Researchers move back and forth between their problem, aim, objectives, and research questions. It's not a linear process.
READ.

WRITE.

RINSE.

REPEAT.

THE RESEARCH CYCLE.
THE PROBLEM STATEMENT
What is the Problem Statement?

Research problems may not first present themselves as fully formed problems.

- A problem can be anything that you find unsatisfactory or unsettling, a difficulty of some sort, a state of affairs that needs to be changed, anything that is not working as well as it might.
- Research problems are usually identified from several sources including the research literature, problems in practice or work-related contexts, and personal biography or history.

- A good problem statement:
  - Asks about a relationship between two or more variables.
  - Is clear.
  - Should be testable by empirical methods.
  - should be possible to collect data to answer the questions asked
  - Should not represent a moral or ethical position.
When choosing a problem, consider...

- Workability
- Critical mass
- Interest
- Theoretical value
- Practical value
A problem statement...

- Uses a “narrative hook.”
- Conveys a distinct research problem or issue.
- Clearly identifies the issue or problem that leads to a need for the study.
- Refrains from using quotations, especially long ones.
- Stays away from trite phrases or idioms.
- Might contain numeric information for impact.
- Indicates why the problem is important by citing numerous references that justify the need to study the problem.
- Frames the problem in a manner consistent with the approach to the research in the study.
- Has a clear rationale.
- Contains your narrow topic of interest
- Contains a research question that does not call for simple yes or no answers.
- Is clear, concise, compelling
When developing your problem statement, consider:

- What is your project about?
- Why are you conducting this project?
- Why should anyone care about your subject?
- What is the big picture, the context or the conditions that make it important to pursue this topic?
- When you are finished with the project, what is the one point that you want to leave with your readers?
- What will be the contributions or implications of your dissertation?
Steps to develop a clear and functional problem statement

- Identify a research topic.
- Read enough that you are able to refine the topic as a research problem.
- Make a decision about the methodology.
- Decide what type of problem statement might be most appropriate.

- State the problem as clearly as possible
- Critical, but fairly brief, section
- The way you state the problem will directly influence the way you present and summarize the results.
You have several choices about the way the problem is stated

- Hypotheses
  - Examples:
    - There is a positive relationship between students’ use of computers in learning mathematics and their achievement in mathematics.
    - Students retained in first grade will have lower achievement in mathematics than those who are promoted.
    - There is a positive relationship between first-grade students’ achievement in reading and the time parents spend reading to them at home.
You have several choices about the way the problem is stated

- Research questions and hypotheses
  - Examples:
    - Does teacher involvement in decision making affect teachers’ morale?
    - Teacher involvement in decision making varies from school to school within a district
    - Teacher involvement in decision making varies with decision making content.
    - Teacher involvement in decision making affects morale in a positive direction only in certain schools and only with certain types of decision-making content.
You have several choices about the way the problem is stated

- Single question
  - Examples:
    - In what ways do students use the Internet when they are working independently on the computer?
You have several choices about the way the problem is stated:

- General question followed by two or more specific questions
  - Example:
    - Is the curriculum audit an effective and feasible tool for educational change?
    - Is the audit feasible in terms of fiscal costs?
    - Is the audit feasible in terms of participant time?
    - Is the audit effective in the change process, from the perspective of administration?
Getting started writing your problem statement

◦ Talk it through first and then write about it.
◦ Engage in free writing while thinking about the focus statement.
◦ Write your focus statement in first person.
◦ Continually revisit your focus statement.
◦ Gain insight into your area of focus through self-reflection.
  ◦ Explore your understanding of the following.
    ◦ The theories that impact your practice
    ◦ The educational theories you hold
    ◦ How your work fits into a larger context
    ◦ The historical contexts of your school and schooling
    ◦ The historical contexts of how you arrived at your beliefs
◦ Gain insight into your area of focus through descriptive activities
  ◦ Try to describe the situation you want to change or improve by focusing on who, what, when, where, and how.
  ◦ What evidence do you have that this issue is a problem?
◦ Gain insight into your area of focus through explanatory activities
  ◦ Focus on the why
There has been renewed debate in recent years about beginning reading instruction, especially at the first-grade level, consistent with a half century of dispute about what works best in developing young readers (Adams, 1990; Bond & Dykstra, 1967; Chall, 1967). For example, in recent years, some have argued for more instruction of beginning reading skills such as phonics, whereas some have called for more reading of real literature and writing. In contrast, still others have conceptualized excellent beginning reading instruction as balancing skills instruction and holistic reading and writing (Allington, Guice, Michelson, Baker, & Li, 1996; Baumann, Hoffman, Moon, & Duffy-Hester, 1998; Hoffman et al., 1998; McIntyre & Pressley, 1996; Pressley, 1998). This third position is consistent with the major conclusion emerging from the effective school and classroom literature that effective instruction involves a complicated mix of elements (Bliss, 1991; Bryk & Thum, 1989; Edmonds, 1979; Firestone, 1991; Good & Brophy, 1986; Lezotte, 1986; Mortimore, 1991; Roehler & Duffy, 1984; Rosenshine, 1979; Rutter, 1983; Stallings & Kaskowitz, 1974; Stedman, 1988).
Problem Statement Example 2

After receiving much attention in the past few years, Cassidy and Cassidy (2005–2006) revealed in their latest annual review of hot topics in reading that experts in the field concluded guided reading is no longer a hot topic in the reading community. That may come as a surprise to many like us who spend time supporting teachers providing literacy instruction in primary classrooms. After struggling with how to accommodate individual differences in whole group instruction, teachers are rediscovering the value of balancing whole group instruction with the use of small groups to differentiate instruction in their reading programs. For some teachers who have been around long enough to have seen grouping formats come and go, the challenge has been how to return to small group reading instruction without returning to all the problems that caused people to move away from the practice in the first place. Conceiving of small group reading instruction as guided reading seemed to provide that needed new direction. To suggest as the survey does that guided reading is no longer hot because either the change has been implemented successfully or is no longer being attempted, seems to deny what we see happening in classrooms every day.
Problem Statement Example 3

It seems intuitive that teacher knowledge (Hill, Rowan, & Ball, 2005) and teacher interest (Alexander, 2003) would be linked to student achievement. Indeed, both content knowledge (what to teach) and pedagogical expertise (how to teach it) are crucial to effective classroom instruction (Griffith, Bauml, & Barksdale, 2015). Therefore, similar to other professional faculties, such as medicine and law, the mandate of teaching programs is to give prospective teachers the specialized expertise they need to develop into professionals. Yet, like all forms of education, those responsible for teacher training programs must consider both the predispositions of their incoming learners and the content of the curriculum. With regards to training early reading teachers, it is now widely accepted that higher classroom quality predicts better student performance (McLean, Sparapani, Toste, & Connor, 2016); in turn, classroom quality hinges on teachers’ familiarity with basic language constructs (Cunningham, Perry, Stanovich, & Stanovich, 2004; McCutchen, Abbott, et al., 2002; McCutchen, Harry, et al., 2002; Piasta, Connor, Fishman, & Morrison, 2009; Spear-Swerling & Brucker, 2004; Washburn, Joshi, & Binks-Cantrell, 2011). However, teacher knowledge surrounding instruction for more advanced readers, such as those who have graduated into reading longer pieces of fiction, has been comparatively understudied (cf. McCutchen, Green, Abbott, & Sanders, 2009). The goal of the current investigation was to examine connections among three types of teacher knowledge with the potential to impact classroom quality: preservice teachers’ own print exposure, their knowledge of print exposure, and their ability to plan for instruction.
Exercises

◦ Read several problem statements in journal articles related to your discipline.
◦ Apply the following criteria to three of them.
  ◦ Uses a “narrative hook.”
  ◦ Conveys a distinct research problem or issue.
  ◦ Clearly identifies the issue or problem that leads to a need for the study.
  ◦ Refrains from using quotations, especially long ones.
  ◦ Stays away from trite phrases or idioms.
  ◦ Might contain numeric information for impact.
  ◦ Indicates why the problem is important by citing numerous references that justify the need to study the problem.
  ◦ Frames the problem in a manner consistent with the approach to the research in the study.
  ◦ Has a clear rationale.
  ◦ Contains a narrow topic of interest
  ◦ Contains a research question that does not call for simple yes or no answers.
  ◦ Is clear, concise, compelling
Unless its research purposes are clear, concise, and manageable, a study is unlikely to succeed.
What is the Purpose Statement?

- A research purpose should refer to observable behaviors and be sufficiently specific to guide the planning and conduct the research.
- Establishes the intent of the entire study.
- Most important statement in the entire study.
- Usually last part of the introduction.
- Why you want to do the study and what you intend to accomplish.
- The purpose builds on a need (the problem) and is refined into specific questions (the research questions).
Qualitative Purpose Statement

- Contains information about a central phenomenon explored in the study, the participants, and the research site.
- Use words such as purpose, intent, or objective.
- Set the statement off as a separate sentence or paragraph.
- Use the language of research.
- Past tense.
- Focus on a single phenomenon.
- Narrow the study to one idea to be explored or understood.
- Use action verbs to convey how learning will take place.
- Keep your inquiry open and convey an emerging design.
- Use neutral words and phrases.
- Provide a general working definition of the central phenomenon or idea.
- Include words that state the qualitative research strategy to be used.
- Mention the participants in the study.
- Identify the site for research.
- Include some language that delimits the scope of the participation – who exactly is participating in the study – who is it limited to?
Qualitative Purpose Statement Script (Creswell, 2014)

- Script that should be helpful in drafting a statement
  - The purpose of this _____ (strategy of inquiry) study is (was? Will be?) to ___ (understand, explore, develop, discover) the ____ (central phenomenon being studied) for ____ (the participants) at ____ (research site). At this stage in the research, the ____ (central phenomenon being studied) will be generally defined as ____ (general definition).
Quantitative Purpose Statement

◦ Include the variables in the study and their relationship, the participants, and the research site; includes language associated with quantitative research
◦ Include words to signal the intent of the study, such as purpose, intent, or objective
◦ Identify the theory, model, or conceptual framework
◦ Identify the independent and dependent variables, control variables
◦ Use words that connect the independent and dependent variables to indicate they are related
◦ Position or order the variables from left to right, with independent variable followed by the dependent variable
◦ Mention the specific type of strategy of inquiry used in the study
◦ Make reference to the participants or unit of analysis in the study and mention the research site
◦ Generally define each key variable, preferably using established definitions found in the literature
Quantitative Purpose Statement Script (Creswell, 2014)

- The purpose of this ____ (experiment? Survey?) study is (was? Will be?) to test the theory of ___ that ____ (describes outcomes) or (compares? Relates?) the ____ (independent variable) to ____ (dependent variable), controlling for ____ (control variables) for ____ (participants) at ____ (research site). The independent variable(s) ____ will be defined as ____ (provide a definition), and the control and intervening variable(s), ____ (identify the control and intervening variables) will be defined as ____ (provide a definition).
Mixed Methods Purpose Statement

- Contains the overall intent of the study, information about both qualitative and quantitative strands of the study, and a rationale incorporating both strands to study the research problem.
- Begin with words that signal intent, such as purpose or intent
- Indicate the overall purpose of the study from a content perspective so the reader has an anchor to use to understand the overall study
- Indicate the type of mixed methods design
- Discuss the reasons for combining both quantitative and qualitative data
Mixed Methods Purpose Statement Script (Creswell, 2014)

- Script for convergent mixed methods strategy in which quantitative and qualitative data are collected and analyzed separately and then merged.
- This mixed methods study will address ___ (overall content aim). A convergent mixed methods design will be used, and it is a type of design in which qualitative and quantitative data are collected in parallel, analyzed separately, and then merged. In this study ___ (quantitative data) will be used to test the theory of ___ (the theory) that predicts that (independent variable) will (positively, negatively) influence the ___ (dependent variables) for ___ (participants) at ___ (site). The ___ (type of qualitative data) will explore ___ (central phenomenon) for ___ (participants) at ___ (site). The reason for collecting both quantitative and qualitative data is to ___.

(Creswell, 2014)
Mixed Methods Purpose Statement Script (Creswell, 2014)

◦ Script for explanatory sequential design in which the intent is to understand the quantitative data at a deeper level using follow-up qualitative data

◦ This study will address ___ (content aim). An explanatory sequential missed methods design will be used, and it will involve collecting quantitative data first and then explaining the quantitative results with in-depth qualitative data. In the first, quantitative phase of the study, ___ (quantitative instrument) data will be collected from ___ (participants) at ____ (research site) to test ___ (name of theory) to assess whether ___ (independent variables) relate to ____ (dependent variables). The second, qualitative phase will be conducted as a follow up to the quantitative results to help explain the quantitative results. In this explanatory follow-up, the tentative plan is to explore ___ (the central phenomenon) with ___ (participants) at ____ (research site).
Mixed Methods Purpose Statement Script (Creswell, 2014)

○ Script for exploratory sequential design in which the intent is to develop measures or instruments that work with a sample by first collecting qualitative data and then using it to design measure or the instrument that can be tested with a sample of a population.

○ This study addresses ___ (content aim). The purpose of the exploratory sequential design will be to first qualitatively explore with a small sample and then to determine if the qualitative findings generalize to a large sample. The first phase of the study will be a qualitative exploration of ____ (the central phenomenon) in which ___ (types of data) will be collected from ___ (participants) at ___ (research site). From this initial exploration, the qualitative findings will be used to develop assessment measures that can be administered to a large sample. In the tentatively planned quantitative phase, ___ (instrument data) will be collected from ___ (participants) at ___ (research site).
Purpose Statement Examples

- A research purpose that lacks specificity:
  - The research purpose is to explore the effectiveness of the ABC Career Planning Program for students.

- Improved version of the research purpose:
  - The research purpose is to determine how effective the ABC Career Planning Program is in helping students identify career options that are consistent with their interests and talents.
Purpose Statement Example 1

We aimed to develop an understanding of what effective Grade 1 literacy instruction is like in contemporary America. We viewed this as a qualitative study, with a goal of coming to general conclusions by identifying commonalities across excellent Grade 1 classrooms. Based on our previous research, we came to this study with certain expectations about what might be observed (i.e., theoretical sensitivities; Strauss&Corbin, 1998). Even so, we were determined to be open-minded with respect to what we would see in the classrooms studied in this investigation, wanting to be sensitive to new possibilities not documented previously either in the general effective education research or in our own research on beginning literacy instruction.
The purpose of this article is to share the findings of the first national guided reading survey. The survey was conducted as a means to tap primary classroom teachers’ views about their current attempts to implement guided reading. Our intent is to shed light on the kinds of methods and materials that can and should be used to teach guided reading. We also believe that our findings have the potential to guide future professional development aimed at supporting teachers in enhancing and improving guided reading practices.
Purpose Statement Example 3

Very little research has been carried out examining how teacher knowledge affects instructional planning for older elementary students; consequently, our hypotheses were necessarily speculative. However, given that teacher knowledge has been positively correlated with explicit instruction in the younger grades (McCutchen, Abbott, et al., 2002; McCutchen, Harry, et al., 2002; Piasta et al., 2009), we hypothesized that preservice teachers who understood the impact of print exposure, both in their own lives and in the lives of their students, would be more inclined to prioritize explicit teaching and student reading when planning for instruction. Specifically, we anticipated positive relations among preservice teachers’ own levels of print exposure, their knowledge of print exposure for their students, and the amount of time allocated for explicit teaching and student reading in the Language Arts Activity Grid.
Exercises

- Practice writing a purpose statement for your proposed study, using one of the scripts presented (based on the possible research design of your study).
Here's to no more dissertation-related crying.... Probably.