Exploiting Rapid Change in Technology Enhanced Learning... for Post Graduate Education

MFT Group. Session 2: Research Problem
A research problem is not solved by apparatus; it is solved in a man's head.

— Charles Kettering —
Agenda

1. Examples of the application of last session learning
2. Research Problem.
3. Criteria to evaluate the quality of a problem.
4. Problem statement.
5. Criteria to evaluate a problem statement.
6. Common flaws in the formulation of research problems.
7. Q & A
8. Exercise
Reflecting upon our own processes is the first step to improve them.

Write down two paragraphs in which you reflect upon how you have approached the thesis process so far. State similarities and differences to what we discussed today.
Upon reflection I have to state I have always been a student who can work independently and strive to produce quality documents. I have been preparing for my master's degree while still busy with my honours. I decided that "memory and ageing" is not only interesting but relevant. Choosing my topic and completing my proposal was easy. However, starting with my dissertation was daunting. At the distance learning university I study at, we are always given tutorial letters to give students relevant information and guidance with regard to what the expects. For masters and doctoral dissertations there are no tutorial letters and you have to rely on your supervisor for guidance.

I was unprepared and ignorant but not unwilling to learn. It was only through the DoctoralNet webinars and reading books on dissertation writing I realized the different stages. I am goal driven and determine to overcome any barriers. Managing my time effectively has been a challenge I am working at diligently. Because I could not establish a fluid relationship with my supervisor and I have no peers, it has been an emotional and frustrating journey. In order deal with the state of affairs, I have found a retired professor of statistics I am consulting with and I am attending webinars to help me improve my academic writing and how I deal with my dissertation. Although I have a mammoth task ahead and a deadline that is too close, I am determined to finish and produce a dissertation that complies with most of the characteristics of an outstanding dissertation as defined by Lovitts (2007).
All begins with the selection of a topic

The topic is the general area that interests you.
What Is a Research Problem?

It is what calls your attention within the topic because it seems not to be working properly and has to be studied.
How do you know you have a promising research problem?
Criteria to Evaluate Problems

- Clearly stated
- Focused
- Usefulness or significance
- Feasible
- Type of information needed
- Access to information
- Interesting to you
Evaluate Your Research Problem Using These Criteria

You can use the automation developed by DoctoralNet to established how promising your research problem is.
It is time to write the problem statement
What Is the Problem Statement?

It is the specific description of what intrigues the researcher.
Generally speaking, it includes briefly what it is already known about the problem situation and that establishes the context from which the research problem emerges, what is unknown and deserves to be studied – the research problem- and why it is important to know about that problem.
How Can You Approach Such a Task
Be aware that you need to:

• Be brief.
• Show the problem’s importance with a compelling opening statement.
• Present the problem in the perspective of the larger field of study.
• Show how the problem generalizes to or across other issues/fields.
• Limit the problem -show the focus in/on your study.
• Give the reader a perspective on the whole study being proposed.
What Does It Mean? (1)

• **Be brief:** not more than 2 paragraphs.
• **Compelling opening statement:** a sentence that catches the reader’s attention to the importance of the problem.
• **Perspective of the larger field of study:** prior research that shows the need to study the problem and sets its theoretical framework.
• **Generalization to or across other fields of study:** link the problem to other relevant issues/fields to support the impact of studying the problem- its implications.
What Does It Mean? (2)

- **Limit the problem:** state clearly what aspect of the problem you focus on. This is in fact the description of the research problem that intrigues you.
- **Give a perspective:** Let the reader know what you really intent to do. In other words, state the purpose of the study as well as the general approach you will use to study the problem.
Example 1

Researchers have argued that relationship capital is intrinsically linked to shareholder value (Bontis & Serenko, 2009; Daum, 2002; Kaplan & Norton, 2004; Lacey, 2007; see also Ledingham, 2003; MacMillan et al., 2004; Porter, 1985, 2008; Prior, 2006, 2007). The problem is how to understand the empirical relationship between the quality of a firm's relationship with its stakeholders and shareholder value. To confront this problem, I designed and tested a statistical model and instrument that enables researchers to empirically link stakeholder generated relationship capital to shareholder value.
Example 2

Digital photography is a recent, novel information technology that has been widely and rapidly adopted across a variety of domains. To understand the role of digital photography as a technology used in scientific work, this study will examine marine mammal researchers who use photo-identification as a tool for gathering, organizing and analyzing data about whales, dolphins, otters, seals, manatees, and other marine animals. Many marine mammal researchers have recently switched from film to digital photography, and we will see that this seemingly minor change has contributed to a number of fundamental alterations to the ways in which they do their scientific work.

The study itself examines the role of new technologies entering scientific practice and regular use by focusing on digital photography. Orlikowski calls this perspective the "practice lens" for studying technology:

Rather than trying to understand why and how a given technology is more or less likely to be appropriated in various circumstances, a practice lens focuses on knowledgeable human action and how its recurrent engagement with a given technology constitutes and reconstitutes particular emergent structures of using the technology (Orlikowski, 2000, p. 421)

The central goal of using this approach in this research project is to understand the consequences of this digitization and computerization of photography for marine mammal scientists. It is also hoped that this research will contribute in general to a fuller understanding of the roles technologies can play in regular use.

Taken from (Meyer, 2007, p.14)
How do you know you have a well-written problem statement?
Criteria to Evaluate Problem Statements

- Is it written in not more than 2 paragraphs?
- Does it open with a compelling statement?
- Does it synthesize prior research?
- Does it contain a clear explanation of the research problem?
- Does it state the purpose of the research clearly?
- Does it summarize the theoretical foundation of the study?
- Does it include the implications of the study?
- Does it reflect the need for your study?
- Are all the previous criteria given 1 or 2 sentences each?
Evaluate Your Problem Statement Using These Criteria

You can use the automation developed by DoctoralNet to establish if your problem statement is good enough.
Common Flaws in the Formulation of Research Problems

- A cause is assigned
- The solution is included
- They are based on conjecture or belief rather than fact
- They are too long
- Do not describe actual current condition or problem condition
- Do not describe the ideal or desired condition
- It is not possible to measure or evaluate them
- They unclear
- They are not specific
- They refer to issues outside of the scope of the actual problem

Adapted from Miller (2007)
Advanced Idea for Today:

A promising research problem is the starting point of a well-developed thesis/dissertation.
In the next minutes, you are invited to ask questions about what has been discussed today. Feel free to not only ask questions but also answer them and make suggestions to improve the group work.
Exercise

Reflecting upon our own processes is the first step to improve them.

Write down the problem statement of your thesis/dissertation.

Write down one paragraph reflecting on how promising your research problem is.
References


What’s Up at DoctoralNet?

Theme for November: HOW MUCH CAN YOU GET DONE BETWEEN NOW AND WHEN CHRISTMAS TAKES YOU AWAY FROM YOUR STUDIES?

1. Phone apps for both IOS and Android available soon.
2. Boxed sets cluster your favorite topics in one place - [https://resources.doctoralnet.com/boxed-sets.html](https://resources.doctoralnet.com/boxed-sets.html)
3. Upcoming webinars…
   1. Transferable Skills 6: 21st Century Scholars Research
   2. Designing Your Methodology Series: Literature that Backs Up Your Design
   3. Mastering Academic Writing: Assuring coherence of wording
   4. Moving Forward with Theses: Literature review
   5. Transferable skills 7: 21st Century Scholars - Your Online Presence
   6. Designing Your Methodology Series: Design that Adds to the Literature
   7. Role of Theory in Research
   8. Mastering Academic Writing: Assuring Coherence of Ideas
   9. Moving Forward with Theses: Research Questions
   10. Managing Theory in Academic Papers

For full list through end of year go to [https://www.bigmarker.com/communities/doctoralnet/conferences](https://www.bigmarker.com/communities/doctoralnet/conferences)