Zig Zag: the Surprising Path to Greater Creativity

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Introduction
What is creativity?

- Creativity is something new and different by definition
- As a result, it doesn’t usually come naturally to us
- People are taught to fear what isn’t familiar, so people stray away from trying to be creative
How does creativity work?

- Creativity is not a bolt of lightning
- Despite the type of creativity, it is always a process consisting of many small steps
- When people follow and pay attention to those small steps, revelations and ideas come to them - they may seem unsolicited, but they are a part of the process
Why should I care about creativity at all?

According to the author, creativity can help you:

- Excel at your job
- Build a successful career
- Balancing professional life with your personal life
- Shape your personality and how you are perceived
- Learn effectively
- Make good, thoughtful decisions
- Make and keep good friendships
- Bring about real change in your community
Sawyer’s Step-by-Step Guide to Being Creative

1. Ask: how the right questions lead to the most novel answers
2. Learn: how to prepare your mind for constant creativity
3. Look: How to be aware of the answers all around you
4. Play: How to free your mind to imagine possible worlds
5. Think: How to have way more ideas than you’ll ever need
6. Fuse: How to combine ideas in surprising new ways
7. Choose: How to pick the best ideas and then make them even better
8. Make: how getting your ideas out into the world drives creativity forward
Mistakes you must avoid

1. Thinking that you only need to be creative on occasion

1. Hoping that there is one great idea out there
Step 1 - Ask: how the right questions lead to the most novel answers
Example: Coffee Shop

- Howard Schultz: head of marketing for a small coffee bean company
- He went to a Milan coffee shop and enjoyed his time there a lot
- Question: How can I recreate the Italian espresso bar in United States?
- He founded Il Giornale as an exact replica, but it didn’t fit in Seattle
- Revised Question: How can I create a comfortable, relaxing environment to enjoy great coffee?
- He got rid of some things and added some others to make it more relaxing
- He bought out his old company to be Il Giornale’s coffee bean distributor and his new company became incredibly successful
Part 1: Find the Question

1. Try 10 questions
   a. Most of these will not make sense
   b. But they will force you to think of unconventional solutions

2. Find the bug
   a. Tiny annoyances are often symptoms of bigger problems
   b. Be unreasonable and unfair when finding bugs

3. Reinterpret
   a. Change the context of your design
   b. How could your solution solve other problems?

4. Rise to the occasion
   a. Analyze the constraints of your question
Part 2: Search for the Space

1. Break it down
   a. Properties, possibilities, combinations

2. Draw your fishbone
   a. Problem at the head
   b. Bones close to head are likely causes of the problem
   c. Bones far from the head are unlikely causes (but still causes!) of the problem

3. Map your idea
   a. Draw an idea map

4. Challenge your assumptions
   a. Make sure that your problem is actually a problem
Part 3: Transform the Problem

1. Reverse
   a. Negate the question to see if that is the real question you should be asking

2. Go back from the future (BFF)
   a. Think as if you have the solution, then analyze how you got there

3. Pick the worst idea
   a. Allows you to get bad questions out of the way
   b. Helps you think about how you would make bad ideas better

4. Stretch and squeeze
   a. To stretch - use the five whys
   b. To squeeze - break the problem down into reasons; one of those reasons is likely the largest issue
Step 2 - Learn: how to prepare your mind for constant creativity
Practice 1: Practice Deliberately

- **Challenge yourself**
  - People in the flow are happier and more creative

- **Focus on Specific Tasks**
  - Break apart the task into subtasks
  - Remember how the subtasks fit into the big picture
  - Ex: play just the left-handed part on the piano

- **Reflect**
  - Concentrate on your performance while working
  - Immediate feedback
    - Preferably from an expert
  - You don’t get additional benefit practicing more than 4 hours a day
    - After 2 hours the benefit declines
Practice 2: Master Your Domain

- **Get Schooled**
  - Deliberate practice is hard without a skilled teacher/coach to design a learning experience for you.
  - Teachers try to keep students in the flow zone as pupils grow in knowledge.
  - You should continue to challenge yourself since not all teachers do this.

- **Go for Deeper Understanding**
  - Knowing how to think, reason, and argue.
  - Deep knowledge transcends circumstance.
  - Ex: what’s actually going on when we multiply $\frac{1}{4}$ by $\frac{1}{4}$.

- **Apply what you know to new situations** (*adaptive expertise*)
  - You can bend and stretch your new knowledge to fit new contexts.
  - Ex: learning about colors can be used when painting a house or making a sign for a bake sale.
Practice 3: Learn Forever

● Creative life is fed by continuous learning

● Seek Knowledge Relentlessly
  ○ Don’t stop asking questions (Keep asking “why?”)
  ○ Go beyond what you learn from teachers and books

● Customize Knowledge
  ○ Don’t just take classes; go out and get knowledge your own way
  ○ Use all your senses
  ○ Ex: learn about Greece through books but also listen to the music, make the dishes, etc.

● Read a Book

● Stay Current
  ○ Look back in time but also be alert to new developments and emerging trends

● Recruit a Mentor
  ○ Exceptional creators always talk about having a mentor who went above and beyond the call of duty to help them succeed
Practice 4: Balance Specialty with Generality

- You must master a domain (first 3 practices help with this)
- Once you start deepening your knowledge, you must broaden it
  - If you specialize too much then you are too narrowly focused
  - You cannot communicate what you know to people of other backgrounds
- Be T-shaped
  - The stem of the T is for being an expert with much depth in an area
  - The top of the T is for a superficial awareness for a range of fields
- Branch Out
  - Stay curious even if it’s not related to your area of expertise
- Be a Dilettante
  - Shop around different areas and invest some time in them
- Pair Up with an Expert
  - Talk about your projects and what you’ve learned with experts in other fields
Step 3 - Look: How to be aware of the answers all around you
Practice 1: Use Fresh Eyes

- **Become more aware**
  - Use *mindfulness*: a state of active observation

- **Make your own luck**
  - Lucky people are aware of their surroundings and open to spontaneity, not stuck in routine

- **Look for new patterns**
  - We can create new categories and use them if we look for new patterns

- **Cultivate your senses**
  - See, hear, and taste with greater sensitivity

- **Practice Ethnography**
  - Notice ways of life in a particular culture that its people aren’t consciously aware of

- **Look for Serendipity**
  - Be alert to valuable accidents and look at them closely to learn from them

- **Spot the Spandrels**
  - Spandrels are the architecture that allows arched doorways
  - Challenge yourself to find someone and determine why they are there

- **Switch Perspectives**
  - How would you solve this problem as a different person (lawyer, journalist, doctor, etc...)

Grab New Sights and Cool Sounds

- Start Tripping
- Relax and Listen
- Play with Children’s Toys
- Shape your day
  - Look for different shapes around you
- Look at Bad Examples
- Flip through strange magazines
- Explore new media
- Go walkabout
  - Walk around your neighborhood like you’re on a scavenger hunt
- Travel
Render it Visible

- **Keep an Idea Log**
  - Any time you get an idea, log it in a journal
  - Skim through your journal every 6 months or so

- **Start an Idea Box**
  - A 3-dimensional idea log
  - Store interesting things that you see and find

- **Set a Google Alert**
  - Get google to send you stuff relating to your problem (but be specific!)

- **Create a Personal Hall of Fame**
  - Find 10 famous people you admire and respect from different walk of life
  - Turn to them for inspiration during a block

- **Appoint a Personal Board of Directors**
  - Find 5 people within your own field that you admire and respect
  - Also turn to them for inspiration during a block
Step 4 - Play: How to free your mind to imagine possible worlds
What is Play?

- Play is letting the mind wander
  - Problems are set aside and the unconscious is allowed to thrive
- Play allows us to create new scenarios, rules, and worlds
  - While the real world is limited by certain boundaries, customs, and laws, alternate worlds are only restricted by creativity
- Creativity and Play are linked
  - By participating in Play, we foster our creativity
First Practice of Play: Visualization

Visualization is the imagining of possibilities

Exercises in Visualizations:

- Imagine Parallel Worlds
- Come up with fantastic explanations
- Envision what’s below
- Follow the arrow
- Explore the future
- Visualize your space
Second Practice of Play: Relax

- Letting your mind relax allows your subconscious to generate novel ideas
  - Find a way to engage your mind and body in a different way than you do at work
  - Still your thoughts
  - Listen to your surroundings
Third Practice of Play: Find the right box

- Contrary to popular belief, creativity can be strengthened through constraints
  - Creating more constraints allows the mind to come up with creative solutions and stops you from getting overwhelmed
- Trying out different constraints or boxes can lead you to the best ideas
  - Trying out different novel tasks and challenges gives you new perspectives on problems you may face in the future
Fourth Practice of Play: Be a Beginner

- Experts narrow down the possibility space, beginners are free to explore every possibility
- Doing things for the first time helps cultivate creativity and try out unique strategies
  - Try doing something you’ve never done before
  - Develop a new hobby
Step 5 - Think: How to have way more ideas than you’ll ever need
Quantity and Productivity

● Creators only become famous from a handful of works while they tended to create hundreds
  ○ Einstein
  ○ Michelangelo

● Quantity is correlated with creativity
  ○ Producing a large quantity of works implies creativity as each work generally has to be unique
The First Practice of Thinking: Ideate

- Since idea quantity is correlated with creativity, it is useful to teach yourself how to generate lists of ideas:
  - Pick a mundane object and list its uses
  - Try toppling
The Second Practice of Thinking: Transform

- **SCAMPER:** Substitute, Combine, Adapt, Magnify, Put to other uses, Eliminate, Rearrange
- **Listing Attributes**
  - Take the keywords of your problem and write the attributes of each
  - Take each attribute and apply SCAMPER
- **Reverse the attributes**
  - Take each attribute and reverse it
  - Think of possible events that could lead to the reversal becoming true
The Third Practice of Thinking: Schedule

- Set time aside each day to generate ideas
- Set a quota for yourself
  - When faced with a quota and a deadline, unique ideas emerge
    - At first, ordinary ideas are presented
    - When they run out, there is a phase of fatigue
    - Once that phase passes, new unique ideas start to emerge
Step 6 - Fuse

How to Combine Ideas in Surprising New Ways
First Practice: Force-Fuse

- Combine ideas that do not naturally go together
- Make distant associations
  - Printing press = wine press + coin punch
- Combine concepts
  - A cooking stove that is also a bicycle
- Cook on all burners
  - Work on multiple projects at once
Second Practice: Make Analogies

● Many great new ideas result from analogies
● Use direct analogy
  ○ Pick characteristics of different objects and think about how these apply to your problem
● Mimic nature
  ○ Sonar and submarines
● Use personal analogy
  ○ Imagine yourself “inside” the problem
Third Practice: Do a People Mash-Up

- Fuse your ideas with those of someone very different
- Talk to someone different
  - Get out of your comfort zone
- Crash a meeting
- Work in the intersection
Step 7 - Choose
How to Pick the Best Ideas and Then Make Them Even Better
First Practice: Know What You’re Looking For

- Identify ideas that are worth pursuing
- Train your intuition
  - Find examples
- Color your choices
- Go for simple, elegant, and robust
- Check your ideas
  - Is there a market for it?
  - Can we do it (or make it)?
  - Can we make money at it?
- Define greatness
Second Practice: Host an Idea Competition

- Focus on two or more ideas and let them compete
- Look for differences
- Map the grid
- Draw an affinity diagram
Third Practice: Look Past the Good

- Excitement about an idea can cloud your judgement
  - Look at an idea from all sides—both the good and the bad
- Consider pros and cons
- Find the worst-case scenarios
  - Anticipate ways to avoid them
Fourth Practice: Edit, Revise, Improve

- Do not get too attached to an idea
  - There is always room for improvement
- Identify three benefits
- Fix the fatal flaw
- Be the devil’s advocate
  - Focus on what’s wrong
- Reformulate, reuse, and reperceive
Thank you :)