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Picture this. You're at work and your team has a big problem to solve. Everyone sits down together in a room and starts to brainstorm. One person comes up with a solution, but it's immediately shot down by another coworker. The next person comes up with a solution, and that's immediately shot down, too. It doesn't take long for the whole team to feel very frustrated and exhausted. You'll never come up with a solution if everything is immediately torn apart! How can you make this situation more productive? The first step is to learn about different types of thinking. By understanding the difference between convergent and divergent thinking, you can more effectively plan out your brainstorming session and come to the best solution without frustration. Convergent and divergent thinking are relatively new terms in the world of psychology. They were first introduced to the world in 1956 by an American psychologist named J.P. Guilford. These two cognitive approaches, when used appropriately, can be used to solve just about any problem that you face. Let's start by talking about divergent thinking. When you think about "brainstorming," you are thinking about divergent thinking. This type of thinking requires you to expand your mind and find innovative solutions. The possibilities are endless. Divergent thinking allows you to see products in materials in new and different ways. Mind maps are the best way to put the results of divergent thinking on paper. Mind maps contain ideas that branch off from each other in different directions. There doesn't have to be a lot of logic used when you are in "divergent thinking" mode. Remember, you are expanding what is possible, not limiting it. Now, let's go back to the first example. There was divergent thinking happening - each person was coming up with an "out of the box" idea. But they were quickly getting shot down. The person that was critiquing their argument was in "convergent thinking" mode. Convergent thinking isn't bad or unproductive. It's necessary! This process is more analytical and "realistic." It uses logic to narrow down ideas. This part of the thinking process requires looking for fallacies and potential problems. By narrowing down ideas that would not possibly work, you can find one or two ideas that will work without a hitch. Let's say you're planning an event, and trying to figure out where to have the event. By putting on your "divergent thinking cap," you start to brainstorm. How fun would it be to have the event at Disney World? Or at the new hotel that is opening down the street? What about a big outdoor party with tents? All of these venues could attract potential guests and make the event really stand out! Wow, these are a lot of great ideas! But let's approach this same problem with our "convergent thinking cap." Disney World? Way out of budget, and most of the guests won't want to travel that far. The new hotel down the street? That's closer to the budget and guests can easily travel there. A big outdoor party? This is an option too, but only if the cost for lights, heating, and the tents actually did fit in the budget. Would you need a permit to hold the party outside? Would you have to worry about noise complaints? As you can see, both of these processes are necessary to come to a solution. You can't just set your heart on Disney World without considering practical factors, like budget or location. But when you do come up with an "out of the box" solution that does fit into your constraints, you get a great solution on your hands. Convergent and divergent thinking require two different parts of the brain. While convergent thinking relies more on logic, divergent thinking relies more on creativity. Switching back and forth between the two may not seem like multitasking, but it is a form of multitasking. And multitasking is not as effective as you may think. In the meeting mentioned at the beginning of this article, your team was constantly switching back and forth between convergent and divergent thinking. Their brain had to switch back and forth, too. No wonder the group became worn out so fast! Harvard instructors like Anne Manning suggest another approach to convergent and divergent thinking. Rather than doing them in the same meeting, try "batching" your divergent and convergent thinking tasks. Take an hour of the meeting for your team simply to brainstorm ideas. No critiques, no logic, no convergent thinking. Just keep expanding the ideas of where you should hold the event, for a solid block of time. Give your team a break. This break could be an overnight break - many people have their best creative ideas when they are sleeping, showering, or thinking about other things. Tell your team to write down any more creative ideas that they might have, and bring them to you before the next meeting. Then, hold a meeting that is focused solely on convergent thinking. Think about the budget. Location. The number of people that you expect to attend the event. You'll be able to cross some ideas off of your list pretty quickly. That's okay. Crossing off items on your list quickly means that you're coming to a solution quickly. And voila! You've found your solution. Now it's time to focus on other elements of the event. Using inspiration from your previous brainstorms, you can truly make your event the greatest it can be, or solve any problem efficiently. You may decide to make the event Disney-themed, for example, to have a fun event without shelling out the costs of actually going to Florida. The next time you're faced with a problem, try this batching technique. You might find yourself coming up with a great solution without frustrations! Don't have two days to come up with an idea? Split your team into two groups and let the debate begin! Well, sort of. Here's how this brainstorming session works. Give two teams a set amount of time (maybe 30-60 minutes) to brainstorm all ideas without any sort of dissent or questioning. Write them all down on the left side of a piece of paper. At the end of the time period, switch the sheets of paper between the two teams. (You may find overlap. That's good!) Set another time period for the groups to engage in divergent thinking. Instruct them to eliminate each of the ideas, leaving a handful for the first group to choose from. At the end of the second time period, switch the papers back to the original groups. If both groups still have not come to a consensus about the idea for moving forward, instruct each group to choose one of their remaining ideas to bring to the table. Once that is chosen, both groups will present that idea and the decision will be put to a vote amongst both groups. If you have a strong team that respects each other's processes, you may want to split your team up by their strengths and allow some to focus on convergent thinking or divergent thinking. Some team members naturally lean toward one or the other. Allowing people to show off their strengths can get your team the best answer in a process that everyone enjoys. How do you know which team members are more skilled at convergent vs. divergent thinking? There are a few ways to find out. Give your team members the opportunity to choose which type of thinking they would like to engage in (if they have to pick.) Get to know their preferred forms of brainstorming. You may find that your team naturally prefers one type of thinking over the other. You may also find that they like to brainstorm in different ways! Keep an open mind. If everyone is shrugging their shoulders, go through a few trial runs. Split the teams randomly or bring everyone together to brainstorm ideas. Clearly split your time between convergent vs. divergent thinking. You will find that some team members have a hard time with convergent thinking, or others fail to speak up once the convergent thinking is over! As you notice these patterns, you will get a better sense of which "group" prefers one style over the other. Does your team all know their Myers Briggs type? Use this to indicate which members are likely more inclined to participate in convergent vs. divergent thinking. Team members best suited for convergent thinking include: These aren't the only team members who should participate in convergent thinking, but it gives you a good idea of who you might want in the room during this brainstorming portion. The best divergent thinkers include: ENFPENTPINFPINTPESTJESFJSJ This isn't set in stone. Trust your team members. If they prefer one style over the other, give them the chance to shine! Knowing the differences between convergent vs. divergent thinking can help you brainstorm. However, this approach may not be the best process for every team. Below are some other ways to brainstorm new ideas and find solutions to your most pressing problems. Get your team together and treat your problem like a conflict in a book. Create a "storyboard" that explains what led to the problem and the conflict at hand. (Post-its and erasable markers are great tools for this type of brainstorming!) This method gives your team a new way to look at your problem. SCAMPER offers a great set of prompts for a conversation about solutions. This is a great form of brainstorming for teams that are generally not convergent thinkers. SCAMPER stands for: Substitute: What would happen to the project if we swapped X for Y?Combine: What would happen to the project if we combined X and Y?Adapt: What changes would need to be made to adapt this project to a different context?Modify: What could we modify to create more value on this project?Put to another use: What other uses or applications might this project have?Eliminate: What could we remove from the project to simplify it?Reverse: How could we reorganize this project to make it more effective? In 1985, psychologist Edward de Bono wrote "Six Thinking Hats" about a problem-solving exercise that involved roleplay. He described six different "hats" a person could wear as they brainstormed new ideas: Logic: FactsOptimism: Value and benefits.Devil's Advocate: Difficulties and dangersEmotion: Feelings and intuitionsCreativity: Possibilities and new ideasManagement: Manager of other "hats" What would happen if you chose six people on your team to wear these "hats?" Would they think about a solution in a new way? Would they come up with great, new ideas? There is only one way to find out! There are so many great ways to brainstorm new ideas. Try out a few different methods, be aware of convergent vs. divergent thinking, and enjoy solving your team's biggest problems! Understanding the difference to empower your creativity. "The best way to have a good idea is to have lots of ideas." — Linus PaulingEver wondered about the secret sauce behind groundbreaking innovations? It often boils down to effective brainstorming. But before we dive into techniques, let's clear up a common confusion: the difference between divergent thinking and brainstorming.Divergent thinking is a cognitive skill that involves exploring multiple solutions to a problem. It's characterized by fluency, flexibility, originality, and elaboration of ideas. Brainstorming, on the other hand, is a specific technique that applies divergent thinking to generate ideas for a particular challenge.While group brainstorming is common, individual brainstorming can be equally powerful. Here are five techniques to supercharge your solo ideas generation:1. Mind Mapping: Create visual diagrams of your ideas, branching out from a central concept.2. SCAMPER: Use this acronym (Substitute, Combine, Adapt, Modify, Put to another use, Eliminate, Reverse) to approach your problem from different angles.3. Six Thinking Hats: Adopt different perspectives (facts, emotions, caution, benefits, creativity, process) to analyze your problem... Get new content delivered directly to your inbox. The creative thinkers of the Brainstorming Network Group (BNG) brainstormed together to create our new Motto & Slogan. These ideas developed by members of BNG were researched using various social media sources to determine which of the suggestions among our members were the best fit. Initially there were Brainstorm Sessions, from which the term was coined for Brainstorming or Brainstorming Sessions. 'Brainstorm' means using the brain to storm a creative problem and do so in commando fashion, with each stormer attacking the same objective." – Alex Faickney Osborn [1] Brainstorming is a process for generating creative ideas and solutions through intensive and freewheeling group discussion where participants are encouraged to think aloud and suggest as many ideas as possible, no matter how outlandish or bizarre. [2] Brainstorming is a group-problem-solving technique that involves the spontaneous contribution of ideas from all members of the group; also : the mulling over of ideas by one or more individuals in an attempt to devise or find a solution to a problem. [3] Brainstorming is a technique used to solve problems and encourage creativity in which members of a group share their ideas about a subject. [4] Brainstorming is a group discussion that encourages people to put heads together, rack brains, share ideas, think, conjure up, dream up, create, invent, plan, ponder, conceptualize, conceive, analyze, and deliberate. [5] Brainstorming sessions can involve creative thinking, thought showers, exogitation, rumination, thinking caps, parley, reflection, contemplation, musing, and opining. [6] Brainstorming is when participants concoct, construct, and cogitate to imagine breakthrough ideas. [7] Brainstorming is the creation for a flash of inspiration, brainchild moments, a hunch, sudden thoughts, and improvisation. [8] Brainstorming in groups is to theorize, ideate, and have an inkling, confab, debate, and form eureka moments. [9] Brainstorming is a way to generate ideas within a group setting. It is usually used in the beginning stages of a project, where the possibilities for the project are not clearly understood or defined. It provides a quick means for tapping the creativity of a limited number of people for a large number of ideas. [10] Brainstorming is an activity or business method in which a group of people meet to suggest a lot of new ideas for possible development. [11] Brainstorming sessions are able to capture the most original and new ideas from two or more people in a fashion that is loosely structured initially, that is later synthesized. [12] Brainstorming is a method of shared problem solving in which all members of a group spontaneously contribute ideas. [13] Brainstorming is a process undertaken by a group of people to solve a problem by rapidly generating a variety of possible solutions. [14] Brainstorming is a group technique, an intensive discussion for solving problems, generating ideas, stimulating creative thinking, etc., by unrestrained spontaneous participation in discussion. [15] Brainstorming is a process for generating creative ideas and solutions through intensive and freewheeling group discussion. Every participant is encouraged to think aloud and suggest as many ideas as possible, no matter seemingly stupid or bizarre. Analysis, discussion, or criticism of the aired ideas is allowed only when the brainstorming session is over and evaluation session begins. [16] Brainstorming is a group creativity technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members. [17] Brainstorming is a situation where a group of people meet to generate new ideas and solutions around a specific domain of interest by removing inhibitions. People are able to think more freely and they suggest many spontaneous new ideas as possible. All the ideas are noted down and are not criticized and after brainstorming session the ideas are evaluated. [18] Brainstorming is the process of intense concentration on a specific question; whereas these sessions should not attempt to address something that can broadly be inefficient. [19] Brainstorming is where participants (expert/novice) are encouraged to provide wild and unexpected answers. Ideas receive no criticism or discussion. The group simply provides ideas that might lead to a solution and apply no analytical judgment as to the feasibility. The judgments are reserved for a later date. Further, the problem must require the generation of ideas rather than judgment; he uses examples such as generating possible names for a product as proper brainstorming material, whereas analytical judgments such as whether or not to marry do not have any need for brainstorming. [20] Brainstorming is where participants are asked to write their ideas anonymously. Then the facilitator collects the ideas and the group votes on each idea. The vote can be as simple as a show of hands in favor of a given idea. This process is called distillation. After distillation, the top ranked ideas may be sent back to the group or to subgroups for further brainstorming. For example, one group may work on the color required in a product. Another group may work on the size, and so forth. Each group will come back to the whole group for ranking the listed ideas. Sometimes ideas that were previously dropped may be brought forward again once the group has re-evaluated the ideas. [21] Brainstorming is a group method that can be applied through several techniques. (a) GROUP PASSING TECHNIQUE – Each person in a circular group writes down one idea, and then passes the piece of paper to the next person, who adds some thoughts. (b) TEAM IDEA MAPPING – The process begins with a well-defined topic. Each participant brainstorms individually, then all of the ideas are merged onto one large idea map. During this consolidation phase, participants may discover a common understanding of the issues as they share the meanings behind their ideas. (c) DIRECTED BRAINSTORMING – Each participant is given one sheet of paper (or electronic form) and told the brainstorming question. They are asked to produce one response and stop, then all of the papers (or forms) are randomly swapped among the participants. The participants are asked to look at the idea they received and to create a new idea that improves on that idea based on the initial criteria. The forms are then swapped again and respondents are asked to improve upon the ideas, and the process is repeated for three or more rounds. (d)GUIDED BRAINSTORMING – Participants are asked to adopt different mindsets for pre-defined period of time while contributing their ideas to a central mind map drawn by a pre-appointed scribe. Having examined a multi-perspective point of view, participants seemingly see the simple solutions that collectively create greater growth. Action is assigned individually. Following a guided brainstorming session participants emerge with ideas ranked for further brainstorming, research and questions remaining unanswered and a prioritized, assigned, actionable list that needs to happen next and the ability to visualize the combined future focus and greater goals of the group. (e) QUESTION BRAINSTORMING – Participants actively develop questions rather than trying to come up with immediate answers and short-term solutions. Theoretically, this technique should not inhibit participation, as there is no need to provide solutions. The answers to the questions form the framework for constructing future action plans. Once the list of questions is set, it may be necessary to prioritize them to reach to the best solution in an orderly way. [22] Brainstorming is a conference technique of solving problems, amassing information, stimulating creative thinking, developing new ideas, etc. by unrestrained and spontaneous participation in discussion. [23] 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. Want to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. 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ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Divergent thinking is a creative process that generates new ideas through free-flowing, unstructured brainstorming. It encourages exploring any and all possibilities, rather than taking the fastest, straightest path to one answer.Divergent thinking is most effective when the people doing it feel safe, have the time and space to get inspired, welcome others, set expectations as a group, and warm up first. Using divergent thinking means outlandish or bizarre ideas are welcome. Inviting people with little structure and inspiration to a purposely unstructured process. If you've ever come up with a name for a child, pet, or even a beloved character in a story or car, you've already engaged in divergent thinking. As you were thinking of names, you let your mind wander, imagining all the possibilities. You might have compared ideas with a loved one too. Perhaps one person was thinking of popular names like Emma and Ava, while your partner wanted a more unique moniker like Eowyn or Aurelia. Eventually, you converged on the perfect name to represent your bundle of joy (Elodie...unique, yet easy to say and spell!) – but only after you diverged and brainstormed without boundaries. That's the power of divergent thinking. Introduced by psychologist J.P. Guilford in 1956, divergent thinking is a creative thought process used to generate new ideas through free-flowing, unstructured brainstorming. In a typical problem-solving or brainstorming session - people are often trying to find the most direct path to one "right" solution, often channeling "convergent" or "lateral" thinking. Divergent thinking, on the other hand, is unrestricted, judgment-free, and takes a meandering path to explore all viable (and some not-so-viable) options. There's no right way to do it, and there are no wrong answers. This approach offers a number of advantages: It allows you to see a problem or concept from many perspectives and angles It produces more ideas to choose from.It encourages creativity and open-mindedness, which often lead to even better solutions. Divergent, convergent, and lateral thinking Divergent thinking unlocks new ideas and even better solutions at work – but only if the team and environment support it. These tips can help prepare your group for a successful session. Psychological safety, a term coined by Harvard researcher Amy Edmondson, is a shared belief held by members of a team that it's safe to take risks. When people feel psychologically safe and know it's ok to make mistakes, they're more comfortable, more open to exploring new ideas, and more inclined to work together to find the best solution. It can be hard for teams to be strategic and creative when they're busy with day-to-day execution. Reserving a designated time for divergent thinking and changing up the environment – another conference room or even an off-site location – helps everyone get in the right mental and physical space to think differently. Approaching your ultimate list like Goldilocks will help make sure the group isn't too big or too small, but rather, juuuuust right. Research shows brainstorming sessions are most efficient when they include five to seven people: big enough to generate enough ideas, but not so big that it becomes unwieldy. Inviting people with different perspectives – people who might abandon their own beliefs to conform with the group. Diversity could be represented in the form of different disciplines (e.g., design or development), departments (e.g., Sales or Product), critical thinking perspectives (e.g., front-line, functional expertise, or creative/innovator), identities (e.g., culture or gender), etc. Divergent thinking is most effective when participants are focused, open, and collaborative. Creating mutual team agreements and expectations (e.g., put devices aside, share all ideas that come to mind, suspend judgment, and build on others' suggestions) can support the group in being efficient and effective. Like warming up your body before exercising, warming up your mind before brainstorming gets you in the right headspace and primes your brain for creativity. Warmups can be more structured, like these icebreaker activities, or more free-form, like listening to music or drawing. Now that the team feels safe, focused, and warmed up, it's time to let their creativity loose! Here are a few exercises to help get started. We'll use the following example to see how each divergent thinking exercise would be applied in a problem-solving brainstorm. Problem statement: "Registrations for our new grocery shopping app have plateaued. We want to increase registrations by 50% over one year." Freewriting is the ultimate free-association activity – you simply write words, phrases, sentences, diagrams, doodles, whatever without stopping, and without worrying about spelling, mechanics, drawing skills, or the feasibility of an idea. There are no wrong answers and no constraints (aside from time, if you choose to set a timer). If your team works best with a bit more structure, you can try 6-3-5 Brainwriting, where six people each write three ideas on a sheet of paper as many times as they can during a five-minute round. Then, they pass their sheets to the next teammate, who spends the next five minutes adding to the other person's ideas. Freewriting in action: Each team member starts with the word "registration" and writes any words that come to mind, such as: Sign upHappinessSmilesSignsSurprisesRewardsLooking upExcitementIncentivesOptimismDelightPositive reinforcement The team could then expand on certain ideas or themes for more specific solutions, such as ways you can add delight to the registration process or rewards you could offer for signing up. A mind map builds new ideas off one central concept or subject. After writing down the primary concept, team members begin thinking about supporting ideas, tasks, and questions around it. Then, they repeat the process for each of the secondary concepts, then the tertiary concepts, etc. The result is an organized diagram that shows lots of new ideas and how of them are linked. Mind mapping in action: With all of these ideas mapped out, the group could then converge and narrow down which ideas should be prioritized based on the impact they could have on registrations vs. the effort they would take to implement. Disruptive brainstorming reveals new solutions by introducing hypothetical constraints. After brainstorming one set of ideas, teams use Disrupt Cards to look at the same problem or question from a new perspective. After diverging, each group converges on the ideas that are most achievable, supportable, and relevant, then assigns owners to investigate how to bring each one to life. Disruptive brainstorming in action: The team brainstorms one set of ideas for increasing registrations. Then, they pick the "Scarcity" Disrupt Card and brainstorm how they might apply scarcity to boost registrations even more, such as limiting signups to 100 per day and displaying the number available in real time next to the "Register" button. Once the brainstorming session comes to a close, they cut the ideas that aren't doable or aligned with the product strategy, and assign owners to the rest to begin the planning process. Designed by J.P. Guilford in the 1960s, the Alternative Uses Test is a way to generate creative ideas and solutions from a single concept or piece of information. This approach can help look at something familiar from a new perspective. Alternative Uses Test in action: What might be alternative ways to share about our grocery shopping app and sign up for it? (Wacky ideas welcome!) Sample answers: Scanning a QR code in the grocery storeMail a welcome kit to new parents with a promo code to try the appApp mascot hands out flyers outside dorms during college move-in daysGuerilla marketing campaign where we put stickers on grocery store doors that say, "We could have saved you this trip."Professional skydivers spell out the app name above the Super Bowl (we meant what we said: no bad ideas) Then, the team could either build on a few of the most promising ideas or filter some of the more granular concepts that might be more feasible. Collaborative drawing and storytelling (also known as a "one-word story") expand on others' ideas spontaneously. One person writes one word or starts a drawing. Then they pass it to another person, who adds the first word or drawing that comes to mind, and so on. The team repeats this process until there are enough potentially viable ideas to begin narrowing down and planning next steps for the best concepts. Collaborative storytelling in action: We could increase registrations by... Person 1's answersharing Person 2's answer3DPerson 3's answeredvideoPerson 4's answeredPerson 5's answerwithPerson 5's answerTikTok (Sounds silly, but hey, we've seen stranger things go viral!) Even if the team ends up moving forward with a scaled-down concept or alternative plan, going through the exercise is a great way to inspire creativity, strengthen collaboration, and get the creative juices flowing! Divergent thinking prioritizes quantity over quality. The idea is to generate as many ideas as possible to find the one that's the best. The answers can be silly or serious, practical or impractical, feasible or wild – the sky's the limit. You're not supposed to filter or evaluate ideas at this stage; that comes later. In fact, adding to "bad" ideas can lead to even better ideas! Adopting a "yes, and..." mindset and building upon the ideas of others can help keep the divergent thinking process going. But just because divergent thinking is free-form doesn't mean it's a free-for-all. With a little preparation and a few exercises to get the momentum going, you can add just enough structure to a purposely unstructured process and set your team up for a brilliant brainstorm. Ready to try it? Yes, and...let's get started! Subscribe to Work LifeGet stories like this in your inbox We often get used to doing things a certain way, because it's fast or convenient or "it's always been like this." Research shows brainstorming sessions are most efficient when they include five to seven people. When we hit a problem, we still apply old assumptions or structures.However, the old way isn't always the best way—and through divergent thinking, you can generate fresh ideas and solutions, and achieve innovation.What is divergent thinking?Divergent thinking believes that there many ways of approaching a problem. You take different perspectives, and let go of biases and assumptions. You explore all possibilities, even those which seem counter-intuitive.Since divergent thinking is open-minded, the process of problem-solving is more spontaneous and expansive. You don't shoot down ideas, or try to control the flow of the discussion. Instead, you believe that there are many equally valid solutions and try to be as holistic as possible.The opposite of divergent thinking is convergent thinking. It uses logic and efficiency to arrive at the fastest solution. Discussions go straight to the point, and will even rule out questions or ideas that are considered off-strategy or off-tangent.What is brainstorming?Brainstorming is a tool for divergent thinking. It gathers several people from a single problem or question, and then freely share their ideas. This can happen through a formal session such as a meeting, or in casual settings when co-workers bounce off ideas with each other.Brainstorming is very effective way to get people to break out of their "mental box" and take a divergent approach.It brings together people with different backgrounds. These people may give you new information, insights or perspectives. The more heterogenous the group is—different cultures, work experiences, personalities, etc—the richer the brainstorming session will be.It gives a creative energy. Talking to others can help you become more excited, curious, and engaged.It helps you articulate and analyze your ideas. The process of explaining your ideas to others can actually develop your idea and make it more concrete.It can stimulate ideas. When someone shares an idea, other people may build on it or offer a different perspective. It may also trigger a question, memory, or insight. So, each new idea can generate even more ideas, or add a deeper dimension to the discussion.It can raise helpful questions. Divergent thinking is driven by curiosity and a broad, open-minded approach. A brainstorming session may generate more questions than answers, but those questions may be the "breakthrough" that people need in order to see a problem in a different light.How can I make brainstorming sessions more divergent?Brainstorming sessions should encourage people to share ideas, but there are many situations where someone might be bored or not intimidated to speak up, or simply stop listening because they are bored or not intimidated by emotionally engaged.So, in order to encourage divergent thinking in brainstorming—and not simply hold a meeting for meeting's sake—you need to create an environment where people feel free to share ideas.Accept all ideas. Make it clear at the beginning of the session that all ideas are welcome, and no one is allowed to interrupt someone, or criticize or object to an idea.Acknowledge and record ideas. Write down ideas on a whiteboard as the discussion flows, so people feel that their ideas have been recognized.Develop and build on what others say. When someone shares an idea, respond by thanking them or pointing out 1 or 2 great things about it that you or other people can build on. This creates a collaborative atmosphere, and prevents the brainstorming session from becoming a competition.Make sure everyone has a chance to speak. Pay attention to the group dynamics. If someone has not spoken up, or looks like he or she feels left out, ask them what they think. If they don't know where to start, you can ask a specific question, like "Did you encounter this problem in your department?" or "How did you solve this problem before?"Try breakout sessions. It may be difficult to engage or give equal speaking opportunities to a large group. So, consider dividing them into smaller groups. It's better to assign them so you can make sure that the group is heterogenous. They will naturally do to people they already know and may have similar biases or perspectives.Brainstorming is just one way to encourage a broader, more dynamic way of thinking. You can use other tools and techniques to train your mind to think out of the box and see things from different points of view.Idea journal. Keep a notebook (for writing down ideas, inspiration, or even interesting moments or conversations. Don't worry if the ideas are unclear and you're not sure where it's going—let it percolate in your mind. Later on, things may just "click."Mind mapping. Mind mapping is a visual tool that shows the relationship of one idea to another. Here, you write down one concept and then develop clusters of related ideas around it. It is useful for getting the brain to look at different aspects of an idea, and breaking down an idea into smaller components.Freewriting. For freewriting, you set a timer and then commit to writing down everything that comes to your mind. You don't edit yourself or try to put structure or logic into your words. Instead, you are recording the "rambling in your mind" for a specific period of time. This is a useful tool when you have been stuck through the brain storming session. Or, you ask participants to do an idea journal or freewriting to generate ideas before going to the session, so they've already had time to think about the problem or issue.Become a divergent thinkerDivergent thinking can help develop your creativity and intuition, and give you fresh approaches to a problem. You can use it in the workplace or other formal structures, or apply it in your own life to help you achieve self-awareness or a personal breakthrough in an area where you want to grow.References ... The absence of criticism and assessment is intended to avoid inhibiting participants in their idea production. [1] The term was popularized by advertising executive Alex Faickney Osborn in the 1948 book Your Creative Power. [2] In the book, Osborn began developing methods for creative problem-solving. [3] He was frustrated by employees' inability to develop creative ideas individually for ad campaigns. In response, he began hosting group-thinking sessions and discovered a significant improvement in the quality and quantity of ideas produced by employees. He first termed the process as organized ideation, but participants later came up with the term "brainstorm sessions", taking the concept after the use of "the brain to storm a problem". [4] During the period when Osborn made his concept, he started writing on creative thinking, and the first notable book where he mentioned the term brainstorming was How to Think Up (1942). [5] Osborn outlined his method in the subsequent book Your Creative Power (1948), in chapter 33, "How to Organize a Squad to Create Ideas".[6][7] One of Osborn's key recommendations was for all the members of the brainstorming group to be provided with a clear statement of the problem to be addressed prior to the actual brainstorming session.[3] He also explained that the guiding principle is that the problem should be simple and narrowed down to a single target.[8] Here, brainstorming is not believed to be effective in complex problems. While the process can address the problems in such a situation, tackling all of them may not be feasible.[8] Flowchart for conducting a brainstorming session Osborn said that two principles contribute to "ideative efficacy," these being : Defer judgment; Reach for quantity.[9] Following these two principles were his four general rules of brainstorming, established with intention to: reduce social inhibitions among group members; stimulate idea generation; increase overall creativity of the group. Four basic rules were: Go for quantity: This rule is a way of enhancing divergent production, aiming at facilitation of problem solution through the maxim quantity breeds quality. The assumption is that the greater the number of ideas generated the bigger the chance of producing a radical and effective solution.[citation needed] Withhold criticism: In brainstorming, criticism of ideas generated should be put 'on hold'. Instead, participants should focus on extending or adding to ideas, reserving criticism for a later 'critical stage' of the process. By suspending judgment, participants will feel free to generate unusual ideas.[citation needed] Welcome wild ideas: To get a good long list of suggestions, wild ideas are encouraged. They can be generated by looking from new perspectives and suspending assumptions. These new ways of thinking might give better solutions.[citation needed] Combine and improve ideas: As suggested by the slogan "1+1=3", it is believed to stimulate the building of ideas by a process of association.[9] Osborn said brainstorming should address a specific question; he held that sessions addressing multiple questions were inefficient.[citation needed] Further, the problem must require the generation of ideas rather than judgment; he uses examples such as generating possible names for a product as proper brainstorming material, whereas analytical judgments such as whether or not to marry do not have any need for brainstorming.[9] Osborn envisioned groups of around 12 participants, including both experts and novices. Participants are encouraged to provide wild and unexpected answers. Ideas receive no criticism or discussion. The group simply provides ideas that might lead to a solution and apply no analytical judgment as to the feasibility. The judgments are reserved for a later date.[citation needed] Main article: Nominal group technique Participants are asked to write their ideas anonymously. Then the facilitator collects the ideas and the group votes on each idea. The vote can be as simple as a show of hands in favor of a given idea. This process is called distillation.[citation needed] After distillation, the top ranked ideas may be sent back to the group or to subgroups for further brainstorming. For example, one group may work on the color required in a product. Another group may work on the size, and so forth. Each group will come back to the whole group for ranking the listed ideas. Sometimes ideas that were previously dropped may be brought forward again once the group has re-evaluated the ideas.[citation needed] It is important that the facilitator is trained in this process. Another group may work on the size, and so forth. Each group will come back to the whole group for ranking the listed ideas. Sometimes ideas that were previously dropped may be brought forward again once the group has re-evaluated the ideas.[citation needed] It is important that the facilitator is trained in this process during the session the the whole group should be primed and encouraged to embrace the process. Like all team efforts, it may take a few practice sessions to train the team in the method before tackling the important ideas.[citation needed] Each person in a circular group writes down one idea, and then passes the piece of paper to the next person, who adds some thoughts. This continues until everybody gets his or her original piece of paper back. By this time, it is likely that the group will have extensively elaborated on each idea.[citation needed] The group may also create an "idea book" and post a distribution list or routing slip to the front of the book. On the first page is a description of the problem. The first person to receive the book lists his or her ideas and then routes the book to the next person on the distribution list. The second person can log new ideas or add to the ideas of the previous person. This continues until the distribution list is exhausted. A follow-up "read out" meeting is then held to discuss the ideas logged in the book. This technique takes longer, but it allows individuals time to think deeply about the problem.[citation needed] This method of brainstorming works by the method of association. It may improve collaboration and increase the quantity of ideas, and is designed so that all attendees participate and no ideas are rejected.[citation needed] The process begins with a well-defined topic. Each participant brainstorms individually, then all the ideas are merged onto one large idea map. During this consolidation phase, participants may discover a common understanding of the issues as they share the meanings behind their ideas. During this sharing, new ideas may arise by the association, and they are added to the map as well. Once all the ideas are captured, the group can prioritize and/or take action.[10] Directed brainstorming is a variation of electronic brainstorming (described below). It can be done manually or with computers. Directed brainstorming works when the solution space (that is, the set of criteria for evaluating a good idea) is known prior to the session. If known, those criteria can be used to constrain the ideation process intentionally.[citation needed] In directed brainstorming, each participant is given one sheet of paper (or electronic form) and told the brainstorming question. They are asked to produce one response and stop, then all of the papers (or forms) are randomly swapped among the participants. The participants are asked to look at the idea they received and to create a new idea that improves on that idea based on the initial criteria. The forms are then swapped again and respondents are asked to improve upon the ideas, and the process is repeated for three or more rounds.[citation needed] In the laboratory, directed brainstorming has been found to almost triple the productivity of groups over electronic brainstorming.[11] A guided brainstorming session is time set aside to brainstorm either individually or as a collective group about a particular subject under the constraints of perspective and time. This type of brainstorming removes all cause for conflict and constrains conversations while stimulating critical and creative thinking in an engaging, balanced environment.[citation needed] Participants are asked to adopt different mindsets for pre-defined period of time while contributing their ideas to a central mind map drawn by a pre-appointed scribe. Having examined a multi-perspective point of view, participants seemingly see the simple solutions that collectively create greater growth. Action is assigned individually.[citation needed] Following a guided brainstorming session participants emerge with ideas ranked for further brainstorming, research and questions remaining unanswered and a prioritized, assigned, actionable list that leaves everyone with a clear understanding of what needs to happen next and the ability to visualize the combined future focus and greater goals of the group.[citation needed] Individual brainstorming is the use of brainstorming in solitary situations. It typically includes such techniques as free writing, free speaking, word association, and drawing a mind map, which is a visual note taking technique in which people diagram their thoughts. Individual brainstorming is a useful method in creative writing and has been shown to be superior to traditional group brainstorming.[12][13] This process involves brainstorming the questions, rather than trying to come up with immediate answers and short-term solutions. Theoretically, this technique should not inhibit participation as there is no need to provide solutions. The answers to the questions form the framework for constructing future action plans. Once the list of questions is set, it may be necessary to prioritize them to reach to the best solution in an orderly way.[14] "Questorming" is another term for this mode of inquiry.[15] Groups can improve the effectiveness and quality of their brainstorming sessions may overcome some of the challenges faced by individual brainstorming methods. For example, ideas might be followed, and feedback should be given to members that violate these rules. Violations of brainstorming rules tend to lead to mediocre ideas. Pay attention to everyone's ideas. People tend to pay more attention to their own ideas, however brainstorming requires exposure to the ideas of others. A method to encourage members to pay attention to others' ideas is to make them write down their own ideas. Take breaks: Allow silence during group discussions so that members have time to think things through. Do not rush: Allow plenty of time for members to complete the task. Although working under pressure tends to lead to more solutions initially, the quality is usually lower than if more time is spent on the task. Stay persistent: Members should stay focused and persist at the task even when productivity is low. Facilitate the session: A skilled discussion leader should lead and coordinate the brainstorming sessions. This leader can motivate members, correct mistakes, and provide a clear standard of work. They can also be used to keep track of all the ideas, and make sure that these ideas are available to everyone. If brainstorming does not work for a group, some alternatives are available.[16] Buzzgroups: Larger groups can form subgroups that come up with ideas when the larger group is stumped. Afterwards, these subgroups come back together and discuss their ideas as a whole group. Bug list: Group members write down all the little bugs or irritations concerning the issue they are working on, and then the group discusses solutions for each of these "bugs". Stepladder technique: A method where new members state their ideas before listening to the group's position.[17] Synectics: A leader guides the group and discusses their goals, wishes, and frustrations using imagination, metaphors, and fantasy. TRIZ: This method is primarily used in science and engineering, and involves following a specific sequence of problem analysis, resource review, goal setting, and review of prior approaches to the problem. See also: Electronic meeting system and Computer supported brainstorming Although the brainstorming can take place online through commonly available technologies such as email or interactive web sites, there have also been many efforts to develop customized computer software that can either replace or enhance one or more manual elements of the brainstorming process.[citation needed] Early efforts, such as GroupSystems at University of Arizona[18] or Software Aided Meeting Management (SAMM) system at the University of Minnesota,[18] took advantage of then-new computer networking technology, which was installed in rooms dedicated to computer supported meetings. When using these electronic meeting systems (EMS, as they came to be called), group members simultaneously and independently entered ideas into a computer terminal. The software collected (or "pools") the ideas into a list, which could be displayed on a central projection screen (anonymized if desired). Other elements of these EMSs could support additional activities such as categorization of ideas, elimination of duplicates, assessment and discussion of prioritized or controversial ideas. Later EMSs capitalized on advances in computer networking and internet protocols to support asynchronous brainstorming sessions over extended periods of time and in multiple locations. Introduced along with the EMS by Nunamaker and colleagues at University of Arizona[18] and now marketed as GroupSystems. By utilizing customized computer software for groups (group decision support systems or groupware), EBS can replace face-to-face brainstorming.[19] An example of groupware is the GroupSystems, a software developed by University of Arizona.[17] After an idea discussion has been posted on GroupSystems, it is displayed on each group member's computer. As group members type their comments on separate computers, comments are anonymously pooled and made available to all group members for evaluation and further elaboration.[17] Compared to face-to-face brainstorming, not only does EBS enhanced efficiency by eliminating travelling and turn-taking during group discussions, it also excelled several psychological aspects compared to face-to-face meetings. Identified by Gallupe and colleagues,[19] both production blocking (reduced idea generation due to turn-taking and forgetting ideas in face-to-face brainstorming)[20] and evaluation apprehension (a general concern experienced by individuals for how others in the presence are evaluating them) are reduced in EBS.[21] These positive psychological effects increase with group size.[22] A perceived advantage of EBS is that all ideas can be archived electronically in their original form, and then retrieved later for further thought and discussion. EBS also enables much larger groups to brainstorm on a topic than would normally be productive in a traditional brainstorming session.[19] Computer supported brainstorming may overcome some of the challenges faced by individual brainstorming methods. For example, ideas might be "pooled" automatically, so that individuals do not need to wait to take a turn, as in verbal brainstorming. Some software programs show all ideas as they are generated (via chat room or e-mail). The display of ideas may cognitively stimulate brainstormers, as their attention is kept on the flow of ideas being generated without the potential distraction of social cues such as facial expressions and verbal language.[22] EBS techniques have been shown to produce more ideas and help individuals focus their attention on the ideas of others better than a brainwriting technique (participants write individual written notes in silence and then subsequently communicate them with the group).[22] The production of more ideas has been linked to the fact that paying attention to others' ideas leads to non-redundancy, as brainstormers try to avoid to replicate or repeat another participant's comment or idea. Conversely, the production gain associated with EBS was less found in situations where EBS group members focused too much on generating ideas that they ignored ideas expressed by others. The production gain associated with GroupSystem users' attentiveness to ideas expressed by others has been documented by Dugosh and colleagues.[23] EBS group members who were instructed to attend to ideas generated by others outperformed those who were not in terms of creativity. According to a meta-analysis comparing EBS to face-to-face brainstorming conducted by DeRosa and colleagues, EBS has been found to enhance both the production of non-redundant ideas and the quality of ideas produced. Despite the advantages demonstrated by EBS groups, EBS group members reported less satisfaction with the brainstorming process compared to face-to-face brainstorming group members. Some web-based brainstorming technologies allow contributors to post their comments anonymously through the use of avatars. This technique also allows users to log on over an extended time period, typically one or two weeks, to allow participants some "soak time" before posting their ideas and feedback. This technique has been used particularly in the field of new product development, but can be applied in any number of areas requiring collection and evaluation of ideas.[25] Some limitations of EBS include the fact that it can flood people with too many ideas at one time that they have to attend to, and people may also compare their performance to others by analyzing how many ideas each individual produces (social matching).[citation needed] Some research indicates that incentives can augment creative processes. Participants are divided into three conditions. In Condition I, a flat fee was paid to all participants. In the Condition II, participants were awarded points for every unique idea of their own, and subjects were paid for the points that they earned. In Condition III, subjects were paid based on the impact that their idea had on the group; this was

measured by counting the number of group ideas derived from the specific subject's ideas. Condition III outperformed Condition II, and Condition II outperformed Condition I at a statistically significant level for most measures. The results demonstrated that participants were willing to work far longer to achieve unique results in the expectation of compensation.[26] A good deal of research refutes Osborn's claim that group brainstorming could generate more ideas than individuals working alone.[13] For example, in a review of 22 studies of group brainstorming, Michael Diehl and Wolfgang Stroebe found that, overwhelmingly, groups brainstorming together produce fewer ideas than individuals working separately.[27] Several factors can contribute to a loss of effectiveness in group brainstorming. Production blocking: Because only one participant may give an idea at any one time, other participants might forget the idea they were going to contribute or not share it because they see it as no longer important or relevant.[28] Further, if we view brainstorming as a cognitive process in which "a participant generates ideas (generation process) and stores them in short-term memory (memorization process) and then eventually extracts some of them from its short-term memory to express them (output process)", then blocking is an even more critical challenge because it may also inhibit a person's train of thought in generating their own ideas and remembering them.[29] Group members can be given notepads to write their ideas on and the meeting can organize who will get to speak next. However, this brainstorming technique does not perform as well as individuals using the nominal group technique. Collaborative fixation: Exchanging ideas in a group may reduce the number of domains that a group explores for additional ideas. Members may also conform their ideas to those of other members, decreasing the novelty or variety of ideas, even though the overall number of ideas might not decrease.[30] Evaluation apprehension: Evaluation apprehension was determined to occur only in instances of personal evaluation. If the assumption of collective assessment were in place, real-time judgment of ideas, ostensibly an induction of evaluation apprehension, failed to induce significant variance.[13][31] Furthermore, when an authority figure watches the group members brainstorm the effectiveness lowers because members worry their ideas may be viewed negatively. Especially individuals with high social anxiety are particularly unproductive barnstormers and report feeling more nervous, anxious, and worried than group members who are less anxiety prone.[32] Free-writing: Individuals may feel that their ideas are less valuable when combined with the ideas of the group at large. Indeed, Diehl and Stroebe demonstrated that even when individuals worked alone, they produced fewer ideas if told that their output would be judged in a group with others than if told that their output would be judged individually. However, experimentation revealed free-writing as only a marginal contributor to productivity loss, and type of session (i.e., real vs. nominal group) contributed much more.[13] Personality characteristics: Extroverts have been shown to outperform introverts in computer mediated groups. Extroverts also generated more unique and diverse ideas than introverts when additional methods were used to stimulate idea generation, such as completing a small related task before brainstorming, or being given a list of the classic rules of brainstorming.[33] Social matching: One phenomenon of group brainstorming is that participants will tend to alter their rate of productivity to match others in the group. This can lead to participants generating fewer ideas in a group setting than they would individually because they will decrease their own contributions if they perceive themselves to be more productive than the group average. On the other hand, the same phenomenon can also increase an individual's rate of production to meet the group average.[27][34] Illusion of group productivity: Members tend to overestimate their group's productivity and so work less. Members of the group can only guess at the quantity and quality of their group's product and their personal contributions to the process but there is no standard to determine how well it is performing. A combination of processes explain why members are incorrectly overestimating productivity: Group member(s) may intuitively mistake others' ideas for their own, and so when they think about their own performance they cognitively claim a few ideas that others actually suggested[35] Group members compare themselves to others who generate relatively few ideas, reassuring them that they are one of the high performers[36] Group brainstorming may "feel" more successful because participants rarely experience failure in a communal process. When individuals are trying to think creatively alone, people repeatedly find that they are unable to come up with a new idea. In a group setting, people are less likely to experience this failure in their search for new ideas because others' ideas are being discussed.[37]

Amygdala hijack 6-3-5 Brainwriting Affinity diagram Group concept mapping Eureka effect Lateral thinking Mass collaboration Nominal group technique Thinking outside the box What? Where? When? ^ Furnham, Alex (2000). "The Brainstorming Myth". Business Strategy Review. 11 (4): 21–18. doi:10.1111/1467-8616.00154. Retrieved 14 November 2023. ^ Osborn, Alex F. (2018-05-11). Applied imagination: principles and procedures of creative thinking. Scribner. OCLC 641122686 – via Open WorldCat. ^ a b Parker, Jeanette; Begnaud, Lucy (2004). Developing Creative Leadership. Portsmouth, NH: Teacher Ideas Press. p. 20. ISBN 978-156308631. ^ Trott, Paul; Hartmann, Dap; van der Duin, Patrick; Scholten, Victor; Ortt, Roland (2016). Managing Technology Entrepreneurship and Innovation. Oxon: Routledge. p. 63. ISBN 9780415677219. ^ "What is Brainstorming and How Is It Helpful?". Retrieved 2018-04-17. ^ Lehrer, Jonah (2012-01-30). "Groupthink: the brainstorming myth". The New Yorker. Retrieved 2013-10-23. ^ "Your Creative Power". 1948. ^ a b Hicks, Michael (2004). Problem Solving and Decision Making: Hard, Soft and Creative Approaches. Cengage Learning EMEA. p. 387. ISBN 1861526172. ^ a b c Osborn, A.F. (1963) Applied imagination: Principles and procedures of creative problem solving (Third Revised Edition). New York, NY: Charles Scribner's Sons. ^ "What is Mind Mapping? (and How to Get Started Immediately)". mindmapai.app. 2025-05-21. Retrieved 2025-04-09. ^ Santanen, E., Briggs, R. O., & de Vreede, G-J. (2004). Causal Relationships in Creative Problem Solving: Comparing Facilitation Interventions for Ideation. Journal of Management Information Systems. 20(4), 167-198. ^ Furnham, A., & Yazdanpanahi, T. (1995). Personality differences and group versus individual brainstorming. Personality and Individual Differences, 19, 73-80. ^ a b c d Michael Diehl; Wolfgang Stroebe (1987). "Productivity Loss in Brainstorming Groups: Toward the Solution of a Riddle". Journal of Personality and Social Psychology. 53 (3): 497–509. doi:10.1037/0022-3514.53.3.497. S2CID 54023714. ^ Lamm, Helmut; Trommsdorff, Gisela (1973). "Group versus individual performance on tasks requiring ideational proficiency (brainstorming): A review" (PDF). European Journal of Social Psychology. 3 (4): 361–388. doi:10.1002/ejsp.2420030402. ^ Haddou, H.A.; G. Camilleri; P. Zarate (2014). "Prediction of ideas number during a brainstorming session" (PDF). Group Decision and Negotiation. 23 (2): 285. doi:10.1007/s10726-012-9312-8. S2CID 62621727. ^ Kohn, Nicholas; Smith, Steven M. (2011). "Collaborative fixation: Effects of others' ideas on brainstorming". Applied Cognitive Psychology. 25 (3): 359–371. doi:10.1002/acp.1699. ^ "23 Creativity Killers That Will Drown Any Brainstorming Session". BoostCompanies. 2016-05-31. Archived from the original on 2017-05-12. Retrieved 2016-10-24. ^ Camacho, L. M., & Paulus, P. B. (1995). The role of social anxiousness in group brainstorming. Journal of Personality and Social Psychology, 68(6), 1071–1080. [1] ^ Henningsen, David Dryden; Henningsen, Mary Lynn Miller (2013). "Generating Ideas About the Uses of Brainstorming: Reconsidering the Losses and Gains of Brainstorming Groups Relative to Nominal Groups". Southern Communication Journal. 78 (1): 42–55. doi:10.1080/1041794X.2012.717684. S2CID 145293729. ^ Brown, V.; Paulus, P. B. (1996). "A simple dynamic model of social factors in group brainstorming". Small Group Research. 27: 91–114. doi:10.1177/1046496496271005. S2CID 143567740. ^ Stroebe, W., Diehl, M., & Abakoumkin, G. (1992). The illusion of group effectivity. Personality and Social Psychology Bulletin, 18(5), 643-650. ^ Paulus, P. B., & Dzindolet, M. T. (1993). Social influence processes in group brainstorming. Journal of Personality and Social Psychology, 64(4), 575. ^ Leggett Dugosh, Karen; Paulus, Paul B. (1 May 2005). "Cognitive and social comparison processes in brainstorming". Journal of Experimental Social Psychology. 41 (3): 313–320. doi:10.1016/j.jesp.2004.05.009. S2CID 145769905. ^ DM DeRosa; et al. (2007). "The medium matters: Mining the long-promised merit of group interaction in creative idea generation tasks in a meta-analysis of the electronic group brainstorming literature". Computers in Human Behavior. 23 (3): 1549–1581. doi:10.1016/j.chb.2005.07.003. S2CID 18436856. ^ Kerzner, H. (2013). Project management: A systems approach to planning, scheduling, and controlling (11th ed.). Hoboken, NJ: Wiley. ^ Toubia, Olivier. "Idea Generation, Creativity, and Incentives" (PDF). Marketing Science. Retrieved 28 April 2011. ^ a b Michael Diehl; Wolfgang Stroebe (1987). "Productivity Loss in Brainstorming Groups: Toward the Solution of a Riddle". Journal of Personality and Social Psychology. 53 (3): 497–509. doi:10.1037/0022-3514.53.3.497. S2CID 54023714. ^ Lamm, Helmut; Trommsdorff, Gisela (1973). "Group versus individual performance on tasks requiring ideational proficiency (brainstorming): A review" (PDF). European Journal of Social Psychology. 3 (4): 361–388. doi:10.1002/ejsp.2420030402. ^ Haddou, H.A.; G. Camilleri; P. Zarate (2014). "Prediction of ideas number during a brainstorming session" (PDF). Group Decision and Negotiation. 23 (2): 285. doi:10.1007/s10726-012-9312-8. S2CID 62621727. ^ Kohn, Nicholas; Smith, Steven M. (2011). "Collaborative fixation: Effects of others' ideas on brainstorming". Applied Cognitive Psychology. 25 (3): 359–371. doi:10.1002/acp.1699. ^ "23 Creativity Killers That Will Drown Any Brainstorming Session". BoostCompanies. 2016-05-31. Archived from the original on 2017-05-12. Retrieved 2016-10-24. ^ Camacho, L. M., & Paulus, P. B. (1995). The role of social anxiousness in group brainstorming. Journal of Personality and Social Psychology, 68(6), 1071–1080. [1] ^ a b c Nunamaker, Jay; Dennis, Alan; Valacich, Joseph; Vogel, Doug; George Joey (1991). "Electronic Meeting Systems to Support Group Work". Communications of the ACM. 34 (7): 40–61. doi:10.1145/105783.105793. S2CID 10389854. ^ DeSanctis, Gerardine; Poole, M.S.; Zigurs, I.; et al. (2008). "The Minnesota GDSS research project: Group support systems, group processes, and outcomes". Journal of the Association for Information Systems. 9 (10): 551–608. doi:10.17705/1jais.00177. S2CID 51855411. ^ a b c Gallupe, R. B., Dennis, A. R., Cooper, W. H., Valacich, J. S., Bastianutti, L. M. and Nunamaker, J. F. (1992), "Electronic Brainstorming and Group Size,". Academy of Management Journal, Vol. 35, No. 2, pp. 350-369. JSTOR 256377 ^ Gallupe, R. B.; Cooper, W. H.; Grise, M.-L.; Bastianutti, L. M. (1994). "Blocking electronic brainstorms". Journal of Applied Psychology. 79 (2): 77–86. doi:10.1037/0021-9010.79.1.77. ^ Furnham, A (2000). "The brainstorming myth". Business Strategy Review. 11 (4): 21–28. doi:10.1111/1467-8616.00154. ^ a b Michinov, N (2012). "Is electronic brainstorming the best way to improve creative performance in groups? An overlooked comparison of two idea generation techniques". Journal of Applied Social Psychology. 42: E222 – E243. doi:10.1111/j.1559-1816.2012.01024.x. ^ Leggett Dugosh, Karen; Paulus, Paul B. (1 May 2005). "Cognitive and social comparison processes in brainstorming". Journal of Experimental Social Psychology. 41 (3): 313–320. doi:10.1016/j.jesp.2004.05.009. S2CID 145769905. ^ DM DeRosa; et al. (2007). "The medium matters: Mining the long-promised merit of group interaction in creative idea generation tasks in a meta-analysis of the electronic group brainstorming literature". Computers in Human Behavior. 23 (3): 1549–1581. doi:10.1016/j.chb.2005.07.003. S2CID 18436856. ^ Kerzner, H. (2013). Project management: A systems approach to planning, scheduling, and controlling (11th ed.). Hoboken, NJ: Wiley. ^ Toubia, Olivier. "Idea Generation, Creativity, and Incentives" (PDF). Marketing Science. Retrieved 28 April 2011. ^ a b Michael Diehl; Wolfgang Stroebe (1987). "Productivity Loss in Brainstorming Groups: Toward the Solution of a Riddle". Journal of Personality and Social Psychology. 53 (3): 497–509. doi:10.1037/0022-3514.53.3.497. S2CID 54023714. ^ Lamm, Helmut; Trommsdorff, Gisela (1973). "Group versus individual performance on tasks requiring ideational proficiency (brainstorming): A review" (PDF). European Journal of Social Psychology. 3 (4): 361–388. doi:10.1002/ejsp.2420030402. ^ Shah, Jahan (2000). "Evaluation of Idea Generation Methods for Conceptual Design: Effectiveness Metrics and Design of Experiments". Journal of Mechanical Design. 122: 377. doi:10.1115/1.1315592. ^ VanGundy, Arthur (1984). "Brain Writing for New Product Ideas: An alternative to Brainstorming". Journal of Consumer Marketing. 2: 67–74. ^ a b University of Oklahoma. "What is "brain writing"?" (PDF). University of Central Oklahoma Office of Academic Affairs. Archived from the original (PDF) on 14 May 2014. Retrieved 20 October 2014. ^ "Tecniche creative Per una maggiore ricchezza di idee e per realizzare soluzioni innovative" (PDF). www.matthysmedical.com. Archived from the original (PDF) on September 15, 2020. Retrieved 20 October 2014. ^ a b c d MacNaught, Stacey. "108 IDEAS IN 30 MINUTES – THE 6-3-5 METHOD OF BRAIN-WRITING por". Blogsession. Retrieved 20 October 2014. ^ a b "Supporting ideas in SME". Archived from the original on 21 October 2014. Retrieved 20 October 2014. ^ "108 Solutions or Ideas in 30 Minutes!". 635 Brainwriting. Retrieved 28 October 2014.[permanent dead link] ^ a b Bangel, Noemi. "Brainwriting". Gustav Kaser Australia. Archived from the original on 30 October 2014. Retrieved 30 October 2014. ^ Beitz, Wolfgang (1996). Engineering Design: A Systematic Approach (Design Council ed.). Springer. ISBN 3540199179. Retrieved from

" 3 The following pages link to 6-3-5 Brainwriting External tools (link count transclusion count sorted list) - See help page for transcluding these entries Showing 34 items. View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Mind map (links | edit) Brainstorming (links | edit) Creativity techniques (links | edit) Multiple-criteria decision analysis (links | edit) Affinity diagram (links | edit) Brainwriting (redirect page) (links | edit) Ideation (creative process) (links | edit) Method 635 (redirect page) (links | edit) 6-3-5 Method (redirect page) (links | edit) Disney method (links | edit) Computer supported brainstorming (links | edit) Organizational-activity game (links | edit) Talk:6-3-5 Brainwriting (transclusion) (links | edit) Talk:Computer supported brainstorming (links | edit) User:BuzzWoof (links | edit) User:AlexNewArtBot/ReferencesSearchResult/archive10 (links | edit) User:AndriusKulikauskas/Gamestorming (links | edit) User:Andrewaskew/Category:Collective consciousness (links | edit) User:Angelo Villanueva/Books/Thesis Writing (links | edit) User:Joelbiten/Books/Problem Solving (links | edit) User:Ekrem ince/Books/Innovation (links | edit) User:Maujifauji789/Books/OPEN GLAMS (links | edit) User:Dwilson555/Books/Schneider (links | edit) User:Hinsenlam/Books/social psychology v1 (links | edit) User talk:83.241.169.42 (links | edit) User talk:Adirlanz/suggestions/Archive 3 (links | edit) User talk:Adirlanz/suggestions/Archive 6 (links | edit) User talk:200.36.253.48 (links | edit) User talk:200.36.253.96 (links | edit) Wikipedia:WikiProject Academic Journals/Journals cited by Wikipedia/A6 (links | edit) Wikipedia:WikiProject Invention/Popular pages (links | edit) Wikipedia:Requests for page protection/Archive/2025/03 (links | edit) Template:Group creativity techniques (links | edit) View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500) Retrieved from " WhatLinksHere/6-3-5_Brainwriting"

Brainstorming is about broadening the base not tightening the screws. The goal is to generate many different ideas over a short period of time without evaluation, criticism or commentary. Strategic Futuring, a vision-centered strategic planning workbook developed by a team of facilitators at Michigan State University Extension, suggests that brainstorming is a useful divergent or 'idea-expansion' tool. A tool that can: Foster creativity by encouraging people to think beyond the conventional Record all ideas, with clarification and discussion later in the process Take advantage of a synergy that occurs when people think creatively together Equalize the influence of all members of the group by posting and considering EVERYONE's ideas. As defined in the Strategic Futuring workbook, "Brainstorming is a structured process with specific rules that encourages the generation of a large quantity of ideas in a group setting" The key to initiating a successful brainstorming session is to develop clear guidelines, which are written on a flip chart or white board and large enough for the whole group to review and reference later in the process. The group leader should review each guideline and ask for the group input, understanding and agreement. Changes or additions may be added based on group consensus. A few excellent guideline examples from the Strategic Futuring workbook include: All ideas are okay. Don't censor your ideas. Aim for quantity not quality. Wild ideas are Ok – they may generate usable ideas. Do not discuss, evaluate, criticize or comment on ideas during the idea generating period. It is ok to build on others' ideas. Say 'pass' if you run out of ideas. The most efficient group size for brainstorming is 3-8 people. If the group is larger, then can be divided into smaller clusters. The time it takes to complete a successful session depends on the group itself and the quantity of ideas generated. The process of generating ideas can be structured (round robin – one person at a time, moving clockwise or counterclockwise around the group) or popcorn style (participants 'shout-out' ideas in no particular order). Participants should be allowed to pass their turn without issue. It is important to allow plenty of time for ideas to flow, but not drag; keeping the process moving. When people have run out of ideas, it may be beneficial to allow a few minutes of quiet time, to think and reflect. Sometimes the best ideas emerge during a second round of brainstorming. Without judgment or the evaluation of an idea, the final step in the brainstorming process is for the group to clarify the written verbiage and if appropriate, combine similar items. At this time, the ideas are still NOT yet assessed for value or significance! The following are two are slightly different variations of the above brainstorming process, and may be better suited to certain situations, the type of questions being asked or the diversity of the participants: Anonymous brainstorming – participants write their ideas on a sheet of paper, passing them around to other group members who build on the ideas. This technique is helpful when people are reluctant to speak in front of a group, the topic is sensitive or an outspoken person tends to dominate verbal brainstorming. Sticky note brainstorming – participants write one idea per sticky note and place them on a wall for everyone to see. Ideas are then grouped by topics or themes. Brainstorming is an excellent divergent or idea-generating tool that can create possibilities and help a group move beyond individual perspectives to solve problems. It can also help to establish buy-in of the final plan or outcome, as participants had the opportunity to contribute. If the planning process continues, convergent or narrowing tools may be used to prioritize and create action plans based on the diverse perspectives generated in the earlier brainstorming sessions. This article was published by Michigan State University Extension. For more information, visit . To have a digest of information delivered straight to your email inbox, visit . To contact an expert in your area, visit or call 888-MSUE4MI (888-678-3464). Please tell us why?

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