INTRODUCTION

It is a constant complaint among those who evaluate proposals that the most frequent deficiency noted by them is the lack of a clear problem
statement to define and guide the inquiry. The issue of how to write a problem statement becomes important.

WHAT IS A RESEARCH PROBLEM?

Generally speaking a research problem is a situation that needs a solution and for which there are possible solutions. If a situation has no possible solutions then it makes little or no sense expending resources researching it. Take this statement, “everybody wants to go to heaven but nobody wants to die”. Dying looks like a problem that needs a solution yet there is no possible solution to it. People must die. A research on how people can live forever makes little or no sense.

A research problem may be described as an incongruence; a discrepancy between what is and what ought to be. It may be also described as the gap in knowledge that needs to be filled.

WHAT IS A PROBLEM STATEMENT?

A problem statement is the description of an issue currently existing which needs to be addressed. It provides the context for the research study and generates the questions which the research aims to answer. The statement of the problem is the focal point of any research. A good problem statement is just one sentence (with several paragraphs of elaboration). For example it could be:

"The frequency of job layoffs is creating fear, anxiety, and a loss of productivity in middle management workers."

While this problem statement is just one sentence, it should be accompanied by a few paragraphs that elaborate on the problem. The paragraphs could cover present persuasive arguments that make the problem important enough to study. They could include the opinions of
others (politicians, futurists, other professionals); explanations of how the problem relates to business, social or political trends via presentation of data that demonstrates the scope and depth of the problem.

A well articulated statement of the problem establishes the foundation for everything to follow in the proposal and will render less problematic most of the conceptual, theoretical and methodological obstacles typically encountered during the process of proposal development. This means that, in subsequent sections of the proposal, there should be no surprises, such as categories, questions, variables or data sources that come out of nowhere: if it can't be found in the problem section, at least at the implicit level, then it either does not belong in the study or the problem statement needs to be re-written.

WHAT ARE KEY COMPONENTS OF THE STATEMENT PROBLEM?

Problem statements often have three elements:

1. The problem itself, stated clearly and with enough contextual detail to establish why it is important

2. The method of solving the problem, often stated as a claim or a working thesis

3. The purpose, statement of objective and scope of the project being proposed.

These elements should be brief so that the reader does not get lost. One page is enough for a statement problem.

Criteria for Research Problem Statements:

- The statement of the problem should clearly indicate what is to be investigated.
• The actual statement may be in a declarative or in a question form.
• The statement should indicate the variables of interest and the specific relationship between the variables that are to be studied.
• Please note: In some qualitative methodologies, a statement of variables will not be possible and should not be done. However, an explanation of the qualitative methodology and the parameters of the research methodology should be explained.

WHAT IS THE ROLE OF PROBLEM STATEMENT?

The problem provides the context for the research study and typically generates questions which the research hopes to answer. In considering whether or not to move forward with a research project, you will generally spend some time considering the problem.

In your proposal the statement of the problem is oftentimes the first part to be read with scrutiny. I am ignoring the title and the abstract because ideally a title should be born out of a problem statement and an abstract should be a summary after the problem has already been dealt with. The problem statement should, therefore, "hook" the reader and establish a persuasive context for what follows.

You need to be able to clearly answer the question: "what is the problem"? And "why is this problem worth my attention"? At the same time, the problem statement limits scope by focusing on some variables and not others. It also provides an opportunity for you to demonstrate why these variables are important.

WHERE DOES A PROBLEM STATEMENT ORIGINATE FROM?
A good problem originates from a research question formulated out of observation of the reality. A literature review and a study of previous experiments, and research, are good sources of research questions that are converted to statements of problem. Many scientific researchers look at an area where a previous researcher generated some interesting results, but never followed up. It could be an interesting area of research, which nobody else has fully explored.

The research question is formulated and then restated in the form of a statement that notes the adverse consequences of the problem. The type of study determines the kinds of question you should formulate: Is there something wrong in society, theoretically unclear or in dispute, or historically worth studying? Is there a program, drug, project, or product that needs evaluation? What do you intend to create or produce and how will it be of value to you and society?

Pose questions such as:

What "should" be occurring? (For example: Based on the national average, small scale farmers in Bungoma district should be harvesting (xy) tons of maize per acre)

What is occurring? (For example: A recent household survey reported that 56% of these farmers harvest only (xy-ab) tons per acre.)

What could happen if the problem is not addressed? (For example: persistent low farm productivity in the district may lead to widespread food insecurity and defeat the government policy on the same.)

Common sources of research problems are:
• Personal experience and interests of researchers.
• Various theories in the discipline of the researcher.
• Related Literature- Literature from one’s own area of interest.
• A reproduction of past research studies.

HOW TO WRITE THE STATEMENT PROBLEM

The problem statement implies some question that your research will be answering. Sometimes it is necessary to draft or pre-write for a while to discover what that point will be (and often writers are unsure of their point until they have written the draft proposal and discover the point near the end of the proposal).

When you set up to write a statement problem you should know that you are looking for something wrong… or something that needs close attention. Your problem statement is the statement that makes a point about the issues and information you are discussing, and is what the rest of the proposal hinges upon. It is not just your topic, but what you are saying about your topic. In other words there must be very good communication between your topic and the statement problem.

The importance of the problem should receive considerable and persuasive attention [note that importance is inevitably subjective and will vary from researcher to researcher]. Nevertheless objectivity can be injected by answering questions such as these:

Is the problem of current interest? Is it topical?

Is the problem likely to continue into the future?

Will more information about the problem have practical application?

Will more information about the problem have theoretical importance?

How large is the population affected by the problem?
How important, influential, or popular is this population?

Would this study substantially revise or extend existing knowledge?

Would this study create or improve an instrument of some utility?

Would research findings lead to some useful change in best practice?

Is there evidence or authoritative opinion from others to support the need for this research?

The problem statement should persuasively indicate that major variables can be measured in some meaningful way. If you can identify likely objections to the study, identify and respond to them here.

The problem statement could close with a question. Typically, the question could contain two variables, a measurable relationship, and some indication of population. The purpose of the literature review that follows thereafter is to answer the research problem question. If the literature cannot answer the question, the research is needed to do so. An example question might be: this proposal poses the question, "What is the relationship between farm productivity and farmer use of fertilizer"? The information needed is (1) productivity levels and (2) some measure of fertilizer use. A bad example might be: "What is the best way to train for use of fertilizer"? This is insufficient because:

What are the variables?

What will be measured?

What relationships will be examined?

There should be a close relationship between the title of the proposal and the problem statement question. For example, in the good example above, the title of this research project would be something like this:
"Fertilizer use by small scale farmers in Bungoma district and their farm productivity"

APPENDICES
Establishing a research problem can be a challenging yet rewarding process. Careful selection of the research problem defines the work of the project and provides a direction for the entire process. Establishing your research problem usually consists of distinct phases:

Research topic>research problem>problem statement>research design>research proposal

<table>
<thead>
<tr>
<th>STEPS</th>
<th>EXAMPLE</th>
<th>STRATEGIES/SOURCES</th>
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<tbody>
<tr>
<td>Select a broad area of interest--a research topic</td>
<td>Costs of farming</td>
<td>Personal interest</td>
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<td>Readings</td>
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<td>Conversations with farmers etc</td>
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<tr>
<td>To move from topic to a manageable research problem, ask questions about the topic such as &quot;who / what / where / when why / how?&quot;</td>
<td>What are the issues in the costs of farming? What is being done to control costs of farming? What factors are responsible for price increases? How effective are institutions in controlling farming costs?</td>
<td>Read abstracts of literature for overview, make observations,</td>
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<tr>
<td>Select one narrowly defined problem</td>
<td>Are government agriculture inputs price policies effective? Does the level of training by farmers affect cost of farming? What is the role of agricultural institutions?</td>
<td>Read several articles on the narrower focus; note possible methodologies that might be used in your project</td>
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<tr>
<td>Ask relevant questions that will help answer the problem</td>
<td>Farming costs are escalating. Farmers are unable to buy inputs. Many people have proposed pro-farmer policies. Among the potential solutions are price subsidies. Questions exist regarding the impact of price subsidies. &quot;In this project I will...&quot; or &quot;This study will...&quot;</td>
<td>Incorporate readings-to-date to determine this working statement. Of course, as your work progresses, you may need to modify this problem statement.</td>
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<tr>
<td>Write a problem statement consisting of several sentences that briefly frame the issues to be investigated, indicate the significance of the question, and includes a declaration of what you will do</td>
<td>Research designs will depend upon the discipline and actual statement of problem. It should be developed in consultation with your supervisor.</td>
<td>Read more focused and specialized articles on content, design and methodologies</td>
</tr>
<tr>
<td>Select possible research design</td>
<td></td>
<td>Read more focused and specialized articles on content, design and methodologies</td>
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<tr>
<td>Prepare a research proposal</td>
<td>After literature review, methodology selection, etc. write the complete research proposal.</td>
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SIMPLE STATEMENT PROBLEM TEMPLATE
This template should help you to draft your first problem statement

Stable Context
Describe unchanging facts about the topic/problem.
For many years, people have debated about ______________________.
Or
____________________ has been controversial because _____________________________________________________.
Or
______________________ has dominated discussions of _____________.

Status Quo
State common but incorrect or incomplete assumptions
Many people think
___________________________________________________________.
Or
At first glance, it may seem like
___________________________________________________________.

Destabilizing Moment
Describe something that reveals the status quo assumptions to be incomplete or inaccurate.

This initial perception fails to take into account ____________________________.

Or

This theory can't explain ____________________________.

Or

People have failed to notice, however, ____________________________.

Consequences
Show readers why they should care: what bad things will happen if people continue to believe the status quo? What good things will happen once they stop believing it?

If we continue to believe ________________, we'll never understand the larger question of ____________________________.

Or

Unless we change ________________, we will continue to have trouble with ____________________________.

Or
Once we understand ________________, we'll begin to see the answer to the problem ______________________________________________________________________.

Or

By rethinking our approach to ________________, we can fix ________________.

Resolution

Provide a better theory/explanation to replace the status quo. State your claim.
__________________________________________________________________________
__________________________________________________________________________.
ONE MORE TEMPLATE FOR WRITING A STATEMENT PROBLEM

<table>
<thead>
<tr>
<th>PROBLEM STATEMENT</th>
<th>4 required parts</th>
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<tbody>
<tr>
<td>1. Start with a general problem identifying the need for the study. E.g. The problem of this study is ______</td>
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<tr>
<td>2. State the specific problem proposed for research. (use citation &amp; usually a number to make it clear to the reader, e.g. 30% of the farms have been affected by the Napier grass disease</td>
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<tr>
<td>3. Introductory words describing Methodological approach (i.e. Research Design) are given and are appropriate to the specific proposal problem, e.g. this qualitative study will explore... or this quantitative study will examine...</td>
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<tr>
<td>4. General population group of proposed study is identified. Small scale farmers in affected locations will be surveyed to determine...</td>
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A qualitative problem statement

Brain drain in Kenya is increasing (GENERAL PROBLEM). Every year about 50 professionals migrate abroad due to unsatisfactory working conditions (SPECIFIC PROBLEM WITH NUMBERS and supported with a citation). This brain drain is different from previous shortages, because it involves not only fresh graduates but also seasoned professionals (quote).

This crisis in the professionals’ industry requires innovative solutions. One innovative solution may be a less structured leadership style, such as steward leadership (quote). This qualitative case study (DESCRIPTION OF STUDY TYPE) will explore perceptions of professionals in Kenya (POPULATION BEING STUDIED) about steward leadership as a strategy to alleviate or reduce factors contributing to the brain drain among professionals in the lake basin region (GEOGRAPHICAL LOCATION OF STUDY) The data to be gathered in this study may provide leaders with information relating to how they may address or mitigate factors contributing to the current brain drain.

A quantitative Statement of the Problem: an American example

Identity fraud is one of the fastest growing crimes in America (Adams, 2002). In 2003, at least 7 million Americans were victims of identity fraud, an increase of 79% from 2002 (AFP, 2003). GENERAL PROBLEM SUPPORTED BY LITERATURE The nation’s system of
personal identification and verification failed to stop the 9/11 terrorists, and according to the 9/11 Investigations report (Strasser, 2004), some of the 19 hijackers of the 9/11 attacks had fraudulent identification, passports, and other travel documents (Wang, 2004). Seven of the 19 hijackers fraudulently obtained and used drivers’ licenses as identification to board commercial aircraft (Driver’s License Fraud, 2003).

Drivers licenses can still be obtained or made fraudulently and are still used as a de facto form of national identification (Etzioni, 2004). Specific problem with citation The 9/11 Commission Report (9/11 Commission, 2004) recommended using an NBIC system as a more reliable and secure means of fighting terrorism. One associated problem of the 9/11 Commission’s recommendation is that various civil liberty advocates oppose the use of a compulsory NBIC, arguing that compulsory use of NBICs may have a potential to deprive citizens of their civil rights and invade individual privacy (Eaton, 2003).

The purpose of this research study will be to examine the motivational factors necessary for the public to use voluntary NBICs as a more reliable and secure means of preventing identity fraud. To fulfill this purpose, a quantitative TYPE OF STUDY research study will survey students, faculty, administrative personnel, and employees of two community colleges in Los Angeles County, California. GEOGRAPHICAL LOCATION