



Unit 3 Developing Creativity & Innovation

Learning Outcomes

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

- ✓ Identify the difference between creativity and innovation
- ✓ Recognize your own creativity
- ✓ Identify the difference between creativity and innovation
- ✓ Recognize your own creativity
- ✓ Build your own creative environment
- ✓ Explain the importance of creativity and innovation in business
- ✓ Apply problem-solving steps and tools
- ✓ Use individual and group techniques to help generate creative ideas
- ✓ Implement creative ideas

Unit 3

Developing Creativity & Innovation

What Is Creativity and Innovation?

Creativity and Innovation: A Breakdown

Defining the Terms

What is creativity? What is innovation? Are they the same thing?

Creativity can be defined as the generation of ideas in the attempt to solve a problem or produce something new. **Innovation** can be defined as the implementation of the ideas generated from the creative process. Innovation transforms the idea into something concrete.

Here is an example of creativity: A bank creates a new program intended to offer mobile banking services for their customers. If they do not have the means to carry out this idea, like the proper Internet platform to support the program, they must use innovation to build the platform.

Being creative and innovative can be much simpler and on a much smaller scale. Imagine a painter who is creating a landscape portrait. They run out of orange paint for the sky as the sun begins to set. Since they are working on a hilltop in the middle of nowhere, they have a choice: they can get innovative or lose the perfect opportunity to finish the painting. By mixing yellow and red, the painter gets his orange paint. He creatively thought of a solution and used innovation to achieve success.

What Am I?

Am I creative? Am I innovative?

Regardless of our personal belief, we all possess the ability to be creative. You don't have to be considered "artistic" to be creative. If you need proof, think back to when you were a child. A tree house was not just wood; it was a space used to create our own imaginary worlds. Blankets and pillows were not just bedding; they were fort building materials!

The challenge for creativity lies in our confidence. Some of us have convinced ourselves that we are not creative. What we fail to recognize is that we do creative and innovative things every day, like stretching budgets. Even picking our clothes in the morning can be a creative activity. Getting better with creativity and innovation will take practice. It's like a muscle – you use it or you lose it. But, with practice and effort, the creativity process will become easier.

Know Your Creative Potential

Describe a time when you felt most creative. This event can be either personal or work related.

Why do you feel this event reflects your creativity?

What made this event a success?

How can you replicate this feeling of success both at work and in your personal life?

Individual Creativity

Know Yourself

Working in a group can help you with your own creativity, but it is essential to get to know your own creative rhythm. Understanding your creative groove comes with having a high degree of self-awareness. You need to pay attention to instances when you felt particularly creative. Ask yourself questions like:

- What sparked my creative thinking?

- Ñ Where was I when I did my creative thinking? What was my environment?
- Ñ What time of day did I think the best?
- Ñ What strategies or tools did I use to aid my thinking?
- Ñ What challenges did I have when trying to generate creative solutions?
- Ñ How long could I sit and think before needing to take a break?

Asking yourself questions to increase your self-awareness can help increase your creative thinking potential.

Tips for Increasing Your Individual Creativity

Practice. Another key element to developing your creative rhythm is practice. High levels of creativity can come naturally to some people, but most of us have to work at it. Giving yourself plenty of time and opportunity to flex your creative muscle will help you increase your creative potential.

Give yourself some distance. When looking to increase your creativity, you need to understand that your creative level can be situation or context dependent. Have you ever helped a friend generate ideas on how to solve their problems? Don't you sometimes find it easier to offer solutions to their problems rather than figuring out solutions for your own? Sometimes when we are too close or emotionally involved in a situation, we find it hard to see our options.

With this in mind, a way to work on increasing your creativity is to put distance between yourself and the problem you are looking to solve. Looking at the problem you are facing with a bit of psychological distance can help to decrease stress and increase focus. A strategy for increasing distance is to look at the issue from someone else's perspective. Ask yourself questions like: "How would my spouse look at this issue?" or "How would Donald Trump solve this problem?" Creating distance between yourself and the problem can help give you the psychological edge you need to develop insight.

Give yourself time. You can also increase your creativity by giving yourself enough time to be creative. Too often, we are working under tight deadlines. Without a sufficient amount of time to think and percolate ideas, we tend to panic. Panic does nothing for creativity. In fact, it makes you react instead of acting with clarity, purpose, and direction.

A good technique to help take your focus off time might be to pretend you are on a desert island. You are going nowhere and you have all the time in the world! Adopting this mindset can help you focus on the creative process rather than other factors.

Organize your life. Another tip to increase your own creative potential is to organize your life so your energy is being spent in the right places. Here is an example to illustrate this point.

Get Creative

Pre-Assignment

What does creativity and innovation mean to you?

When you think of someone as being creative, what traits do they possess?

Is there a difference between creativity and innovation?

When do you feel most creative?

Where do you feel most creative? (Examples: when you are driving, at work, or having a conversation with a good friend.)

In what areas of your life would you like to be more creative?

In what areas of your work would you like to be more creative?

How would being more creative and innovative benefit your life?

On a scale of 1-10, with 1 being not creative at all and 10 being bursting with creativity, give the number that best represents your current creativity level.

Using the same 1-10 scale, give the number that represents the creativity level you would like to be at in the future.

Developing the Right Environment for Creativity

What Does a Creative Environment Look Like?

People often think that creativity and insight comes from being in a profound, awe-inspiring place. The reality is that, for most people, a complex environment can be too distracting for deep, prolonged thought to occur. Additionally, most of us do not get to see these awe-inspiring places on a daily basis. The most we see is our usual workspace, whether that's a cubicle, home office, or somewhere else.

The truth of the matter is that idea generation and implementation of ideas takes place in normal settings. A great example of this concept is author Anthony Trollope. Trollope was the most prolific writer of the Victorian literature era, but he did his writing in addition to working for the post office. His writing routine involved writing for three hours each day prior to having breakfast. He disciplined himself to write 250 words in each 15 minute time period, whether he was writing at home or on a train while he travelled for the post office.

Building your best creative environment is a highly individualized activity. What worked for Trollope may not work for you. When trying to create your best thinking environment, pay attention to events that spark your thoughts.

- Ñ When are you the most creative?
- Ñ Do you find ideas on long drives, over a stimulating conversation with a friend, while reading, or when walking the dog?
- Ñ Do you find the best time for thinking in the early morning, afternoon, or night?

Getting to know your own creative rhythm and implementing some general tips will help you create the right environment.

Tips for Building Your Own Creative Environment

Work in an easy and uninterrupted concentration. Interruptions lead to broken thoughts. Trying to think in a disruptive environment can be extremely frustrating and stressful, especially when you are on a deadline. If you work in a cubicle where noise and distractions are just a reality of life, see if you can book time in a boardroom or meeting room. The quiet will allow you time to think.

Make sure you have everything you need. This could include pens, paper, sticky notes, highlighters, coffee, music, etc. Each time you have to get up from your workplace is a distraction. Make sure you have what you need to minimize interruptions.

Take a break when you need to. When you are feeling like you need some time and distance away from the issue you are trying to solve, take a break. Scheduled breaks can actually help increase creativity. Having time away from an issue can help to forge unexpected connections and creative solutions.

Make your creative space your own space. When you are creating, make the space you are working in your own. Put up pictures that have personal significance. Play your favorite music. Light your favorite candle. Construct this space so that you feel comfortable and in control. Try to make your space as unique as you are.

Exercise and eat well. Exercising and eating well can help increase our mental and physical endurance. When you do not eat properly, your brain is not functioning at its optimal level. Creativity is not just about cognition. You need your physical self to be well maintained too!

Why are creativity and innovation important for business?

The Birth of the Four Seasons: A Case Study

The Birth of the Four Seasons Hotel Chain

In 1961, Isadore Sharp opened the first Four Seasons Motor Hotel in downtown Toronto. At this time, guests had two options for overnighting: they could choose a smaller hotel with a cozy atmosphere but few amenities, or a larger impersonal hotel with all the amenities imaginable. Each type of hotel had its benefits as well as its shortcomings. The smaller hotel simply could not offer a business traveler the options they needed, like a meeting room. On the other hand, due to its sheer size, the larger hotel left guests feeling anonymous.

To offer travelers the best of both worlds, Isadore Sharp created his new business model: the medium-sized hotel. With only 220 rooms, he knew that he would have to charge prices much higher than his competitors in order to afford state-of-the-art amenities. How would he overcome this obstacle?

Sharp decided that if his hotel was creative and innovative in terms of customer service, guests would pay the premium prices. To better gauge what services to offer, Sharp enlisted the help of his guests. Based on their feedback, Sharp decided to offer services that would make guests feel like they were at home or in their own office.

To replicate the sought after at-home feeling, the Four Seasons was the first hotel to offer shampoo in the showers, hairdryers, makeup mirrors, 24-hour room service, bathrobes, dry cleaning, and pressing. To replicate the “in their own office” feeling, the Four Seasons was the first hotel to install a two-line phone in every guest room, a big well-lit desk, and 24-hour secretarial service. This revolution in customer service set the Four Seasons hotel chain apart from their competitors.

(The information for this case study came from Roger Martin’s book *The Opposable Mind: Winning Through Integrative Thinking*.)

Discussion Questions

How did Isadore Sharp use creativity and innovation to achieve his goals?

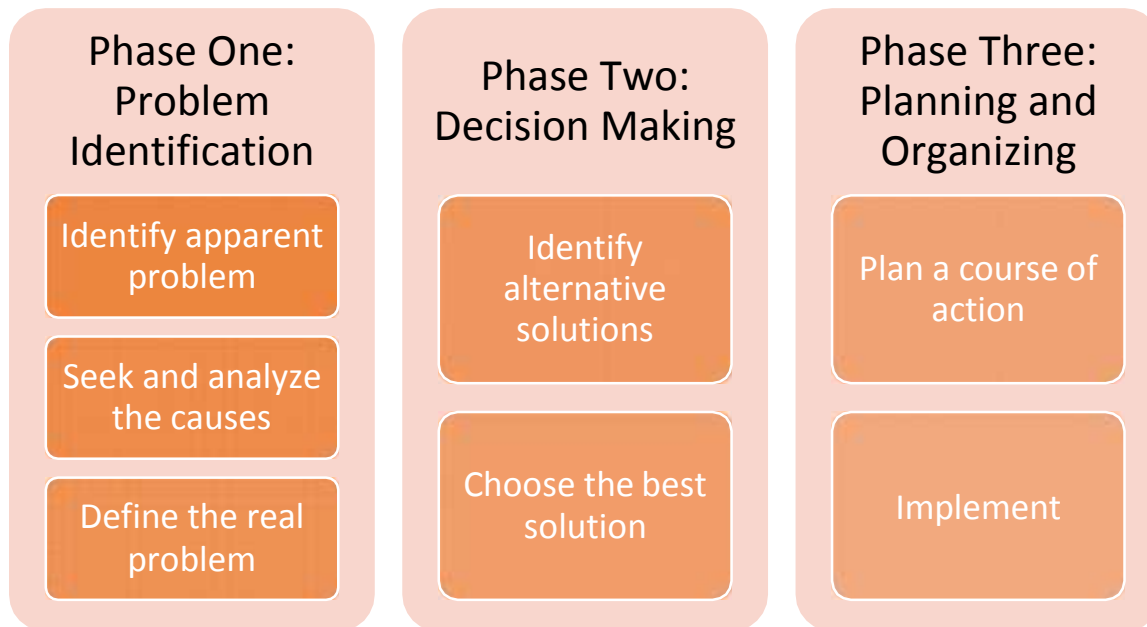
How did Sharp avoid choosing the existing models of the hotel industry?

What steps did Sharp take to create his new hotel model?

Do you think Sharp's creativity and innovation had any effect on the hotel industry? Why or why not?

Where Does Creativity Fit Into the Problem-Solving Process?

Problem-Solving Models



This process is the very basis for informed and consistent problem solving, and creativity is a key part of the entire model. Each phase is equally important: proper identification of the problem, creativity in identifying solutions, innovation in implementing solutions.

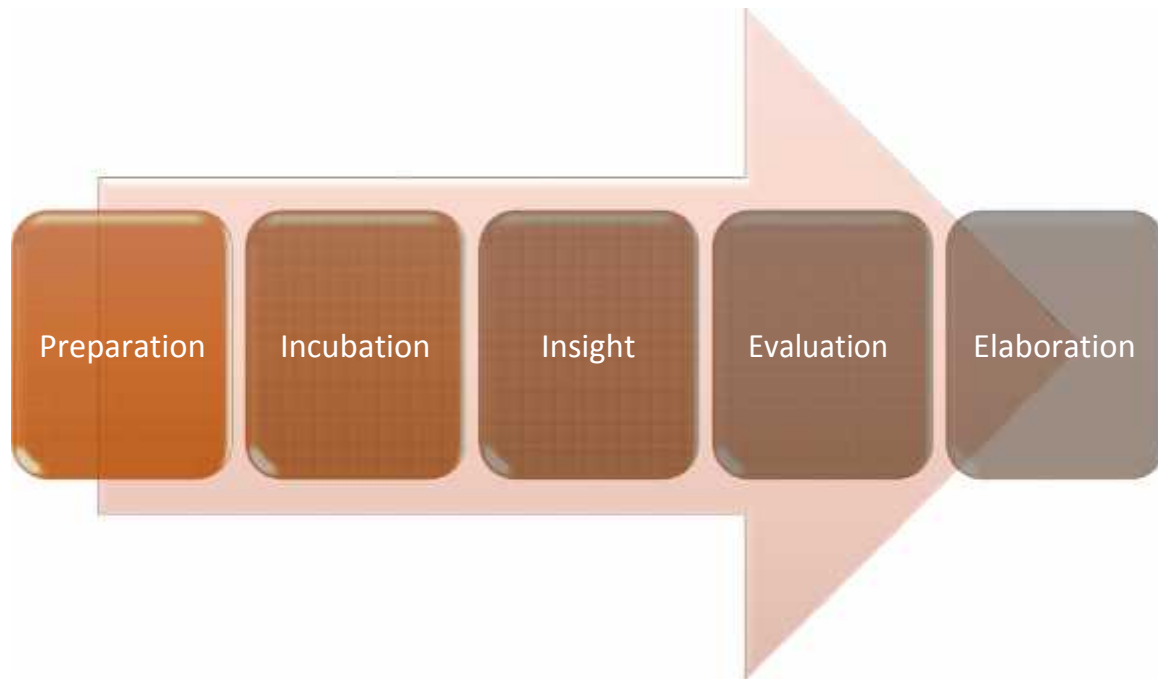
The first stage of problem solving involves proper identification of the problem. This stage is vital since it will enable you to generate the right solutions. Do not rush this stage: make sure you know what the problem is before you proceed.

The second stage involves creativity and the generating of ideas. This stage revolves around identifying your options and deciding which option will be the best to solve your issue.

The third stage involves innovation: making a plan and implementing the ideas generated in the second stage.

Another Perspective for Creative Problem Solving

Here is another model that we can use for creative problem solving:



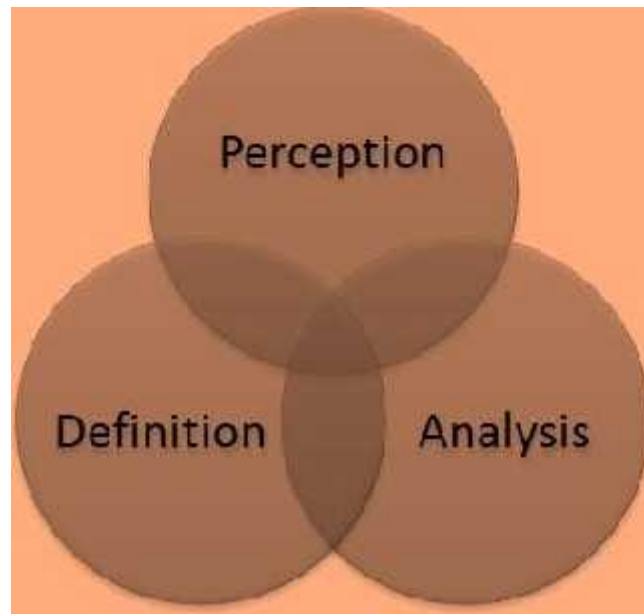
This model comes from Mihaly Csikszentmihalyi's book *Creativity: Flow and the Psychology of Discovery and Invention*.

Here is a more detailed breakdown of the model.

- Ñ **Preparation Phase:** During this phase, we are becoming immersed in a set of problematic issues that are interesting or arouse curiosity.
- Ñ **Incubation Phase:** This phase is the percolation phase. Here we have ideas churning around in our heads. This is the phase when unusual connections between ideas can begin to emerge.
- Ñ **Insight:** This phase is the “Aha!” moment, as Oprah would say. It’s the time when the pieces of the puzzle come together.
- Ñ **Evaluation:** This is the phase when we must decide if the insight(s) made in the previous phase have any value. Are they worth pursuing?
- Ñ **Elaboration:** If our insights have value, we elaborate and act on them. This phase transforms our ideas into a plan. We take the abstract and make it concrete.

Keeping an Open Mind

Part of the problem-solving process is re-evaluating and evolving. This will ensure that you reach the best solution possible. Consider how perception, definition, and analysis overlap:



Solving Problems the “Right” Way

There is no one “right” way to solve a problem. If there was, it would be much simpler to decide on a solution and apply it! With so many different kinds of problems to deal with, there is no system that works in every situation. Many solutions are possible, and some are better than others.

Your skill as a problem solver depends on your expertise with the tools and your knowledge of how to use them. You know you don’t always solve problems step by step. Sometimes you have a solution before you know what problem it solves. (For example, you decide to move your bed against another wall and you find out the next morning that the sun doesn’t wake you up so early.) However, for many situations, having formal steps to follow can help you create flexible, workable solutions.

Phase One

Let’s take a look at the first phase of the three-phase model: Problem Identification. Let’s look at each of the three steps in this process. In all steps, your focus is on the problem itself.

Perception

You ask yourself: Is there a problem? Where is the problem? Whose problem is it? This is the exploration stage. It includes whatever you do to get a handle on the problem.

What are the symptoms? Funny noises in the engine, an unhappy look on your employee's face, or a change in the productivity rate? You've got to find out what the problem is.

The purpose of this phase is:

- Ñ To surface an issue.
- Ñ To make it okay to discuss it (legitimize).
- Ñ To air different points of view.
- Ñ To avoid perception wars.
- Ñ To get group agreement to work on the problem.

Steps in this phase include:

- Ñ Legitimizing the problem; make it okay to discuss it.
- Ñ Asking, "How does the problem feel?" and, "What's the real problem?"
- Ñ Identifying the best, worst, and most probable situation.
- Ñ Identifying whose problem it is.

Definition

Here, we state the problem as a question. Our goal is to grasp the general idea of the problem and then draw the rope tighter to get a more specific idea of the problem.

Steps in this phase include identifying:

- Ñ What is the problem?
- Ñ What is not the problem?

Analysis

Now that we have a general idea of the problem, we will use analytical tools to define it even further. Steps in this phase can include the following techniques.

Ask basic questions, such as who, what, where, when, why, and how.

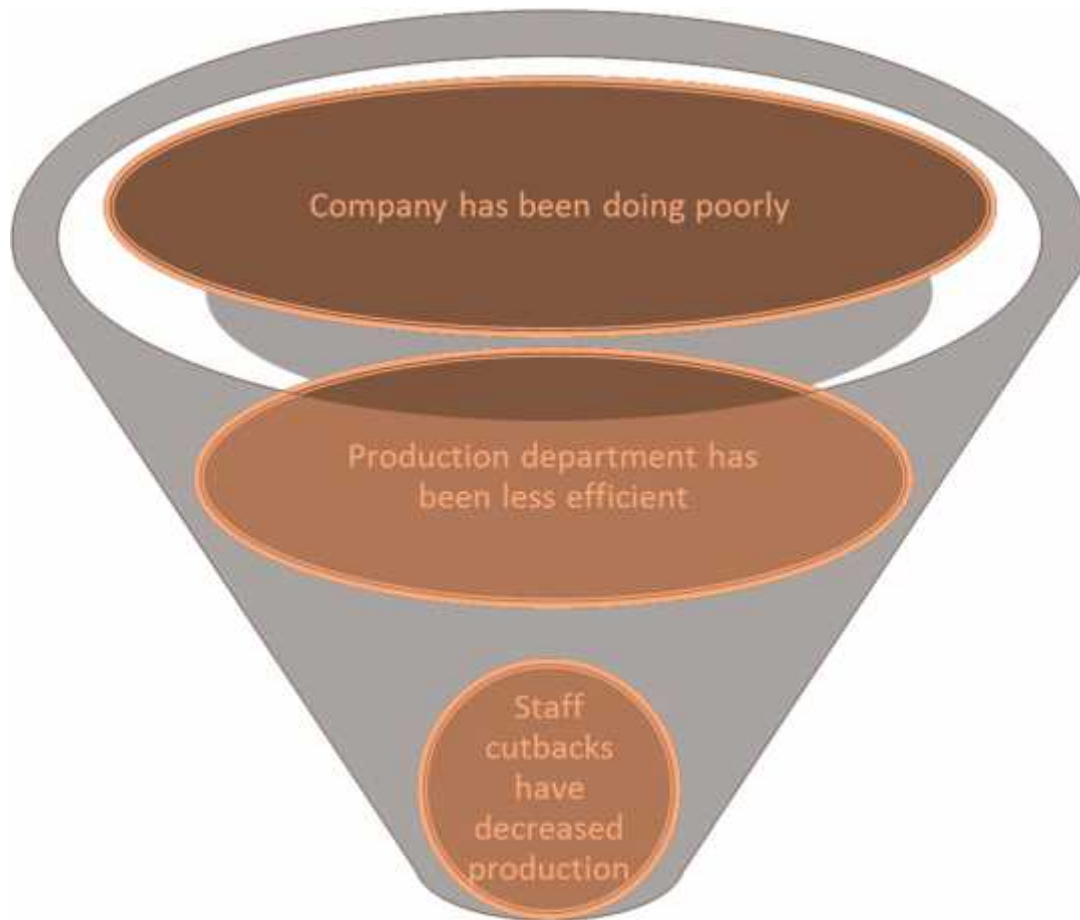
Break it down into smaller pieces. For example, if we know that the problem is that revenue is down, we can break it down into possible areas of cause: manufacturing, shipping, or sales.

Ask the expert. Find a person who has dealt with this sort of issue before.

Move from **generalizations to specific examples** as a way of testing what the problem is or is not. For example, you could say, "Our company has really been doing poorly all year." We could further identify how the company has been doing poorly; let's say that the production department in particular has been

less efficient, costing the company money. Then, we can look at what aspect in particular is doing poorly.

This analysis can be looked at in the shape of a funnel. We move from the top of the funnel (the general issue) to the bottom of the funnel (the specific issues):



Possible Solution: Hire Staff to Increase Production

Phase Two

The next phase of the problem-solving model (idea generation) involves a high level of creativity. Remember, you must have completed the first phase (identifying the problem) before you move onto creating possible solutions. As well, if the problem you are trying to solve involves group input, be sure that all group members agree that the problem has been accurately identified. If people don't agree on the problem, they will never agree on a solution!

Creative Thinking Methods

Here are some tools you can use to come up with ideas.

Brainstorming

Draw a circle in the middle of a page and write down your problem. Then, draw lines from that circle and write possible solutions. Don't worry if some ideas are unconventional; this is a time for creative thinking, not critical thinking. The purpose of this exercise is to capture the range of ideas.



Checkerboard

This is a more organized form of brainstorming and can be particularly helpful for people who don't like how chaotic a brainstorming session can become. With this method, you organize your thoughts into a table. We still want creative thinking rather than critical thinking, but this method may help you develop ideas.

Here is an example of a checkerboard.

| Main Problem | Possible Specific Solutions | | |
|--|--|--|---|
| Roof at the office needs to be shingled | Have construction done in the summer to minimize the effect on the workplace | Have staff work from home | Arrange to have the roof worked on in the night |
| People are consistently showing up late for work | Dock their pay for time missed | Bring the problem to their attention | Provide incentives for good attendance |
| Colleagues are leaving dirty dishes in the staff room | Post a sign stating expected behavior | Speak to the people responsible individually | Assign a cleaning schedule for each day |

Next, cut up solutions and move them around, or use your computer. This can help you organize your ideas and generate even more solutions!

Research and Report

We do not have to reinvent the wheel. Look at what others have done. Do some research and prepare a report. With some investigation, you might just find the perfect solution to your problem. Or you might just learn what not to do!

Evaluation

Now that we have been through the creative process and generated ideas, it's time to evaluate the solutions to find the best fit.

- Ñ Sort solutions by category. This can be similar to the checkerboard above, just with some critical thinking applied.
- Ñ Identify the advantages and disadvantages to each solution.
- Ñ Identify what you like about each idea and what you don't like.
- Ñ Number your ideas in order, from the one that seems the most feasible to the one that seems the least feasible.

Decision Making

Once you have evaluated the options, it's time to make a decision. Here are some ways you can do it:

- Ñ Get a consensus from the group on the best solution.

- Ñ Don't limit yourself to one option; you may find that you can combine solutions for super success. (This is called the both/and method.)
- Ñ Eliminate the solutions that the group as a whole won't consider.
- Ñ Try to focus on agreements during all voting.
- Ñ Use straw voting: Take a quick, non-binding yes/no vote on the current solution as proposed.
- Ñ Try negative voting: Rather than asking who is for a solution, ask who is against the proposed solution.
- Ñ Back off! The group may need some time to evaluate the options before making a decision.

Phase Three

The last phase involves innovation. We take the chosen idea generated from our creativity phase (Phase Two) and plan how to implement the idea. In addition to planning, we perform the implementation of the solution. After all, we have to try out our solution sometime!

Planning

For the planning portion, start by breaking the task into manageable chunks. Then, for each mini-task, plan the following information:

- Ñ What needs to be done?
- Ñ Who will do it?
- Ñ What resources will we need?
- Ñ How much time will it take? (Set a deadline!)

Once all the smaller tasks are planned out, you will have an idea of how long the main solution will take to implement. You will also want to make sure that the above questions are answered for the main task.

Implementation

Implementation is a cycle of three activities:

- Ñ Figuring out what you are going to do
- Ñ Doing it
- Ñ Reacting to what happened or getting feedback

Solution Planning Worksheet

It can help to lay out what you are planning to do. Here is an example of a solution planning worksheet.

Problem: Staff shortage

Solution: Hire more staff

| | |
|---------------|--|
| Task 1 | Hiring budget needs to be assessed. |
|---------------|--|

| | | |
|---------------|--|---|
| | What needs to be done? | Budget needs to be assessed to know how many people we can afford to hire |
| | Who will do it? | Deborah from Accounting |
| | What resources will they need? | All resources in-house |
| | How much time will it take? | Targeted completion date: Dec. 31 |
| Task 2 | Establish company presence at local job recruiting fairs. | |
| | What needs to be done? | Contact people who run recruitment fairs and reserve a spot for our company |
| | Who will do it? | Bill and Barb from Human Resources |
| | What resources will they need? | Table, Chairs, Company Brochures, Applications, Decorations |
| | How much time will it take? | Targeted completion date: March 1 |
| Task 3 | Advertise Openings. | |
| | What needs to be done? | Job advertisements need to be created and posted on company website |
| | Who will do it? | Sheila from Human Resources and Bob from Tech Support |
| | What resources will they need? | All resources in-house |
| | How much time will it take? | Targeted completion date: Jan. 20 |

Defining the Problem

Problem Identification

The first and most important undertaking of your problem-solving efforts needs to be defining the problem. You cannot work on something if you don't know what it is. You have to resist the tendency to start working on the problem as soon as you know one exists, and instead develop an understanding of whether you are addressing the problem or merely a symptom of it.

We should go after the problem rather than attack symptoms. This way, we can create higher quality solutions that in turn will eliminate or reduce the symptoms. As well, this will resolve the problem much more easily than when you attack the surface only. Most importantly, you'll also know that you are taking on a worthwhile problem.

Asking the right questions and avoiding assumptions is vital in this phase.

Eight Essentials to Defining a Problem

Although we make decisions all the time, some decisions come easier than others. The first step is to define the problem clearly. We have eight suggestions to help you do this as easily, efficiently, and effectively as possible.

Rephrase the Problem

Sometimes what we want to see is not what other people see. When the boss sees sales drop and he tells his team to work harder, he's not likely to see much of a result. He's telling people what to do for his benefit. Unfortunately, this approach does very little to engage people. Instead, he could rephrase the problem and ask people what they feel connects them to their work. He can take an interest and ask what they can do to make their jobs easier or make work processes more efficient. In this way he engages people, finds out what could be affecting their sales, and can come up with solutions instead of just telling people to be "more productive." By showing people what's in it for them and involving them in the problem-solving process, the boss is motivating his employees to find creative solutions.

If you have a hard time with wordsmithing, grab a dictionary and thesaurus (or look at online versions) and play with your problem statement by changing it several times. Start with one word or short phrases. If you don't enjoy word games very much or feel yourself struggling, ask for help from a colleague or friend.

Here's an example. If the problem seems like "Our production costs have increased," start replacing words to become clearer about what's going on:

- Ñ "Our sales are down slightly from last year."
- Ñ "Our customer volume is down from last year."
- Ñ "Wages have stayed the same."
- Ñ "Production costs are the same from last year."

By doing this type of rewording, you can narrow things down and determine that the real problem isn't that your production costs, it is the decrease in sales. The problem appears to be that sales are down. Finding out why will be your next step.

Expose and Challenge Assumptions

We assume a lot. It's human nature. Unfortunately, assumptions can really interfere with getting an accurate problem statement.

When defining your problem, write a list and include as many assumptions you can think of, especially the obvious ones. This helps to clarify the problem. Then, test each assumption and find out if some of them are actually wrong, or if you imposed them on yourself.

One common assumption is to say, "We've never done it that way, so we won't be allowed to do it in the future."

Use Facts

Sometimes we see a problem and just want to jump in and fix it. However, we are also generally responsible for things like time and money, so it's important that we look at the details and determine what the problem really is. Find the data you need to define the problem. If you need creative aids to help with your thinking, use them. Draw a picture or a graph to help gather and focus your thoughts. Ask questions and gather information that honestly describes the problem so that you can get specific about it.

"You take too many coffee breaks," is a very vague statement of a problem. "You've taken five coffee breaks today and I feel it is affecting your productivity," is specific. With straightforward problems like this one, you will find that defining the problem and bringing it to the other person's attention will often resolve it. There are very few people who will continue to challenge the supervisor once they demonstrate an awareness of the problematic behavior being repeated.

Grow Your Thinking

Problems are often related to other problems. They can be a small element of a larger issue, so this element of problem definition includes considering the problem as part of something larger. To do this, you make the problem more general.

Ask questions such as

- Ñ "What's this connected to?"
- Ñ "What is this an example of?"
- Ñ "Where have we seen this before?"

Leveraging the word play we used earlier, replace specific words with more general ones. "Budget" becomes "finances," "office desk" becomes "furniture," "mouse" becomes "pest."

Shrink Your Environment Temporarily

Since each problem is likely made up of smaller problems, one way to figure out the issue is to split it into smaller pieces. Break the problem down into subsections. This allows you to consider specific details pertaining to each factor involved in the issue. This will help you gain an understanding of the bigger problem, as well as the effect that the smaller problems have on one another.

An example could be that you need to increase your income by \$2000 a month. Break this problem down into manageable chunks.

- Ñ I have been spending \$1000 a month on home renovations. I can cut this back to \$200.
- Ñ I can put in extra hours at work.
- Ñ I can ask for a pay increase.
- Ñ I can do odd jobs like cleaning to generate income.
- Ñ I can stop going out for coffee and save \$100 a month by making coffee at home.
- Ñ I can prepare lunch at home instead of eating out. This will save me \$300 a month.

Shrinking your environment is very effective when you have a problem that is overwhelming. It allows you to focus on something tangible. You can again use word play to great benefit here, using words that are more accurate in their definition. “Vehicle” becomes “taxi” or “car.” “Budget” becomes “our department’s budget” and then “our department’s travel budget.”

Practice Multiple Perspectives

Although the problem may be very clear from where you are looking right now, that may not be the case from everyone else’s perspective. If our sales are decreasing, we may think it’s because our sales team is not being effective, but maybe our competition has dropped their price and added a feature to their product that makes them more appealing than we are.

Rewrite the problem from several different perspectives. How does your customer look at this problem? What about your sales team? Your courier? Add perspectives for people in different roles. How would your spouse see this? A former teacher? A local business association? The people at the café down the street?

Turn it Upside Down

One powerful perspective for defining your problem is to look at it from the reverse direction. If you want more of something, figure out what you get less of as a result. Investigate what happens to decrease sales, or to sell fewer products, or to lose more games. If you feel that sending an employee to a conference is too expensive, consider what happens when you do not send them.

Change your perspective and consider things from angles you had not yet considered, and consider the consequences. What about setting up a bare bones product that does not have all the same elements as the fancy items people are buying from your competition?

R: Remove

- Ñ How can you simplify your product and reduce it to its core functions?
- Ñ How can you make this product more efficient?

R: Reorder

- Ñ How can you change the order or rearrange the use of this product?
- Ñ What components could you substitute to change the order of this product?

A: Amalgamate

- Ñ What products or services could you combine to make a new product?
- Ñ What items can you integrate to create a new product?
- Ñ What components can you put together to maximize the uses of this product?

A: Amplify

- Ñ What features could you add to amplify this product?
- Ñ What components could you change to give this product a different look and feel?
- Ñ What components could you add to your product to give it more consumer value?

A: Alter

- Ñ How can you adapt this product to serve another purpose or use?
- Ñ What are others doing in your industry to adapt and change their products to the market?

P: Put to another use

- Ñ Instead of scrapping a product, would there be a way to use this idea somewhere else?

Case Study

An excellent example of the RAP Model at work is the invention of the sticky note. In 1968, Dr. Spencer Silver was attempting to develop a super-strong adhesive, but instead he accidentally created a low-tack, reusable adhesive. For years, Silver promoted his invention but had little luck finding a proper use for the product. In 1974, a colleague of Dr. Silver's came up with the idea of using the adhesive to anchor his bookmark in his hymn book, and so the sticky note was born!

With the help of a colleague, Dr. Silver managed to create a new product from an existing product. The men **altered** an existing product and **put an existing product to another use**.

Summary

Use the questions in the RAP model as a guide to brainstorm potential ideas for developing an existing product or for creating a new product. Your goal in the brainstorming process is to generate as many ideas as possible. Do not eliminate ideas until you have exhausted the creative process. As you get comfortable using the technique, alter and add questions. Having the right questions to fit your problem can help the idea generation stage go much more smoothly.

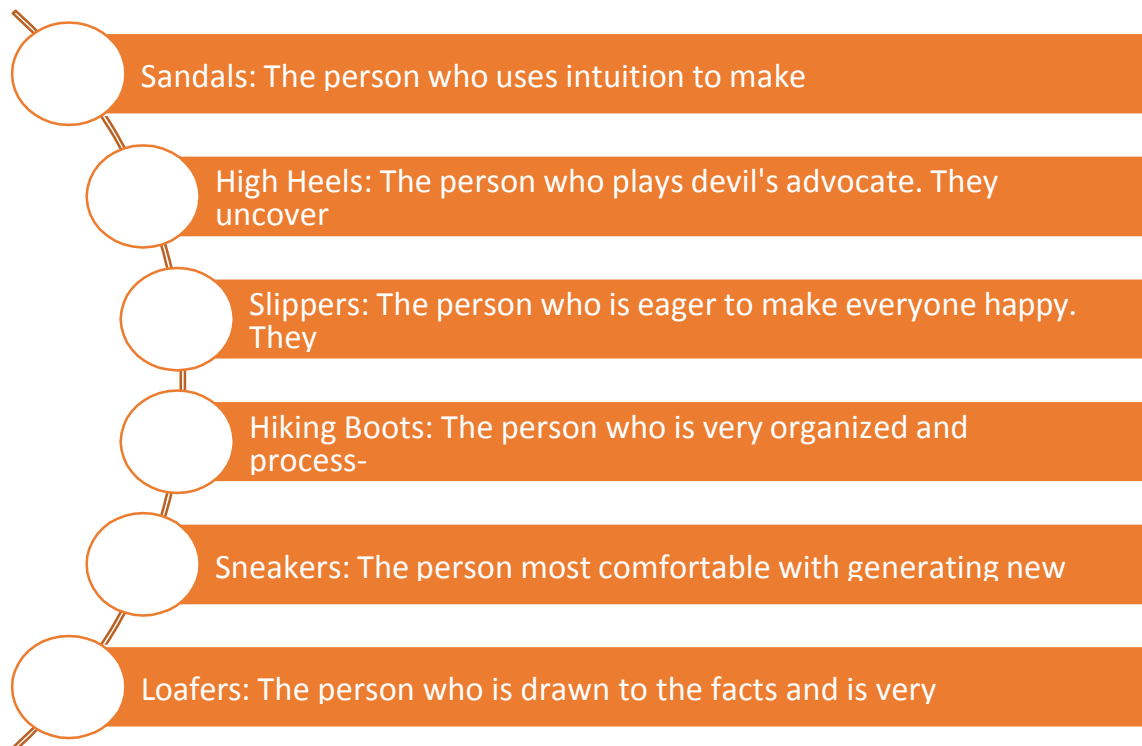
The Shoe Swap Technique

Isolating your thinking to examine an issue can bring about great insight and perspective. Human beings can naturally jump toward a particular issue in both their thinking and feelings. They can move from being neutral to being optimistic in seconds. This “waffling” makes planning and coming up with ideas a difficult task, especially in a group setting where some people are uncomfortable speaking their mind. This is particularly common when there is conflict or competition among members of the group.

The shoe swap technique calls for members of a group to each play a thinking role. Each member selects or is given a pair of shoes that represents a role or certain style of thinking. The roles associated with each pair of shoes are based upon the six dominant thinking styles that emerge in group settings:

- ñ The creative person
- ñ The fact-based person
- ñ The intuitive person
- ñ The process-oriented person
- ñ The devil’s advocate
- ñ The people pleaser

The model below gives a breakdown of the shoes and what style of thinking each pair represents.



When employing this technique, it is important to note that certain people will better identify with certain roles. Although there are probably two or three roles that we can each identify with in some ways, most people tend to fit in one category or thinking style the best. Alternatively, there are some thinking styles that will bring people out of their comfort zone. For example, a person who likes to keep the peace and please others may find it slightly uncomfortable playing the devil's advocate.

There are a variety of ways to implement this technique. You could have each person pick the role they are most comfortable with. If you know the group you are working with well enough, you could assign people roles they may not normally assume.

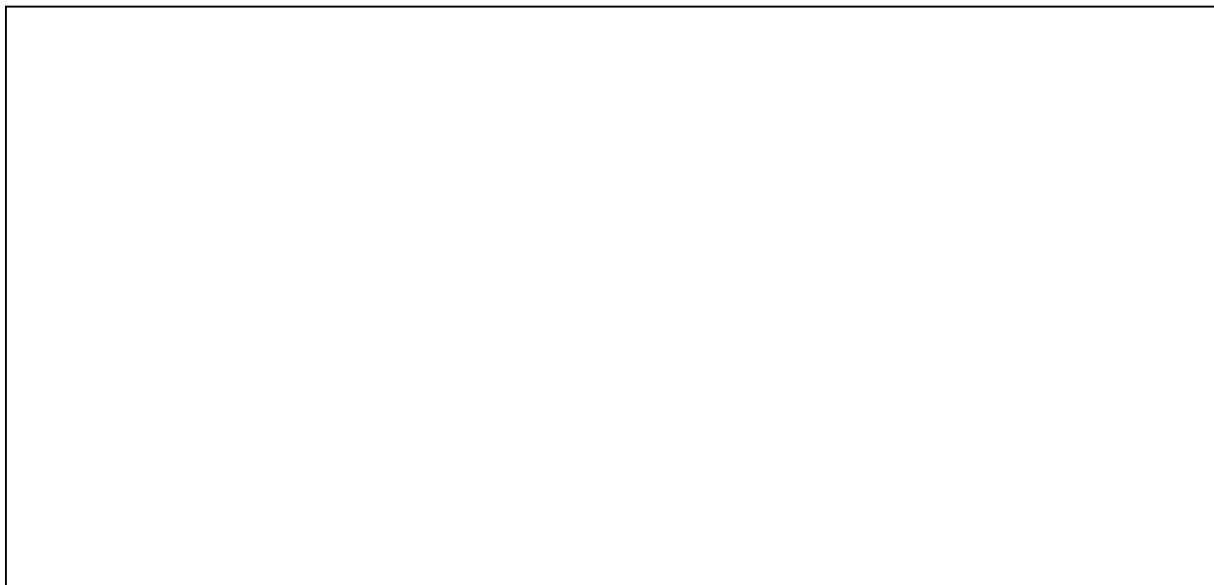
Stretching a person's comfort zone can enable them to view things from a different perspective, but you don't want to make people feel too uncomfortable. Make sure they are stretched just enough but not so much as to hinder the activity's progress.

An additional approach would be to have all members of the group assume the same role at the same time. Once many ideas have been generated, have all the group members switch to another role.

This technique is useful for understanding different perspectives. Since the roles represent the six dominant thinking styles that emerge in group settings, role playing these styles can help give us great insight into how other people think. For example, if you are a loafer person (drawn to facts and very logical), you may find it very difficult to identify with and understand a sandal person (uses intuition to make decisions). This technique teaches you about other thinking styles and can give you a better understanding of why people act as they do.

Walk A Mile

Use the space below to draw a picture of your shoe style.





The physical layout of the mind map also lends itself to easily adding more information. As well, this technique can be as creative as you like. To add a little spice to your map, you can add drawings to represent the main idea and its sub-topics.

Creating a Mind Map

To help you fully understand the concept, here is an example of a mind map.

Step One: Write a list of the main topic and the sub-topics.

Main Topic:

Ñ Vacation to Italy

Sub-Topics:

Ñ Get Passport

Ñ Flights

Ñ Hotel

Ñ Sightseeing

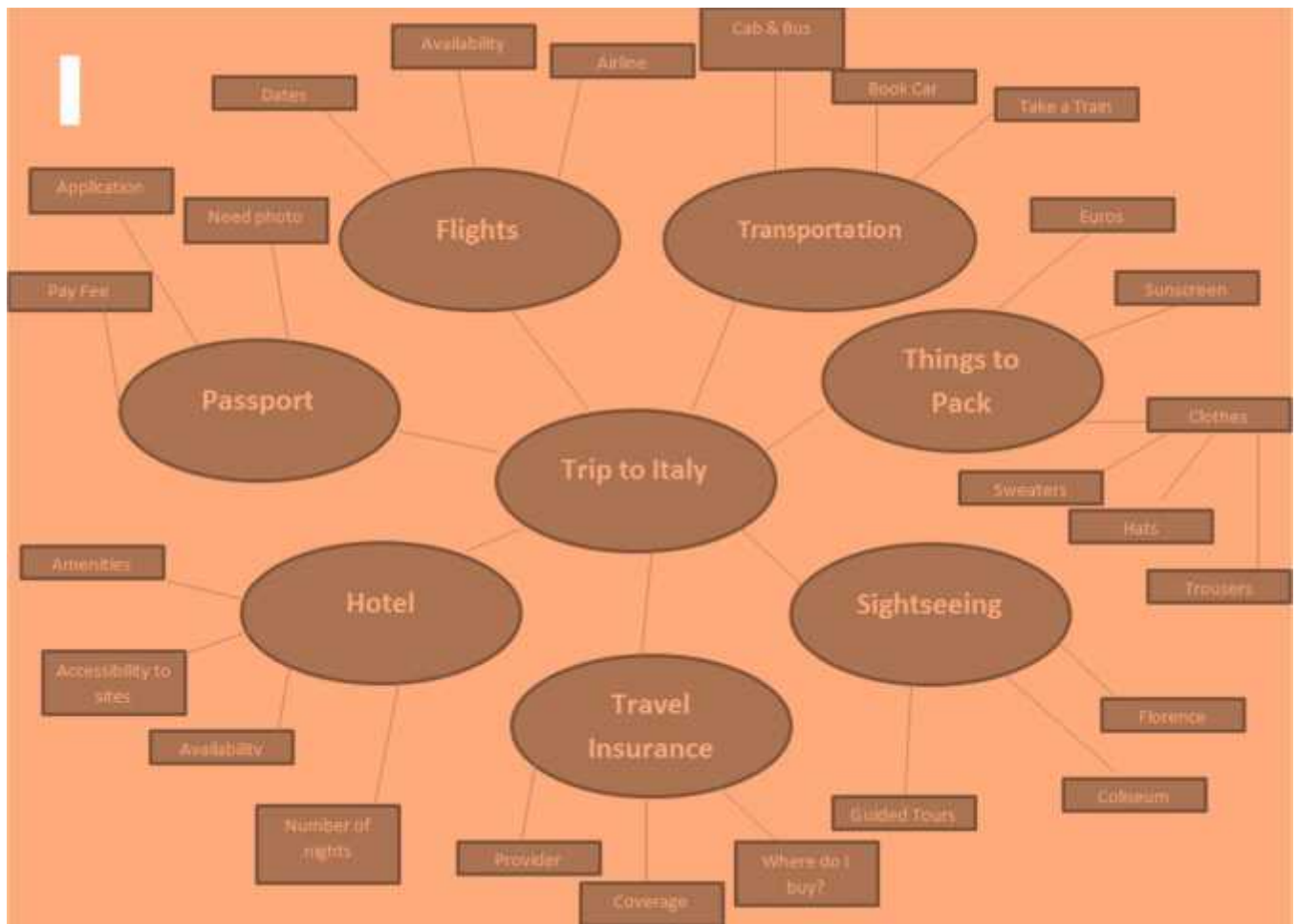
Ñ Things to Take

Ñ Travel Insurance

Ñ Transportation

Step Two: Begin constructing your mind map. Place the main topic at the center of your map. Place your sub-topics in a circular shape around your main topic. Use lines to show the relationship between your main topic and sub-topics.

Step Three: Enhance your mind map by adding relevant information to your subtopics and modifying them as needed.



Map It Out!

Create a mind map using the following scenario: Imagine your team has to write and deliver a presentation to the company stakeholders. What information do you need to consider in order to complete this task?

Metaphors and Analogies

Defining Metaphors and Analogies

Metaphors and analogies can be great tools for sparking creativity. A **metaphor** is a figure of speech that compares two unrelated objects. A simple equation for creating metaphors is “The (first item) is a (second item).” Examples:

- Ń His mind is a prison.
- Ń My hamster is a king.

An **analogy** is a figure of speech that compares two unrelated objects in order to show a point of similarity. Here is an example of an analogy: “In life, you need to take the old out of your backpack in order to put the new in. Sort through the tools you have, keep the ones you need, and leave room for ones to develop.”

The analogy between the contents of a backpack and personal development tries to emphasize that personal development is a continual process of evaluation. Just like carrying a backpack, you cannot carry everything and you must evaluate what tools are important for you on your journey.

While metaphors and analogies may seem similar, they are not. Remember, a **metaphor** compares two unlike objects. An **analogy** compares two unlike objects in order to show a point of similarity.

Using Metaphors and Analogies to Express Ideas

Using metaphors and analogies can be a great creativity exercise as they help us view a concept through a different lens. By looking at these objects in a different light, we create the opportunity to forge unexpected connections. Additionally, metaphors and analogies paint a descriptive picture of a concept. If a concept is particularly difficult to understand, it may be easier to grasp if it is reframed using one of the above techniques. For example, saying “The heart of the car is its transmission” is a lot easier to understand than explaining how other parts of the car (such as the alternator, pistons, sensors) would not function without the transmission working properly. The beauty of this metaphor is that even if we know nothing about transmissions, instantly we have some insight into how vital this part is to a vehicle. One point to remember when using metaphors and analogies is to make sure your audience will understand the references. When someone hears a metaphor or analogy, the message being sent should automatically ring true. If you use obscure references unknown to your audience, your message will fall flat. Using a well-known metaphor like, “Time is money” will probably resonate more with your audience than saying, “Making money is a Sisyphean endeavor.”

Make a Metaphor

Use the words listed here to make as many metaphors as you can in ten minutes. These metaphors can be as silly, fun, and creative as you like. You can use a word more than once if necessary.

Remember: A simple equation for creating metaphors is “The (first item) is a (second item).”

| | | |
|--------|--------|--------|
| Love | Rally | Radish |
| Tennis | Heart | Home |
| Red | Blood | Rock |
| Ball | Celery | Tuna |

3. Brainstorm as many answers to the questions posed as possible. Allow all ideas to be written down. Do not attempt to filter ideas at this stage.
4. When you have completed your brainstorming, look at the ideas that have been generated. Reverse all of these ideas into solutions for your original problem.
5. Assess your solutions. Are any of the ideas viable?

Case Study

Linda's department has just installed a new program for billing. Lately, the department has received a high volume of complaints with customers confused about the layout of the new monthly statements.

Linda has scheduled a meeting with her staff to address the issue. After checking for any glitches in the software program, she has narrowed down the problem to be: "How do we inform our customers about the new layout of the monthly bill in the effort to increase customer satisfaction?"

Instead of posing this question to her staff, Linda decides to implement the situation/solution reversal. Linda arrives at the meeting and asks the following question: "How do we keep our customers in the dark about the new layout of the monthly bill in the effort to decrease customer satisfaction?"

Linda notices looks of surprise on the employees' faces as she instructs them to generate ideas for how we can achieve this goal. She also instructs them to write down whatever ideas they can think of; the process for filtering ideas will come later.

The group generated the following potential solutions:

- Hang up on the customer when they call
- Be rude to the customer when they call
- Change the layout again to confuse them even more
- Don't include anything extra in the next monthly bill to explain the changes

When the idea generating stage slows, Linda instructs her team to look at each idea and reverse it.

The group's reversed solutions were:

- Be polite to the customer when they call
- Be patient with a customer when they call
- Assure customers that this layout change will be in place for some time to come and that their department is doing everything they can to minimize confusion
- Assure customers that the billing department will be including some literature in the next monthly statement to explain the changes

Linda found that the Situation/Solution Reversal technique worked well with her employees. The group was enthusiastic about the approach and had fun in the creative process. The reversed solutions

Bring on the Toys!

The Nine Intelligences

Howard Gardner's theory of multiple intelligences has given us great insight into the way people learn. Gardner's theory encompasses nine different intelligences (described below). While individuals can possess different intelligences, they normally fit into one mode of intelligence best.

Verbal-Linguistic

This person has fantastic verbal skills and is the quintessential wordsmith.

Mathematical-Logical

This person has the ability to think abstractly and is quite good with numbers.

Musical

This person has musical ability. They can produce rhythm and understand pitch.

Visual-Spatial

This person is able to think in images and pictures. They can visualize what is not concretely in front of them.

Bodily-Kinesthetic

This person has great control over their body and is able to handle objects in a skillful manner. (Think of a basketball player or a gymnast.)

Interpersonal

This person has emotional intelligence. They are able to navigate and respond to the moods of others.

Intrapersonal

This person is highly self-aware. They are quite clear on what their inner attitudes, values, and beliefs are.

Naturalist

This person is one with nature. They are adept at interacting with the natural world.

Existential

This person questions the meaning of human existence. They ponder questions such as "How did we get here?"

This theory has also given us great insight into the way people learn. We now know that some people learn better by hearing (auditory), by seeing (visual), or by hands on (bodily-kinesthetic). This information is important when we are trying to tap into our own creativity and the creativity of others. Offering people a creative alternative to solving a problem can be a great method to jump-start their thinking. Instead of offering the traditional paper and pen approach, give people the opportunity to problem solve using methods listed below. This is a great way to be creative, solve a problem, and have fun in the process!

Draw Instead of Write

Sometimes, in the beginning stages of generating an idea, it can be hard to express in words what you are thinking. Drawing offers an alternative method to express what you are trying to verbalize. Additionally, a drawing can help trigger other thoughts and make new connections between ideas.

With the drawing technique, the creator often has more freedom than with verbalizing an idea as language can be a restrictive structure. Drawing also has the added benefit of transforming an idea from being abstract to concrete. Being able to “see” the idea can help give you greater focus and a better understanding of what you need to do.

Think of drawing your dream house. You could describe, in words, to your builder what the house would look like. However, differences in interpretation could result in you having the house you don’t want. Drawing a blueprint helps you and others to better see your vision.

Use Objects

Using objects (like modeling clay or building blocks) can also be a great creativity technique. As with drawing, using objects makes a problem physical – it’s now something you can touch. This technique suits those who learn best by doing rather than hearing or reading about a problem.

Using objects is especially good when we are in the beginning stages of idea generation. Objects can help us better understand the problem, which is vital for generating solution-based ideas.

Draw It Out! Problem

Solutions

Encouraging Creativity in a Team

Brainstorming

About Brainstorming

The creation of the concept of brainstorming is credited to Alex Osborn. Osborn was an advertising executive who first published the idea in his 1953 book *Applied Imagination: Principles and Procedures of Creative Thinking*. Brainstorming can be an individual activity or a group discussion centered on either creating ideas or solving a problem.

Creating Ground Rules

One requirement for brainstorming is that there needs to be a safe environment for people to share their ideas. Members of the group should all feel comfortable in contributing their thoughts. A way to

create this safe environment is to have some ground rules for your group brainstorming sessions. These rules can be created by the group and might look like:

- Ñ Everyone must contribute.
- Ñ No idea gets criticized, no matter how unconventional.
- Ñ Be considerate of those around you. Allow a person to finish their thought before jumping in.
- Ñ One person speaks at a time.

Having guidelines can help to create a safe environment without hampering the creative spirit needed to produce innovative ideas. Additionally, if rules are not in place you may have outspoken group members taking over the session. If this happens, great ideas can be overlooked or a solution could be settled upon too early, resulting in a less than optimal solution.

Another key component to brainstorming is that wild ideas should be encouraged and criticism should be avoided. Group members should be able to use this safe space to suggest ideas that may be overlooked.

Finally, brainstorming sessions should be used to build and enhance ideas. For example, if one group member suggests an idea, other group members should be encouraged to build upon and enhance it.

Individual Brainstorming

While group brainstorming has the advantage of offering plenty of perspectives, individual brainstorming should also be promoted. A benefit of individual brainstorming is that you have more time to think about creating an idea or solution. Some people just need more time to process or perhaps they think better alone. Allowing individuals to percolate an idea can sometimes offer the breakthrough your organization needs!

Additionally, when we are in a group setting we sometimes have a tendency to focus on something that one person says. This focus may deter people from generating new ideas. Having distance, time, and individual brainstorming sessions helps to make sure you don't overlook vital information.

Plan It Out!

Brainstorm some possible solutions for one of the following scenarios:

- Ñ A company needs to increase product sales
- Ñ How to save money (personal or work)
- Ñ A company needs to recruit engineers
- Ñ A topic of the group's choice

Rolestorming

In the 1980's, Rick Griggs developed the concept of **rolestorming** in the book *Quality at Work: A Personal*

Guide to Professional Standards. Rolestorming is a variation on the brainstorming technique. While brainstorming is a group discussion held in the effort to solve a problem or generate lots of ideas, rolestorming is a group discussion which involves each member of the group taking on the role or character of another person in the effort to solve a problem.

The essence is that by taking on the identity of another person, rolestorming offers participants the opportunity to see things from a different perspective. The hope is that the group members will then generate ideas they may have otherwise overlooked. Additionally, since each group member is now playing a part, they may feel less inhibited and more comfortable offering ideas that may have been considered unconventional or “off the wall” in a regular group brainstorming session.

After each person has chosen who they want to be, they should get into character by asking themselves some important questions:

- Ñ How does my character view the world?
- Ñ How would my character solve this problem?
- Ñ What would my character’s stance be toward the problem or situation? What would be their attitude?

When taking on the role of others, be sure **not** to take on the identity of someone in the room or someone the group is familiar with. Taking on the role of a familiar person could be potentially hurtful if they are being portrayed in a disrespectful or degrading manner.

People may struggle with this technique, especially if you have any introverts in your group. People may also struggle with fully getting into character if their boss or team leader is in the room. Allow group members to ease into the task and do what they feel comfortable with. Do not be critical of ideas generated while in character.

To relieve anxiety, you may want to ease people into this technique by warming up with another technique, such as the shoe swap.

Case Study

Let’s look at an example of how this tool might be used to generate solutions.

You have a new business where you make and sell jewelry. One of your newer employees keeps missing shifts and does not call in ahead of time to let you know or arrange for a replacement worker. You have tried speaking with the employee to no avail. To solve this problem, you are going to rolestorm to help think of creative solutions.

For this particular problem, you will assume Donald Trump, the business icon, as a character.

The **first question** is, “How does Mr. Trump view the world?” You know that he believes that time is money and that he is notoriously hard on people with poor performance.

The **second question** to ask is, “How would Mr. Trump solve this problem?” Based on what you know of him, you think he would solve the problem by firing the employee for poor performance or reprimanding the employee in some way, like garnishing the employee’s wages.

The **third question** is “What would Mr. Trump’s stance be toward the problem or situation? What would be his attitude?” You think Mr. Trump would first garnish wages, and if the employee’s behavior did not change, he would fire them for poor performance. Mr. Trump’s attitude would be that this is your business and you have to protect its integrity. You can always get another employee, but starting a new business is another story.

You now have a plan for action to solve your problem.

Act It Out!

Your company has launched a new, improved cell phone, but sales have decreased instead of increasing. Use rolestorming to solve the problem.

Here are your roles:

- Ñ Have one person in the group take on the role of a customer who is completely happy with the product. Why are they satisfied with the product?
- Ñ Have one person in the group take on the role of a customer who is unhappy with the updates on the product. Why are they unhappy? What suggestions do they have for product improvements?
- Ñ Have one person in the group take on the role of Steve Jobs. What would he say about the quality of your product?

Notes

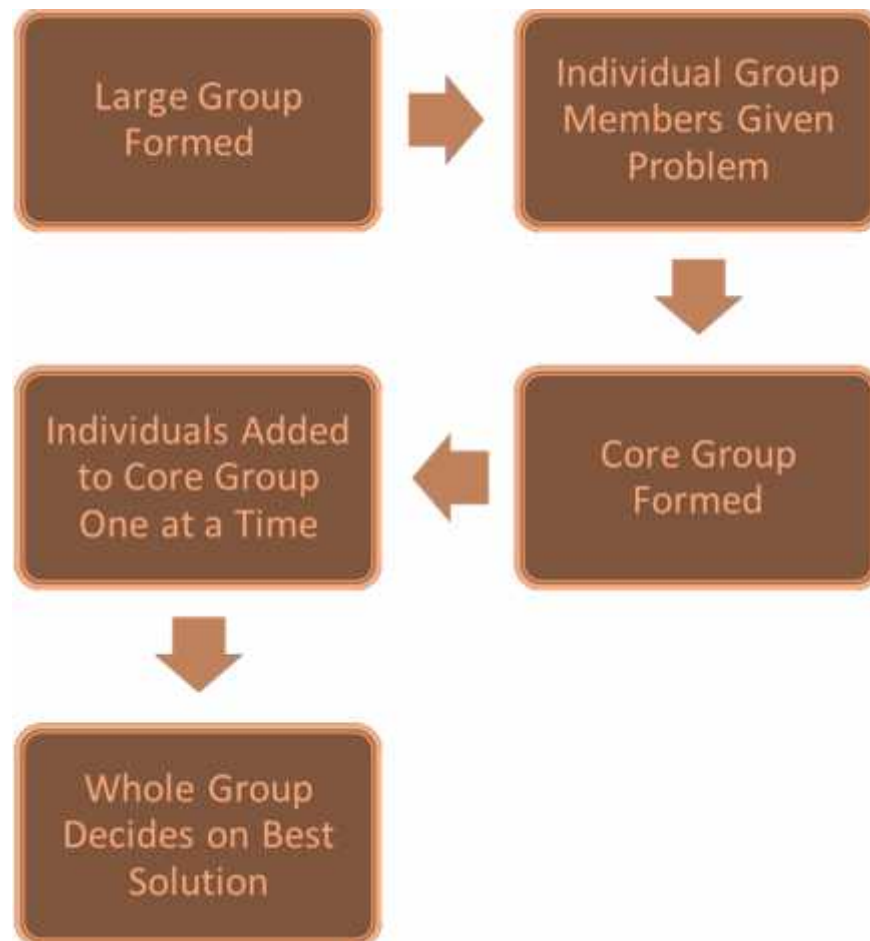
The Stepladder Technique

What is the Stepladder?

Developed in 1992 by Steven Rogelberg, Janet Barnes-Farrell, and Charles Lowe, the stepladder technique offers a new tool to help groups with the decision-making process. This technique is designed so that each member of the group gets an equal opportunity to voice their ideas. By introducing group members' ideas in succession, the stepladder technique guards against one person taking over the group and ensures that all members of the group are accountable. It also gives each member a chance to voice their ideas.

One important point to consider when using this technique is the size of your group. If a group has 20 members, this process may be too time-consuming. Smaller group sizes (ten or less) would be best suited for this approach.

Stepladder Model



Here is a breakdown of the flow chart presented above.

1. The group working on an issue is formed.
2. Each individual group member is presented with the problem. They are given time to think about the issue and are expected to create potential solutions.
3. Out of the group members, a core group of two members from the larger group is formed. These members begin discussing the solutions they have created.
4. A third member is added to the core group. This third member presents their solutions to the first two members. Only after the new member has presented their ideas can the whole group talk about possible solutions. This process repeats until every individual member of the group is assimilated into the larger group.
5. Once all members have presented their ideas, the whole group can decide on the best solution.

Brainwriting

Brainwriting is similar to the brainstorming creativity technique. Both approaches are used to create ideas in the effort to solve a problem. However, the difference between the two is the process through which the ideas are generated.

Brainwriting has taken the basic principles of brainstorming and enhanced them to guard against some of the downsides of group brainstorming, such as members of the group taking over the session or members not contributing. These drawbacks can affect the group's decision as great ideas may be overlooked or a decision may be arrived at too hastily. In the effort to get more ideas generated, brainwriting was born.

Here are the steps for conducting a brainwriting session:

1. Write the problem on a whiteboard or flip chart paper.
2. Give each member of the group a piece of blank paper. To make this a little more fun, each member could also be given a large, oversized sticky note to write on.
3. Nominate one member to be the chairperson.
4. For the next five minutes, each group member will individually write four ideas on how to solve the problem. No discussion should be allowed, but can take place after ideas have been generated. (Get the chairperson to keep track of time for this step.)
5. After the five minutes have elapsed, the chairperson collects the papers, mixes them up, and distributes them (so that each person now has another group member's sheet).
6. The chairperson will give the group five minutes to write new ideas or to build upon the ideas already written.
7. Steps 5 and 6 are repeated as many times as necessary.
8. When finished, whole group discussion takes place. The solutions presented by group members should be posted for all to see.

Brainwriting allows all group members to contribute equally. As well, because ideas are written, certain

quieter group members may feel more comfortable sharing their ideas and more ideas may be generated than in a discussion setting. When the process is silent, group members have the ability to focus solely on their own thoughts without worrying about repeating an idea, forgetting an idea, or feeling embarrassed by sharing an idea.

Furthermore, more ideas are generated in terms of volume. In a traditional brainstorm, one idea would be shared at a time. With brainwriting, you have multiple ideas being written at the same time. Not only does brainwriting generate more ideas, it generates them faster.

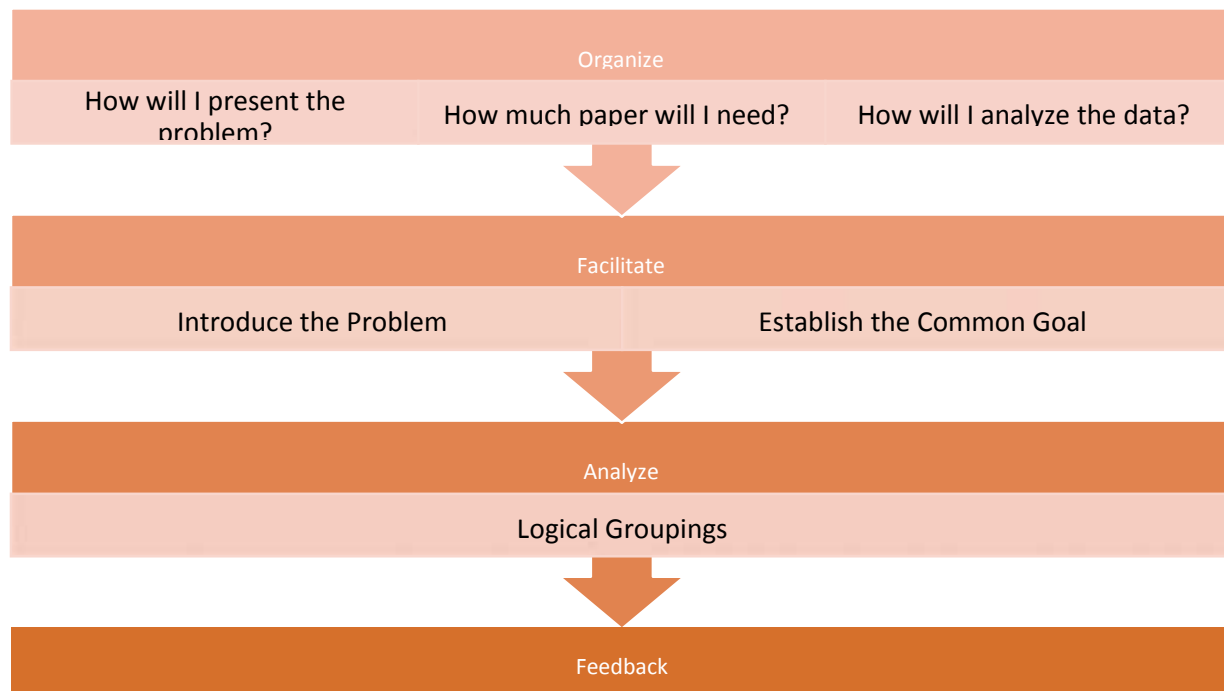
The Slip Writing Technique

About the Slip Writing Technique

The Crawford Slip Writing technique was developed in the 1920's by Dr. C.C. Crawford, a professor at the University of California. This method of idea generation is similar to brainstorming, but instead of a discussion, it uses pieces of paper to capture ideas from a group. The Crawford Slip Writing technique was designed for use with large groups of 50 – 5000 or even more!

Since dealing with such large numbers can be overwhelming, Dr. Crawford sought to invent a technique that would offer organization while allowing each group member their say and an equal chance to contribute.

The Crawford Slip Writing Technique Model



As you can see from the flow chart, there are four main steps in this model.

Organize.

Since you are dealing with a large group of people, you need to organize and prepare effectively. You need to figure out how you will present the problem to the group and how you will analyze the large volume of data collected from the group. Have ample pieces of paper or sticky notes ready; estimate about 30 per group member. These will be distributed to each member before the problem is presented.

Facilitate.

Introduce the problem to the group in a clear and concise way. It is vital that everyone understands what is expected of them. Establish the common goal by informing the group that the objective here is to get as many solutions as possible. Let people know that each idea must be written on its own piece of paper. Advise them to write down as many ideas as possible. The facilitator will use their discretion and end the idea generating session when writing slows. At the end of the session, inform the group that feedback on the session will be given soon after the data has been analyzed.

Analyze.

Sort data into groups that are logical depending on the nature of the problem that needs solving. For example, if your company is looking to create a service in order to break into a new market, you could organize your data into the following categories: market research ideas, advertising ideas, new service ideas etc.

Feedback.

As a professional courtesy and sign that you value the contributions of participants, feedback should be given as soon after the session as possible. If possible, this feedback should include the direction decided upon.

Putting It All Together

Nancy Clue and the Case of the

Software Upgrade Case Study

Nancy Clue's company wants to change from OfficePro 2000 to OfficePro 2020 because of compatibility issues with documents received from customers. Nancy has presented the idea to her colleagues but she is getting resistance about the upgrade. People are hesitant to change the software they have been working with for years. Nancy has discovered that this attitude is primarily because of a previous botched software upgrade.

A couple of years before she started in her position, the company tried to install new accounting

Give a brief but detailed description of how you will implement this solution.

Further Reading:

- ✓ Eriksen, Karen. *Perfect Phrases for Creativity and Innovation*. McGraw Hill, 2012.
- ✓ Godin, Seth. *Linchpin*. Portfolio Hardcover, 2010.
- ✓ Martin, Roger. *The Design of Business: Why Design Thinking is the Next Competitive Advantage*. Harvard Business Press, 2009.
- ✓ —. *The Opposable Mind: Winning Through Integrative Thinking*. Harvard Business Press, 2009.
- ✓ Seelig, Tina. *inGenius: A Crash Course on Creativity*. HarperCollins, 2012.