

Workshop on Design Thinking and Collaborative Problem Solving

Professor Widom's Instructional Odyssey

www.professorwidom.org





Warm-Up

Sticky-notes on your body!

Forehead - *What's on your mind?*

Heart - *How are you feeling emotionally?*

Bicep - *How is your body feeling?*

Partner Activities

1. Introduce yourselves - *30 seconds*
2. Make a quick drawing of your partner's face
- *2 minutes*
3. Mini design thinking activity - *30 minutes*



Context

“Design thinking” is a methodology for problem solving

Human-centered

Collaborative

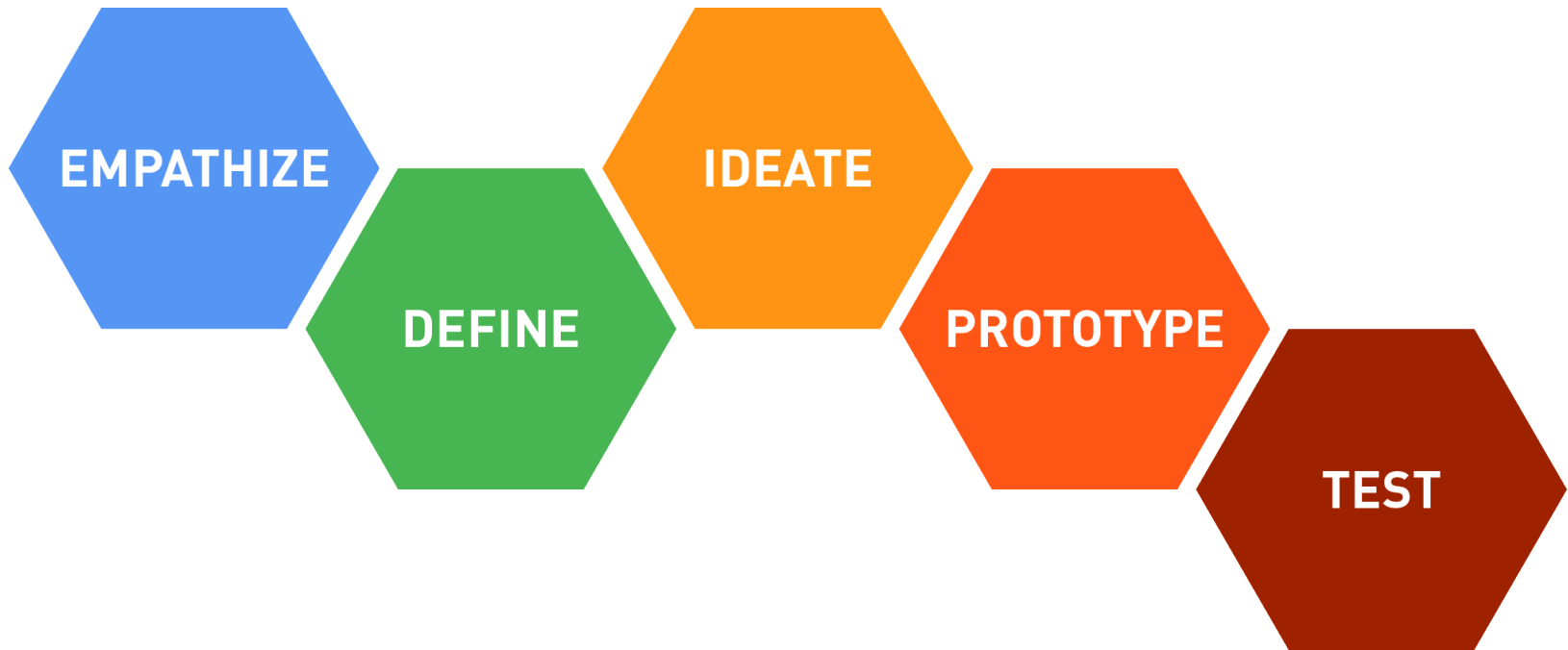
Optimistic

Experimental

It's also a mindset:

New and better things are possible, and your creativity can make them happen!

Design Thinking Methodology



Some Guiding Principles

1. Relax and dive in
2. Prepare for a fast pace
3. Try things out even if they're not what you are accustomed to
4. Defer judgment

Some “Ground Rules”

1. Put phones away if at all possible - we will have breaks
2. All participants must commit to staying the full day

This is an immersive team-based workshop that doesn't work with distracted or absent participants

3. Bell means silence, please!

Outcomes

What will you have learned by the end of the day?

The “mindsets and methods” of design thinking...

- Techniques for bringing out, understanding, and solidifying user’s *real* needs
- Techniques for team-based brainstorming of innovative solutions to meet those needs
- The value of early prototyping and feedback
- How you might apply design thinking to your own work and life

Team Launch

✧ Team name: more sticky-notes practice!

1. Each team member posts a minimum of three possible names, one per sticky-note
2. Select a name, remove other sticky-notes

✧ Team cheer

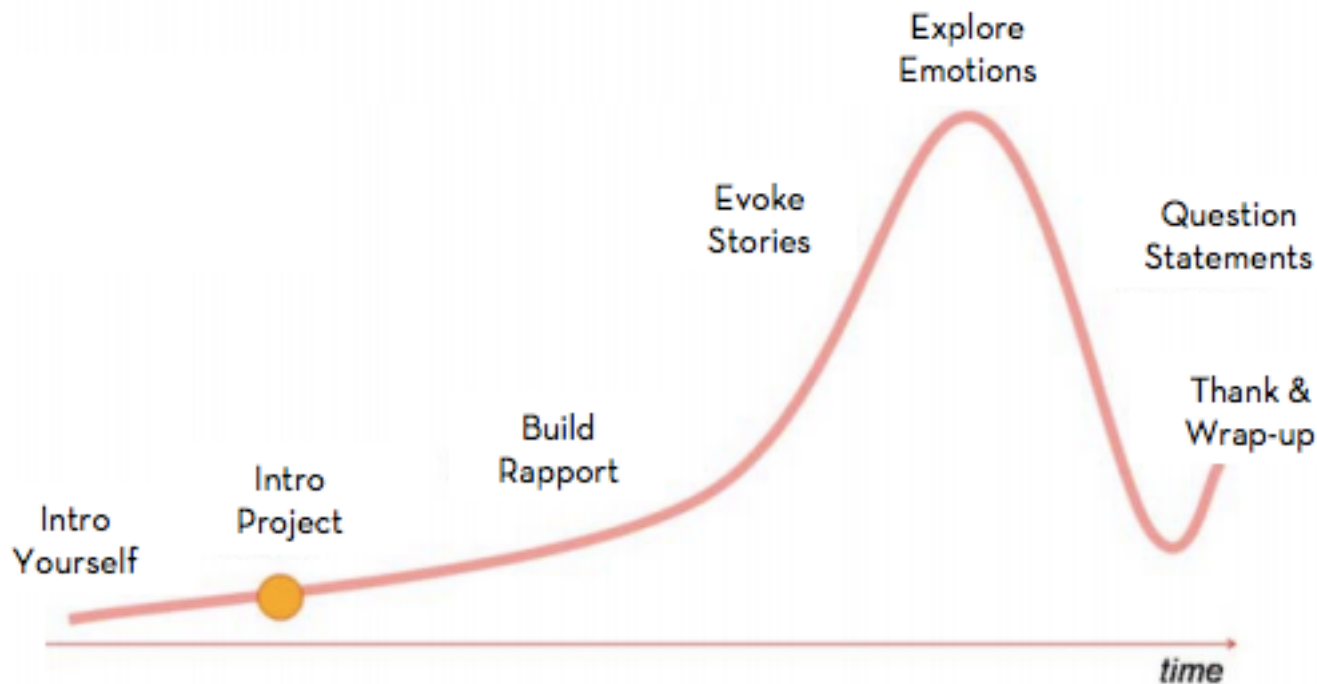
Today's Challenge

How might we improve the experience of giving and taking exams?



Empathize

Interview users to gain empathy and insight into the design challenge *from their point of view*



Interviewing Do's and Don'ts

- **Do** ask neutral, open-ended, non-YES/NO questions

- **Don't** ask leading questions or suggest answers

- **Don't** ask for solutions

Take extensive notes – you will need them later

- **Do** let them do most of the talking

- **Don't** say “usually” – single examples are good, seek stories

- **Do** ask follow-up questions – ask for more, ask why, ask if things have changed, ask how the user feels about the issue

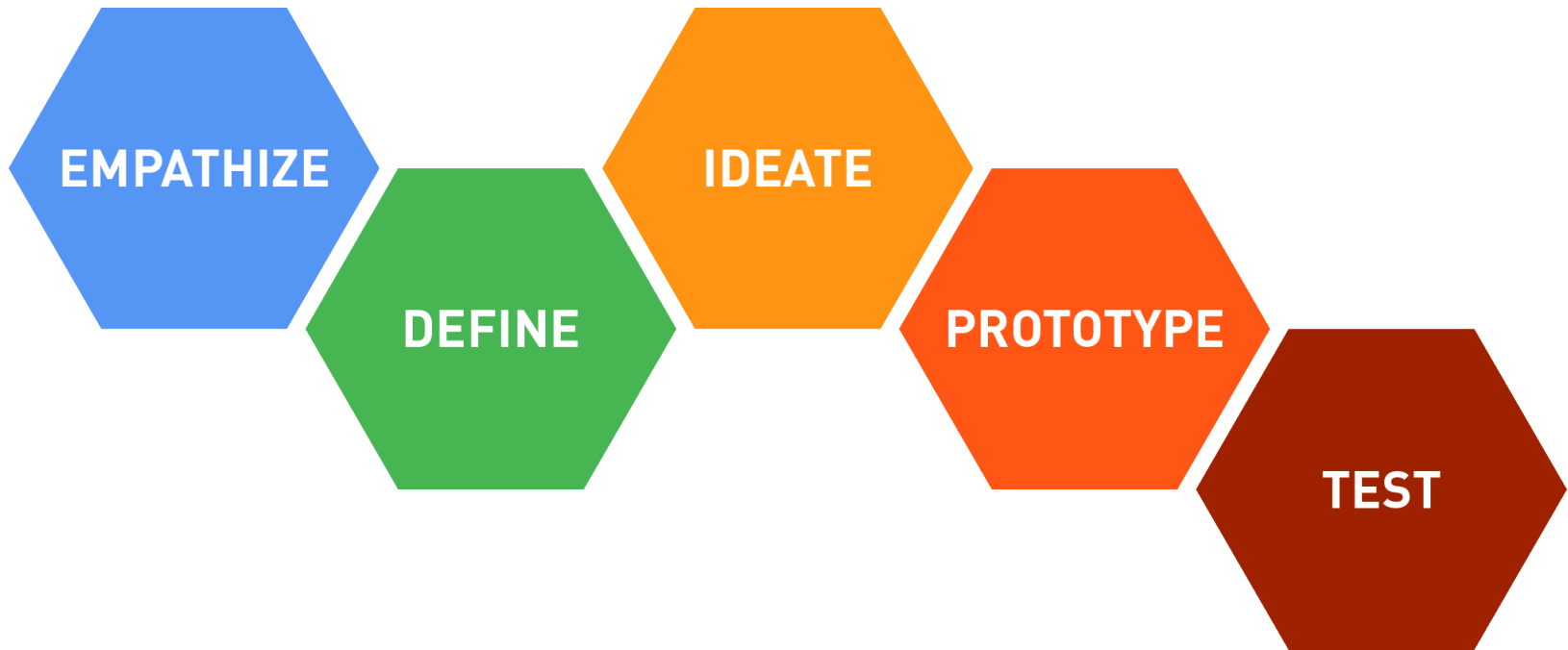
- **Do** try to draw out feelings and emotions

Define the Needs

Distill and synthesize the information from the interviews to come up with specific problems or needs

1. Individually “download” what you learned from the interviews: memorable facts, quotes, observations, one per sticky-note
2. Share with team; organize into themes and/or insights; label each group
3. Some themes will identify clear problem areas or needs; pick a favorite and turn it into a “How might we...” question. **But no solutions yet!**

Design Thinking Methodology



Ideation Warm-Up

“Yes, And...” Exercise

Brainstorm ideas for what Prof. Widom should do if she has spare time in Nur-Sultan (no sticky-notes, just verbal)

Phase 1: “Yes, but ...”

Phase 2: “Yes, and ...”

Ideate

Generate as many solutions as possible
to your How-might-we question

1. Each team member privately writes 5-10 ideas,
one per sticky-note

Go for quantity!

Don't worry about quality:
sometimes "bad" or crazy ideas
are the path to the really good ones

2. Additional 3-4 ideas from each team member,
subject to constraints
3. Take turns: One team member posts idea,
others add one of theirs or a new one; next team
member posts idea and others add to it, etc.

Idea Selection

Each team member “votes” for their favorite ideas:

Green dots - *Practical ideas most likely to succeed*

Pink dots - *Ideas that would most delight the user*

Orange dots - *Ideas that would be the biggest breakthrough, ignoring feasibility*

- Focus on ideas with dots
- Create clusters of related ideas when suitable
- **Pick one idea (or idea cluster) to prototype**

Prototype

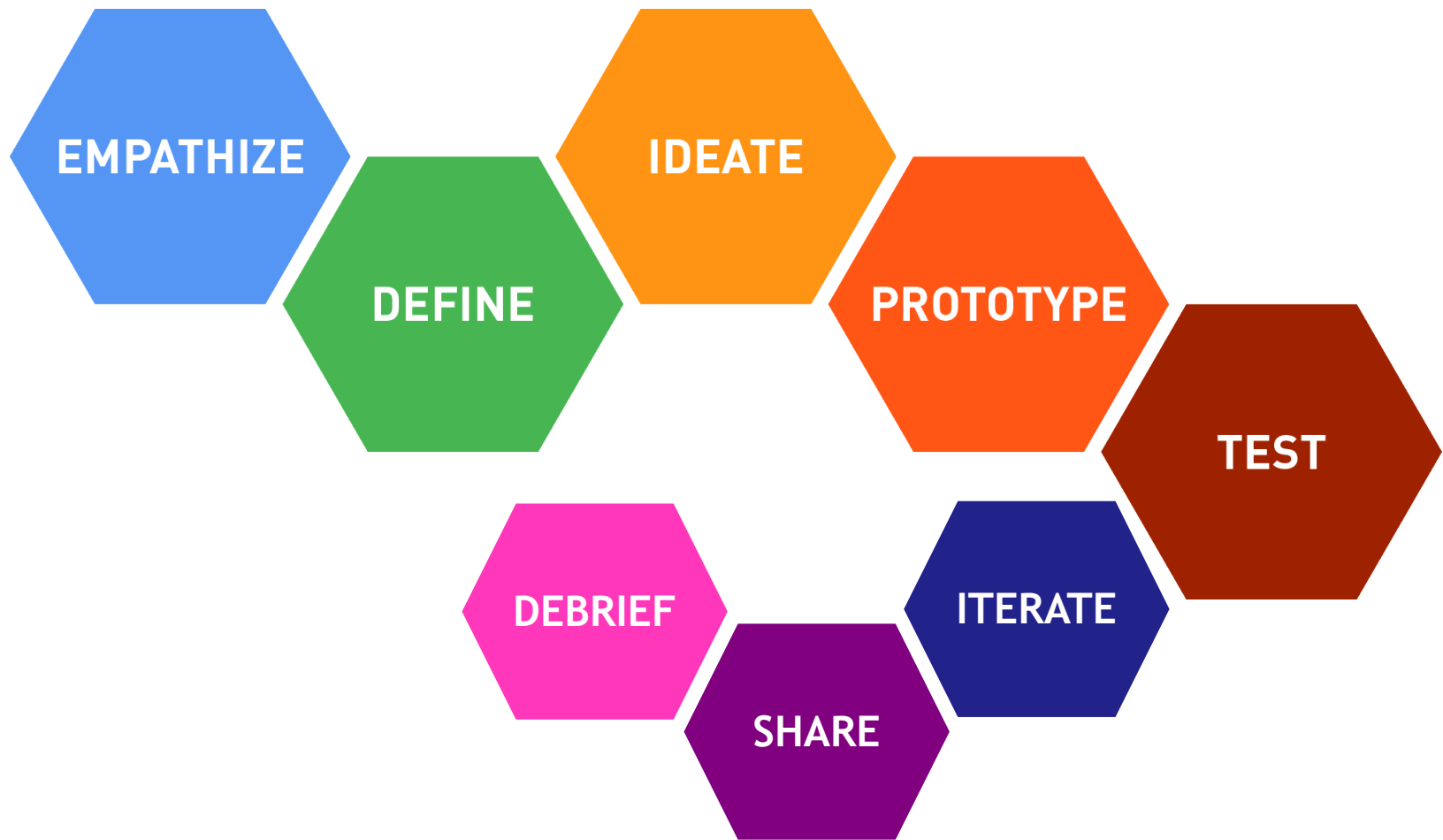
Time to get really creative!

Prototype may include:

- Physical models
- Storyboards
 - Drawings of solutions, users interacting with them
- Play-acting
 - Scene
 - Props
 - Participant role-playing

Design prototype so sample user can experience it

Design Thinking Methodology



Test

- Help the user come into the scene
 - Set the stage
- Create a present-tense experience
- Things to look out for:
 - When is the user confused?
 - When is the user delighted?
- Talk with user afterward
 - What felt right/wrong?
 - Anything missing?

Don't just "tell" your solution – try to have the user experience it

Don't "sell" your solution – you want honest feedback

Take notes – you will need them for the next step

Iterate

Things the user liked



Things the user suggests changing



Things the user didn't understand



New ideas that emerged from the test



Agree on at least two improvements to your idea based on user feedback



Share

Five-minute presentations

1. Remind group of your How-might-we question
2. Presentation of idea
3. How idea could be improved

Debrief

- *How did you like working at the fast pace?*
- *How did it feel to work in a team and share half-baked ideas?*
- *What was your favorite part of the process?*
- *What was the most challenging part of the process?*



Last Task

Write down one thing you learned today that you can apply to your work, studies, or life