



Writing a Problem Statement

Writing a Problem Statement

- Why write a problem statement?
- What makes a good problem statement?
- Problem statement examples

Why write a problem statement?



- Focus effort
- Provide a measure of success

What Makes a Good Problem Statement?



- Concise
- Leaves room for multiple solutions
 - Does not imply a solution
- Specific enough to be solvable in the given time frame and with available resources
- Answers the questions:
 - Who has the problem?
 - What exactly is the problem?
 - Where does the problem exist?
 - When has it happened and for how long?
 - How prevalent is the problem (statistics)?
 - Is the problem valid? (Who says there is a problem?)

Problem Statement Example 1

Lots of people go fishing for red fish and do not catch anything. There aren't as many red fish as there used to be.



Game fishermen fishing in the lower **Laguna Madre of Texas** reported between **2002-2007** a **decrease of 20%** in red drum (i.e., *Sciaenops ocellatus*). This loss can be attributed to **premature death due to mouth infections caused when undersized fish are caught and released.**

Who? What? Where? When? How Many?

Problem Statement Example 2

Car accidents are occurring because the intersection needs to be redesigned.

What are some issues with this problem statement?

- Only cars or all vehicles?
- Are vehicles hitting vehicles? Other objects? Pedestrians?
- What is the current design of the intersection?
- Does the intersection *really* need to be redesigned, or could the solution involve the lights, speed limits, lane configurations, traffic violation enforcement, etc.?



Revise the problem statement

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Image Resources

iStockphoto. Retrieved December 7, 2009, from <http://www.istockphoto.com/index.php>