PROBLEM, PROCESS, AND SOLUTION 101

*As* we have seen, general-specific passages tend to be descriptive and **expository. In contrast, problem-solution texts tend to be more argumenta**tive and evaluative. In the former, students and junior scholars will most likely position themselves as being informed and organized and in the latter **as questioning, perceptive, and convincing. We say this because you may** need to convince your reader that your problem is indeed a problem and/or**that your solution is reasonable.**

**The Structure of Problem-Solutiou Texts**

This passage discusses the need for junior scholars or novices to **receive training in scientific writing**. How important is it for you to publish in journals in your field?

Why? What are some challenges that novices may face?

**Scientific Writing of Novice Researchers:**

**What Difficulties and Encouragements Do They Encounter?**

Shah, J., BA, MS; Shah, A., MD, MPH; Pietrobon, R., MD, PhD, MBA. (2009).

*Academic Medicine,* 84, 511-516.

Clear communication of research findings is essential to sustain the ever-evolving biomedical research field. Serving as the mainstay for this purpose, scientific writing involves the consideration of numerous factors, while building up an argument that would convince readers and possibly enable them to arrive at a decision. Those who report research must attend to the soundness of the subject matter, to the nature of the intended audience, and to questions of clarity, style, structure, precision, and accuracy. These factors, along with the weight of responsibility to the scientific community, make scientific writing a daunting task. Consequently, many researchers shy away from this critical element of research, which may impede the progress of science and their own scientific careers.

The ability to accurately and effectively communicate ideas, procedures, and findings according to readers' expectations is the primary skill required for scientific writing. e Additionally, skills such as the ability to relate and interlink evidence, to lend permanence to thoughts and speech, to enable one's writing to *serve* as a future reference to others, and to protect intellectual property rights need to be developed and tempered\* *over* a period of time.

These skills are necessary for all researchers, but especially for novice researchers in the beginnings of their careers so that theydo not face failure and lose valuable time learning these skills later. Individuals entering the research field with no or little experiencewith past publications qualify as novice researchers. *Even* clinicians intending to explore and publish findings about research questions based on their clinical practice need to learn these skills to effectively contribute to health care.

Instruction in scientific writing and subsequent publication in peer-reviewed journals will help novice researchers refine their ideas and increase their expertise, because the act of writing is itself a valuable tool for learning and for fostering the scientific thought proces -this aligns with the principles of the writing to learn. Effective writing skills help new scientists take part in the ongoing, *ever-evolving* scientific conversation.s The practice of scientific writing *develops* habits of reflection that make for better researchers, and publication in respected journals strengthens the scientific process, while playing a crucial role **in career advancement. made stronger through experience.**

Which sentences belong to each part? What is the general point being discussed in each part?

Situation Problem Solution Evaluation

background information on a particular set of circumstances,

reasons for challenging the accuracy of the figures;

criticisms, weaknesses surrounding the current situation;

possible

evidence of discussion of a way or ways to alleviate the problem assessment of the merits of the proposed solution(s)

Do you agree or disagree with the opening sentence? Why or why not? What would be the reaction if the statement were

ther than biomedicine? Why do you suppose the this as their starting pointabout a field uthors chose

What is your reaction to the point made in Sentence 7?

5. Put a check mark (,,) next to the aspects of the text that contribute to the authors' attempts to convince you. How convinced are you that novices should receive instruction in scientific writing?

a. the problem-solution organization

b. the How of ideas

c. references to other published papers (indicated by the superscripted numbers at the ends of some of the sentences)

d. claims that are stated cautiously

e. the explanation of the causes of the writing challenges

6. Where do you think the authors are more convincing? Is it in stating the problem or in suggesting the solution? Why?

7. Put a check mark (,,) next to the items that you think could strengthen the text and would lend support to the argument.

a. a quote from a study that shows the progress of science is slowed because researchers do not write up their work

b. some statistics indicating that writing instruction is beneficial

c. some data on the relationship between writing (publishing) and career advancement

d. an explanation of the writing to learn movement mentioned in Sentence 11

8. Do you have any experience of your own to contribute to the discussion? Have you been involved in a publication? Would you agree or disagree with the authors' point that scientific writing involves the creation of an argument?