

15 Ideation

Monday, February 27, 2023 1:38 PM

yes clickers
Log in now please

Today

Blake Wilson	de stijl
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Grad presentations

Ideation techniques

Brainstorm brainstorming

Linear techniques

Intuitive techniques

-or-

~~International Style, Art Deco, Organic Design~~ & streamlining

Chat about your main project

Curves drawing practice

Friday: Guest Lecture - Chelsea Young. AesDes alum, Sr Mgr Industrial Designer at Spectrum, broadband provider

Attendance required

clicker short answer:

Everybody got feedback on Upcycle last week. Short answer in iclicker: What was best or the most important or surprising feedback you got?

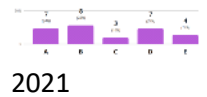
same

Talk about
main Project

On to Main Project

Poll:

- A) I know what I'm making for my main project
- B) I've got some ideas, but still need to narrow it down
- C) Too many ideas right now
- D) Not enough ideas, nothing feels right
- E) Haven't started thinking about it yet.



Do you want to see ideation techniques in class today?

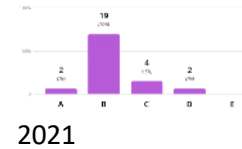
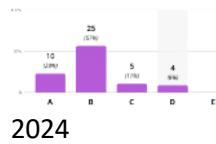
Ideation techniques

Brainstorm brainstorming

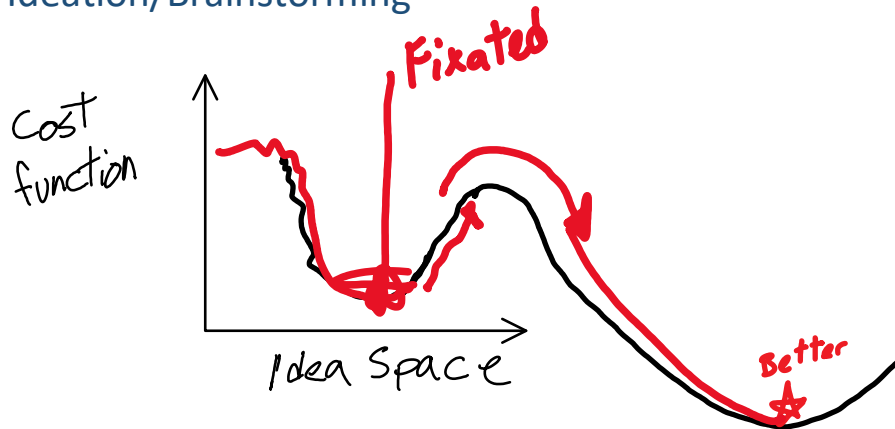
Linear techniques

Intuitive techniques

- A) Yes please!!
- B) Sure. Can't hurt
- C) whatever
- D) No thanks, let's move on.



Ideation/Brainstorming



Your initial idea may be good, but you may get a better one if you press on, and keep generating ideas

Benefits of ideation

- Never hurts
- Can lead to new solution
- Can lead to better solution
- Can lead to an awesome solution for some *other* problem
- Even if nothing comes of it, can add meaning to your original solution

Ideation Techniques

Brainstorming: What have you been exposed to?

- Making word webs, yes and
- Sketching for visual ideas
- Sticky notes on a wall
- Design Heuristics
- Start with broad concepts, go to Pinterist , camera roll, for shapes and colors. Gather from various media
- Be openminded
- Define constraints or concepts. I.e. dynamic is current constraint.
- Google images, follow rabbit holes
- Collaboration, bounce ideas off others

Previous years:

Write everything down as it comes, even if it isn't that good

No idea is bad, can still provide something useful

Build on other ideas

Don't settle on any idea until you have at least 100 to choose from. First 15 are good, 50 are meh, after 70 ideas really opened up

Fail early and fail often

Write out obvious ideas first to clear space for the next

Relax:

- Let ideas simmer, then take a shower

- Running or hiking, being in motion and not thinking helps. Music can help

Just before sleep, be ready to get up and write it down

Start with easy google search

If you have a basic idea or two, talk to folks for other viewpoints

Looking at something from as many perspectives as possible, even unrelated ideas

Reading any book, just sitting and reading

APD: Pain points of clients

Rapid shotgun method. As many as possible, judge later

Look at example solutions

- Pinterist, Youtube videos

Combining requirements to make a single prompt

Take all ideas good and bad

Suggestion cards. Eno's Oblique Strategies, IDEO, Instagram ads, Design Heuristics

Empathize

Talk to myself

Bounce similar words: Cardboard to cardstock

Dali: fall asleep with a plate, then use the adrenaline rush from crash to get ideas

Being receptive while falling asleep

Create a roadmap: list specifications and goals

Think of materials, then the object, and vice versa

Consider your audience, then come up with tone words about what they want

Come up with user personality profiles, be empathetic

Break task up into smaller parts

Questionstorming. Helps you decide what's important, can guide brainstorming, open you to other considerations. Start with a statement, then generate open questions.

Sketching can give ideas and insights

Keep a list for later. Always have ideas ready

Design Heuristics

Prompts to help spark alternatives. Good for early in design process.

1 Add levels	20 Change geometry	39 Incorporate environment	58 Scale up or down
2 Add motion	21 Change product lifetime	40 Incorporate user input	59 Separate functions
3 Add natural features	22 Change surface properties	41 Layer	60 Simplify
4 Add to existing product	23 Compartmentalize	42 Make components attachable/detachable	61 Slide
5 Adjust function through movement	24 Contextualize	43 Make multifunctional	62 Stack
6 Adjust functions for specific users	25 Convert 2-D material to 3-D object	44 Make product recyclable	63 Substitute way achieving function
7 Align components around center	26 Convert for second function	45 Merge surfaces	64 Synthesize functions
8 Allow user to assemble	27 Cover or wrap	46 Mimic natural mechanisms	65 Telescope
9 Allow user to customize	28 Create service	47 Mirror or array	66 Twist
10 Allow user to rearrange	29 Create system	48 Nest	67 Unify
11 Allow user to reorient	30 Divide continuous surface	49 Offer optional components	68 Use common base to hold components
12 Animate	31 Elevate or lower	50 Provide sensory feedback	69 Use continuous material
13 Apply existing mechanism in new way	32 Expand or collapse	51 Reconfigure	70 Use different energy source
14 Attach independent functional components	33 Expose interior	52 Redefine joints	71 Use human-generated power
15 Attach product to user	34 Extend surface	53 Reduce material	72 Use multiple components for one function
16 Bend	35 Flatten	54 Repeat	73 Use packaging as functional component
17 Build user community	36 Fold	55 Repurpose packaging	74 Use repurposed or recycled materials
18 Change direction of access	37 Hollow out	56 Roll	75 Utilize inner space
19 Change flexibility	38 Impose hierarchy on functions	57 Rotate	76 Utilize opposite surface
			77 Visually distinguish functions

Daly, Shanna R., Seda Yilmaz, James L. Christian, Colleen M. Seifert, and Richard Gonzalez. "Design Heuristics in Engineering Concept Generation." *Journal of Engineering Education* 101, no. 4 (2012): 601–29. <https://doi.org/10.1002/j.2168-9830.2012.tb01121.x>.

<https://www.youtube.com/watch?v=JPwXlwaUpi0>

Neurological perspective on creativity. Practice, but then let it flow.