



**DESIGN THINKING FOR LEADING AND LEARNING
FACILITATOR'S GUIDE**

*based on [P2PU's Learning Circles Facilitator Handbook](#)

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Welcome to the Facilitator's Guide

Collaboration is a key component of the design process, both with users and with other designers. Designers at MIT value the opinions and ideas of their colleagues throughout the entire design process, whether they're sharing research resources in the Discover stage or bouncing ideas off each other in the Imagine stage. We therefore encourage you to take this class with a **learning circle** so that you can benefit of working with a team of designers.

A learning circle is a peer-facilitated, face-to-face study group for learners who are all registered in the course. Ideally, your learning circle will be composed of colleagues from your school or organization so that you can work on common problems together in a common context. **The way in which your learning circle engages with the course is entirely up to you.** You and your colleagues may work on the course online independently, and then find time to come together to discuss what you are learning. Or maybe your group does certain assignment steps together each week. **The Design Thinking for Leading and Learning Facilitator's Guide has ideas and strategies for working collaboratively and making the most of your shared time, including:**

- Strategies for keeping participants organized
- Video discussion questions - Conversation starters for discussing the videos and the presentations from Justin
- Ways to make assignments more collaborative

Keep in mind that though you will sometimes prompt discussion and guide activities, your role as facilitator is not to stand at the front of the room, lecture-style, but to be an equal member of the learning circle.

Learning Circle Logistics

Before the Course Launches

As facilitator, here are a few of your responsibilities before the course begins.

- **Gather your learners** (learning circles work best between 4 to 10 members).
 - Consider inviting people to participate during a staff meeting, e-mailing out invitations, or posting on social media
 - In [Appendix I](#) of the Facilitator's Guide, we've offered some suggestions for how to communicate to your networks.
- **Set a regular meeting space and time.**
 - Consider what resources the room needs. How will everyone see the course materials? Does the room have a projector? Or does everyone have laptops/iPads/etc.? How will the table be set up? Ideally, everyone will be in a circle.
 - Are there any other supplies you'll need? Are you requiring members to bring paper or pens? For example, during the prototyping stage, you might want to bring in building materials like scissors, construction paper, tape, etc.
- **Have an initial meeting for logistics.**
- A few days before the start of the course, **e-mail out a reminder.**

During the Course

While this guide will provide you with suggestions for how your learning circle might engage with the course materials, you should customize the experience to your group. Do not feel pressured to try to cover all of the material that is offered in each session. However, **we do encourage you to spend the bulk of your time working through or discussing your progress with assignment steps.**

A typical session might include:

Check-in: Spend the first few minutes reviewing the previous meeting and any action taken since the previous meeting.

Coursework:

- **Video Discussion Questions.** You should begin discussion of the videos by asking the group for general thoughts and impressions. What was surprising about the video? What would you like to know more about? What were two important takeaways? We will provide discussion questions as suggestions, but feel free to discuss what your group is most interested in.
- **Assignment Work/Discussion.** We will provide guidelines for how to begin thinking about the assignment steps and how you might use your meeting to engage with the assignment as a group.

Plus/delta: Spend the last five minutes sharing something positive about the meeting, and

what learners hope to improve for the next meeting.

Afterwards: Send short summary e-mail to all learners and a reminder about the next meeting

Here is a sample of what an agenda might look like given a one hour meeting:

0:00 - 0:05 Welcome and Check-ins

0:05 - 0:15 Video Discussion

0:15 - 0:55 Assignment Steps Discussion

0:55 - 1:00 Plus/Delta Closing

Design Thinking for Leading and Learning: Course Flow



In the first two weeks of the course, **all learners will engage with *Unit 1: Meet Design Thinking***. This first unit is meant to introduce you to design thinking through the perspectives of designers from MIT. Your assignment will put you in the role of a designer as you go through one cycle of the design process to create something that will improve a specific experience for a user. The various steps of the assignment are interspersed with video content intended to provide support. This Facilitator’s Guide includes suggestions for how your learning circle might engage with unit content.

After Unit 1, we will launch the rest of the course, meaning Unit 2 and Unit 3. Take a look at the [Course Capsules](#) to learn more about the content in Unit 2 and Unit 3 (Click “Course Capsules” in the side navigation bar in the course.).

Unit 2 explores how design thinking can be used with students. In this unit, you will hear from schools at various stages of introducing design thinking to students. Your assignment will take you through the design process as you create an activity to introduce a phase of the design thinking process to your students.

Unit 3 introduces the idea of applying design thinking to systemic educational challenges. You’ll hear both from designers who work in large urban school systems as well as school leaders. Your assignment will take you through the design process as you think about a systemic problem in your school or organization that you want to tackle.

Because we want to give you the freedom and support to explore these two units in a way that is most meaningful and valuable for you, you will have options regarding how you can proceed for this four week period after Unit 1.

- **Pathway 1** is a great fit for those who want an equal balance of design thinking for learning and design thinking for leading. You spend two weeks on Unit 2 and then the next two weeks on Unit 3. You put an equal amount of effort into both assignments.
- **Pathway 2** is for those who are eager to learn more about sharing design thinking with students. You focus on Unit 2, both the video content and the assignment, but you will spend some time exploring Unit 3.
- **Pathway 3** is for those who feel most excited about using design thinking for systemic change. You peruse Unit 2 and engage with parts of the assignment, but spend most of your time on the content and assignment in Unit 3.

Which pathway you take will depend on which assignment you are more interested in focusing on. **No matter which option you choose, you will still explore content from both Unit 2 and Unit 3.**

If learning circle members are focusing on different assignments and leveraging the units in different ways, that's great! Your learning circles meetings might look like a mixture of video discussion from both units, then breaking into unit-specific groups to work on assignment steps. Or you might find it useful to spend time sharing what everyone has been working on across units. Find the way that works best for your learning circle members and their interests.

Possible Overall Flow of Learning Circle Meetings

Note: You can meet more often if you would like.

Meeting	Focus
0	Pre-launch: Logistics
1	Assignment 1: Focus on the Step of Your Choice
2	Assignment 1: Focus on the Step of Your Choice
3	Exploring Units 2 & 3
4	Exploring Units 2 & 3
5	Exploring Units 2 & 3
6	Reflecting on the Course

Pre-Launch: Logistics

We recommend connecting with your group, either in person or virtually, before the launch of the course to handle logistics. This could be a full meeting or a quick check-in.

Course Introduction: Make sure everyone is on the same page about the course by giving an overview:

Length: 6 weeks

Time commitment: approximately 2 hrs/wk

Price: FREE, Add a Verified Certificate for \$49

What you'll learn about:

How do we prepare K-12 students and learning communities to be as successful as possible? If future jobs require creativity, problem-solving and communication, how do we teach these skills in meaningful ways? How do we bring together passionate school leaders to create systemic solutions to educational challenges?

Getting started: Decide how you will take the course with your learning circle. Here are a few points to iron out to get you started:

- **What are your goals for this course as a group?** Are you simply curious about design thinking? Do you want to introduce the concept to your colleagues? Do you want teachers to begin using design activities with their students? Do you have a problem in your school that you want to use design thinking to tackle? It might be a good idea to **watch the [Welcome to the Course Video](#)** as a group. Ask your group the framing questions for the course and discuss your goals for the course.
 - How do we prepare PK12 students to be as successful as possible in a future that requires creativity, problem-solving and communication skills?
 - How do we enable passionate school leaders to re-envision the role of schools in preparing kids for the future?
- **What work will be done outside of the learning circle?** Everyone in the learning circle should be registered for the course.
 - **Does your learning circle want to do certain steps of the assignment in the meeting?** If scheduling permits, this can be a nice way of connecting with your colleagues around assignment work. A member may choose to ask another member of the learning to be his/her user for Assignment 1. This could mean that meeting time is spent actually completing certain steps.
 - **Does your learning circle want to do the work independently and then debrief?** This is a great option and can be useful if members want to complete the work at different times.

- **When, where, for how long, and how frequently will you meet?** These logistics will likely change from Unit 1 to Units 2 and 3. For now, focus on deciding how your group will handle the first two weeks of the course (Unit 1).
- **How will you interact with the forums?** For *Design Thinking for Leading and Learning*, participants will use the forums to submit assignments, provide peer feedback, participate in virtual groups, and to discuss course content with educators from diverse backgrounds. Your learning circle can take advantage of the forums in these ways as well.

Logistics and goals should be permanently and readily accessible for anyone in the group. This might be in the form of a shared Google doc, a poster hung in the room, etc. Be sure to also send an email summary of what was decided after this meeting.

Unit 1: Meet Design Thinking

This unit will introduce you to the design thinking process through the perspectives of designers at MIT. Your assignment for this unit will take you through the design process as you try to improve a user's specific experience.

For Assignment 1, consider what steps you want to focus on within the learning circle sessions. If you decide to work on specific steps within the learning circle sessions, we've included some guidelines here. If group members are completing work independently, focus on discussing the debrief questions as a group.



Step 1: Select Your User

We recommend that if you meet about this step, you meet early on.

Goal: Choose your user for the Unit 1 Assignment and pick one of the following experiences to be the impetus for your design project and the subject of the interview:

- Morning or bedtime routine
- Preparing a meal (could include grocery shopping)
- Hosting a party or event
- Preparing for a trip

Review Together: Assignment Overview

Activities and Guidance: Group members should decide if they want to use each other as users or look elsewhere.

Debrief:

- How did you decide which subject to pursue?
- For this design project, what are you especially excited about? What are you worried about?



Step 2: Conduct User Interview (Discover)

Goal: Interview user about the subject you chose.

Review Together: Amos Winter: Advice for Conducting an Interview. Review the Discover section of the Design Process Tips.

Activities and Guidance:

- If group members choose to interview each other within the meeting time, try to meet in a location that can accommodate several separate conversations.

- If members choose to interview users outside the learning circle, members should begin by spending 10 minutes generating questions that might help them learn more about the user's motivations and problems related to the experience chosen. Each group member would select 4-5 open-ended interview questions that they think are great and then swap question lists (includes both the bigger list and the selected 4-5 questions) with another member. The two members would then discuss the process.

Debrief:

- What was challenging about conducting an interview?
- What would you do differently?

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Step 3: Select Specific User Problem (Focus)

Goal: Identify insights from user interview to select specific problem.

Review Together: Watch *Blade Kotelly: Advice for Finding Opportunities*. Review the Focus section of the Design Process Tips.

Activities and Guidance:

- To engage with the Focus stage inside the learning circles, group members would start by writing key takeaways and insights from the interview on sticky notes. Members would then divide the notes into categories and themes. These categories could be based on anything from when your user feels negative emotions to a chronological grouping of experiences, etc. Next, members would move on to choosing a problem to focus on and generating a problem statement.
- Members might also come in with key takeaways and insights *already* organized into categories. Members could then share work with each other and discuss general thoughts for how to make sense of the interview data.

Debrief:

- How did you decide what parts of the interview were especially important?
- Which categories/themes did you choose? Why were these particularly helpful?
- Are there areas of inquiry that you wish you had pursued with your user?

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Step 4: Generate & Evaluate Ideas (Imagine)

Goal: Generate as many ideas as possible that will help solve the identified user problem. Evaluate solution ideas and select one to move forward to the prototyping stage.

Review Together: Watch *Kevin Robinson: Advice for Brainstorming*. Review the Imagine section of the Design Process Tips.

Activities and Guidance:

- After generating some “how might we” statements to frame ideation, group members could brainstorm individually on their specific project for 20 minutes regarding their identified user problem, using one sticky note for each idea. After each group member organizes and categorizes his/her solution ideas, they could sit in pairs and discuss each other’s work, considering which ideas are especially relevant and promising. (Note: Members should not pair up with their user.)
- Group members could also ideate on their own, before the learning circle. Members would bring in the solution idea they want to move forward with and invite others to suggest tweaks that might make it even more effective. Each group member would provide enough information about the user so that the rest of the group can offer feedback specific to context and user.

Debrief:

- Did you find it easy to generate a bunch of ideas? Did you find that any of your ideas were similar?
- In the assignment prompt, we recommended that you consider solutions that might seem crazy. Were you able to do this? How did you shift gears in your mind?
- Did using sticky notes work? Do you have other brainstorming techniques that are helpful that you might like to share with the group? Have you tried techniques that didn’t work for you?



Step 5: Prototype Your Solution (Prototype)

Goal: Build a model of your solution to effectively communicate your idea to your user.

Review Together: Watch *Yasmine Kotturi: Advice for Prototyping*. Review the Prototype section of the Design Process Tips.

Activities and Guidance:

- If your group members want to prototype within the learning circle, trying starting with a warm-up sketch. Set the timer for five minutes. Group members should quickly sketch out their idea in a way that conveys the most important feature of the solution idea. This exercise is just meant to get the creative juices flowing. Each group member should present briefly.
- For prototyping within the learning circle, group members should bring in common, cheap materials such as cardboard boxes, construction paper, foil, pens, tape, or anything else that is relevant considering what group members are working on. Remind

everyone that it's not about building something pretty or perfect; instead it's about generating low-resolution prototypes that allow you to effectively and simply communicate your idea to your user. The majority of your time for this session should be spent building.

Debrief:

- Ask each member to explain why they made the decisions they did when creating their prototype(s). What did they hope to communicate?
- How does the prototype reflect user needs?
- What assumptions about the user are evident in the design of the prototype?

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Step 6: Get User Feedback & Iterate (Try)

Goal: Solicit user feedback about your prototype that will help you iterate your prototype into robust solution.

Review Together: Watch *Meredith Thompson: Advice for Playtesting*. Review the Try section of the Design Process Tips.

Activities and Guidance:

- To engage with the Try phase within the learning circle, each group member could begin by brainstorming a list of questions they have about their solution idea. These questions, which will be used in testing sessions, should reflect what they want to learn about the prototype concept. Use the Design Process Tips to optimize the questions to prompt helpful feedback. Put all the questions in one document. Do many of the questions seem similar, or designed to elicit a similar type of response, even though the subjects and target users are different? Do you see evidence of members asking one type of question in very different ways? Perhaps one version is more open ended than the other.
- Use the rest of your time to test prototypes with others. Prioritize testing with your user (if he or she is in your learning circle), but we also encourage you to test with others as well. Use the Feedback template to take notes

Debrief:

- Did you find your testing session to be valuable? Was there one feedback tip that you found to be especially crucial?
- What would you do differently next time to get even more helpful feedback from your user?
- Do you do a version of user-testing in your current job or profession? How do you make sure you get helpful and constructive feedback?

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**Step 7: Reflect & Peer Feedback (Reflect & Share)**

Goal: Reflect on using the design process with an emphasis on incorporating user feedback into another prototype iteration.

Review Together: Take a look at the questions for reflection in Step 7.

Activities and Guidance:

- Group members could share at least one key insight they gained from the Try stage that would prompt an iteration in the next version of the prototype.
- The group should reflect on ways they think they might use the design process in their daily lives, with students, at work with colleagues, etc. What are some problems they could solve using the process?
- Together, the group could review the Forums and Peer Feedback Guidelines and consider if there are any interesting posts, discussions, or submissions in the forum to discuss as a group. Members of the group should also interact with forums on their own.

Debrief:

- What did you enjoy most about the design project?
- What was most challenging?
- What surprised you?
- If you could do the design project again, what would you do differently?
- How does this process differ (positively or negatively) from your usual problem-solving process?

Units 2 and 3 Roadmap

Now that you have gained familiarity with the design thinking process in Unit 1, it's time to consider **design thinking for students (Unit 2)** and **using design thinking to approach systemic challenges (Unit 3)**. Remember that you have the freedom to **explore these two units in a way that is meaningful and valuable for you**. The assignment for Unit 2 will invite you to create an activity to introduce the design thinking process to students. For Unit 3, you'll use the design process to tackle systemic problem in your school or organization.

Your learning circle should consider the following questions when planning the next few meetings:

- How many people are working on which assignment? Can you group people working on the same assignment together so that they can support each other? Will you continue to meet as an entire learning circle, or will smaller groups meet at different times?
- How will the focus of your time as learning circle change? Will you focus more on sharing progress or soliciting feedback? Which, if any, steps of the design process will you work on during the learning circle?
- How can you best use other members of your learning circle?

Possible Structure for Units 2 & 3 Learning Circle Meetings

Note: This is just one way of doing it. We want your learning circle to work in the way that is most suitable for its members.

0:00 - 0:05	Welcome, Check-In and Review
0:05 - 0:15	Video Discussion Groups should choose 1 video from Unit 2 and 1 video from Unit 3. We have provided discussion questions for these videos in the Facilitator's Guide.
0:15 - 0:55	Assignment Work This part of the meeting will look different depending on the group and which assignments members have decided to focus on. It could be that members do a certain assignment step together.
0:55 - 1:00	Plus/Delta Closing Spend the last five minutes sharing something positive about the meeting, and what learners hope to improve for the next meeting.

Final Meeting

Reflecting on the Course: For this meeting, group members will share their assignment work for Units 2 & 3 and discuss their experience in the course as a whole.

Unit 2: Design Thinking for Students

Video Discussion Questions

Unit 2 Overview

- Your group members have been through one iteration of the design process and have heard from designers about the value of a design mindset. Ask your group how they feel about teaching design thinking to students. What questions or fears do they have? What are they excited about?

Banneker Visit

Getting Started with Design Thinking

- Sherley highlights the importance of supporting teachers through this process. How supportive do you think your administration would be to introducing design thinking?
- Virginia and Aolani both mention the importance of letting students take ownership of their own work. In your school or organization, how often do students take control of their learning? Discuss how this might change the role of a teacher.

Framing a Design Activity

- How might you bring design thinking back to colleagues at your school or organization? What might a staff meeting look like if you designed an activity to introduce colleagues to one stage of design thinking? Can you anticipate concerns your colleagues may have?

Meadowbrook Visit

Interdisciplinary Design Thinking

- What does your school value? How might those values compare or contrast with characteristics of the design thinking mindset?
- Does your school or classroom tend to assess the *process* or the *final product*? What might a classroom look like/feel like/sound like if the final product didn't matter as much as the process? What challenges might arise?
- Does your school have a common language to discuss curriculum or what excellent teaching and learning looks like? If so, compare and contrast that language to the design thinking mindset. Remember that design thinking is just one tool. Consider what your current curriculum language that design thinking can't.

Starting Small

- Does your school have a makerspace? How integrated is your makerspace into other areas of the school? Who oversees your makerspace and what role does that person have in introducing design thinking into the rest of the school?
- If your school doesn't have a makerspace, what might a makerspace look like at your school? What role would it have?
- Sue talks about changing the vocabulary of the design process to fit her students. For example, calling the testing phase "try" to avoid negative associations with the word "test". How might you adapt the design process to your students' needs?

Spotlight on a Design Thinking Project

- What existing units in your curriculum lend themselves to a design thinking project?
- How can you utilize the whole school in designing a project? Think about your school's physical environment, community resources, students, teachers, etc. How can you connect a project beyond the classroom?

NuVu Visit*Supporting Creative Learning*

- What does "creative learning" mean to you? Is it a priority in your school or classroom? What ways do you allow your students to express their creativity?
- In your classroom, how are you like a teacher and how are you like a coach? Which role do you prefer? What might it look like/feel like/sound like to be more of a coach than a teacher?

Prototyping & Iteration

- During the Unit 1 assignment, did you offer critique to others in your learning circle? How did it feel to give or receive critique?
- Do you ask your students to critique each other? How do they feel about being critiqued or revising their work? How might you help them be more comfortable with critique?

In Conversation: Considering Design Work in Schools / Challenges

- **Activity:** Blake and Justin explain that some of what teachers are already doing can map onto the design process. Divide a whiteboard or large piece of paper that is visible to everyone into two columns. In one column, have everyone in the room list projects or assignments that they do with their class or that they've done before in an educational setting. Challenge yourself to then map these projects or assignments to a stage in the design thinking process.
- Blake and Justin discuss the challenges of time and assessment. Are these concerns that you share? Discuss with your learning circle your concerns and how these concerns might be addressed in your school or organization

Assignment Step Discussion

Step 1: Select Your User

Goal: Learn more about your user so the learning experience will be engaging.

Activities and Guidance:

- Members of your learning circle could consider partnering up for this design challenge. For example, if two or more members of the learning circle teach the same or similar groups of students, they could design an activity together. Together, they would decide which of the “How might I…” questions is most intriguing and feasible.
 - How might I teach (content area) to (group of students) by using (a stage of the design thinking process) in an engaging way? Note: This option is best-suited for those who work with students and have experience teaching particular curriculum. Example: How might I teach cell organelles to my 7th grade science class by using prototyping in an engaging way?
 - How might I teach (group of students) about (a stage of the design thinking process) in an engaging way? Example: How might I teach high school, after-school engineering club students about the discover stage in an engaging way?
- Next, your group members should plan the Discover phase. Consider the following questions:
 - Will the user (student) be interviewed?
 - If two learning circle members are designing together, will each interview the same student or different students?
 - How many students will be interviewed?
 - If members can’t talk with a student directly, will they talk with a parent or other person who could help illuminate the perspective?
 - Are other members of the learning circle able to fill in some of the student perspective?

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Step 2: Understand Your User (Discover)

Goal: Think about different and exciting ways you could present design thinking to your students.

Activities and Guidance:

Any interview would likely happen outside of the learning circle. However, interviewing is just one way to come to understand a user. Also consider the following:

- Remember that the student-centered design activity should be presented in a way that best engages students. Group members could discuss what a powerful learning environment for students looks like.
- Is it possible to gain access to student engagement survey data? Perhaps a member could bring in the data and everyone could discuss what students value in their learning process, according to the survey results.
- Group members could also discuss their past experiences teaching or being taught and about what works and what doesn’t work.

- The group could brainstorm resources that the school or organization (or wherever the implementation environment is) has that might be relevant for the design activity. The design activity doesn't necessarily have to happen in a classroom. What other spaces are available? What materials resources could be used? Group members should think creatively.
- Did group members discover that their user has different values regarding education and learning?
- Did anyone discover opportunities or constraints that they weren't expecting?
- How did group members determine what information from their users was particularly important?

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Step 3: Identify Key Insights (Focus)

Goal: Identify insights from users that are most helpful for creating an engaging learning activity.

Activities and Guidance:

- Members could also share key insights from their interviews or other part of the Discover process. These key insights might be helpful to other members.
- What was surprising? To practice developing understanding of their users, group members could compare and contrast their users' responses to a particular questions with their own. This activity helps group members check that they are designing an activity for their user and not for themselves.
- Revisit the Unit 1 experience. What did group members learn in Unit 1 that they think will be helpful for this design project in Unit 2 or the one in Unit 3?
- The assignment prompt asks learners to consider "what stood out." Instead, try the reverse - What doesn't stand out? Group members could look at their interview notes or other material from the Discover process and find information that isn't relevant to their design project.
- How did group members determine what information from their user was particularly important? Did they have a lens that they found to be helpful?

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Step 4: Brainstorm Learning Activities & Select (**Imagine**)

Goal: Create a shareable representation of your learning activity.

Activities and Guidance:

We know that group members might be focusing on different units. This is a great opportunity for members currently focusing on the Unit 3 assignment to think more creatively about how students might learn about design thinking and to provide some input on another group member's project.

- One member focusing on the Unit 2 assignment could briefly present their work so far, making sure to include any key takeaways from the Discover process. Then other group members could brainstorm engaging ways to share design thinking with their users.
- Next, group members could organize the ideas. This could be using themes and categories from the member who presented earlier, or not.

Next, members can evaluate the ideas, considering the following:

- Which ideas seem especially exciting? Does everyone agree?
- Which ideas seem like they most closely fit the needs of the user?



Step 5: Develop Activity Plan (**Prototype**)

Goal: Create a shareable representation of your learning activity.

The prototype for this assignment is the **Activity Plan**: 2-3 sentence overview of the activity, activity context, flow of the activity, student instructions/materials, additional materials, and “What does awesome look like?”

Activities and Guidance:

- Using an idea from the previous step, members could pair up and build a prototype together and consider the following:
 - **Why are you doing it like that? What is the purpose of this design choice?** These questions make sure that decisions are intentional, and not made just because that's the way things were done before.
 - **What assumptions are you making?** Assumptions could be about student skill level or interest, how fast students might work, etc. It's always helpful to raise questions and challenge each other's assumptions.
 - **Are you still considering the user here?** Would that be engaging for the students or boring? Would that be confusing?
- A learning circle member could present his/her prototype with a focus on sharing the process, rather than asking for feedback on the artifact. Note: They can get feedback in the next step.
- How does this prototyping experience for Unit 2 feel different than the one in Unit 1?





Step 6: Get User Feedback (Try)

Goal: Consider your design project holistically and provide peer feedback.

Activities and Guidance:

In this step, you will get feedback on your design activity and iterate.

- The learning circle is a great way to get feedback on your design activity for another iteration. Not everyone will be able to test their design activity with students. However, even if user testing is planned, more feedback never hurts! Members could test one or two design activities during the meeting. Encourage everyone to give honest feedback, both from their personal perspectives and/or, if possible, the perspective of a student. We recommend that group members come to this meeting already having generated questions for testing so that you can jump right in!
- If you find you won't have time to do the design activity, consider having group members trade activity plans to get and give feedback.
- Did the activity run as expected? Did students (or other users) interpret instructions or resources in a way different than you expected?
- Have each group member share at least one key insight they gained from the Try stage that they would iterate on in the next version of the activity.
- What advice would group members give to someone testing with students for the first time?



Step 7: Reflect & Peer Feedback (Reflect & Share)

Goal: Create a shareable representation of your learning activity.

Activities and Guidance:

- **General reflection.** Reflect with the group on using the design process for lesson planning and teaching the process with students.
 - What was surprising about creating a design thinking activity for students? What was most challenging? What would you do differently?
 - If you've created an activity/lesson plan for students previously, how did you feel about using the design process this time?
 - What advice would you give someone working on this type of design project for the first time?
 - You worked on a design project in Unit 1. Compare and contrast your reflections in Unit 1 with your thoughts now.
- **Reflecting on design thinking stages:** Take the time to think about what specific phases of the design thinking process resonate with you. According to Jared Perrine at Banneker, **Reflect & Share** is the most important phase of the process. Sue Fisher of Meadowbrook says to remember to keep sight of empathy (**Discover**) in whatever design project that you do. At NuVu Studio, design projects emphasize the iterative process of **Prototyping** and Testing (**Try**). Reflect now as a group about which design thinking stages you individually value, and which your school might value as a whole.
- **Moving forward.** Reflect on what's next for you, your students, and the design process. Are you interested in doing more? Why or why not?

Unit 3: Design Thinking for Schools

Video Discussion Questions

Unit 3 Overview

- Your group members have been through at least one iteration of the design process and have heard from designers about the value of a design mindset. Ask your group how they feel about using design thinking to address change in your school. What questions or fears do they have? What are they excited about?

Amelia Peterson: Researching Human-Centered Systems Design

- Amelia talks about the importance of bringing various stakeholders into the design process. She specifically mentions involving parents. What are parents' role in the "system" of your school? When do they find out about new programs and how? What responsibilities or leadership positions do they have? At which stage in the design process would you bring them in?

BPS Experience Lab: Redesigning Schools & Agency: Designing for Complex Systems

- Think about district-level or systemic-level problems your community is faced with. Discuss the following:
 - Who would you define as the "users"? (Users are also called stakeholders.)
 - What is the balance of considering the needs of the individual users over the needs of the system? What examples can you think of that reveal that balance?
 - How does the system collect user feedback? Do they iterate based on that feedback?

Benjamin Banneker Charter Public School: Problem-Solving with Design Thinking

- Sherley says, “If you want to implement a design thinking process in your school, you have to spend some time really building a base.” Do you have a base? Does the base begin with the teachers in your learning circle? What are ways you might build a base of advocates?
- Banneker’s culture of trust and respect was important because design thinking requires people to learn from failure. Does your school or organization have a culture that encourages students and staff to learn from failure? How might you facilitate that culture?

Meadowbrook School: Interviews with School Leaders

- Jonathan and Steve share how incorporating design thinking has impacted their community. What aspects of design thinking would you like to impact your community?

NuVu: NuVu and Beyond

- **Activity:** Saba talks about the importance of teachers adopting the designer mindset. After engaging with the design process and hearing the experience of other educators, how would you define the designer mindset? Discuss with the group, and list 5-6 characteristics of a designer that you think are most important.
- Saeed says that design thinking often appears outside of a student’s schedule, for example after school. When and where can students already engage in design thinking in your school or organization? How might you integrate design thinking into the daily schedule?

Bob Vieth: Bringing Design Thinking to Schools

- Not every school can be part of a design thinking consortium, but think about the resources you *do* have. Are there other schools in your area who are pursuing design thinking? Could you leverage their experiences? What about companies, makerspaces, universities, camps, etc. in the area?
- **Activity:** Bob talks about allowing students to redesign the classroom. Try to think outside the box for opportunities to redesign existing structures or spaces whose design you’ve taken for granted. This can be anything from the carpool pick-up line to the flow of students’ getting lunch in the cafeteria. Create a list as a group of these structures, then pick one and spend five minutes brainstorming ways to redesign. This is meant to be a short activity to help you to look at existing systems differently.

In Conversation: School Change & Improvement

- When your school or organization launches a change initiative, what is the usual process? Take a few minutes to discuss the process as a group, and have someone write the process where it will be visible to others. Now compare and contrast this process with the design thinking process. What stages of the design thinking process does your school emphasize? Are any stages left out? Which stage would you like to see more of? What about the key qualities of the designer mindset such as bias toward action, acceptance of failure, iteration, etc.?
- Think about the last change initiative that you or your organization was involved in. Discuss what that process of change might have looked like if the design process had been used. How would rapid prototyping and iteration have changed things?

Assignment Step Discussion

Step 1: Considering Change

Goal: Select an important challenge related to making change in your school or other organization.

Activities and Guidance:

If your learning circle is composed of educators from the same school or organization, consider tackling the same systemic challenge related to your school or organization OR forming small groups, each tackling a different challenge. Having multiple people focused on the same problem will allow the exploration of more resources and perspectives and hopefully result in more action and a greater impact by the time this course ends.

- Think back to a recent staff meeting, assembly, professional development session, etc. Invite each group member to list organizational problems that were identified or emerged. Categorize the problems in terms of group members' interests and urgency.
- Ask group members to write down the first thing that comes to mind in response to the question "What would you change about your school/organization?" Were there any commonalities among responses? That could be a good area for exploration.
- Group members should put themselves in the perspective of students. What would students say if asked to identify an important challenge related to making change in the educational environment?
- Determine which challenge(s) the group(s) will work on, and write the challenges in concise, clear one-sentence statements. Consider the following questions to make decision-making easier:
 - **Is the challenge important to other stakeholders besides those in the room?** For example, is this an issue that students and parents share?
 - **Is your challenge manageable in scope?** Ideally, your challenge is large enough to be worth investing substantial thought and energy, but not so large as to feel impossible. Aim for a challenge that could keep a community of educators busy for 1-3 years in order to make substantial improvement.



Step 2: Research (Discover)

Goal: Think about what stakeholders your challenge affects and how it affects them. Look into ways other schools and organizations have responded to the identified challenge.

Activities and Guidance:

- Consider ways to leverage the learning circle. Does one member have contacts in a certain area of the school organization that could be useful? For instance, maybe one member works closely with parents.
- Ask members to make a list of tools the school or organization uses to learn about the perspective of various stakeholders. For each tool, think about how it might be helpful in gaining a better understanding of the challenge.
- After the Discover process has been completed, the group could discuss the following questions:
 - What did you expect the discover process would reveal? Did it work out the way you expected?
 - Was there a resource that you especially wished you had?



Step 3: Thinking About Needs (Focus)

Goal: Craft a problem statement that reflects user(s) needs.

Activities and Guidance:

- To leverage the different resources available to group members, the group could share key insights from the Discover phase.
- This challenge is probably something that you and your colleagues have been thinking about for a while now. Have the Discover and Focus stages encouraged you to think about the problem in a new way? Are you thinking about your school or stakeholders in a new way?
- Though your learning circle may be working on multiple challenges, it's possible that your users overlap and that your users' *needs* overlap. As a group, members could write their users' needs on sticky notes and group the needs based on themes.
- To practice developing understanding of their users, group members could compare and contrast their users' responses to a particular questions with their own. This activity helps group members check that they are designing an Action Plan that is suitable for the users and context and not just for themselves.





Step 4: Brainstorm Solutions (Imagine)

Goal: Generate solutions for the problem you identified and choose one that is especially promising.

Activities and Guidance:

We know that group members might be focusing on different units. This is a great opportunity for members currently focusing on the Unit 2 assignment to think more creatively about how to use design thinking to tackle systemic challenges and to provide some input on another group member's project.

- Choose one school challenge to focus on. Group members could briefly present their work so far, including key takeaways from the Discover stage and needs from the Focus stage. Once the group understands the background, begin the brainstorm for the solution idea.



Step 5: Develop Action Plan (Prototype)

Goal: Create a prototype of your solution idea in the form of an Action Plan that can be shared with others.

The prototype for this assignment is the **Action Plan**: A description of the challenge and user need, the solution idea, a few first action steps and their impact, help that may be needed, and indicators of success.

Activities and Guidance:

- If prototyping is done within the learning circle, group members could focus on building parts of the Action Plan for a specific project together. Group members could create a number of visual prototypes that communicate the strengths of their solution idea. This could be a sketch, storyboard, wireframe, or any other prototype best-suited to communicate the idea. Other group members could offer advice or probing questions that encourage creative thought. Possible questions might include: **Why are you doing it like that? What is the purpose of this design choice? Are you still considering the user here?**
- Leverage the various kinds of expertise in the group, especially when building the "Action Steps & Impact" and "Help Needed" sections.
- If prototyping is done outside of the learning circle, group members could discuss their prototyping experience. Consider the following questions:
 - With which parts of the Action Plan did you struggle the most? Did you seek help to move forward?
 - Was it difficult to make your prototype reflect other stakeholders' point of view?
- Group members could also discuss the upcoming Try experience. Sharing ideas with others and taking first steps can bring about both excitement and nervousness. Consider the following questions:

- What do you expect to go well when you take your first step toward change? What do you expect to go poorly? Can anyone in your group help fix that problem before the Try phase?
- What are you excited to present? What in your Action Plan are you proud of?

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Step 6: Test Action Plan & Iterate (Try)

Goal: Get feedback from a trusted colleague (or if possible, a stakeholder). Apply that feedback to make your Action Plan better. Take a step from your Action Plan.

Activities and Guidance:

- This Action Plan is meant to be shared with colleagues with intent of sparking their interest. Group members should use their time in the learning circle to get feedback! Members could share one or two Action Plans during the meeting. Encourage everyone to give honest feedback, both from their personal perspectives and/or, if possible, the perspective of a student. We recommend that group members come to this meeting already having generated questions for testing so that everyone can just get started!
- It is possible that the learning circle will meet after members have already received feedback and taken initial steps. In this case, group members can reflect on what happened. Have each group member share at least one key insight they gained from the Try stage that they would iterate on in the next version of the activity.

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Step 7: Reflect & Peer Feedback (Reflect & Share)

Goal: Reflect on your experience with this design cycle and provide peer feedback.

Activities and Guidance:

- **General reflection.** Reflect with the group on using the design process for lesson planning and teaching the process with students.
 - How do you feel about your solution idea? Do you plan to work on it in the future?
 - If you've launched a change initiative previously, how did you feel about using the design process this time? How did you feel about framing students as the primary user?
 - What advice would you give someone working on this type of design project for the first time?
 - You worked on a design project in Unit 1. Compare and contrast your reflections in Unit 1 with your thoughts now.
- **Moving forward.** Reflect on what's next for you, your school or organization, and the design process. Are you interested in doing more? Why or why not?

Appendix I: Social Media Templates

TWITTER

Join @bjfr for a free online course for school leaders: Design Thinking for Leading and Learning. Starts 3/21!

<https://www.edx.org/course/design-thinking-leading-learning-mitx-microsoft-education-11-155x#!>

LINKEDIN

Join Executive Director of MIT's Teaching Systems Lab Dr. Justin Reich this March in a free, online course for school leaders: Design Thinking for Leading and Learning.

Over six weeks, you will explore how you might use design thinking both as a pedagogical framework to use with students as well as a set of strategies to use with colleagues to improve systems in schools.

At the end of the course, you will have directly applied design thinking to different contexts and made connections with peers who are also undertaking the important work of re-imagining the future of education for students.

Registration is [now open](#), and the course launches March 21, 2017.

FACEBOOK

Join Executive Director of MIT's Teaching Systems Lab Dr. Justin Reich this March in a free, online course for school leaders: Design Thinking for Leading and Learning.

Over six weeks, you will explore how you might use design thinking both as a pedagogical framework to use with our students as well as a set of strategies that school leaders can use with their colleagues to improve the systems in their own schools.

At the end of the course, you will have directly applied design thinking to different contexts and made connections with peers who are also undertaking the important work of re-imagining the future of education for students.

[Register now](#) to receive updates as we get the course ready to launch!

E-MAIL

Dear Colleague,

I want to invite you to join a new free online course for school leaders starting March 21, Design Thinking for Leading and Learning. The course is taught by Executive Director of MIT's Teaching Systems Lab Dr. Justin Reich who has studied and supported innovation in education systems for many years. Below is a short blurb about the course.

You can [register now](#) and receive updates as the course gets started.

I would also like to invite you to be part of my learning circle for this course. **A learning circle is a peer-facilitated, face-to-face study group for learners who are all registered in the course.** As a learning circle, we will discuss course videos and support each other's assignment work.

"As we think about the future of schooling and learning, one of our central concerns is how we can prepare students for their future. For students to thrive, they need to become great communicators and be comfortable solving ill-structured problems. This course is for school leaders of all kinds (from teacher-leaders to principals to superintendents) who are interested in a new set of tools for solving complex problems, for preparing students for their future, and for helping the schools of today become the schools of tomorrow.

Over six weeks, you will explore how you might use design thinking both as a pedagogical framework to use with our students as well as a set of strategies that school leaders can use with their colleagues to improve the systems in their own schools.

At the end of the course, you will have directly applied design thinking to different contexts and made connections with peers who are also undertaking the important work of re-imagining the future of education for students."