Lecture Notes on Problem/Solution Writing

Table of Contents

[Problem/Solution Summary 1](#_Toc485287484)

[Deciding when to use the Problem/Solution Pattern 2](#_Toc485287485)

[Organization of P/S Pattern 3](#_Toc485287486)

[Title 3](#_Toc485287487)

[Introduction: Acknowledging the Reader's Problem State 3](#_Toc485287488)

[Body Sections: Presenting the Solution(s) 4](#_Toc485287489)

[Organizing the Body Sections 4](#_Toc485287490)

[Process Writing or Instructions 5](#_Toc485287491)

[Objection Handling 5](#_Toc485287492)

[Conclusion: Persuading the Reader to Act 7](#_Toc485287493)

[Language Choice is Critical 8](#_Toc485287494)

[Examples of Problem Language 8](#_Toc485287495)

[Examples of Solution Language 9](#_Toc485287496)

[Examples of Persuasive Language 9](#_Toc485287497)

[Pre-writing Stage: Getting Started 9](#_Toc485287498)

[Uses of Problem/Solution Pattern 10](#_Toc485287499)

# Problem/Solution Summary

The problem/solution pattern is used when someone has a problem and is looking for a solution. The reader's goal is to find and implement the solution articulated so their problem goes away.

A summary of the problem/solution pattern is in Table 1.

Table 1: Problem/Solution Summary of Characteristics

| **Characteristics** | **Writing Problem/Solution** |
| --- | --- |
| Purpose | To solve a problem the reader has |
| Audience/Reader | The reader that has the problem |
| Secondary Audience (someone who may also read a document) | Someone who is affected by the problem, but may not implement the solution themselves |
| Point of View (1st, 2nd, 3rd) | 2nd |
| Tone (based on word choice & format [visual appeal, fonts]) | formal |
| Pace (the speed that ideas are presented to the reader) | medium |
| Organization Method | Introduction (problem) body sections (solution) Conclusion (convincing)  Where the body sections (solution) are organized as one of the following options:   a) one solution  b) a solution with multiple steps   c) multiple solutions  And where the solutions are organized as one of the following options:   a) process (progressive level of disclosure)  b) instructions  c) or a combination of these two methods |
| Cognitive Skill required for writing | Thinking logically about the problem and its solution(s). Handling the reader's objections: "Why can't my reader do what I tell them to do?" |
| Writing Skill | Organizing solutions and objection handling, writing the conclusion (persuasive tone) |
| Ethical scenarios  (when it's very easy to be less than truthful in writing) | Exaggerated claims in solution, exaggerated claims of problem or its difficulties (like ads), solution not adequate but saying it is |
| Examples | Proposals (in response to a request for proposal (RFP)), FAQs (Q = problem, A = solution), marketing case studies |
| Source: Anderson, Laurie. "Lecture Notes on Problem/Solution Writing." CSS 301 Technical Writing for Computing Professionals. University of Washington Bothell. Summer 2017. | |

# Deciding when to use the Problem/Solution Pattern

As an author that needs to provide information to people as part of your job, you need to decide how to organize that information.

You would be cued to use the problem/solution pattern by someone using any of the following words:

* "problem"

# Organization of P/S Pattern

The P/S pattern is organized with an introduction, body sections, and conclusion.

## Title

The title of P/S writing tells the reader that the solution to their problem lies here.

## Introduction: Acknowledging the Reader's Problem State

If the introduction is too long, then the reader will lose interest before they reach your solutions. So theintroduction section should be short, but short is relative because there are number of tasks that it must address. The **introduction** section includes the following information:

1. Acknowledge the audience who has the problem. With this acknowledgement, the reader knows that you know who they are.
2. Acknowledge their problem to tell the reader that you understand the problem they have.

In the brief explanation of the problem, you need to be clear enough so that the reader knows that you know what problem they have. Then they know that the solutions offered would actually solve their problem.

1. Convince the reader that the problem is serious. For example, use facts and statistics to illustrate the gravity of the problem.

NOTE: This requirement is not to convince the reader that they have a problem. Remember that in P/S writing the reader knows they have a problem and is looking for a solution. This part of the introduction convinces them that the problem is serious. That is, they need to solve it NOW. They shouldn't wait any longer.

One way to think about coming up with this content is to imagine what might happen if the problem went unsolved. While the reader may realize that a problem needs fixing, they may not understand the ramifications of why it's serious and needs fixing right away.

For example, say that the reader's kitchen sink drips and they need to get it fixed. That's the problem. Why is it serious? It wastes gallons and gallons of clean water each day; water that they are paying for. Over even a short period of time, that wasted water can cost a lot of money (for best effect, you could estimate the amount.) Okay, now, that's serious.

NOTE: Do not say "This is serious" to tell the reader that the problem is serious. Let the reader understand the seriousness in facts or explanation.

1. Forecast the way the solution is organized in the body of the work, using one of the following phrases:
   1. “a solution”

Telling the reader that there is one solution that will solve their problem.

* 1. “a solution with multiple steps”

Telling the reader that the solution has several steps that must be followed in a particular order.

* 1. “multiple solutions”

Telling the reader that more than one solution exists for this problem.

NOTE: You must explain to the reader how to choose the various solutions: First fit? As many as possible? All of the above (which makes that sound more like a solution with multiple steps)? Do this in the introduction, body, or in the conclusion.

NOTE: Yes, you must use one of the sets of phrases in the introduction, because the reader needs to understand how the solution is structured before they read the specifics of solving their problem. This phrase helps to *orient the reader* on how to read the rest of the document, which you'll recall is one of the roles of the introduction section.

Do not forecast the solution itself. That is, do not offer a summary of the solution in the introduction. Why? You want the reader to read your solution. If you give them a summary of the solution in the introduction, then they may not read further. Thus the reader will miss all the details that would make it possible for them to implement the solution successfully.

## Body Sections: Presenting the Solution(s)

In the body, you explain the solution.

The solution needs to tell the reader specifically what to do that solves their problem. That could be written in terms of instructions or process writing depending on how much prior knowledge the reader has about what they need to do to solve the problem.

The body contains strong solution language that includes examples or other specifics.

Avoid using problem language in the body. The reader knows the problem they have, so focus on how to solve it.

Avoid persuasive language in the body. The reader wants to solve their problem, so you don't need to convince them to solve it. Some benefits to the solution (which is persuasive language) might leak into the solution as you describe how to solve it, but don't focus on benefits or persuasive language in the body.

### Organizing the Body Sections

Use headings that are rules/commands to help the reader follow what they should do to solve their problem.

There are three options for organizing the body section of a problem/solution pattern. Pick the one that matches your solution organization as identified in the introduction.

* **A solution** – Explain how the solution works, organized in progressive level of disclosure order of information.
* **A solution with multiple steps** – Each step to the solution has its own heading, and underneath the heading is a full discussion of how that step works. That information can be organized in progressive level of disclosure OR could be organized as instructions. Be sure the step headings are ordered chronologically.
* **Multiple solutions** – Each solution has its own heading, and underneath the heading is a full discussion of how that solution works. That information can be organized in progressive level of disclosure OR could be organized as instructions.   
    
  When you are offering multiple solutions, you need to let the reader decide which solution to adopt based on their own situation. You can give them suggestions, such as the more solutions you adopt the better, or pick the first one that fits your situation, or whatever.

### Process Writing or Instructions

The body sections are written as either process or instructions. See Table 2.

Table 2: Quick Refresher on Organizing using Process vs Instructions Writing

| **Comparison** | **Process** | **Instructions** |
| --- | --- | --- |
| Organization | Process is organized in progressive level of disclosure order | Instructions are organized as stages and steps. Each stage has a heading. Each step is numbered and begins with verbs |
| Audience | Readers that already know how | Uninformed readers that need step-by-step instructions to follow |
| Example | Explain to the reader how to create a strong password, using a combination of letters, capital letters, and special characters | Provide step-by-step instructions on how to change a password in a specific application |
| Source: Anderson, Laurie. "Lecture Notes on Problem/Solution Writing." CSS 301 Technical Writing for Computing Professionals. University of Washington Bothell. Winter 2017. | | |

NOTE: If you need to refresh your memory more on how to write these patterns, then refer back to those lecture notes from this course.

### Objection Handling

#### What is objection handling?

Have you ever read a suggestion of what to do and while you were reading it, in the back of your mind, you were thinking, "not likely" or "not in this lifetime" or some other objection to the suggestion? Yes! That's a situation where the reader is objecting to what the author wants the reader to do.

What if the author told you at that moment that your brain rejected the idea, "if you can't do <rejected idea>, then do <alternative idea> instead"? Would you be more likely to keep following the reading? Yes. That "if" statement is considered objection handling.

Since you, as the author, will be telling the reader what to do (in the form of a solution to a problem the reader is having), you must handle these unconscious objections that occur in the readers' minds when they read your solution.

Objection handling needs to be handled promptly so that the reader doesn't go away and find another solution, but instead adopts the alternative you provided. In the case of a company offering the solution vs another company, if the reader goes away and purchases a competitive product instead, objection handling can be the difference between getting revenue or not.

NOTE: The reader doesn't think in terms of "objection handling" but rather "alternative solution."

#### What is objection handling in the Problem/Solution pattern?

Objection handling is handling the problem that has come up in the reader's mind. The reader, while reading the solution, inwardly shakes their head, saying "this (or some part of the solution) won't work." So the objection handling needs to offer an alternative.

Objective handling means that you acknowledge the objection in their mind as the reader reads your solution (why they can't use that solution or part of that solution) and counter with what they can do instead.

The best way to offer the objection handling is an "if" statement:

"If" <(some part of) the solution doesn't work>, "then" <give alternative solution.>

NOTE: You can't be vague and say "if this doesn't work." In the "if" statement, you need to be specific about what their brain is rejecting.

NOTE: Always put the alternative solution in its own paragraph. This is so that the solution is separate from the alternative solution, which is a separate idea. Even if the "if" statement is just one sentence, it ought to be its own paragraph.

#### What does objection handling NOT mean?

Do not convince the reader they don't have a problem with the solution, and they should just buck up and do what you're telling them to do.

#### What kind of objections might occur to the reader?

The following bullets offer ideas of why the reader might be shaking their head "no way" while reading the solution you offer:

* This solution is unclear.
* This solution is hardly a better alternative.
* This solution doesn’t seem feasible.
* This solution doesn’t seem reasonable to implement.
* This solution will cost more/too much to implement.
* This solution seems like it will create a bigger problem than already existed, especially if it appears to be too complicated.
* The reader doesn't understand some aspect of this solution, so the reader doesn't know what to do, OR the reader can't do some step because his/her system doesn't look like that or work that way.

#### Where does objection handling go in the P/S pattern?

Depending on your solution organization, you deliver the objection handling differently as follows:

* **A solution** – Handle the objection to this one solution in its own section or paragraph, usually at the end of the body section.
* **A solution with multiple steps** – Depending on what the steps are, handle the objection by picking one of the following options:
  + If each step has only one way of doing it and could NOT be confused in any way, then create one section at the end of all steps that handles objections to the solution as a whole. This section needs its own heading that does NOT say "objection handling" because that is not how the reader thinks about it. Maybe "If these ideas can't work as stated" or whatever works for your steps.
  + If the steps can have alternatives, then have one objection to each solution step. If any steps have something about them that the reader may not be able to do or not like, then you need to have objection handling at those steps; otherwise, you risk losing the reader mid-step.  
      
    NOTE: For this pattern body, you can't say "If this step does not work, then try the next step" because in a solution with multiple steps, you're expecting the reader to perform each step. So if they can't perform some aspect of a step, then you need to identify an alternative to that, not the next step.
* **Multiple solutions** – Each solution has its own objection handling. Organize each solution as follows: heading, solution section/paragraph, objection handling section/paragraph.   
    
  NOTE: Sometimes for multiple solutions, the objection handling can be as easy as "If this solution doesn't work for you, then try the next solution" assuming that you have the solutions organized in an order that supports that structure. Just don’t forget to offer an objection for that last solution in the body; you cannot send the reader to the top of the list of solutions again to find one that works this time. If you can't take advantage of this option, each solution still needs its own objection handling.

## Conclusion: Persuading the Reader to Act

The goal of the conclusion is to convince the reader to use the solution or one of the solutions you've offered.

This answers the "now what" as you convince the reader WHY these solution(s) are the best way to solve the problem. (Consider that the reader may have read other competing solutions and you want the reader to pick your solution.)

One way is to summarize with a powerful statement, question, fact, quotation, or another device to drive home to your reader that this solution is the best answer to their problem.

Topics to avoid in the conclusion:

* Do not discuss the problem again. If you return a discussion of the problem, you remind the reader of their plight and can destroy all the hard work you'd done of explaining how to solve their problem.
* Do not discuss additional solutions not mentioned in the body of the work.
* Do not summarize the solutions. The reader does not need to read again what was stated in the body.

# Language Choice is Critical

The problem/solution pattern has a strong need for exact language/word choice.

## Examples of Problem Language

The following example offers problem language about electric cars, which would be found in the introduction of the P/S pattern.

*The U.S. Department of Energy estimates that only about 600 electric vehicle-charging stations existed in 2014 (“Electric Vehicle Charging Station Location”). As an EV owner, if you can find an electric-charging station, it takes multiple hours to charge the battery. “With a Level 2 (240V) charging dock, an EV can be refueled in 2-8 hours, depending on the vehicle battery size and charging capability. If you're using a standard 110V outlet, the refueling time could be as long as 8-16 hours” (Plug-In America). Due to the low number of vehicle-charging stations and the amount of time to charge a vehicle, more charging stations need to be created.*

Can you find which specific words tell you this is problem language? Can you find which language tells you that this problem is serious and needs to be solved right away?

Which of the four elements of the problem/solution introduction requirements can you spot in these two paragraphs? See the answer to this question in the footnote:[[1]](#footnote-1).

## Examples of Solution Language

The following example offers solution language about electric cars, which would be located in the body sections of the P/S pattern.

*Facilities need to be co-located with the new charging stations.*

*While EV car owners are waiting for their car to charge, a process that can take some time, provide a community of activities for their interest while they wait.*

*Work with other vendors to build the following:*

* + *Café's and/or coffee shops*
  + *Free internet services*
  + *Outlet stores*
  + *Child’s playgrounds*

*If you can't get land for these extra services, even a small coffee hut with free wifi gives the waiting EV owners something to do.*

Can you see how this wording describes a solution only? Notice how there is no problem language in this section. Can you identify the objection handling? Can you see how the objection handling addresses objections that might have occurred to the reader while reading the solution?

## Examples of Persuasive Language

The following paragraph offers conclusion language about electric cars, which would be found in the conclusion section of the P/S pattern.

*Once people can easily find a charging station while they are traveling long distances to charge their vehicle, and can enjoy the time they wait for it to charge, they will be more likely to make their next vehicle an electric one. These electric vehicle purchases would reduce the nation's fossil fuel requirements and its by-products, such as fossil fuel emissions and its resultant global warming.*

Can you find which specific words tell you this is persuasive language? Answer: "easily", "enjoy", "more likely", "reduce". Can you see how the benefits are used as persuasive language, not as a description of how to implement the solution (body section)?

# Pre-writing Stage: Getting Started

Various questions/tasks need to be completed during the pre-writing stage of the writing process as outlined:

1. Brainstorm the problem.
2. Brainstorm who has the problem.
3. Brainstorm who will solve the problem. NOTE: Who has the problem may not be the person who solves the problem. The P/S pattern is always addressed to the reader who has the power to solve the problem.
4. Brainstorm what you know about the audience (perform an audience analysis) so that you can target your writing to the reader.
5. Brainstorm the solution(s).
6. Identify what type of solution it is.
7. Brainstorm the objection handling. Look at each stage, step, and task the reader has to perform and consider why they might not want to or be able to do that. Think of a way around that objection.
8. Create an outline for the writing.

# Uses of Problem/Solution Pattern

NOTE: The problem/solution pattern is one of the most common patterns that you'll use on the job, since your job will be to solve problems. Once you've understood this pattern, there are many ways in which you can change it based on your situation. For example:

* Use it in emails or when talking to someone that has problem you can solve for them.
* Use it as an editorial. The problem/solution pattern can be used when writing an editorial. When writing an editorial, the author is offering generic solutions to problems where the readers usually do not have any power to implement the solution. Note: Writing an editorial is not okay for CSS 301.
* Use the P/S pattern as a part or section of a larger document.
* Translate the P/S pattern into a table where you have rows as the problems and columns as solution and objection handling
* Use it as a research paper for an audience who isn't looking for a solution, but interested in the topic. This research paper would spend more time on the introduction explaining the problem to the reader than solving the problem. You might not want to use "you" to address the reader, but instead use 3rd POV to refer to the type of person (e.g., job title) of the person solving the problem.
* And many more

1. ANSWER: The paragraph identifies the problem and acknowledges the reader. It does not explain why the problem is serious (it's implied in the amount of time to charge a vehicle, but not explained why that's serious). It does not forecast the solution type. [↑](#footnote-ref-1)