

Unit 2 chapter 1

Topics:

The Physics of Innovation, Story Telling, How prepared is your mind for innovation.

Levels of creativity, Creativity Tools, How to reach users through stories.

➤ **Story Telling**

Storytelling is how we share ideas and experiences. Having raw data is not enough to convince our teams and stakeholders of what needs to be done. A narrative makes a connection between our data and why other people should care about it.

In our work as UX professionals, we use stories to help create a shared vocabulary, focus the team on a common goal, and persuade stakeholders — ultimately leading to buy-in. UX stories are a communication tool that can be used in lieu of boring task check lists that are far removed from the user. They provide a natural, engaging way to share behavior, perspectives, and attitudes.

If you write tasks in a usability test, communicate insights from research, or sell design ideas, you're already using stories in your process. In many business contexts, storytelling can feel uncomfortable, but this rich way of communicating can help set the stage for persuasion or a call to action, ultimately bettering the design at hand.

This article is specifically about the use of stories within the design process. That is, our observations and recommendations apply when the intended audience for your story consists of your own team members, rather than your end users.

Benefits of Storytelling

Stories help us explain difficult concepts.

Giving additional context helps our audience connect with a concept. This additional context can be in the form of behaviors, emotions, reactions, motivations, or goals.

Unlike a flow chart or artifact, a narrative allows the audience to understand the reasons behind users' actions; they remind our audience members that they are not the user.

Stories spark our imaginations and generate new ideas.

When we read a book, we take the descriptions the author gives us and fill in the gaps with what we're familiar with. We do the same thing when we tell stories. Rather than describing every single detail of what users want, allow your audience some freedom to envision the solution. Here's an example:

Carmen recently purged a large number of clothes from her closet, many of which still had tags attached. She would like to sell these items online but needs a way to keep track of her inventory. She doesn't have a dedicated space in her apartment to lay everything out and stores items in large cardboard boxes until they sell.

From this story, different people may envision different solutions for Carmen. Enough details are given to picture the scenario, but not too many that they dictate a specific solution. (For example, we don't say that she's selling 7 jackets, 5 dresses, and so forth, let alone the brands and colors of each item.)

Stories allow us to form a shared understanding.

Thinking about how to build a product usually involves feature lists and backlogs. Stories bring user pain points and goals to the forefront of the conversation and help teams create a shared language of why they're building a product or feature and whom it benefits. These stories can also be used to rally around a product vision, painting an image of how life could be better with that product.

6 Rules for Persuasive Storytelling

1. Adapt your vocabulary to match your audience.

In this article I define “audience” as anyone who is being told the story — including multidisciplinary-team members, stakeholders, clients, third-party partners, and so on. Our goal when telling stories is to resonate with our audience, but it's difficult to do it when we do not speak its language. Understand the industry and terminology of your audience and incorporate these words into your story so they can put themselves in it. For example, if your audience is a client in the manufacturing industry using an assembly-line process, you should know about the machinery being used, the steps of the assembly line, and any product-specific terminology. Without using vocabulary that applies to your audience members, you risk losing their attention and your credibility. This diagram visualizes key terms and processes used in a (fictitious) manufacturing-industry product. Understanding your audience's industry and respective terminology is key when telling stories. Take notes of critical processes and definitions as you do your research.

2. Appeal to the needs of your audience.

Along with understanding the terminology of your audience, you need to know what your audience members care about. Are they only interested in how much money the product will cost? Do they have a strict timeline they need to adhere to? These are concerns that will be running through their minds as you tell your story, so you'll want to ease them as quickly as possible. Focusing on a glitzy UI design when your stakeholders are mostly worried about how quickly their users can navigate through a workflow will make them uneasy and skeptical about your solution. Think of your audience members as personas: that is, understand what their needs and frustrations are when coming into this meeting. How will you make sure you touch on each need and frustration for each type of person in the room?

3. Back up your points with real data.

A compelling story is nothing without hard facts to back up the narrative. Use insights from qualitative or quantitative testing to help craft your narrative and minimize doubt and gray area. When questions arise from your audience, you can back up your answers with this data. For example, if in recent usability testing you got negative feedback on your purchase process, you can tell the story of how you witnessed a user stumbling through the workflow. Use real quotes from the usability test and show your audience how the user completed the task.

4. Focus on the entire omnichannel experience, inside and outside of the interface.

Your users don't exist only inside of your application. What drives them to your software? Where do they use it? Consider the context of use: what do your users do before, after, and during the time when they are engaged with your product? What distracts them?

Understanding these elements will help your audience empathize with what your users are going through.

For example, put your audience in the shoes of your user by saying, “Imagine you’re a single parent, have two kids, a busy full-time job, and you need to keep up with all of the extracurricular activities on your calendar.” This story allows your audience members to picture themselves with these responsibilities, taking them away from their own perspectives.

5. Pair your story with an artifact for memorability and alignment.

Artifacts create a lasting impression after the story has been told. Storyboards, personas, journey maps, and research reports give the audience members something tangible to refer to when the story is brought up at a later time and help them recall specific details. For example, pairing your story with a journey map allows your audience to gauge the overall user satisfaction as you discuss each step of the user’s journey. Alternatively, telling a story while showing a storyboard allows the audience to see the user’s environment.

6. Follow up with a summary.

Summarize your story or meeting with a brief email or other communication for further memorability. If decisions were made based on that story, include what was decided and why. If a decision is questioned down the road, you have this followup to refer back to. Here’s an example:

“Thanks for your help evaluating the priority of the upcoming work in our backlog. We talked about how Gary, our small-business owner, would benefit from a filter-able table of sales rather than a dashboard overview because he has very specific data he looks for when running end of the month reports. We’ve decided to downgrade the priority of the dashboard feature.”

Using Storytelling in Your Work

Research and Strategy

Communicate stories through compelling research reports. You can incorporate imagery with relevant case studies, charts, and photos from usability tests to give your audience something to connect with beyond words.

For example, let’s say you’re working on a checkout workflow for a novelty gift shop’s website. You interview a user and he tells you about a recent experience he had when purchasing an item. Randy is a father who lives far away from his adult children but likes to send them gifts from time to time. He finds the perfect gift for his daughter — something that reminded him of when they used to go on road trips together. He sends the package directly to her house a few states away, but doesn’t include a gift receipt because he doesn’t realize he can do so. When his daughter gets the package in the mail, she has no idea who sent the package or why she’s receiving it, leaving her unsure of whom to thank.

When writing your research report, include Randy’s story as a case study along with a storyboard or journey map as a visual representation. Consider including a photo or illustration of him to allow your audience to put a face to a name.

Translating Randy's story into a journey map illustrates his emotional state at each point of his process. This journey map could be handed out or included in a research report after conducting usability testing.

Interaction and Visual Design

When communicating your design ideas, talk through a design or interaction as if you were your user using it. Use quotes from usability tests along with additional qualitative data that supports why you made certain design decisions.

For example, you can show your audience the original design that Randy (our protagonist from above) used to purchase his gift. Then present your new-design idea using the same scenario; point out how the gift options will be more easily accessible in this new version to allow Randy to include a gift receipt and a message with his purchase. Recalling the story and using it as a scenario to design something better helps your audience members make decisions based on Randy's needs and not on their own preferences. It also gives additional context as to why you made certain design decisions.

➤ **How prepared is your mind for innovation**

Learning Mindset

Our perspective on the world and outlook on our life matters the most. Because our choices reflect our mindset. For some of us, problems and new situations may be an opportunity to learn for others they may an opportunity to fail.

Broad Repertoire

Person who works in a variety of functions and businesses are the one who thinks outside the box and push limits to creativity and innovation, such individual, can quickly and skillfully, learn to play a lot of different pieces. A broad repertoire can be an important enabler of innovation.

Customer Empathy

An empathetic perspective towards customer looks works completely different. It involves deeply interested in details of their lives, as people, not as categories of consumers. Tools like journey mapping, ethnographic research, pattern finding, etc are much more likely to produce the kind of deep and original insights, that inspire invention and lead to really compelling and differentiated, new value propositions.

The opportunities to innovate or create new thing are out there waiting for us to find them, but often, we simply can't see them. Like scientific discoveries, finding opportunity requires a prepared mind.

5 key steps to creating an innovation mindset

1. Be open to change

To be open to change means to admit and embrace the notion that the world is in constant transformation and all areas of society are challenged by this change. It also means to be aware of where this transforming world is heading and to curiously keep track of change and new phenomena. Finally, it also means that you have to constantly keep analyzing what the transformation means and what the possible consequences of the transformation will be for your business.

Change is a tricky thing – we all have to deal with it and organizations are no different. Accepting the fact that technological transformation is about to impact your business is usually very hard for established organizations.

Let's apply a light version of the Kübler-Ross Change Curve to this:

Denial is a common reaction to new technology and new market forces that can potentially overthrow an organization's incumbent business.

'We've been doing what we do for many years: it has proven successful and if we just continue to deliver on our quality we will be back on track again. The newcomer does not even have a working business model and are financed by venture capital.'

Defense is the next stage in the Change Curve: a kind of anger or aggressive energy to defend one's current business model. A prime example of this can be seen in the music industry when MP3 and streaming came along as new technologies, and established organizations tried to change laws and prosecute against their customers.

The next stage is depression, where an organization will begin lamenting the state of affairs. Only after this depression stage are they ready to accept the new market paradigm and start working towards managing and adapting to it.

In today's fast-moving markets there is little time to dwell in the different stages of the Change Curve, as competitors and new market entrants are pushing forward while you're in the first three stages. To be innovative, established businesses must learn to shortcut the Change Curve and go directly from shock (pre-denial) to acceptance, without dropping into any of the stages in between.

2. Embrace creativity

The other aspect of an innovative mindset is to truly embrace creativity. An innovator's attitude is that creativity is the solution to problems, rather than a traditional scientific method. This argument is predominant among many of those who have successfully practiced innovation in the realm of daily business activities. The innovation-as-art perspective in business stems – to a large extent – from the concept of design thinking. But importantly, to equate innovation with art doesn't rule out the necessity of structure, processes and methodology for innovation. All these are required also when practicing the art of innovation. However, the innovation-as-art perspective stresses that the starting point for innovation is creativity, rather than implementation of management processes and organizational structures for innovation. Which, in turn, requires a certain kind of culture and organization that enables creativity. In this area, we see many digital companies positioning themselves. For example, Valve Software, who stress their flat organization and the freedom – and every employee's responsibility – to be creative in everyday work in their company handbook.

3. Think big

Today, most academic researchers and experts on innovation agree that innovation is about more than just incremental improvements to existing products or product extensions.

This leads to the point that innovation requires an ability and the courage to think bigger and beyond the current norms and truths in the market. Innovation is about stretching one's thoughts out of everyday ordinary thinking and analysis.

We'd argue that big thinking and innovation is a combination of analytical skills, entrepreneurial spirit and the ability to fantasize. Few individuals are blessed with all these capabilities, but a group of people – and certainly organizations – are well equipped to accommodate these capabilities under the same roof. This is also one of the reasons why a diverse organizational culture has emerged as a key prerequisite for innovation: diverse groups that combine skills and capabilities can accomplish big thinking more easily than homogenous groups that are likely to reproduce versions of similar thinking over and over again.

4. Show courage

Innovation doesn't happen unless organizations and the innovators within them have the courage to constantly rethink how things can be done. It takes courage not to conform to widespread beliefs and popular "truths" in big organizations. It takes courage to challenge proven strategies and successful products and services before they go into decline. It takes courage to question management and colleagues for doing things the way they have always done. It takes courage to constantly problematize and be that one person who always goes against the grain and tries to think about things from a different angle. It takes courage to be vulnerable rather than playing it safe according to established business practice. It takes courage to venture into the new and uncertain, risking failure.

But all of the above is necessary to push innovation forward and to create an innovative climate in organizations. Because when has anything new ever happened unless someone dared to take that step into the uncertainty of the unknown? When I think about the courage needed to take that first step I always think about the guy that started a dance party at Sasquatch music festival. That is exactly how things can work in an organization as well.

5. Think and act fast

Innovation within an organization must be a fast-moving process to keep up with the change going on outside of the organization.

Twentieth century innovation was often a slow process, with long lead times from idea to concept, and concept to market. A lot of time usually went into extensive R&D. In the automotive industry, for example, the timeframe to invent, design and launch a new car model has been around eight years. But today, eight years is an eon in an automotive market that is transforming year by year. Potentially disruptive business models for auto manufacturing like Local Motors have proved that a new car can be dreamed up and launched in the market in 12 to 18 months, and with advanced 3D printing technologies and VR-aided design and manufacturing, that timeframe can probably be cut even shorter in the years to come.

To sum all of this up succinctly, there are five main ingredients to an innovation mindset. We need to be open to change, have a bias towards creativity, an ability to think big, unrelenting courage to challenge the norm, and be characterized by speed of thought and action.

An organization with the desire to be innovative must think fast and apply a fast-paced innovation process with an efficient go-to-market roadmap. In this context, it's also critical to adhere to the notion of "failing fast", as new ideas and concepts have to be

tested out quickly and be shut down just as quickly if they don't fly. In this way, the organization can move resources to the next concept instead of getting stuck in a dead-end innovation project, because after all, the world's next "big idea" is just around the corner

➤ **Levels of creativity**

Some methods to inspire creativity tools are listed below:

Breaking the creativity blocks: Often, you may seem to hit a wall while trying to come up with ideas. Please remember that creativity cannot be forced. An environment has to be created to let creativity tips bloom.

You can resort to the following to get the creative juices flowing:

Prepare the ground, ask questions, and soak in inputs: Your mind is like a sponge. You must keep the ground fertile and moist by being curious, asking questions, and experimenting and exploring.

Feed your brain by reading good books, listening to music, watching the theatre. By exposing yourself to sublime artistic experiences, you open up your mind to creative thinking. The mind can make connections and draw insights from regular nourishment in the form of artistic inputs.

Keep a notebook of ideas and insights: Inspiration can strike you at the most unprepared moments. Write down random thoughts and insights as and when they occur to you. These will become the raw material on which to build further ideas.

Allow yourself to make mistakes: "Creativity is allowing yourself to make mistakes." Unless you learn to experiment and subsequently try and fail, you will never learn to think creatively. Creativity follows a trial and error method. You must be prepared to face obstacles and failure.

Get some physical exercise: A brisk run or a round of tennis or swimming is a great way to boost creativity. The endorphins released through exercise generate a feel-good sensation in the body and help the brain in idea generation. So get yourself off the couch and do a bit of running.

Do some quiet contemplation in the lap of nature: Nature is our best teacher. She inspires us to think in new ways. Take a walk and find yourself some quiet place to do some reflection surrounded by greenery. Your imagination will be fueled, and you will find your creativity renewed. Ideas come more easily when we are in a relaxed and soothing environment.

Take a short nap: Your subconscious mind throws up great associations and images in the semi-waking state. Indulge in a session of shut-eye sitting on your desk, and the time your nap to not more than fifteen minutes. As you drift between sleep and waking up, your subconscious mind is active, and ideas come up naturally.

How to get started: "Creativity is a habit, and the best creativity is the result of good work habits."

Search for Inspiration: Walk around your workplace, talk to people involved in the situation, or handle the problem to identify needs and solutions specific to the problem. This will challenge your assumptions, give you a clear picture, and put you on the right track.

Write down stray bits of information and insights from a particular problem. Later you can organize and categorize these to form a rough idea. "Problems are hidden opportunities, and constraints can actually boost creativity."

Brainstorm, explore the limits of the situation, ask trick questions, play devil's advocate, and generate new ideas

.Assess and evaluate these ideas through checklists and idea dissection. You need to analyze and test your ideas for feasibility. Get opinions and suggestions from some of your supportive coworkers so that your ideas can be made ready for implementation.

➤ **10 Creativity Tools**

Some methods of idea generation are listed below:

#1. Attribute Listing

Here you break down a problem into smaller bits and see what you discover. The first step is to list attributes, as many as you can, of a particular object, for example, a toothbrush. The second step is to consider both positive and negative values of each attribute of the object, for example, angles, bristles, the shape of the toothbrush. Finally, you seek to modify the attributes in some way, like changing the negative attributes. This creativity tools technique is helpful in the design of new models.

#2. Assumption Challenging

This creativity tips & technique attempts to create new perspectives in looking at things. It follows a three-step process: Take a critical component of your problem, write down the assumptions around it, and challenge these by saying, "What if.....was not there", then answer this question from a fresh perspective.

#3. Biomimicry

This is a creativity tools technique where you copy nature's ideas and designs to solve human problems. Here nature is treated as a solution provider. This creativity tips & technique can be used in solving engineering problems, the logic being that biological organisms and their organs have evolved over the years and are therefore dependable.

#4. Classical Brainstorming

This is a group creativity tools technique. You and some four other coworkers sit down and ideate on an issue. Write down the problem on a flipchart or board and make sure everyone understands the problem. Ask each member to put forth their ideas; the more, the better. A facilitator writes down the ideas. There is no censure or evaluation of ideas, just generation. After the ideas have been written down, seek a consensus on what ideas can be considered further.

#5. Osborn Checklist

It is used to develop new solutions from existing ideas. You have to apply the following questions to the solution:

Adopt?

Modify?

Substitute?

Magnify/ Minimize?

Rearrange?

Combine?

Any other use?

#6. Personal Analogy

This creativity tools technique involves personifying animate or inanimate objects or identifying with concepts or objects. You take a concept and personify it, giving it human emotions and feelings. Then you communicate the personification and emotions, and relationships through role-playing or pictures. The next step is to make connections between the analog and the subject. And finally, write down insights gained.

#7. Wishing

Wishing is a method of generating radical ideas, of thinking outside the box. You expand your thinking beyond the logical and the feasible. You can be your creative best in wishing for things. The first step is to offer ideas as “I Wish”, and then offer ideas as “Wouldn’t it be nice if”.

After you have collected ideas, now is the time to analyze and converge these. Following are some creativity tips:

#8. Enhancement Checklist

This checklist is meant to analyze the idea and get it ready for implementation. The steps involve shaping, tailoring, modifying, strengthening, analyzing possible defects, comparing with the current situation, and finally getting the prototype ready.

#9. Negative Selection

This is a creativity tools technique of sorting ideas. You review the problem to see what you are trying to achieve. Then you sort ideas into “No” and “Maybe” categories. You consider all aspects of implementing the idea, like the cost, logistics, etc. The purpose is to shortlist the best idea that has greater chances of acceptability.

#10. Six Thinking Hats

It is a creativity tools technique you can use when you need different types of thinking. It can be used for exploring ideas to decide which one to take forward. Six imaginary hats coloured black, white, green, red, yellow and blue, denote several characteristics. The group doing this exercise is first explained the meaning of each colour. Then they proceed to analyze ideas by mentioning the hat with which they are analyzing. So factors like cost, control, benefits, obstacles, logic, feasibility etc., are considered in the evaluation.

Your organization also has a role to play in encouraging creativity tips. Organizations should take some steps to foster innovation and creativity tips:

Minimize control and supervision, and the tendency to micromanage

Provide verbal encouragement and motivation for original thinkers

Create supportive environments and opportunities for creativity to flower

Implement ideas and suggestions given by employees on a regular basis
Reward creative endeavor and appreciate original thinkers

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➤ **How to reach users through stories.**

User stories are short statements about a feature, written from a user's perspective. A well-defined user story does not spell out the exact feature, but rather what the user aims to achieve, to give agile teams the freedom to identify the best possible way to implement the feature.

Ideally, the team should draft the stories in collaboration with all stakeholders, and be informed by research. While there is no standard format for creating user stories, teams commonly write them as single-line statements. Some teams may also include design deliverables such as personas, storyboards or short movies and include details about the users' activities, thoughts and emotions.

User stories are commonly used in agile teams to facilitate planning. Each story should be small enough to fit into one sprint. The most common format for framing the story is:

"As a [user], I want [goal or action] so that [outcome or reason]."

Unit 2 chapter 2

Topics:

The idea generation process, 10 design thinking tools, Brainstorming, Brainstorming Techniques, The principle of Brainstorming, Alphabet Brainstorming, Brainwriting, Grid Brainstorming.

➤ **The idea generation process**

Ideation is a creative process where designers generate ideas in sessions (e.g., brainstorming, worst possible idea). It is the third stage in the Design Thinking process. Participants gather with open minds to produce as many ideas as they can to address a problem statement in a facilitated, judgment-free environment.

➤ **10 design thinking tools**

1. Visualization is about using images. It's not about drawing; it's about visual thinking. It pushes us beyond using words or language alone. It is a way of unlocking a different part of our brains that allows us to think nonverbally and that managers might not normally use.

2. Journey mapping (or experience mapping) is an ethnographic research method that focuses on tracing the customer's "journey" as he or she interacts with an organization while in the process of receiving a service, with special attention to emotional highs and lows. Experience mapping is used with the objective of identifying needs that customers are often unable to articulate.

3. Value chain analysis examines how an organization interacts with value chain partners to produce, market, and distribute new offerings. Analysis of the value chain offers ways to create better value for customers along the chain and uncovers important clues about partners' capabilities and intentions.

4. Mind mapping is used to represent how ideas or other items are linked to a central idea and to each other. Mind maps are used to generate, visualize, structure, and classify ideas to look for patterns and insights that provide key design criteria.

5. Rapid concept development assists us in generating hypotheses about potential new business opportunities.

6. Assumption testing focuses on identifying assumptions underlying the attractiveness of a new business idea and using available data to assess the likelihood that these assumptions will turn out to be true. These assumptions are then tested through thought experiments, followed by field experiments, which subject new concepts to four tests: value creation, execution, scalability, and defensibility.

7. Prototyping techniques allow us to make abstract new ideas tangible to potential partners and customers. These include storyboarding, user scenarios, experience journeys, and business concept illustrations — all of which encourage deep involvement by important stakeholders to provide feedback.

8. Customer co-creation incorporates techniques that allow managers to engage a customer while in the process of generating and developing new business ideas of mutual interest. They are among the most value-enhancing, risk-reducing approaches to growth and innovation.

9. Learning launches are designed to test the key underlying value-generating assumptions of a potential new-growth initiative in the marketplace. In contrast to a full new-product rollout, a

learning launch is a learning experiment conducted quickly and inexpensively to gather market-driven data.

10. Storytelling is exactly how it sounds: weaving together a story rather than just making a series of points. It is a close relative of visualization—another way to make new ideas feel real and compelling. Visual storytelling is actually the most compelling type of story. All good presentations—whether analytical or design-oriented — tell a persuasive story.

➤ **Brainstorming, Brainstorming Techniques**

Brainstorming

Brainstorming combines a relaxed, informal approach to problem solving with lateral thinking. It encourages people to come up with thoughts and ideas that can, at first, seem a bit crazy. Some of these ideas can be crafted into original, creative solutions to a problem, while others can spark even more ideas. This helps to get people unstuck by "jolting" them out of their normal ways of thinking.

Therefore, during brainstorming sessions, people should avoid criticizing or rewarding ideas. You're trying to open up possibilities and break down incorrect assumptions about the problem's limits. Judgment and analysis at this stage stunts idea generation and limit creativity.

Evaluate ideas at the end of the session – this is the time to explore solutions further, using conventional approaches.

Why Use Brainstorming?

Conventional group problem solving can often be undermined by unhelpful group behavior

. And while it's important to start with a structured, analytical process when solving problems, this can lead a group to develop limited and unimaginative ideas.

By contrast, brainstorming provides a free and open environment that encourages everyone to participate. Quirky ideas are welcomed and built upon, and all participants are encouraged to contribute fully, helping them develop a rich array of creative solutions.

When used during problem solving, brainstorming brings team members' diverse experience into play. It increases the richness of ideas explored, which means that you can often find better solutions to the problems that you face.

It can also help you get buy-in from team members for the solution chosen – after all, they're likely to be more committed to an approach if they were involved in developing it. What's more, because brainstorming is fun, it helps team members bond, as they solve problems in a positive, rewarding environment.

While brainstorming can be effective, it's important to approach it with an open mind and a spirit of non-judgment. If you don't do this, people "clam up," the number and quality of ideas plummets, and morale can suffer.

How to Use the Tool

You often get the best results by combining individual and group brainstorming, which we explain below, and by managing the process according to the "rules" below. By doing this, you can get people to focus on the issue without interruption, you maximize the number of ideas that you can generate, and you get that great feeling of team bonding that comes with a well-run brainstorming session!

To run a group brainstorming session effectively, follow these steps.

Step 1: Prepare the Group

How much information or preparation does your team need in order to brainstorm solutions to your problem? Remember that prep is important, but too much can limit – or even destroy – the freewheeling nature of a brainstorming session.

First, choose an appropriate and comfortable meeting space. This can be in the office, or virtual. Consider what would work best for your team. Make sure you have the right resources beforehand; you can use virtual brainstorming tools like Miro or LucidSpark, and you'll need pens and Post-Its for an in-person session.

Now consider who will attend the meeting. A brainstorming session full of like-minded people won't generate as many creative ideas as a diverse group

, so try to include people from a wide range of disciplines, and include people who have a variety of different thinking styles.

When everyone is gathered, appoint one person to record the ideas that come from the session. This person shouldn't necessarily be the team manager – it's hard to record and contribute at the same time. Post notes where everyone can see them, such as on flip charts or whiteboards; or use a computer with a data projector.

If people aren't used to working together, consider using an appropriate warm-up exercise, or an icebreaker

.

Step 2: Present the Problem

Clearly define the problem that you want to solve, and lay out any criteria that you must meet. Make it clear that the meeting's objective is to generate as many ideas as possible.

Give people plenty of quiet time at the start of the session to generate as many of their own ideas as they can. Then, ask them to share or present their ideas, while giving everyone a fair opportunity to contribute.

Step 3: Guide the Discussion

Once everyone has shared their ideas, start a group discussion to develop other people's ideas, and use them to create new ideas. Building on others' ideas is one of the most valuable aspects of group brainstorming.

Encourage everyone to contribute and to develop ideas, including the quietest people, and discourage anyone from criticizing ideas.

As the group facilitator, you should share ideas if you have them, but spend your time and energy supporting your team and guiding the discussion. Stick to one conversation at a time, and refocus the group if people become sidetracked.

Although you're guiding the discussion, remember to let everyone have fun while brainstorming. Welcome creativity, and encourage your team to come up with as many ideas as possible, regardless of whether they're practical or impractical. Use thought experiments such as Provocation

or Random Input

to generate some unexpected ideas.

Don't follow one train of thought for too long. Make sure that you generate a good number of different ideas, and explore individual ideas in detail. If a team member needs to "tune out" to explore an idea alone, allow them the freedom to do this.

Also, if the brainstorming session is lengthy, take plenty of breaks so that people can continue to concentrate.

Individual Brainstorming

While group brainstorming is often more effective at generating ideas than normal group problem solving, several studies have shown that individual brainstorming produces more – and often better – ideas than group brainstorming. [3]

This can occur because groups aren't always strict in following the rules of brainstorming, and bad behaviors creep in. Mostly, though, this happens because people pay so much attention to other people that they don't generate ideas of their own – or they forget these ideas while they wait for their turn to speak. This is called "blocking."

When you brainstorm on your own, you don't have to worry about other people's egos or opinions, and you can be freer and more creative. For example, you might find that an idea you'd hesitate to bring up in a group develops into something special when you explore it on your own.

However, you may not develop ideas as fully when you're on your own, because you don't have the wider experience of other group members to draw on.

Tip:

To get the most out of your individual brainstorming session, choose a comfortable place to sit and think. Minimize distractions

so that you can focus on the problem at hand, and consider using Mind Maps

to arrange and develop ideas.

Individual brainstorming is most effective when you need to solve a simple problem, generate a list of ideas, or focus on a broad issue. Group brainstorming is often more effective for solving complex problems.

Group Brainstorming

Here, you can take advantage of the full experience and creativity of all team members. When one member gets stuck with an idea, another member's creativity and experience can take the idea to the next stage. You can develop ideas in greater depth with group brainstorming than you can with individual brainstorming.

Another advantage of group brainstorming is that it helps everyone feel that they've contributed to the solution, and it reminds people that others have creative ideas to offer. It's also fun, so it can be great for team building!

Group brainstorming can be risky for individuals. Unusual suggestions may appear to lack value at first sight – this is where you need to chair sessions tightly, so that the group doesn't crush these ideas and stifle creativity.

Where possible, participants should come from a wide range of disciplines. This cross-section of experience can make the session more creative. However, don't make the group too big: as with other types of teamwork, groups of five to seven people are usually most effective.

Other Brainstorming Techniques

If you're not getting enough good quality ideas, try using the approaches below to increase the number of ideas that you generate:

- **The Stepladder Technique**

🎬 – This improves the contribution of quieter group members by introducing one person at a time.

- **Brainwriting**

🎬 – This is a written approach that you can use to encourage all individuals to generate and develop ideas.

- **Online Brainstorming (also known as Brain-netting)**

🎬 – An electronic method of brainstorming, this uses a document stored on a central server, or on a Cloud-based system.

- **Crawford's Slip Writing Approach**

- – You can use this approach to get plenty of ideas from all participants, and to get a view of each idea's popularity.

These techniques help you in specific situations:

- **Reverse Brainstorming**

🎬 – This is used to improve a product or service.


- **Starbursting**

🎬 – Starbursting helps you develop questions that you need to ask to evaluate a proposal.

- **Charette Procedure**

🎬 – This helps you brainstorm with large groups of people. (Conventional brainstorming becomes increasingly ineffective when more than 10 or 12 people are involved.)

Round-Robin Brainstorming

 – You can use this approach to get people to contribute ideas without being influenced by others.

Rolestorming

- – This technique encourages group members to take on other people's identities while brainstorming, thereby reducing their inhibitions.

➤ **Alphabet Brainwriting**

The Alphabet Brainstorm strategy helps to structure students' brainstorming by asking them to generate ideas that begin with each letter of the alphabet. This can be done individually, in small groups, or as a whole-class activity. It is a quick way to generate thoughts, measure prior knowledge, and evaluate learning.

Procedure

1. Select a Topic or Text

Topics that work well include broad historical time periods or events (e.g., the civil rights movement, World War II, the Enlightenment) or themes (e.g., immigration, human rights, genocide). Films, books, or other media can be the focus of an Alphabet Brainstorm activity, as well.

2. Determine Your Purpose

1. Do you want to see what students already know about a topic? If so, use the Alphabet Brainstorm strategy as an opener or warm-up activity.
2. Do you want students to review material they have already studied, especially before they take a test or write an essay? If so, you can use this as a class activity to help students recall information.
3. Do you want to stimulate discussion after students watch a film or read a text? Do you want to see what students took away from the teaching of new material? If so, use the Alphabet Brainstorm strategy as part of a debrief activity or in place of the [Exit Card](#) strategy.

3. Prepare for the Brainstorm

Ask students to write the alphabet down the left-hand side of a piece of paper.

Alternatively, you can put 26 posters around the room, each with a letter on it. Or you can provide a graphic organizer with the alphabet printed on it.

4. Conduct the Alphabet Brainstorm

Depending on your purpose for using this activity, the way you conduct the brainstorm will be different. Here are some questions to consider:

1. Group? Will students work alone? In pairs? In groups? As a whole class?
2. Timed? This activity works best if students are given a fixed time period. An Alphabet Brainstorm activity can be conducted in two to three minutes if students work in groups or as a class. If students are working individually, you may want to give them more time to generate an entry for most of the letters.
3. Silent? The Alphabet Brainstorm strategy can make for a good silent activity, with discussion happening after students have reviewed what they have written.
4. Accountability? Will students turn in their work? Will it be graded? If so, what qualities are you looking for in students' responses (accuracy, creativity, how many letters they can complete, etc.)?

5. Debrief

The results of an Alphabet Brainstorm activity provide excellent material for student discussion. What themes do they notice? What was included? What was left out?

Variations

- Alphabet brainstorm race: Working in small groups or as two teams, you can have students race to see who can be the first team to complete the alphabet brainstorm. Or you can have the whole class work together to complete the brainstorm in an allotted amount of time (example: 2-3 minutes).
- Partial- alphabet brainstorm: You could give students only a portion of the alphabet to work with. Or you could divide the alphabet into quarters or thirds and have groups work on only one section.
- Spoken alphabet brainstorm: You could have students line up and have them say a word or phrase that relates to a theme or material (text) they just explored. The first student has to say a word that starts with "A," the second student says a word that starts with "B," and so on.

➤ What Is Brainwriting?

Like brainstorming, brainwriting is a great way to share new ideas, encourage creativity, and develop innovative ideas. It was designed by German marketing expert Bernd Rohrbach in 1969.

Shy or introverted team members may be reluctant to speak up in group brainstorming sessions. Brainwriting overcomes these limitations by allowing them to write down their ideas

instead, giving everyone an equal opportunity to participate. It also encourages people to take more time to formulate their thoughts, and enables them to develop ideas offered up by others.

6-3-5 Brainwriting

A popular and lively form of brainwriting is known as 6-3-5. During a 6-3-5 session, brainwriting exercises are split into several rounds. In each round, six people write down three ideas each within five minutes.

After the first round, everyone swaps their piece of paper with someone else, reads what's on it, and then writes down three more ideas. These can be new ideas, or build on ideas that have already been shared.

After six rounds, the pieces of paper are collected, and all the suggested ideas are discussed and next steps agreed.

Although this example uses six people, you can invite any number of people to your brainwriting session. Other details can also be adapted to suit your needs, including the number of rounds and the amount of time given for each one. But most people find that aiming for three ideas in each round brings the best results.

Brainwriting Versus Brainstorming

Regular brainstorming, where everyone offers suggestions aloud, is a tried-and-true way to generate new ideas. If everyone is confident to participate, and they're prepared to consider other people's suggestions, it can be an energetic, exciting and effective way to tackle creative challenges.

Note:

There are many different methods of brainstorming to choose from. To learn more about them, see our articles on [Reverse Brainstorming](#) , [Rolestorming](#) and [The Charette Procedure](#) .

However, not everyone feels confident enough to contribute to a brainstorming session. They may be anxious about receiving negative comments , or worried that their ideas might be unsuitable.

Some people may just need longer than others to come up with ideas, which can restrict their ability to participate in traditional brainstorming sessions. This is especially true if the people who speak first end up directing the discussion, as this can mean that their ideas become the only options "on the table."

In brainwriting, however, everyone's on an equal footing. All participants get to contribute at the same time, and all suggestions are anonymous. People also have more time to think through their ideas and to develop them. This can help to boost creativity , because it empowers people to put forward ideas that they might – in a normal brainstorming session – have deemed too risky.

Tip:

If you want to encourage and empower your more introverted team members to speak up in meetings, or if you struggle to get your own opinions heard, take a look at our articles, [Managing Introverted Team Members](#) and [How to Get Your Voice Heard in Meetings](#) .

How to Run a Brainwriting Session

If you think your team could benefit from a brainwriting session, use our brainwriting template (PDF format) to help you to organize and structure it. Brainwriting works well as a pen-and-paper exercise. So, simply download the template, print out as many copies as you need – and you're ready to go!

Note:

If your team can't meet in person for your brainwriting session, why not host a virtual one? See [Brainwriting Online](#), below, for more details on this.

Here are six simple steps to help you to run a brainwriting session:

1. Appoint someone to be the moderator.

The moderator ensures that everyone stays on track throughout the session. First, they should hand out copies of the brainwriting template and ask participants to fill in the date and the focus of the session. This is a good way to ensure that everyone knows what needs to be achieved.

2. Decide on the length and number of rounds.

Aim to give people enough time to come up with their own ideas, and to respond to other people's. But don't let things run on for too long! Consider how long people will likely be able to concentrate for, and make each round quick enough to keep everyone focused and energized.

3. Begin Round 1.

The moderator starts the timer and tells everyone to write down three ideas in the three spaces provided for Round 1. No discussion needs to take place at this stage.

4. Exchange worksheets.

When the time is up, the moderator collects all the brainwriting worksheets, then redistributes them at random. (Numbering the worksheets may make it easier to hand them out in a different pattern each time, so that people avoid getting the same worksheet over and over again.)

5. Repeat the process, round by round.

During each subsequent round, participants write down three more ideas. These can be brand new ideas, or can build on ideas that other people have already suggested on the worksheet. After each round, the worksheets are swapped around again – to a different person each time, if possible.

6. Discuss all the ideas.

After the final round, the moderator collects everyone's worksheets, then displays and talks through all the suggestions that have been made. Use a whiteboard to do this or, if you're meeting online, try out an online collaboration tool like Mural or Jamboard. Everyone can then discuss the ideas raised and make a group decision about which ones to take forward.

➤ **Brainwriting Online**

Brainwriting sessions can also be hosted online in a remote or virtual meeting.

First, the moderator should email everyone an electronic copy of the brainwriting template. Label each one that you send out with a different number in the file name ("Brainwriting Worksheet 1," for example). Then, ask participants to type their ideas into the boxes provided for each round.

At the end of each round, each person needs to save their worksheet and label it clearly ("Brainwriting Worksheet 1 After Round 2," for instance), before sending it back to the moderator. These can then be redistributed among participants again, ready for the next round.

Running a brainwriting session in this way will likely take more time. You may even need to consider running the activity over several days, to enable people in different locations and timezones to put forward their ideas.

It may also be harder to keep everything anonymous, and to prevent people from getting the same worksheet more than once. But, as long as the moderator gives out clear instructions and helps everyone to stay on track, this can still be an effective way to work through a creative problem virtually.

Key Points

Brainwriting is similar to brainstorming: it can be used to generate new ideas, encourage creative problem-solving, and develop innovative solutions. But, instead of getting people to discuss ideas out loud, brainwriting gets people to write them down and share them anonymously.

A popular form of brainwriting is known as 6-3-5, where six people write down three ideas in five minutes. This formula can be adapted to suit your specific needs.

After each round of ideas, participants swap their brainwriting worksheets, and repeat the process several more times. During each round they can respond to other people's ideas or add new ones.

After the final round, all the ideas on the worksheets are shared with the group. Everyone can then discuss the suggestions that have been made and agree on the best ones to take forward.

➤ **Grid Brainstorming.**

This is what people mean when they say “think outside of the box.”

By associating unrelated concepts together, you’re able to tackle the problem in a different way.

Follow these steps to get started:

1. If you are the team leader, fill in the top header row and the first column with the same idea and then move along the top and along the column
2. Have each participant from your team suggest an idea and add it to the grid
3. Then start combining ideas, one from each row, all the way down
4. If you start with 4 ideas, you’ll have 16 new ones just by combining them together. It may feel odd to combine the same idea together (like Idea 2 + Idea 2), but creativity will ensue, promise.

	<u>Idea 1</u>	<u>Idea 2</u>	<u>Idea 3</u>	<u>Idea 4</u>
<u>Idea 1</u>	<u>Ideas 1 + 1</u>	<u>1 + 2</u>	<u>1 + 3</u>	<u>1 + 4</u>
<u>Idea 2</u>	<u>Ideas 2 + 1</u>	<u>2 + 2</u>	<u>2 + 3</u>	<u>2 + 4</u>
<u>Idea 3</u>	<u>Ideas 3 + 1</u>	<u>3 + 2</u>	<u>3 + 3</u>	<u>3 + 4</u>
<u>Idea 4</u>	<u>Ideas 4 + 1</u>	<u>4 + 3</u>	<u>4 + 3</u>	<u>4 + 4</u>

