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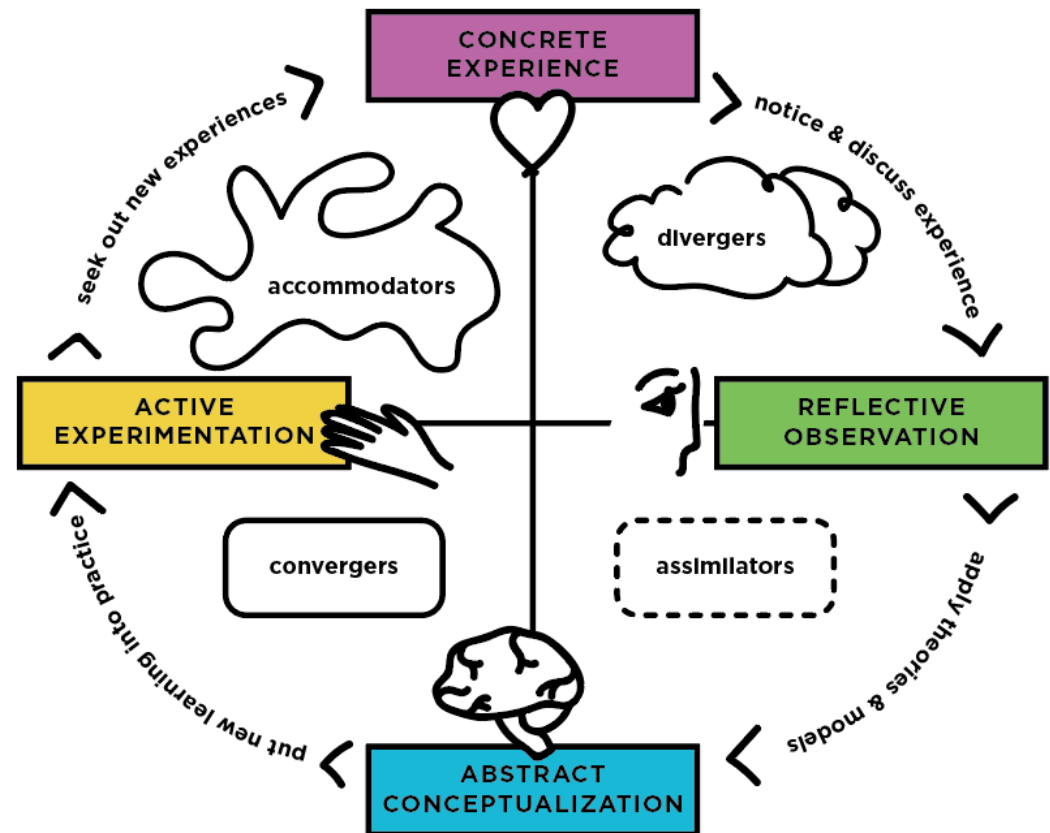
TEACHING PHILOSOPHY

*Among designers, I'm the one thinking like an educator; among educators, I'm the one thinking like a designer.
My background in interaction design and instructional design informs every aspect of my teaching practice.*

Every lived experience is a learning experience. But these experiences must be mindfully designed if we want them to achieve certain learning goals.

I design learning experiences that incorporate action, theory, and reflection. My rendering of Kolb's learning cycle (right) illustrates how different learning modes – **experience**, **reflection**, **conceptual modeling**, and **experimentation** – fit together.

As John Dewey wrote, "we do not learn from experience, we learn from reflecting on experience." A well-designed learning experience enables and encourages every step of this process.



TEACHING PHILOSOPHY // GOAL-ORIENTED LEARNING



Seneca wrote, “to the man who does not know where he is going, there is no favorable wind.” My lectures, exercises, peer feedback rounds, reflections, and assessments are all designed around learning goals. This approach, best articulated by Wiggins & McTighe (), is known as **backwards design**.

One important learning goal in every class I teach: at the end of the course, learners should no longer need me. They should become progressively more confident, independent, and self-directed. To achieve this, I aim to identify and teach within each learner’s zone of proximal development (Vygotsky, YEAR) – in other words, to teach in the area where a learner currently needs support in order to succeed.

TEACHING PHILOSOPHY // MEETING STUDENTS WHERE THEY ARE



Teaching university and adult learners (andragogy) is fundamentally different from teaching children (pedagogy).

Adult learners do not respond well to external motivation; they need to activate their own internal motivation. They need to understand why they are learning something, and the structure and reasoning behind the activities. Rather than being told what to do, they need to make informed decisions about their own learning.

References

- Dewey, J. (1938). *Experience and education*.
- Knowles, Malcolm; Holton, E. F., III; Swanson, R. A. (2005). *The adult learner*. Burlington, MA: Elsevier.
- Kolb, D.A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Vygotsky, L.S. (1978) *Mind in society: The development of higher psychological processes*. London: Harvard University Press.
- Wiggins, G. P., & McTighe, J. (2005). *Understanding by design*.

SAMPLE CLASSES

***Design synthesis** and **sketching** are two topics I'm frequently asked to teach. I've collected some of my plans and materials in order to illustrate how I think through and conduct classes and workshops.*

Purpose

- Help teams gather their fieldwork and articulate design insights.

Audience

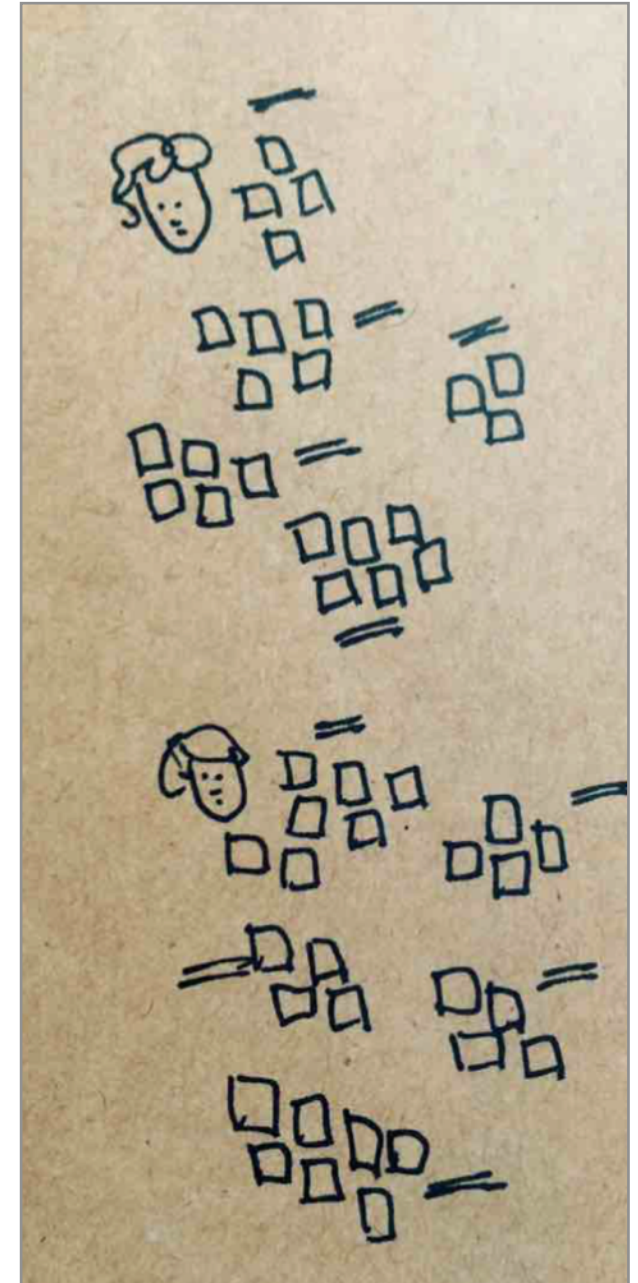
- Teams of beginning to intermediate students or professionals who have just finished initial field research as part of a user-centered design process.

Challenges

- Students haven't yet developed an intuition for what a design insight looks like. They need clear frameworks and frequent feedback.
- Though it is important to provide structure, promoting rigid templates can easily take the depth and color out of students' insights.
- Many students have experience with other kinds of field research and may not be aware of the goals and outcomes of design research.

Selected readings

- Buchanan, R. & Margolin, V., eds. (1996). *The idea of design*. Cambridge: MIT Press.
- Kolko, J. (2010). *Exposing the magic of design*. Oxford: Oxford University Press.
- Tufte, E. (1997). *Visual explanations*. Graphics Press USA.



Part 1: Unpacking Data

Lecture with slides

- Introduce data-information-knowledge-wisdom pyramid as a model for meaning-making
- Explain how to unpack and organize information
- Discuss examples of “war rooms” from design studios and the importance of visual artifact creation

Student work time

- Parallelize and summarize quotes, observations, and other fieldwork data using post-its
- Explore patterns in data using visual frameworks

Peer sharing + feedback

- Notice any underexplored opportunity areas
- Point to alternate interpretations of fieldwork data

Part 2: Articulating a Design Problem

Lecture with slides

- Introduce user-challenge-context model of design problem framing
- Explain common frameworks for problem-framing (persona, user story, etc.)
- Discuss case studies of design problems and the role of problem-framing

Student work time

- Create one, or several, design problem framings
- Use visual as well as verbal artifacts to articulate problem

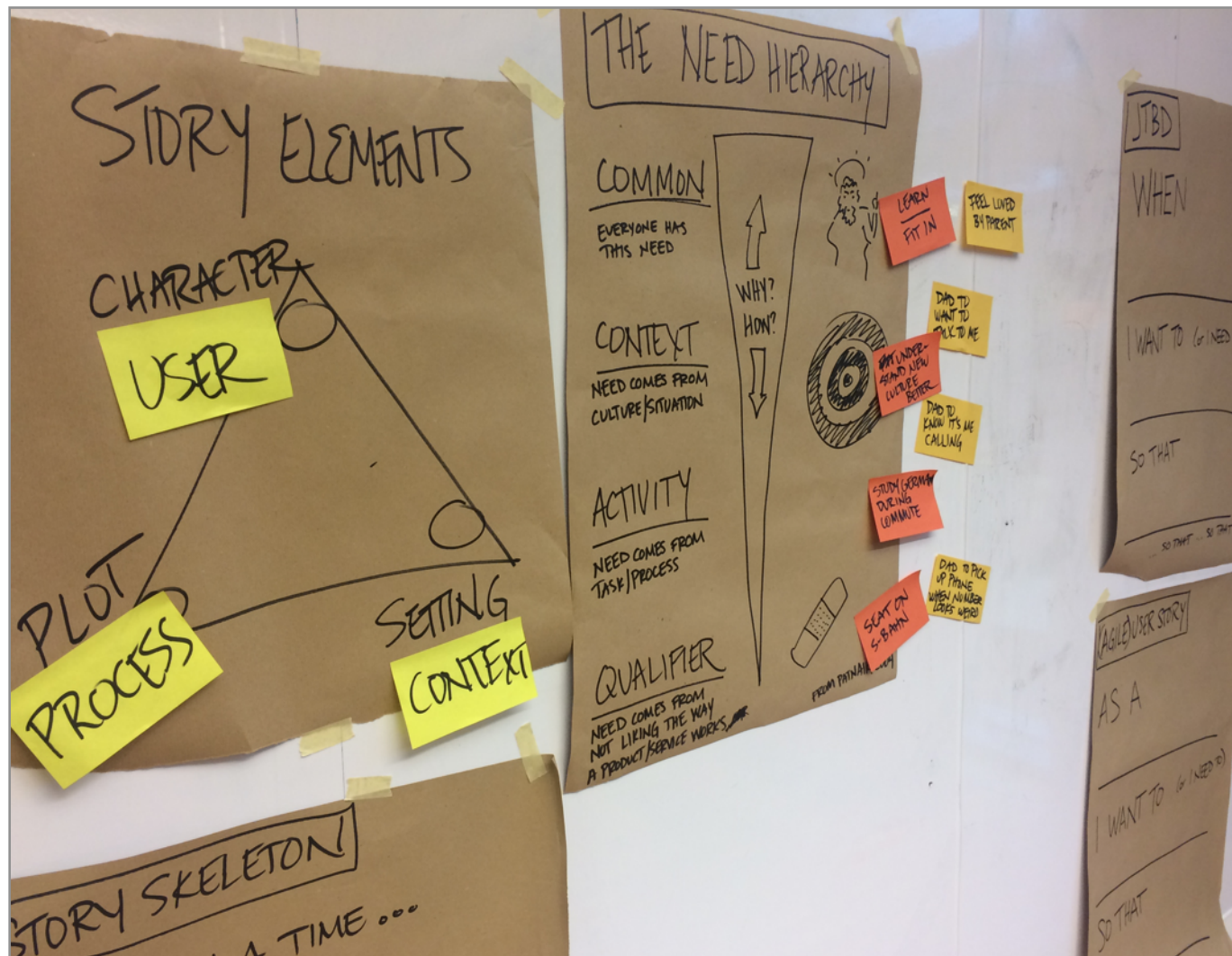
Peer sharing + feedback

- Present design problem using a narrative format (often a role-play or user story)
- Give feedback on resonance, depth, and creative/business possibilities opened up by the design problem

DESIGN SYNTHESIS // VISUAL DISPLAYS

I use the studio space to display materials that are useful and relevant. Here, I posted visualizations that put complex information into frameworks. I then grouped them into categories (e.g. timelines, process maps, relational diagrams).





I often reinforce specific frameworks, models, and concepts with low-resolution visuals. Keeping these diagrams rough invites editing, questioning, revision, and commenting.

For example, this rendering of Dev Patnaik's need hierarchy (center) is a useful touchpoint for reminding students which problem framings have the highest potential for impact.

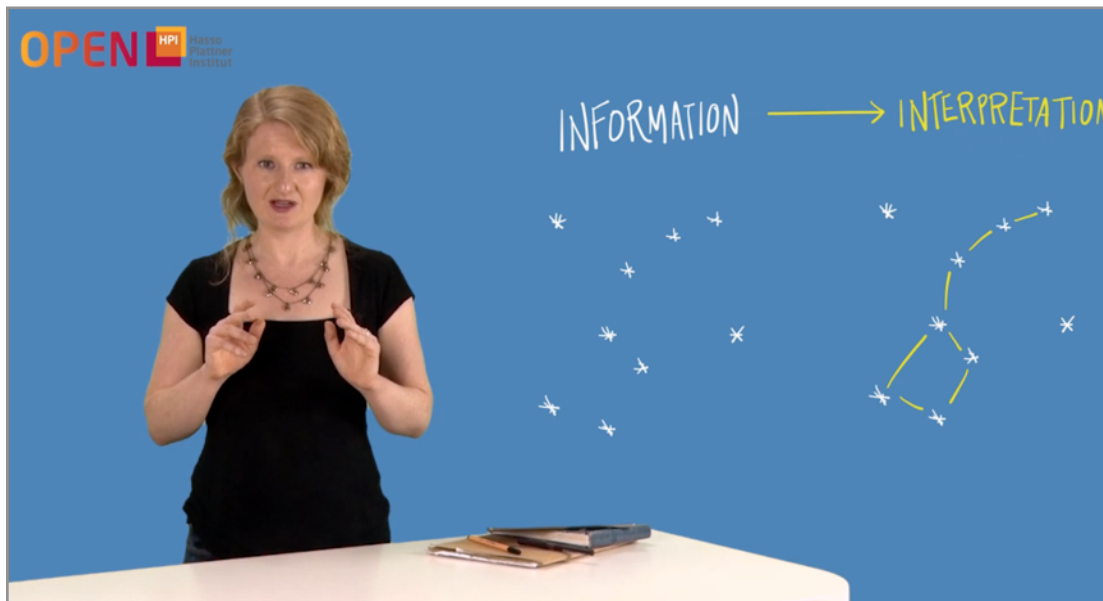
References

Patnaik, D. (2004). "System logics: organizing your offerings to solve people's big needs." *Design Management Review*, Summer 2004, 50-57.



I contributed two “expert videos” to “Inspirations for Design,” a recent MOOC released by the Hasso Plattner Institut.

My goal was to explain complex concepts to an audience of total beginners in under 3 minutes, without using buzzwords or technical vocabulary. I find that the videos are also useful as quick reminders for advanced students – and an excellent exercise for me!



- Extreme Users
- From Data to Meaning

SKETCHING

Purpose

- Help students understand and experience the practical applications of communicating through drawing, using a selection of activities tailored to the audience and time frame.

Audience

- People who struggle with how to use visuals as a part of their communication processes – whether they are already confident sketchers and visual thinkers, or whether they struggle with stick figures.

Challenges

- Many people are most comfortable with the idea of producing realistic, aesthetically-oriented drawings, rather than functional drawings.
- Most academic instruction, outside of design and the arts, de-emphasizes all forms of visual communication and literacy, so people are primed to think of visuals as less serious and less important.

Selected readings

- Rohde, M. (2013). *The sketchnote handbook*. Peachpit Press.
- Roam, D. (2008). *The back of the napkin*. New York: Penguin.
- McCloud, S. (1993). *Understanding comics: the invisible art*. Northampton: Kitchen Sink Press.



SKETCHING // INSTRUCTIONAL BUILDING BLOCKS

Getting comfortable with sketching (aka “pen yoga”)

- Follow along with structured, guided exercises in lettering, lines, shapes, solids, objects, faces, and bodies.
- Students provide suggestions and requests around what objects and concepts to draw; this keeps the content relevant to the audience..



SKETCHING // INSTRUCTIONAL BUILDING BLOCKS



Sketchnoting

- Discuss information structures of talks, and how we can use visuals to enhance these structures.
- Watch a video of a talk, and visually capture the talk.
- Compare our sketchnotes and discuss the process.

Visual problem solving

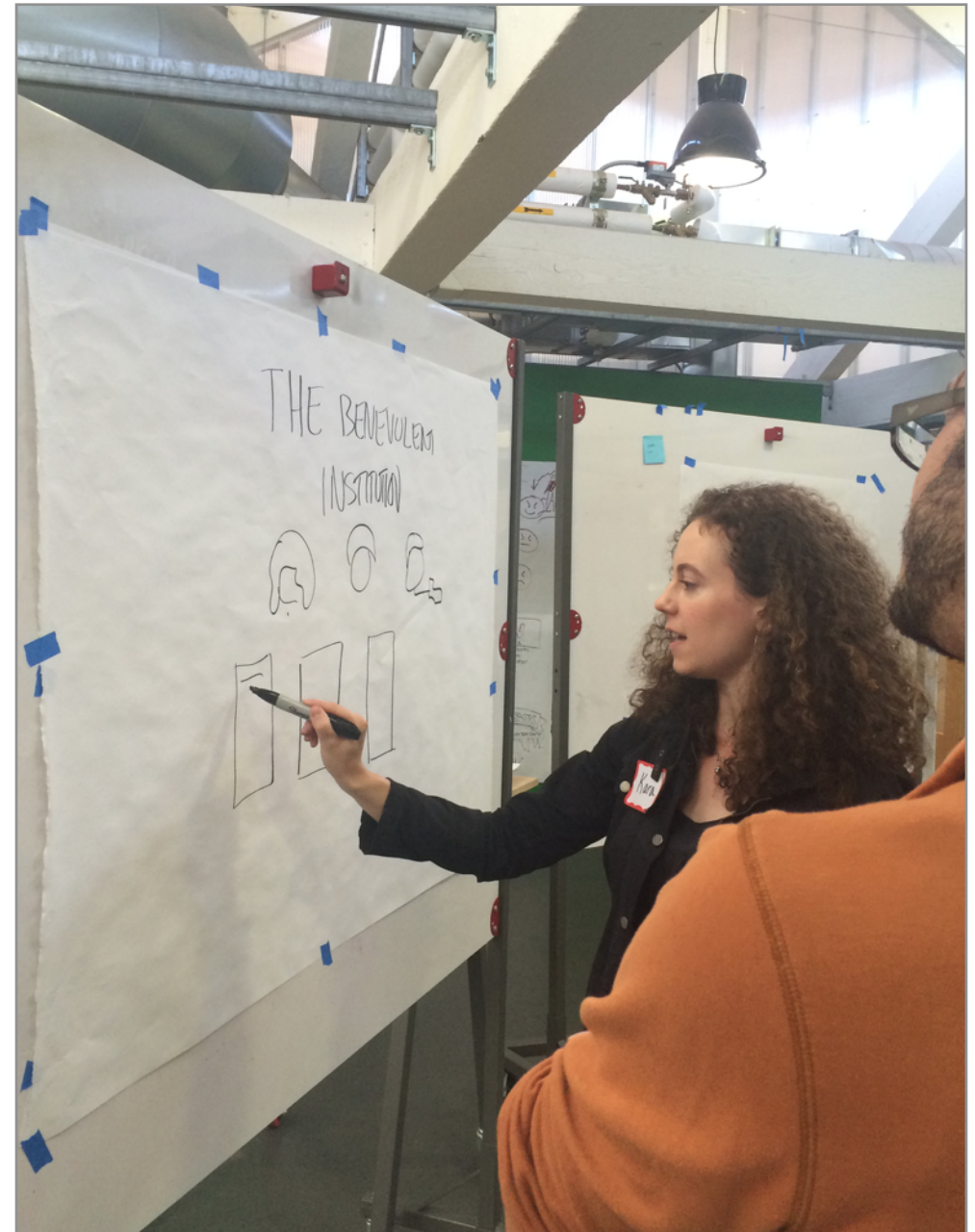
- In groups of 2-4, create a design solution to a problem using only drawing – no talking.
- Present the solution, and discuss the interplay between your visual languages.

Graphic capturing or facilitation

- Visually capture a partner's explanation of a concept or process OR explain a concept or process while illustrating it simultaneously.
- Discuss how the visuals change or enhance understanding for both the explainer and the listener.

Three-panel comic

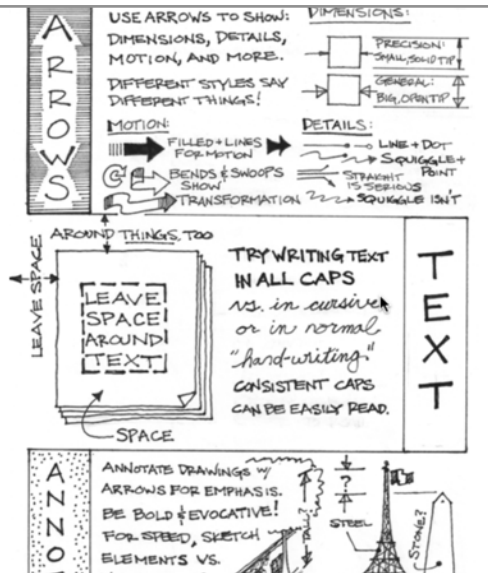
- One student draws a scene, then passes the paper to a second. The second student draws an event, then passes the paper to a third student, who resolves the drama and gives the comic a title.
- Discuss how (mis)interpretations lead to a different story than a verbal approach might have created.





Scott Witthoft
Environments Designer
SF, CA

Small ← ● → Large
Solo ← ● → Collaborative
For You ← ● → For Others



Reflection on personal visual practice

- Show a wide variety of different visuals in use.
- Introduce a categorizing framework for these visuals.
- Students share with a partner and create a plan for practicing and improving their visual skills in their chosen area.

How big are you working?
Small ← → Large

Who's doing it?
Solo ← → Collaborative

Who's your audience?
For You ← → For Others
(i.e. the person or group of people creating the sketch) (i.e. people not in the room, not involved in creating)

“I want to take better notes”

“I want to lead better brainstorm”

“I want to explain things better as a TA”

“I want a new way to articulate ideas”

“I want to be more persuasive in groups”

“I want to be less shy about drawing in front of others”





I've posted several slide decks online, slightly modified from various workshops.

- [Drawing for Creativity](#) (Bauhaus Summer School, 2017)
- [Whiteboard Warrior](#) (Stanford d.school, 2015)

Some slides were developed with Kate Rutter.


why visual notetaking?

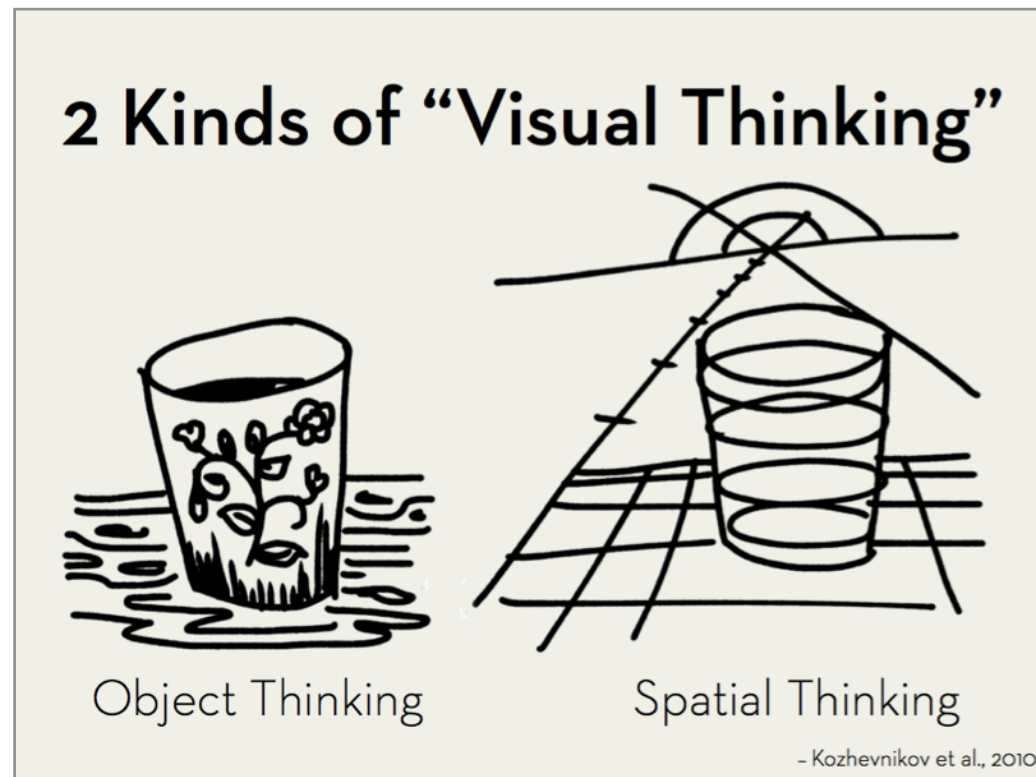
- externalize and clarify ideas
- communicate with others
- get in a different groove
- be super cool



our goals for you

- be confident with visual notes
- know how to develop your skills





ARTIFACTS FOR LEARNING

*When I teach, I create much more than curricula and program designs.
Here is a selection of resources and exercises that support design
learners and enable a strong creative community.*

ARTIFACTS FOR LEARNING // INTERVIEW CHEAT SHEETS

STARTING THE INTERVIEW

- Introduce yourself and give a brief description of your project.
- Let the interviewee know how long the interview will approximately take.
- Tell the interviewee that there are no right or wrong answers, and that you are interested in their real opinion and experiences.
- It's nice to thank the interviewee for agreeing to talk to you.



QUESTION DO's & DON'TS

- Avoid yes or no questions.
NO: Do you like air travel?
YES: How do you feel about air travel?
- Avoid leading questions.
NO: Do you think airports are boring?
YES: What do you like or dislike about airports?
YES: Tell me about an airport you have been to.
- Don't use "usually" in your questions.
NO: What do you usually do at the airport?
YES: Tell me about the last time you were at an airport.
YES: Tell me about your worst/best/craziest experience at an airport.
- Remember that you should be talking only 20% of the time. Interviewing is really about listening, not talking.



QUESTION TYPES

Get information:

- Tell me about the last time you ...
- How often do you...?
- Can you walk me through the process of ...?
- What's your favorite/least favorite part of ...?
- How has ... changed over time for you?

BEYOND TALKING

- Silence is incredibly important. If you leave space between your questions, your interviewee can reflect on what they've just said and may reveal something deeper.
- Use body language that shows you're listening. Don't fidget, cross your arms, or turn your body away from your interviewee.



ENDING THE INTERVIEW

- Thank the interviewee. If possible, be specific about how they were helpful to you ("You really helped me understand that airports can be relaxing as well").
- Ask "Before we finish, is there anything we didn't talk about that you'd like to tell me?". The most interesting stuff often comes at the very end of the interview, when the interviewee has let his or her guard down.
- Ask if you can take a photo, for your internal use only. The interviewee is more likely to say yes after the interview than before.
- Record personal details, if you didn't at the beginning (name, age, city, occupation, etc.).

THANK You!



DEBRIEFING THE INTERVIEW

- Always take time to debrief an interview immediately afterwards. You think you'll remember it perfectly, but trust us, you won't!
- Go over your notes, fill in holes, and circle or highlight key quotes.
- Note your 3-5 top learning.
- Note any new questions you have.



These "cheat sheets" are for beginners in qualitative interviewing. They emphasize key best practices in an easy-to-understand format.

Developed with Mana Taheri.



Card Sorting

What: Card sorting is a technique for discovering and understanding relationships and patterns. It can be used to guide conversations and draw out affinities and/or preferences.

How: Collect visuals and/or words related to your field of interest. Print them out on cards. Ask your participants to arrange and sort the cards into groups. You can also have them create hierarchies or describe relationships between the cards. Card sorting can be done either open, where your participant defines clusters, or closed, where you as the researcher define categories or sequences that you direct the participant to use. Additionally, you can provide blank cards for the users to complete and/or supplement your card deck or the headings.

Why: Use this technique to trigger conversation, to uncover relationships, patterns and preferences. It helps you figure out your users' mental models.

These research method cards (set of 16) are for people who have some exposure to qualitative research methods, but may not be aware of the range of methods in design research: different types of interviews, use of physical artifacts, and longitudinal techniques. *Developed with Carmen Luippold.*



Expert Interview

"Can you explain to me how ... works?"

"What do you wish more people knew about ... ?"

"Do you have suggestions for how I can learn more about ... ?"

What: An interview with people who have unique knowledge. This can mean academics, researchers, experienced practitioners, or anybody else who knows a lot about the topic.

How: Ask your expert to explain to you how certain things work. Be interested in the thing they're interested in, and allow them to educate you. Learn enough in advance so that they're not explaining things to you that you could Google by yourself.

Why: You've researched the basics, but you need to talk to experts on certain topics to go deeper.

Protopbot generates random product and service ideas. How & why to use it. By Molly.

Design a **sidewalk** that boosts your self-confidence.

RANDOMIZE

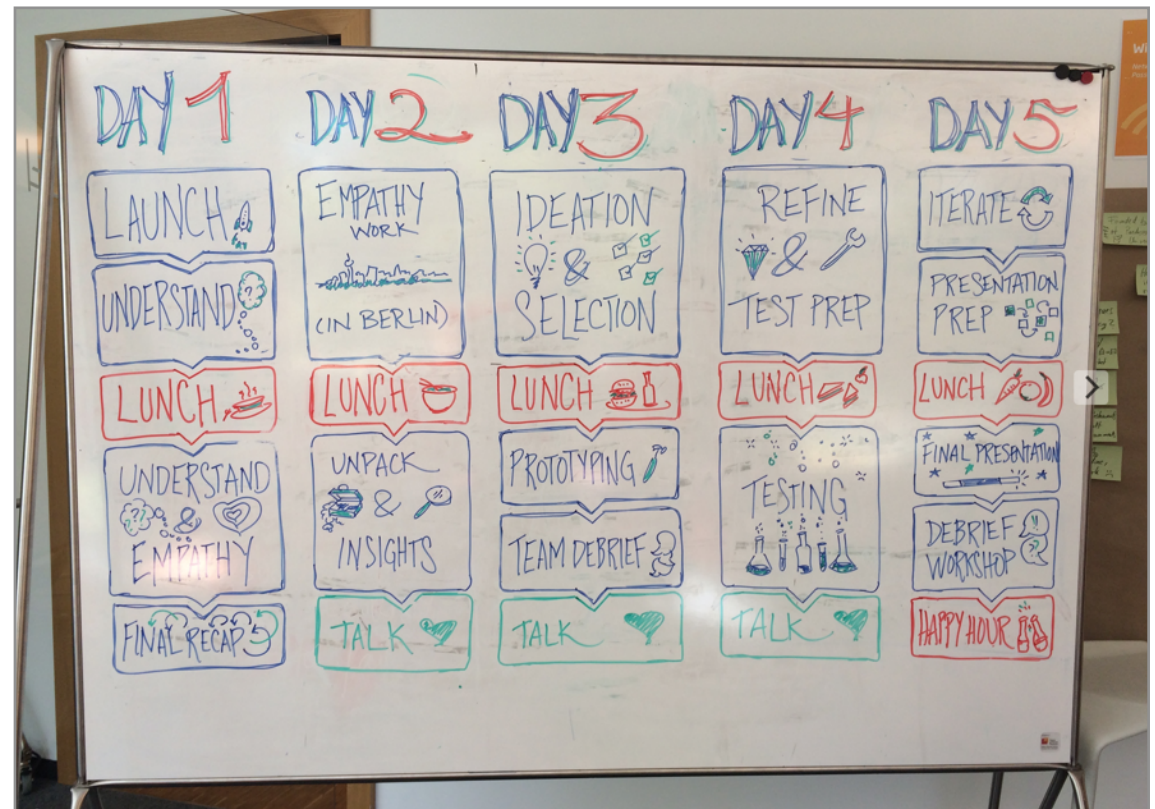
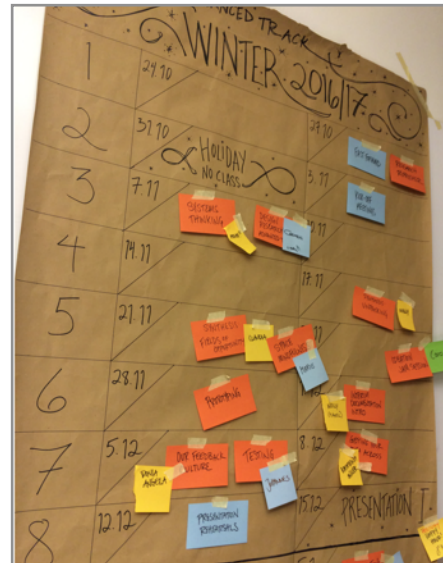
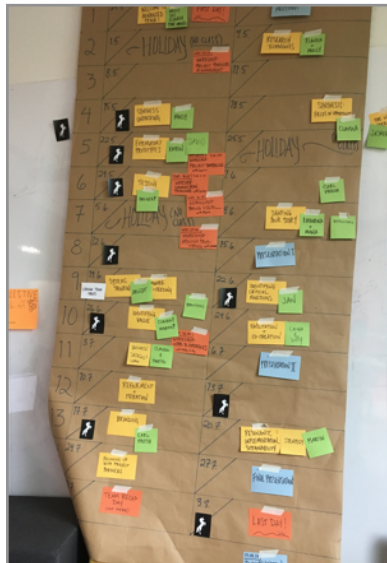
This simple online design challenge generator is a versatile tool for teams or individuals. It's inspired by the free-association "games" invented by Magritte, Breton, and their surrealist contemporaries. Protopbot leverages the power of random juxtapositions to give designers permission to create something useless, strange, and even disturbing. Because there are over 22,000 possible product combinations, it rewards frequent reuse.

- [Protopbot](#)
- [The story behind Protopbot](#)

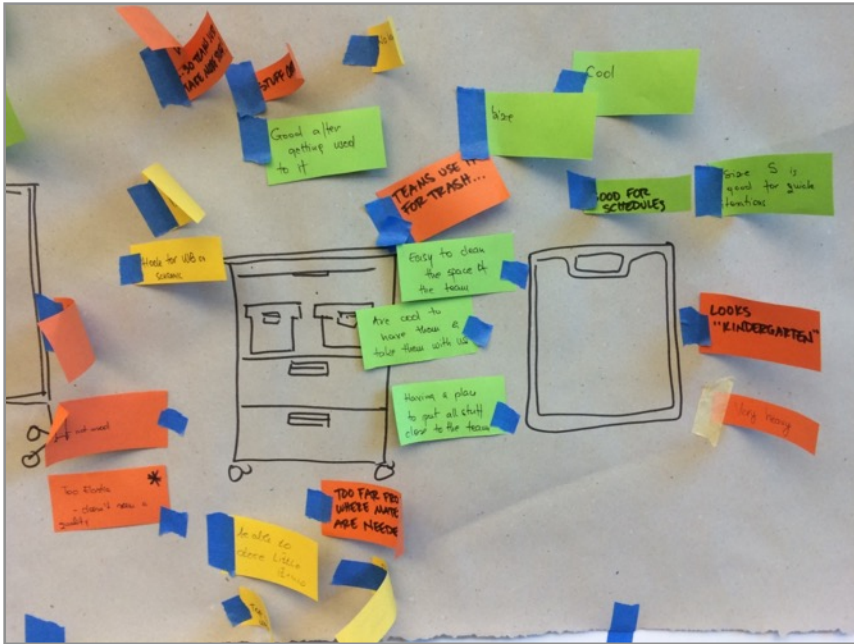
ARTIFACTS FOR LEARNING // CALENDARS



During classes and workshops, it is important for learners to understand the overall structure and timescale of the experience. Whether I am teaching for a day or for a semester, I always make a large visual representation of the class or workshop. A rough, low-fidelity look, hand-drawn rather than printed, works best: it lends itself to community participation and to adding, adapting, or rearranging blocks or events as necessary.



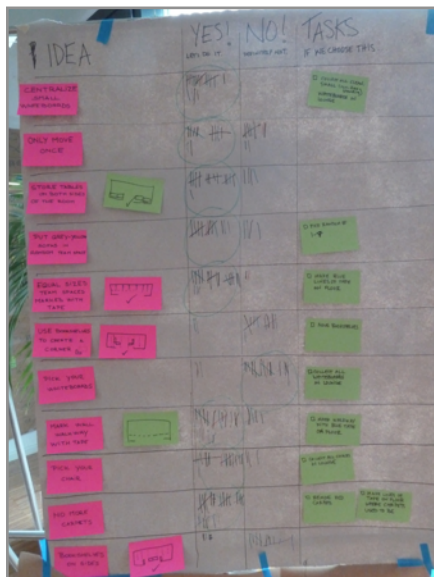
ARTIFACTS FOR LEARNING // FACILITATING A STUDIO REDESIGN



In Summer 2016, the HPI D-School partnered with Steelcase Education to introduce new studio furniture.

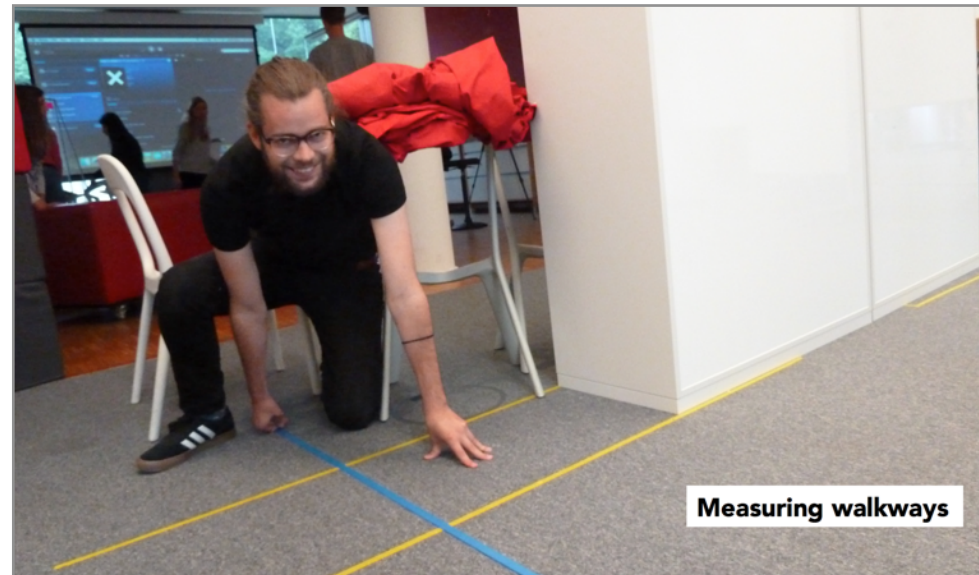
I led much of the redesign process, working with Steelcase's interior designers. However, more complicated than the redesign was the process of gathering and incorporating feedback from students, colleagues, and faculty.

Throughout the semester, I led structured feedback exercises, as well as thoroughly documenting and reporting on students' use of the new furniture.



Most popular proposals

- Only move once during semester
- Get rid of red carpets
- Make all team spaces equal size (3,3m)
- Mark walkways along wall
- Let people choose their own chairs
- Let teams choose their own tables
- Store all small whiteboards in central location
- Give each team a shelf on large bookshelves to store belongings



Measuring walkways

EVALUATIONS

STUDENT EVALUATIONS

Below is a selection of comments from students' evaluations of Advanced Track, Summer Semester 2017, at the HPI D-School:

- “Without Molly this experience would absolutely not have been possible. Besides her warm and caring attitude, she has unparalleled expertise in various subjects (education, design theory, UX design, communication, etc.) that she gladly shared with students. She often stayed late to help us or give us inspiration. ... Molly also has a deep consciousness and understanding of cultural appropriateness, which she actively incorporated into her class.” (translated from German)
- “She made this place into a place of learning. ... She gave us the important structures to work together effectively and happily.” (translated from German)
- “Molly is the most inspiring person at D-School. She is always open for new ideas and feedback.”

| ▼ Molly Wilson | | | |
|--|----|-------------|-----|
| General questions | | | |
| ... showed respect for the students. | 19 | <div></div> | 1.1 |
| ... imparted knowledge. | 19 | <div></div> | 1.1 |
| ... addressed questions and proposals. | 19 | <div></div> | 1.1 |
| ... seemed to be well prepared. | 19 | <div></div> | 1.1 |
| ... was available even outside the course. | 19 | <div></div> | 1.1 |
| Lecturer | | | |
| ... gave the course in an interesting way. | 19 | <div></div> | 1.0 |
| ... had a comfortable pace. | 19 | <div></div> | 1.0 |

*“Don’t think about what **you** are going to do -
think about what **they** are going to do.”*

The best teaching, and design, advice I’ve ever received.
Thanks to Bonnie McCarthy, my first teaching mentor.

