

Creativity in the context of education

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[Site owners](#)[Matthew Laurence](#)[Generating Ideas](#) >

Synectics

Synectics is a creativity and problem solving process which combines a structured approach to creativity with the freewheeling problem-solving approach used in techniques like brainstorming.

However, given the sheer range of different triggers and thinking approaches used within synectics, it can take much longer to solve a problem using it than with, say, traditional brainstorming – hence its best use as a "backstop" when other creativity techniques have failed.

Background

The word "synectics" means "bringing different things together to create a unified connection", which is what's done using the synectics process. It was developed by William J. J. Gordon in the early 1960s and developed (in an artistic context) by Nicholas Roukes.

How to Use the Tool

Generating ideas with Synectics is a three stage process:

1. "Referring": Gathering information, and defining the problem.
2. "Reflecting": Using a wide range of techniques to generate ideas.
3. "Reconstructing": Bringing ideas back together to create a useful solution.

1. Referring

In the referring stage, you lay the foundations you'll use later for successful use of the tool. At this stage you:

- Precisely define the problem you want to solve.
- Properly research the factors contributing to the problem.
- Understand what solutions have been tried up to this point.

2. Reflecting

Reflecting is where you creatively and imaginatively generate possible solutions to the problem you've defined. The emphasis here is on using a range of different "triggers" and "springboards" to generate associations and ideas.

Just as with brainstorming, reflecting is best done in a relaxed, spontaneous and open-minded way with an emphasis on creative thinking rather than on critical assessment of suggestions.

Where Synectics differs from brainstorming and other creativity approaches is in the formal and systematic way it seeks to spark comparison with other approaches and situations, creating new ideas by making associations between these and the problem being solved.

That said, a useful way of starting the Synectic idea generation process is to brainstorm around the problem normally. This should generate a range of possible solutions to the problem.

If none of these solves the problem, the next step is to use some of the 22 possible triggers below to try to break free of existing thinking patterns. These triggers reflect things that you can do to transform your current product, service or approach to try to solve the problem. They are:

1. **Subtract:** Remove parts of your current approach, or simplify it.
2. **Repeat:** Duplicate parts of it, or significantly increase resources so that you can take existing approaches to a new level.
3. **Combine:** Mix existing approaches with other approaches.
4. **Add:** Make existing approaches bigger or stronger, or add other elements.
5. **Transfer:** Move existing approaches into different situations, and look at how they would change to cope with these approaches.
6. **Empathize:** Put yourself in the minds of your customers, or pretend that you are the problem: From this perspective, how would you do things differently?
7. **Animate:** Bring the problem to life. Think about it as a living thing.
8. **Superimpose:** Overlay the situation with new meanings or ideas, possibly randomly generated (see random input).
9. **Change Scale:** Think about what would happen if you radically expanded the scale of the problem, or if you reduced it substantially.
10. **Substitute:** Switch out and replace elements of your current approach. Switch in parts of alternative approaches.

11. **Fragment:** Take the problem or your current approach apart. If you solve some parts of the problem, does this help solve others? Or can other people help you solve parts more effectively?
12. **Isolate:** And is there value in only looking at part of the problem? Are people really that concerned about other parts?
13. **Distort:** Change the "shape" of your current product, solution or service: Extend it or stretch it, think about it as a different, distorted shape.
14. **Disguise:** Think about whether you can eliminate the problem by hiding it or camouflaging it (in some cases this may be a legitimate solution).
15. **Contradict:** Think about doing the opposite of what you want to do (for example, how you would make the problem worse?), then reverse this.
16. **Parody:** Think about what you'd ridicule about your problem or solution. See if this changes the context or suggests alterations.
17. **Prevaricate:** Fantasize about your service. Think about what it would be like in your wildest dreams.
18. **Analogize:** Think about analogies for your product or service, and what you can compare it to in other disciplines. How do people deal with analogous problems? (We'll look at this in more detail later.)
19. **Hybridize:** Think about what would happen if you crossed your current approach with something wildly different. Does this suggest any ideas?
20. **Metamorphose:** Think about how your product or service will be affected if current trends continue – will the problem get worse, or will it fade away in significance?
21. **Symbolize:** How can you strip your product or service back to its bare essentials? How can you convert it into something this is immediately easy to grasp?
22. **Mythologize:** Taking this further, how could you give it symbolic, "iconic" or "mythological" status?

Again, once you've done this, evaluate whether you have a satisfactory solution to the problem you're addressing.

If you haven't, it's time to move to the next stage: Using "synectic springboards" to stimulate new ideas. These are analogies between the current situation and other situations or things. They can be functional analogies (with other products, services and approaches that do a similar job), analogies with other phenomena (for example, with an ocean storm, a rainforest or a mechanical digger), or stretched analogies (for example, comparisons with emotions or symbols).

Analogies can be close or can be outrageous: Close analogies are likely to generate steady improvement, while outrageous analogies are useful for generating fundamental shifts in the

way people think.

3. Reconstructing

Reconstructing is where you collect all of the ideas you've created during the "Reflecting" step, and evaluate them rationally, bringing them together to create practical and useful ideas.

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