Unit 3

Critical and Creative Throughout System

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Develop and evaluate explanations
- ✓ Improve key critical thinking skills, including active listening and questioning
- ✓ Use analytical thought systems and creative thinking techniques
- ✓ Prepare and present powerful arguments

Unit 3

Critical and Creative Thought Systems

Techniques for Thinking Creatively

Brainstorming

Brainstorming is the first thing that comes to most people's minds when we talk about creative thinking. In a brainstorming session, participants need to know that all ideas are encouraged and that their ideas are being asked for. This way, they will be less likely to filter their ideas and more likely to offer creative solutions. There are many ways to run a brainstorming session, and none is better than the other. Use a method that works for your group.

Before Brainstorming

Think about what you want to achieve by conducting a brainstorming session, who to include, and where you will conduct the session. (Sometimes it is best to brainstorm offsite, while other times it is not as important.) Try to establish an informal space and an informal approach so that people can allow their creative juices to flow. If you set this up as a typical meeting, participants may not be as ready to let the ideas flow. Also consider whether you should lead the session or if it might be better to have a guest facilitate.

During Brainstorming

We tend to set up meetings with people sitting around a table and facing each other. Consider instead if you can get people thinking, sharing, and opening up if they sit side-by-side, or with chairs arranged around a flip chart or whiteboard. Clarify some rules of engagement, including the fact that all ideas are welcome and there is no criticism or analysis of ideas during brainstorming; the time to analyze is after the ideas have been raised. Record all ideas to help stimulate more ideas and to see how many ideas can be generated. If you are using a smartboard or someone has a smart phone, you can also take pictures of the completed list for later reference.

After Brainstorming

Once brainstorming itself is finished, have the group look at the options that were presented and start circling the most promising ideas. For each promising idea, have the group take it a little further by making suggestions to make it possible to carry out or to make it practical or attractive as an option. Any constructive criticism should start with statements like:

- "What I like the best about that idea is…"
- "Have you thought about adding…"
- "What if we looked at it from this direction?"

Imagine the Opposite
Write down your idea and then ask people for ways to ensure that it will fail. Write all responses down and then reverse them.
Example: I want to write a newsletter about animals that people will read.

I will ask people: How do I write a newsletter that no one will read?

Possible answers:

- Use small, unreadable type
- Choose topics that aren't relevant to people
- Offer impractical advice
- Don't include experts

Reversed:

- Use large, readable type
- Choose topics that are relevant to people
- Offer practical advice
- Include experts

Breaking Down Assumptions
Try making a list of your assumptions about the current issue. Ask co-workers to add to the list. Then, rephrase each assumption as an open-ended question.

- Example: I assume that we will produce 10 widgets each day.
- Question: How can we make sure we produce 10 widgets each day?

Random Word Method
Another interesting technique is the random word method. First, open a dictionary. Then, close your eyes, choose a page, and point to a word. You must use the first word you choose. Then, write the word on a flip chart and try to figure out how that word applies to your problem. Perhaps you're working on solutions for a decline in sales and your word is "tiger." You could say that we need a tougher approach, or a brighter idea.

The Triad
Write your issue at the top of a piece of paper. Then divide the rest of the paper into three parts. Label the columns as: What Fascinates Me, A Perfect Situation, and What I'd Do If I Had More Time. Give yourself five minutes to fill out the sheet. Then, look for connections and focus on your favorite ideas.

Secret Characters
Think of someone that you really admire, like Albert Einstein, John Lennon, Bruce Lee, or Madonna. Now, think of your problem or issue through their eyes.

Don't Re-Invent the Wheel

When you've solved a problem successfully, or if you hear about a creative solution, write the solution down in a log. Then, when you're having trouble problem solving, refer back to the log to get your creative juices started. You may even be able to take certain elements of different solutions and bring them together to create a solution for your particular problem.

Creative Thinking Exercise

Choose one of the following creative thinking techniques.

- Brainstorming
- Imagine the opposite
- Breaking down assumptions
- Random word method
- The triad
- Secret characters

Generate ideas for the perfect office chair using that method.

Putting It into Practice

Presenting and Communicating Your Ideas to Others

So far, we have learned how to build strong, logical arguments and explanations. However, there is not much point in being able to think and reason critically if you cannot present that information to others.

Here are the steps for preparing a powerful, logical argument.

Define

- Outline your key argument
- Define key terms for your audience

Outline

- List what assumptions you are making
- Categorize evidence
- List points against your argument and gather evidence to counter those points

Organize

- Begin with an introduction summarizing your argument
- Provide various conclusions supported by evidence
- Add examples
- Conclude with a summary

Practice

- Present your argument to people familiar and unfamiliar with the topic
- Edit as necessary

Pre-Assignment Preparation
Prepare a short presentation to the class about the problem outlined in your pre-assignment.

Critical Thinking Worksheet

Issue:

Conclusion:
Evidence:
Analysis: Is the evidence straightforward and precise? How does the context affect the argument? Are all pieces of evidence consistent with each other? Is the evidence credible? Do all the pieces of the evidence support the conclusion?

Presentation Worksheet

Key Issue and Argument:	
Important Terms:	
Assumptions Made:	
Introduction:	
Summarizing Conclusion:	
Conclusion	**Evidence**
Challenge	**Countering Point**

Presentations

Presentation Evaluation for _____

Key Issue and Argument:	
Conclusion	**Evidence**

Evidence Analysis

- Was the evidence clear, precise, accurate, true, and credible?
- Were all the pieces of evidence consistent with each other?
- Did the argument flow logically?
- Do all the pieces of evidence support the conclusion?
- Was enough evidence presented with enough breadth, depth, and precision?

Summarizing Conclusion:

Did you reach the same conclusion as the speaker? Why or why not?

Challenge	**Countering Point**	**Did speaker cover challenge?**

Presentation Evaluation for _____

Key Issue and Argument:	
Conclusion	**Evidence**

Evidence Analysis

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Further Reading:

- ✓ ***Critical Thinking & Logic Mastery - How To Make Smarter Decisions, Conquer Logical Fallacies And Sharpen Your Thinking, by Thinknetic | Dec 18, 2021***
- ✓ ***Critical Thinking: Tools for Taking Charge of Your Learning and Your Life, by Linda Elder and Richard Paul | Mar 15, 2020***