education Review, 21*(2/3), 370-395.

Petrina, S. (2008a). *The principles of research (as rhetoric)*. Unpublished manuscript.

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Reviewing Literature

1. Overview/ Introduction of subject, theories and issues involved.
   - Type of literature review (theory, methodology, policy, quantitative research, qualitative research)
   - Scope- what type of resources are best
   - Search for information: wide enough and narrow enough
2. Categories selected as natural divides of thesis and reviewed material:
   - Organize material around the research question or thesis
   - Include areas of controversy
3. Analysis and interpretation of overarching similarities and variances of ideas: Include
   - Provenance: credentials, evidence
   - Objectivity: authors point of view and representation of other views
   - Persuasiveness: which theses are most convincing vs least?
   - Value: Does this work contribute in a significant way to understanding the subject.
4. Summation or conclusions of thesis generating idea in context with materials reviewed.
   - What is known and not known
   - Areas of further research
   - Relevant, appropriate and, useful

Literature Review Matrix

Question (author's view)	Article Information	Analysis (strengths & weaknesses)
Formulation of problem/issue		
Clearly defined: Scope, severity, relevance		
Would another perspective be more effective?		
Researcher's orientation: interpretive, critical science, both?		
Author's theoretical framework (psychological, developmental, feminist?) what voice?		
Relationship between theoretical and research perspective		
Relevant and representative literature (inclusive) used?		
If research, how well was it done (measurements, analysis, validity)		
"Popular readership", language use, emotional, rhetorically toned, or reasoning		
Structure clear? Deconstruction possible? Cause-effect		

*Matrix 1 adapted by Linda A. Cannon

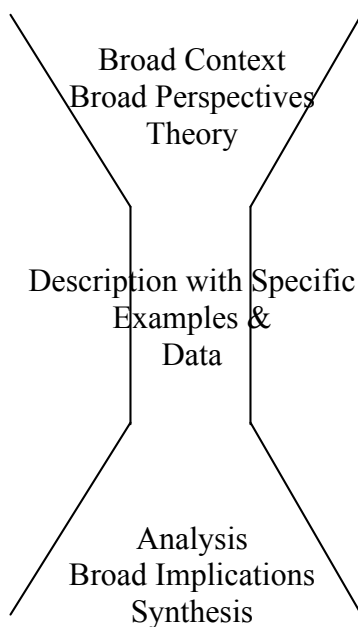| Category	Criterion	1	2	3	4
Coverage	Justified criteria for inclusion and exclusion from review	Did not discuss the criteria inclusion or exclusion	Discussed the literature included and excluded	Justified inclusion and exclusion of literature	
Synthesis	Distinguished what has been done in the field what needs to be done	Did not distinguish what has and has not been done	Discussed what has and has not been done	Critically examined the state of the field	
	Placed the topic or problem in the broader scholarly literature	Topic not placed in broader scholarly literature	Some discussion of broader scholarly literature	Topic clearly situated in broader scholarly literature	
	Place the research in the historical context of the field	History of topic not discussed	Some mention of history of topic	Critically examined history of topic	
	Acquired and enhanced the subject vocabulary	Key vocabulary not discussed	Key vocabulary defined	Discussed and resolved ambiguities in definition	
	Articulated important variables and phenomena relevant to the topic	Accepted literature at face value	Some critiques of literature	Offered new perspective	
Methodology	Identified the main methodologies and research techniques that have been used in the field, and their advantages and disadvantages	Research methods not discussed	Some discussion of research methods used to produce claims	Critiqued research methods	Introduced new methods to address problems with predominant methods
	Related ideas and theories in the field to research methodologies	Research methods not discussed	Some discussion of appropriateness of research methods to warrant claims	Critiqued appropriateness of research methods to warrant claims	
Significance	Rationalized the practical significance of the research problem	Practical significance of research not discussed	Practical significance of research discussed	Critiqued practical significance of research	
	Rationalized the scholarly significance of the research problem	Scholarly significance of research not discussed	Scholarly significance of research discussed	Critiqued scholarly significance of research	
Rhetoric	Was written with a coherent, clear structure that supported the review	Poorly conceptualized, haphazard	Some coherent structure	Well developed, coherent	

Boote, D.N. and Beile, P (2005). Scholars before researcher: On the centrality of the dissertation literature review in research preparation, *Educational Researcher, 34* (6). p.3-15.
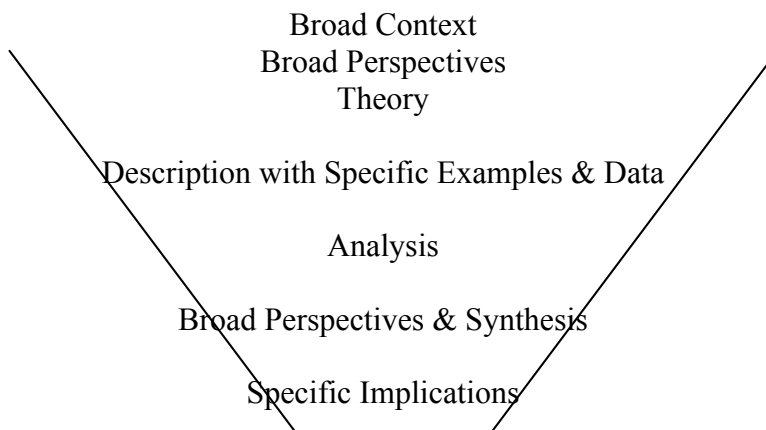
Approaches to Writing
Stephen Petrina

There are a variety of general approaches to writing, including the hourglass, funnel and inverted funnel approaches. Generally, it is important to introduce a topic, describe, analyze and synthesize. Depending on the methodology, it may also be important to deconstruct. In cultural studies, writing (and research) often involves tracking, mapping and framing. Hence, one might track (describe) trends or discourses, map interrelationships among (analyze) trends or discourses, and frame (deconstruct or synthesize) the trends or discourses.

1. Hourglass

Broad Context
Broad Perspectives
Theory

Description with Specific
Examples &
Data

Analysis
Broad Implications
Synthesis

2. Funnel

Broad Context
Broad Perspectives
Theory

Description with Specific Examples & Data

Analysis

Broad Perspectives & Synthesis

Specific Implications

3. Inverted Funnel

Specific Example

Personal Narrative or Story

Implications

Broad Perspectives

Synthesis and Theory
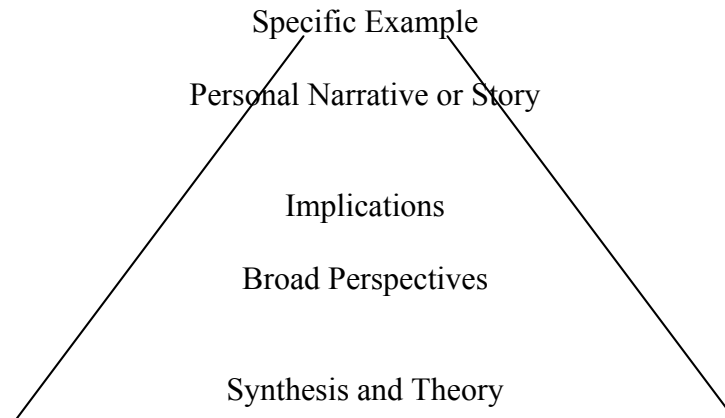
Writing Process

1. ## Organization
   a. Chronological Organization
   b. Conceptual Organization

   c. Practical Organization

2. ## Description
   a. What did the author(s) and texts actually say?
   b. What did they not say?

3. ## Analysis
   a. How do the authors and texts compare? Contrast?
   b. What is beneath what they say? What are they *really* saying?

4. ## Deconstruction
   a. What are the binary oppositions in the texts?
   b. How can these oppositions be deconstructed?

5. ## Synthesis and Explanation
   a. How do the authors and texts fit together?
   b. What underwrites what these authors and texts are saying?
   c. Can new directions be created from the totality of authors and texts reviewed?
   d. How does my work or narrative relate to this?

Writing Tips

❑ **Active Language:** *Always* use active (as opposed to passive) language. This is helpfully presented in Diana Hacker's A Pocket Style Manual. In fact, this is the best guide for writing:

Hacker, D. (2004). *A pocket style manual* (fourth ed.). Boston: St. Martin's Press.

❑ **Action verbs:** Use active verbs to give voice to authors. APA style suggests that verbs be in past tense for writing reviews of literature, research reports, etc. MLA style advises authors to use the present tense in writing. The key is to be consistent!

APA Style Manual, 5th ed. suggests the use of past verb tense for reviews of literature. Use past for data and findings. And use present for conclusions, etc to draw the reader into the discussion (see p. 41 and section 2.02).

APA also states that present perfect tense is suitable for a literature review, although it suggests past tense be used. "MLA disagrees with the concept of citing any written material in past tense on these simple grounds: the cited text exists here and now, regardless of when it was written or when it is read. This is fundamentally what distinguishes publication from oration. It is the essence of written text: technologies for writing give rise to the concept of the "living" word. I, along with others from my foundational discipline (the humanities), disagree with any notion that what exists in manuscript, print or digital artifact should be spoken of in the past" (Teresa Dobson, email correspondence, 2005).

❑ The following list will help provide variety in giving voice to authors:

a. acknowledged
b. according to
c. agreed with
d. argued
e. asserted
f. cautioned
g. compared
h. concluded
i. contended
j. continued
k. concurred with
l. determined
m. entertained
n. identified
o. illustrated
p. issued
q. indicated
r. inferred
s. insisted listed
t. located
u. maintained
v. manipulated
w. obtained
x. proposed postulated
y. reasoned
z. reported
aa. said
bb. stated
cc. stipulated
dd. suggested
ee. supported
ff. wrote

Appendix
Top 10 Tests of Writing

1. Screen Test (Would this research have a role or "play" in other venues (e.g., from education to sociology?)

2. Substance Abuse Test (Is the "so what?" question exaggerated, neglected or mishandled?)

3. Radioactive & Radon Test (Is it "hot'? Is the "so what?" question addressed? Is it relevant?)

4. Vision & Hearing Test (Is there an oversight or myopia? Is there evidence of listening?)

5. DNA Test (Is there evidence of disciplinary or interdisciplinary structure?)

6. Fertility Test (Are there creative insights to generate new interpretations?)

7. Litmus & Acid Test (Are there signs of ideas having gone through tests of trials? Is there wisdom?)

8. Vocational Dexterity & Intelligence Test (How were the data and evidence handled?)

9. Lie Detector (Test of Integrity) (Is what was promised or said really what was done?)

10. Standardized Test (Test of Style) (How is it said? Is it (merely) a reliable, standard form? Is there a form or story to what is said?)