

Problem Solving Research

Your next assignment in this class is to write a fully documented research paper that investigates and offers solutions to a problem, controversy, or unresolved issue. In order to write this paper, you **first** need to find a topic that you find stimulating and exciting and that you either have an opinion on or that you would like to know more about in order to form an opinion. Your **second** step is to think about everything you know about this topic and jot down ideas that you have come up with yourself or that are common knowledge. Also list your own opinions on the topic. **Third**, you should begin to research, keeping track of every source you use and exactly what information comes from each source. (During this process, you may change your mind or find information that contradicts what you think. You may even find sources that disagree with each other. These are good exercises that will encourage you to think critically.) **Last**, you should write the paper, combining your ideas with those of your sources, giving all sources adequate credit and citation.

The Problem Solving Process

In order to write this paper, you need to be able to think critically about a problem. In order to help you do this, I am including a guide to the problem solving thought process.

Step One: Identify the problem. You must be clear and concise. In other words, you should not identify your problem as, for instance, “garbage.” A much more appropriate and manageable way to describe the problem follows: “Local municipalities need to find effective ways to limit or eradicate littering.” Once you have decided on a general topic, narrow it to something that will be possible to discuss in 7-9 pages, not a series of lengthy books.

Step Two: Explain why the problem is a problem. Make sure you understand why the problem seems significant and worth the audience’s time and concern. Gather numbers, statistics, stories, facts, and examples that show the severity and extent of this particular problem.

Step Three: List goals that would be achieved by a good solution to the problem. For instance, one obvious goal of the above problem would be to improve the appearance of public parks and roadways. Importantly, the solution to any problem ALWAYS involves multiple goals. For instance, we want to eliminate litter, but we also want to encourage people to continue to use public facilities, and we certainly don’t want excessively stringent laws leading to a police state. We also do not want to overburden busy law enforcement officials with a relatively minor issue. Get the picture? **Every problem affects different groups whose interests must be taken into consideration and whose interests often conflict.** Your goals must have a sense of conflict in them (for example: you want to limit people’s littering, but you do not want to infringe too much on their personal liberties or privacy). **Without conflict in the goals, you are not addressing a true problem.**

Step Four: List your goals in order of importance. Decide which goals you definitely need to achieve with a solution and which ones you might be willing to compromise.

Step Five: Propose and/or investigate multiple solutions to the problem. Multiple means **at least three**. These solutions may be ideas you have come up with on your own or ideas you have found in research. (Note: Even if you come up with an idea yourself before you have researched anything, if you later find the same idea in your research, you must credit and cite your research. Just point out that you agree with the idea.)

Step Six: Evaluate how well each solution meets your goals. Which solutions meet your most important goals? Which solutions meet some less important goals but not the more important ones? Which solutions seem feasible and which unrealistic?

Step Seven: Decide on the best possible solution or combination of solutions to the problem. Important note: if problems had perfect solutions for everybody concerned, they would not really be problems. Do not expect your solution to cure every aspect of the problem, and do not misrepresent your solution to make your audience think that it will. Evaluate your solution honestly.

These steps will guide you through the thought process needed to write a good problem-based research paper. **THEY ARE NOT MEANT TO REPRESENT A STRUCTURE FOR YOUR PAPER!** In other words, you should not write a paper that devotes a paragraph to each of the above steps. It is fine to base the organization of your paper loosely on the seven steps; obviously, you need to identify and explain the problem in the beginning of your paper. You do not need, however, to develop a separate paragraph on goals, another on listing which goals are important, and so forth. Your topic and how much you have to say about each point will determine the structure of your paper.