

## Application of Metacognition

### Scenario:

Every year, businesses receive millions of dollars in grants to fund various programs critical to the success of their organization. Many of the grant writers within an organization need to figure out the process of writing grants, from finding grants to actually writing and submitting them, on their own because they have not been trained in the process. Grant writing is typically offered at colleges, but it is usually not a required course, and college students have other required classes that they must take. If an organization opts to implement a new project, and there is no money left in the budget, then somebody will be given the task of finding the grants to cover the expenses. There is no feedback for people who submit the grants; businesses either receive or do not receive the funds. This is problematic for people who are inexperienced in writing grants and who continuously make the same mistakes because they never become cognizant of their errors.

When writing grants, it is imperative that questions be answered in a direct and concise manner. The individuals reviewing the grants read thousands of applications and will gladly pass over an application when the directions have not been followed.

### Learning Problem:

Large organizations have the necessary funding to employ people who are experienced in the process of writing grants, and they hire people specifically for grant writing positions. Many smaller organizations lack the funding to hire one specific person, and they must rely upon their existing employees. There may be a quick tutorial and, in many instances, a mentor for the grant writer, but many of these inexperienced grant writers do not understand the significance of language or grammar in grants, and they do not understand the importance of reading the information required in the grant and answering the questions exactly as the grant requests.

### Reflective Questions:

1. With Cognitive Information Processing, new information is taken into the brain and placed into the short-term memory. With the proper techniques (i.e. rehearsal, encoding, and chunking), this information can be stored in the long-term memory for later retrieval. This is important with grant because the process is the same regardless of the grant. What strategies can be used to activate the prior knowledge of a grant writer?
2. Sensory memory is important in regards to where the initial information will be sent. Which steps in the grant writing process will become automatic and stay the same as the grant writer writes different grants?
3. There are three main methods for transferring short-term memory information into long-term memory information: chunking, rehearsal, and encoding. What is an analogy (an implicit method that falls under the encoding strategy) that would allow grant writers to remember the process of writing grants?

4. Cognitive overload needs to be avoided so that the grant writer will be able to store and recall writing grants the next time that one needs to be written. What external memory supports (job aids, reference-based training, memory support embedded in the training) could be helpful in the process of writing grants?
5. One of the methods to minimize unproductive mental work is to show them past examples of work. What system (from start to finish with examples of past grants) could be implemented at the organization to allow for a smaller learning curve with new/existing employees who are going to write grants?

**Possible Solutions:**

1. *What strategies can be used to activate the prior knowledge of a grant writer?*

In order for new connections to be linked with existing knowledge, the mentor can ask some questions to the grant writer.

- a. Have you ever filled out your own taxes (either by paper or a program like TurboTax)? What did you have to do as you filled your taxes out?
- b. Have you ever bought an unassembled piece of furniture? What was it like assembling it yourself? What did you have to do throughout the assembly process?
- c. What steps do you need to follow when you are writing a business letter to an executive at an organization? What is the importance of editing your letter? What happens if your letter was not thoroughly edited and there are mistakes?

These questions will allow the grant writer to consider times when he/she needed to follow explicit instructions to complete a task and recall the importance of editing for errors.

2. *Which steps in the grant writing process will become automatic and stay the same as the grant writer writes different grants?*

The grant writer needs to be aware that regardless of the grant, there are certain steps in the process that will never change. These steps will eventually become an automatic response, and this will lead to more time spent on the actual grants and less time worrying about the details. These include:

- a. Websites that can be used for finding grants; when searching for a grant, many times, the grant writer will access the same websites over and over again.
- b. Reading the conditions of the grant before filling out the grant is absolutely necessary! It's a waste of time on time sensitive material to fill out a grant that the organization does not even qualify for.
- c. Reading all of the instructions for each step of the grant. The grant writer needs to read all of the instructions and explicitly follow them in the responses.

- d. Editing the final copy for grammatical errors and to be sure that the instructions were explicitly followed.
3. *What is an analogy (an implicit method that falls under the encoding strategy) that would allow grant writers to remember the process of writing grants?*

The process for grant-writing looks like this:

**G – Go** out and look for grants on the websites

**R – Requirements** need to be met by the organization in order to apply for the grant

**A – Answer** the questions completely after reading the questions thoroughly

**N – Note** all of the errors and correct them

**T – Take** the paper to somebody else who is unfamiliar with the project who will provide feedback and correct any remaining errors.

4. *What external memory supports (job aids, reference-based training, memory support embedded in the training) could be helpful in the process of writing grants?*

A reference sheet “cheat sheet” will be provided with a checklist of each step throughout the process (See page 4).

5. *What system (from start to finish with examples of past grants) could be implemented at the organization to allow for a smaller learning curve with new/existing employees who are going to write grants?*

### **The New System**

1. New grant writers will have a specific mentor who will work with them at bookmarking the websites typically used for finding grants.
2. The new mentors will go through an example of a good grant with the new grant writer, pointing out what makes the grant so well done.
3. The new mentor will provide the new grant writer with a few bad examples in which the new grant writer must find the mistakes, explain why they are wrong, and offer a solution.
4. The new grant writer will be given the Grant Writing Checklist to be used each time he/she writes a grant.
5. The mentor will go through the first grant with the new grant writer and help when he/she is needed.
  - a. At this time, the mentor will explain which processes will become automatic.
  - b. The mentor will tell the new grant writer the analogy and explain it in-depth.
6. The new grant writer will go through the second grant but have the mentor re-read the grant and provide feedback before sending it to somebody else to be proofed.
7. The mentor will monitor each grant written and offer feedback on each grant for the first 3 months or 10 grants, whichever is longer.

<b>WRITING GRANTS CHECKLIST</b>		
<i>Beginning of process (Searching)...</i>		
Step 1	Knows what the grant is needed for.	<input type="radio"/>
Step 2	Accesses the proper websites to find the grant.	<input type="radio"/>
Step 3	Reads through potential grants first making sure that the organization meets <b>all</b> of the requirements.	<input type="radio"/>
<i>Once the grant is selected (Answering)...</i>		
Step 4	Read through <b>all</b> of the instructions <b>3</b> times thoroughly.	<input type="radio"/>
Step 5	Read the question, answer the question, and then <b>re-read</b> the answer to make sure that it answers the entire question.	<input type="radio"/>
Step 6	Once a question is answered, read the preceding responses to ensure smooth transitions and flow.	<input type="radio"/>
<i>After the answers are completed (Editing)...</i>		
Step 7	Read the answers once out loud for clarity and to ensure that the questions were completely answered.	<input type="radio"/>
Step 8	Read the answers again for grammatical clarity.	<input type="radio"/>
<i>Feedback (Editing II)...</i>		
Step 9	Give the paper to somebody who is unfamiliar with the project/grant and have them read it and offer feedback.	<input type="radio"/>
Step 10	Using the feedback section, make more corrections to the grant.	<input type="radio"/>
Step 11	Submit the grant.	<input type="radio"/>