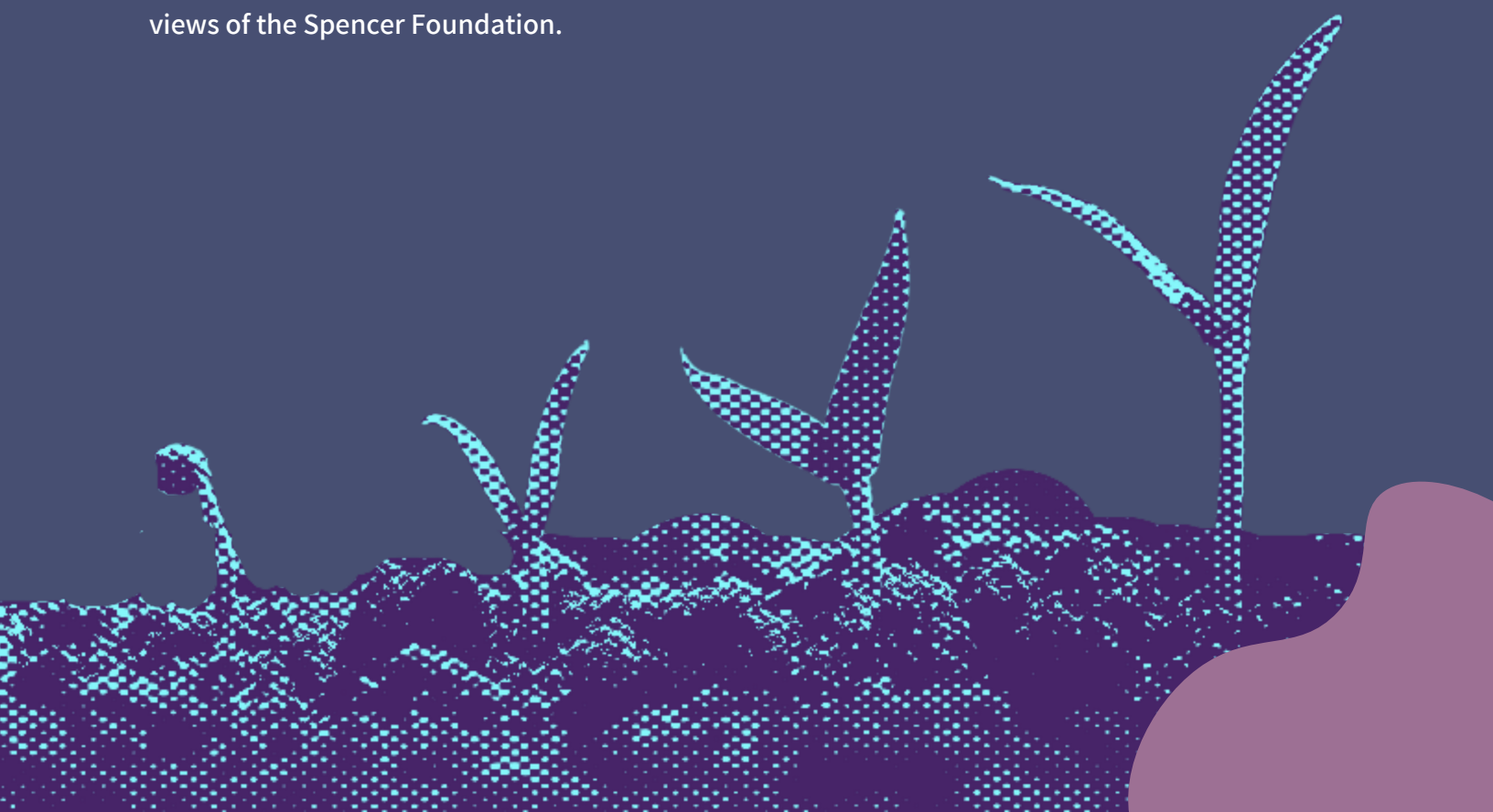


# CO-DESIGNING TRANSDISCIPLINARY LEARNING:

## Teachers, Students, Families, and Researchers Partnering to Reimagine Education

This report was developed by Shirin Vossoughi, Trinity Collins, Leslie Russell and Silvia Gonzalez in collaboration with Andrea Anders, Tiffany Childress Price, Anna Choi, Lindsay Hayden, Michael Meadows, Corey Winchester and TaRhonda Woods. We would also like to thank all participating teachers, families, and students, as well as Alejandra Frausto, Jessica Marshall and Chris Nho, for their contributions to the project.

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# Executive Summary + Highlights

Starting in 2019, a group of Chicago and Evanston teachers and Northwestern researchers worked together to co-design justice-oriented transdisciplinary curriculum across students, teachers, and families.

Within our current systems, students and families often do not have a central role in shaping the what, how, and why of learning in schools. Co-design creates the conditions for students, families, community members and teachers to creatively and collectively design curriculum and teaching practices. Pages 3-7 of this report define co-design, intergenerational learning, and transdisciplinary curriculum, and the ways they shaped our approach in this project. Pages 10-12 offer evolving principles for co-design developed by our lead teachers.

## Research questions and findings

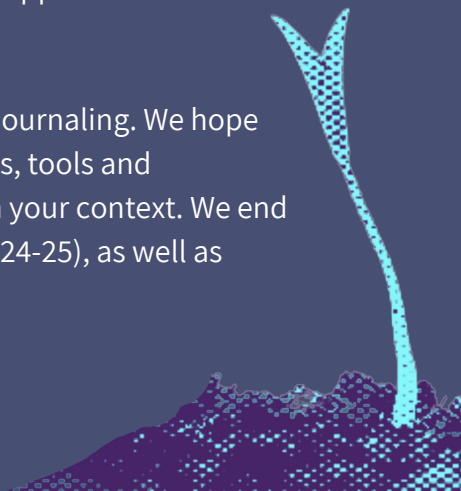
Our documentation and study of this process examined the conditions that support meaningful co-design, the connections that emerged across disciplines, and the kinds of learning and change co-design can help make possible.

We found **three elements** that supported robust conditions for co-design: the power of beginnings, sustained attention to relationship building, and an emphasis on embracing process. These are elaborated, with key examples from the data, on pages 15-17.

We also traced key shifts among students and teachers that reflect the power of co-design as an environment for learning. For example: students described deeper conceptual understandings in key subject areas, a sense of joy in connecting academic learning with personal and community knowledges, and new relationships with teachers and learning itself, leading some to advocate for change in other classes.

Teachers connected critical social analysis within STEM and other fields with efforts to support students to imagine and build life-giving systems. They described new ways of seeing teaching and learning, connecting with their students' lived experiences, and working with students and families as partners in curricular design. Pages 18-21 provide further examples of key ripples and forms of learning through co-design.

Finally, our report is intentionally interwoven with questions and spaces for journaling. We hope this workbook format can support reflection and planning based on the ideas, tools and experiences shared here in conversation with the work you are developing in your context. We end with suggestions for getting started and going deeper with co-design (pages 24-25), as well as resources and references from the broader field.



# Story | Goals | Genealogy

In Fall 2019, we convened a small group of Northwestern researchers and teachers from high schools across Chicago and Evanston to discuss transdisciplinary STEM learning, co-design, and educational justice.

Teachers were recruited through our networks in the city, and through support from district level STEM and Civics Education departments. Most have been teaching for over ten years and bring to the project both deep domain expertise (in biology, chemistry, algebra, geometry, history, civics and English) as well as questions that reflect the edges of their practice.

Five of the eight are teachers of color. Their schools represent different neighborhoods and serve a range of student communities. They include: Chicago Vocational Career Academy, Walter Payton College Prep, Senn High School, and Evanston Township High School.

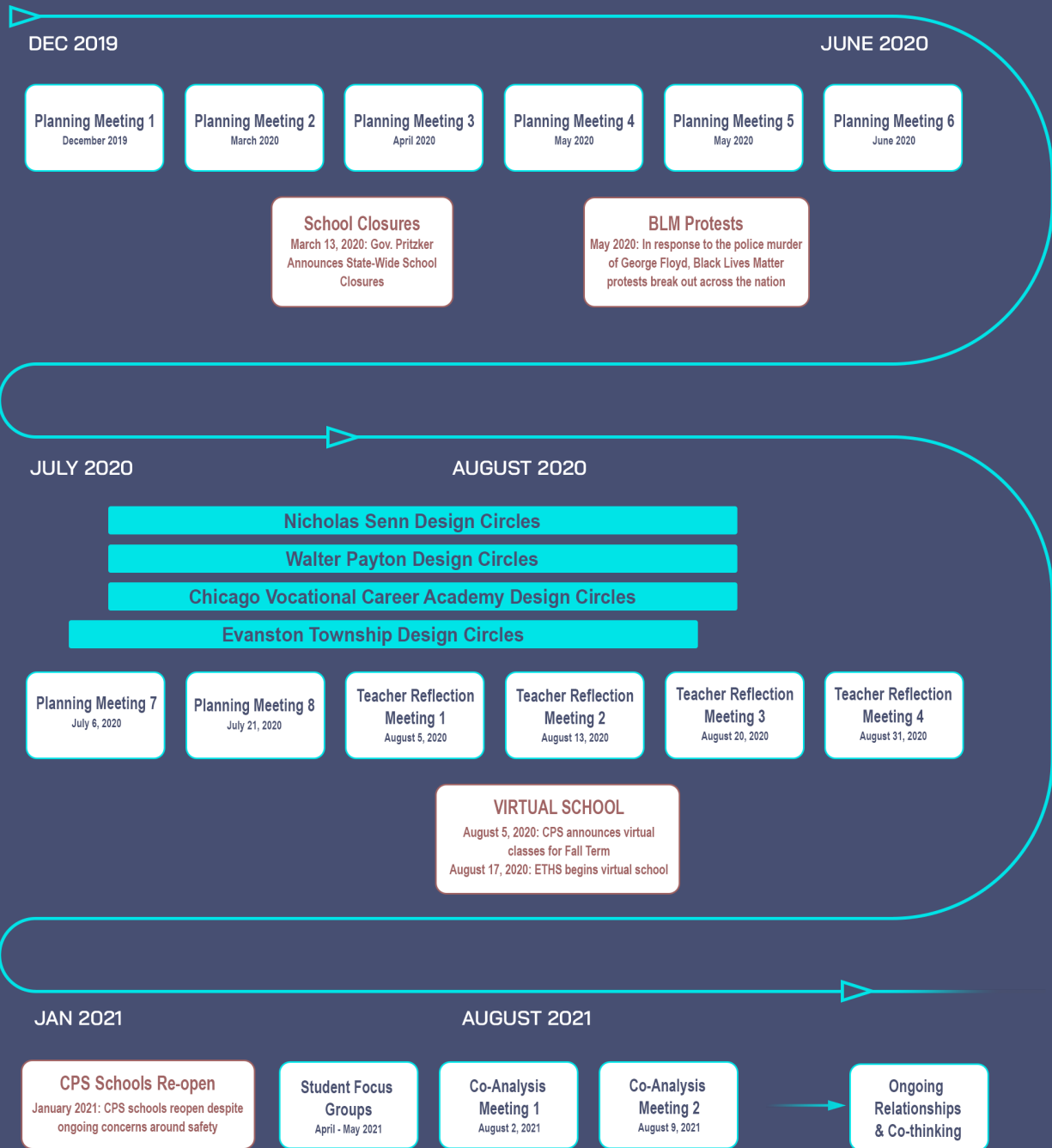
Our initial conversations revolved around key problems of practice, and how issues of justice take shape across schools. We agreed that curriculum and teaching are most effective and equitable when meaningfully connected to students' lives, particularly for students systematically marginalized within schools. We also discussed the need to develop transdisciplinary learning and thinking that supports young people to wrestle with the complex social, environmental, and ethical issues of our time. As one teacher expressed, "what kinds of scientists, engineers, architects and doctors are we developing?" These shared values were important to the work we were able to pursue together.

Given the constraints of COVID-19 during the timeline of our project, our design and documentation focused on 1) bringing together teachers across schools to co-design transdisciplinary curriculum; and 2) supporting teachers to co-design with a team of colleagues, students and in some cases, parents/caregivers and community members at their respective schools. Teachers were intentional about inviting participants with various identities, academic histories and experiences with schooling to engage together in co-design. All participants received stipends for participating in the co-design work.

Long-time educators and district specialists Alejandra Frausto, Chris Nho and Jessica Marshall also shared their expertise on transdisciplinary learning and critical civics with our team, helping to nourish our design imaginations.

# Story | Goals | Genealogy

The following timeline captures the layers and historical time period of our collective work:





# Why co-design?

Within our current systems, students and families often do not have a central role in shaping the what, how, and why of learning in schools. Co-design creates the conditions for students, families, community members and teachers to creatively and collectively design curriculum and teaching practices.

According to the Family Leadership Design Collaborative (FLDC), “co-design is an iterative process made up of cycles in which people:

- Build relationships & theorize around shared issues
- Design and develop tools, practices, processes, and other solutions that push beyond the status quo
- Enact or pilot these solutions and collect data on what happens
- Analyze & reflect on what was learned, in order to revise theories and designs

Solidarity-driven co-design draws from design-based research, as well as indigenous and decolonizing methodologies. By engaging with and across diversity, and attending to historically accumulated forms of power, co-design can illuminate new avenues for change-making and allow us to collectively imagine possible futures.”

This approach treats teachers, students and families as co-designers of expansive and equitable learning, and understands **processes of partnering** themselves as important to intentionally design and document (Bang & Vossoughi, 2016).

Our co-design process with teachers began with sharing our own educational stories as tied to our experiences with STEM and other disciplinary domains.

1. What moved you to work on critical STEM education and/or interdisciplinary teaching and learning?
2. How do you see this work as important for what you imagine/dream for your students' learning and development?

What are you resonating with? What differences do you notice that are important to hold, and that can enrich the collective work?

*Questions engaged with teachers in our first co-design meeting.*

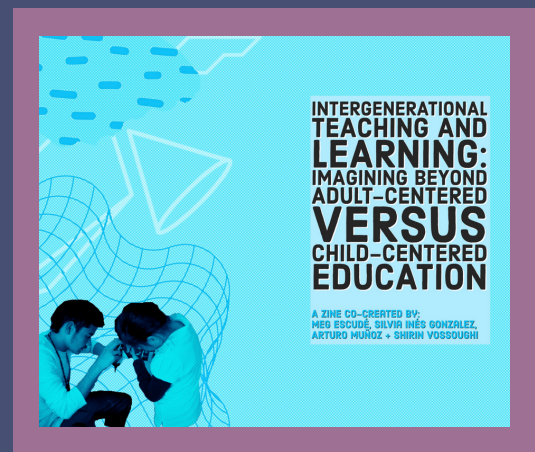


# Why intergenerational learning?

Growing efforts to engage student voice require models of collaboration across teachers, students and families, and ways of building with students' perspectives around the design of learning across domains. We also recognize that student voice initiatives can sometimes fall into tokenizing forms of participation and listening sessions where students voice their concerns without necessarily seeing changes in policy and practice. In the important effort to challenge adultism and teacher-centered education, youth-centered models can also sometimes constrain the space for adults and young people to learn how to think and work together towards social and educational change, and to build with forms of intergenerational collaboration that have historically shaped learning within our communities (Vossoughi, et. al., 2021).

Many educational thinkers have sought to rethink binaries of teacher vs. student centered education, arguing that the most dynamic learning emerges when both adults and young people are active participants, partners in thinking.

To learn more about intergenerational models of learning, check out this [zine](#) and [article](#).



“

So working with your teacher around a curriculum was really... just nice because it's like, **if I could work with all my teachers on that, I think I would pass all of their classes. With no hassle, do all of their work.** It was really nice because it was something new, because I'd never worked with my teachers on anything. But at the same time, it was really fun. I thought I wasn't gonna enjoy it. I really did, 'cause I'm like, huh. A teacher's gonna rule whatever happens. But then it was just like, no, the students get to have the same,

**so it felt very free.**

-Lauryn (student)\*

”

*\*All student, teacher and parent/caregiver names within the report are pseudonyms*

# Why transdisciplinary learning?

Human beings make sense of phenomena in the world using tools, questions, and ideas from multiple disciplines.

Disciplines are also power-laden and socially constructed. Some disciplines may be positioned as more “smart” or useful to society, and some practitioners of disciplines are valued over others (e.g., white male scientists working in labs). Artificial boundaries can also separate school-based learning from the multiple ways of knowing that students and families routinely engage in everyday life. These are important tensions to hold and intentionally reshape through co-design.

Developing the knowledge required to confront challenges such as climate change, environmental injustice and global pandemics—and their deeply unequal impacts—necessitates rethinking disciplinary boundaries. Such complex problems require not only multiple disciplinary perspectives and tools (**interdisciplinary learning**), but new forms of thinking and problem solving that emerge across disciplines (**transdisciplinary learning**). Based on a commitment to “questions greater than the discipline itself,” new interactions across disciplinary boundaries can “lead to the emergence of new concepts, representations, and applications, that ideally should also re-centre voices from the margins” (Takeuchi, et. al., 2020, p. 6).

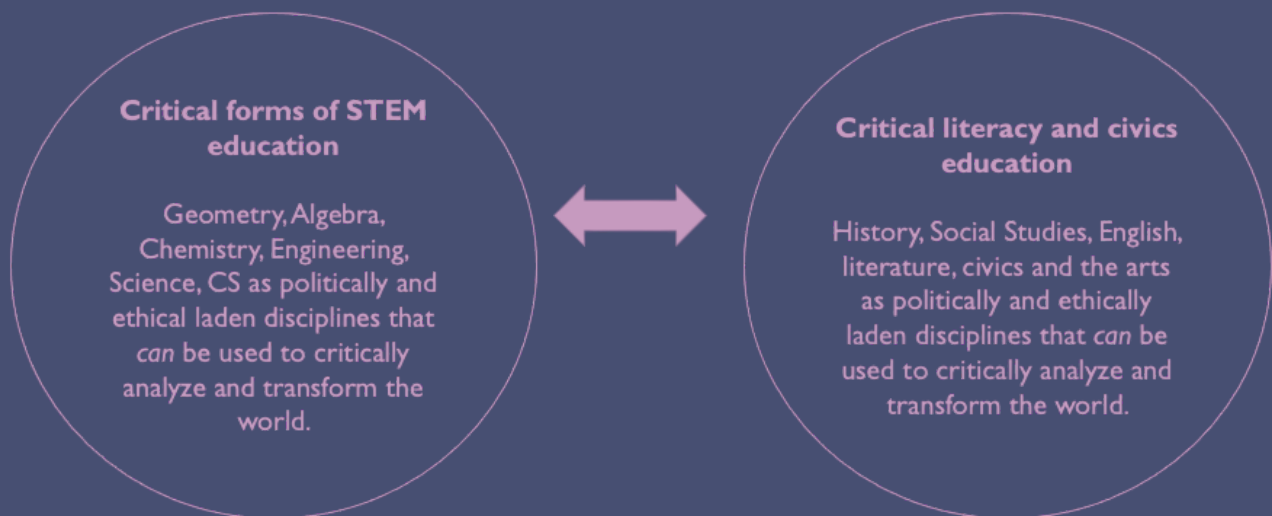
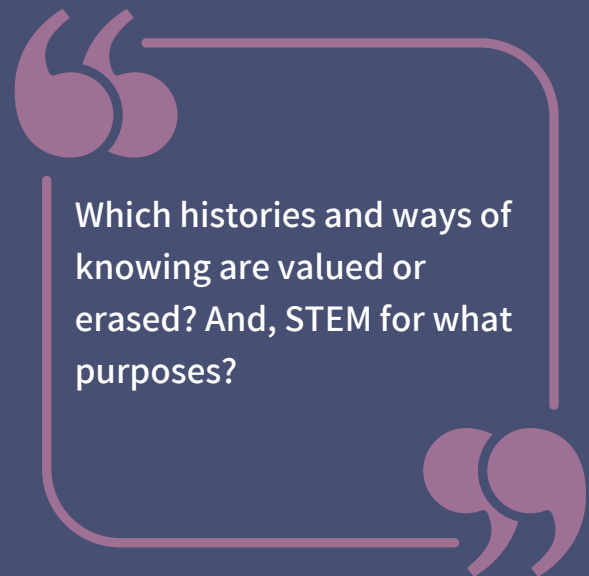




Also: disciplines like science and math are themselves value-laden, cultural domains deeply implicated in social and ethical questions (Davis & Schaeffer, 2019; Doyle, Price & Chapell, 2019; Gutiérrez, 2017; Medin & Bang, 2014; Warren, et. al., 2020). Rather than treating STEM knowledge and practices as settled (Bang et al. 2012), we might ask: Which histories and ways of knowing are valued or erased? And, STEM for what purposes? (Sengupta-Irving & Vossoughi, 2019)

Civics and ethnic studies educators are also asserting the need to move beyond stand-alone courses towards the deeper integration of critical civics education across disciplines (Mirra & Garcia, 2022; Sleeter & Zavala, 2020).

From this perspective, social-emotional learning, identity development, ethical sense-making and deep academic engagement are closely intertwined (Nasir, et. al., 2006).



*An image participants worked with together in our first few meetings*

# Space for reflection, journaling, and dialogue

What ideas are standing out to you so far?

How have you noticed student voices being honored and taken up (or not) in your school?

What does intergenerational learning mean to you?

What are the multiple disciplinary perspectives that you and your team hold right now?  
In what ways are you already bringing disciplines together? What new opportunities do you see for weaving across disciplines? For connecting with students' and families' experiences?

# Our Co-Design Process + Projects

## Questions that guided our work:

What are the conditions that support meaningful co-design across students, teachers, families, and community members?

What connections across disciplines emerged in the process of co-design?

What kinds of learning and educational change can co-design help make possible?

“

I feel like most of the time you're learning it only for that class...for me personally, whenever I can see the dots and like put pieces together, it makes remembering it a lot easier, cause there's more ways to view it. And so, in the co-design where we like talked about different things and we're trying to include all of these different variables, it may seem overwhelming, but to me it was better because it's like, okay, I don't have to only think about it this way, I can see how things like intertwined, play with each other and bounce off of each other.

”

-Carmilla (student)

“You have to act as if it were possible to radically transform the world. And you have to do it all the time.”

-Angela Davis





# Evolving Principles for Co-Design

The following co-design principles were developed and refined by Andrea Anders, Tiffany Childress Price, Anna Choi, Lindsay Hayden, Jessica Marshall, Michael Meadows, Leslie Russell, Shirin Vossoughi, Corey Winchester and TaRhonda Woods. We drew on existing literature and prior experiences with community-based education and co-design, particularly resources provided by the Family Leadership Design Collaborative. Each of our school-specific co-design teams then shared and edited these principles with the teachers, students, and families they worked with.

- **Co-design prioritizes the health and well-being of participants.** This includes recognizing all that participants, and communities of color in particular, are carrying in this time. Co-design aims to support the intellectual and relational nourishment of participants, cultivate connection & healing, and practice the transformative possibilities we are working to build. While we work to design expansive learning together, we are also creating and practicing a co-design process that itself aims to transform education towards justice, dignity, and thriving.
- **Co-design creates the conditions for students, families, community members and teachers to design curriculum and teaching practices creatively and collectively.** This means:
  - Trusting and respecting the knowledge of all participants, and approaching co-design as greater than the sum of its parts.
  - Moving beyond narrow notions of “parent engagement,” and recognizing parents and caregivers as educators who play a central role in young people’s development. Teaching and learning happen everywhere!
  - Creating space to surface and address participants’ understandings of race, class, gender and other social inequalities, their histories and structures, as well as conceptions of educational justice and theories of change.



...We are creating and practicing a co-design process that itself aims to transform education towards justice, dignity, and thriving.

- Recognizing students as experts of their own experience, including what kinds of teaching and curriculum support their learning, growth, and sense of dignity.
- Creating space for participants to learn from one another, including coming to see new horizons of what could be possible in education. Storytelling and storylistening (Marin, 2020) about our own educational and life experiences are important to this process.
- **Co-design is inter-generational.** Co-design facilitators look for opportunities to seed and support mutual learning and role re-mediations: shifts over time in who is speaking, listening, and teaching (about what, and how) that reshape powered hierarchies of knowledge. It is important to recognize the multiple identities and roles people bring to this work. Co-design can also create space to see and hear each other in new ways. This might include parents/caregivers and teachers seeing the concerns of students in new ways; students gaining deeper appreciation for family histories and knowledges; or students developing new interests in teaching based on positive experiences with educational design.
- Co-design takes a **deeply processual and emergent view of learning**. Process matters to collective thinking and learning, and is worth investing in. Careful attention to the beginnings of the work, generative structures, intentional facilitation and reflection can be helpful here, as can orienting towards tensions as potential growth points. Supporting shifts in roles and participation often involves patient attunement to process.

“ So what stands out to me are a few things: one I felt like I got a chance to like **interact with teachers about being teachers**, if that makes sense, because it's like when you're in the class, you look at them solely as an instructor most of the time, but I felt like during the co-design process, I got a bit more of a personal level which made it a more intimate experience, like within creating this curriculum, which is like- we were all- it was connectedness, it wasn't like you were telling us what to do, it was like guiding us through it and also getting to know the teachers as people.

-Kalil (student)

- **Scientific, social scientific, mathematical, and humanistic thinking and inquiry are fundamental human practices that live in the languages, processes and purposes shaped by communities.** Co-design works to transform disciplinary boundaries and hierarchies that position Western forms of academic knowledge as superior, while supporting students to navigate different knowledge systems. Doing this work together in our co-design teams also supports doing this work in our classrooms.
- **Co-design cultivates our collective capacities for social critique, imagination and dreaming.** A key rhythm of co-design work involves moving between dream-space and concretizing educational possibility in here-and-now activity. This rhythm is often aided by language such as “what if,” “could,” “how can,” “maybe,” “might,” “why couldn’t we...” It’s important to note that we don’t dream from a blank slate, but can draw on the many powerful examples of just education developed within families, communities and schools.
- **Co-design questions narrow educational models and recognizes human learning as tied to people’s limitless capacities within and across expansive domains.** This means re-imagining what’s valued in terms of the practices, understandings, and ways of knowing we are teaching and learning, and pushing towards new forms of intellectual and relational possibility.
- **Participants add to, co-author, and revise these principles so that the processes and products are iterative and responsive.**



...It is important to note that we don’t dream from a blank slate, but can draw on the many powerful examples of just educational space developed within families, communities and schools.

# Space for reflection, journaling, and dialogue



Take a moment to mark up, annotate, highlight the evolving principles for co-design.

Which principles feel especially important to you, and why?  
What might you edit, add or elaborate?

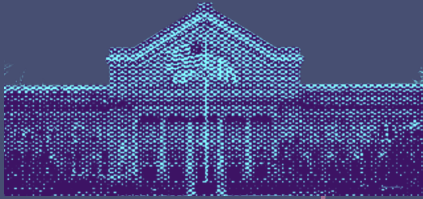
Our teachers began their co-design work by sharing, annotating and editing a version of these principles with students, parents/caregivers and fellow teachers. If and how would you want to use them in your work?

What kinds of beginnings, commitments and dialogues would you want your co-design principles to support?

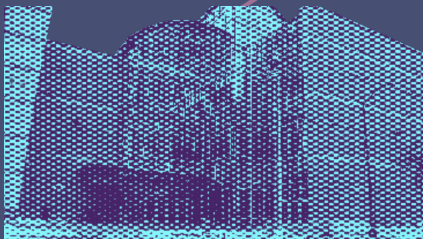
# Key Co-Design Projects

Based on these processes and principles, each school level team worked across co-design sessions to develop a range of educational projects:

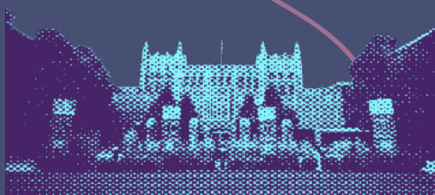
At Chicago Vocational Career Academy, a team of teachers and students worked on the theme of power, emphasizing the connections between local communities and larger systems of power. The following year, a civics class drew on the co-design work to critically engage with the theme of Racial and Criminal Justice. Three students from the co-design team took the course and served in leadership positions alongside the teacher.



At Senn, teachers and students developed a unit entitled “Justice in Chicago” that brought together Math, Social Studies and English and included modules on racial and economic inequalities and environmental justice. The math course also deepened their work with critical data literacy, analyzing, for example, the use and misuse of statistics within political discourse.



At Payton, teachers, students, and families expanded existing units around water, asking: How do Chicagoans use local waterways and water systems? How does the sociopolitical context shape our relationships with water? The unit was implemented in a lead teacher’s class where there was a long history of chemistry teaching that brings together the personal and political. Modules focused on water use and properties, contamination, and water as a political and social resource.



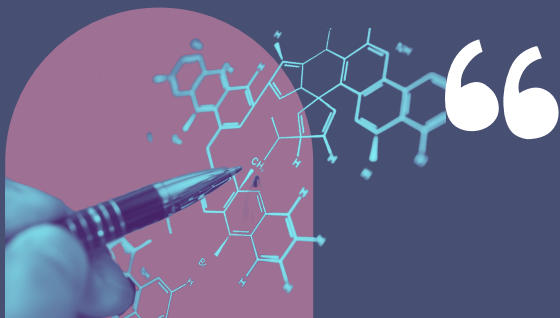
And at ETHS, teachers, students, and families worked in two teams around the themes of food accessibility and sovereignty, and science and ethics in context. There was a focus on blending science and critical literacies, supporting students to critically interpret scientific information and representations. The ETHS team has since created a transdisciplinary science course that follows students across two years. The course uses Eve L. Ewing’s comics as mentor texts to scaffold students’ creation of their own scientific comic book stories.

# Key Elements of Co-Design

Our analysis led us to identify three (interrelated) elements that support robust conditions for codesign: the power of beginnings, sustained attention to relationship building, and an emphasis on embracing process.

The **power of beginnings** refers to the intentional design of early co-design meetings and the ethical opening of space within each ongoing session. The ways we begin matter for what emerges among participants over time (Bang, et. al., in press; Vossoughi, et. al., 2021). Our data showed that beginnings can seed an expansive design imaginary, creating the grounds for participants to engage as their full selves and offer questions and ideas at the edges of their thinking, rather than sharing only what is known or comfortable. Beginnings also offered negotiable structures (such as the editable co-design principles shared on 10-12) that shaped the group's activity towards an ethic of what is valued in supporting young people's learning and thriving. The intentional design of beginnings was often carried over from our meetings with lead teachers to their design meetings with students, teachers, and families.

**Intentional relationship and community building** was another key focal point of design. "Co-learning" and "relationship/community building" were amongst the most common phenomenon identified across our co-design sessions, and increased over time. These findings suggests that relationship building should be intentionally nurtured throughout co-design, not only at the outset. Relational sensibilities also opened up new forms of connection and vulnerability, as seen in the kinds of storytelling and storylistening that emerged across groups. This storywork allowed participants to connect the design of transdisciplinary curriculum with their lived experiences and community contexts. As Carmilla (student participant) shared:



I think like my favorite part overall was just how we were trying our best to connect science on a personal level and like talk about our experiences as Chicago citizens and how that actually relates, cause I feel like a lot of times in science, we like, we lose that piece about **how everything connects.**





# For students, building curriculum with teachers required new forms of relationship building.

Katherine described how she had to remind herself not to think of co-design meetings with peers and teachers “as a class,” stating “it was like a learning curve because you have to re-contextualize the way that you're interacting with these people.” Such relational shifts mattered for teacher learning as well. Some teachers described a shift from thinking of co-design through the lens of student feedback and input on existing curriculum towards more substantive co-thinking and design with students (a trajectory we have found can be productive). Pauline shared, “I didn't think of bringing it [genealogies of ancestry] into the classroom, that was from a student. And so I wonder what other opportunities there are for rich learning that they have ideas about that could just enrich my curriculum even more if I just asked them.”

**Teachers also learned from one another** in ways that increased over time. In one lead teacher meeting, Jonathan shared a tension about the initially imbalanced airtime between students and teachers within his co-design team. James posed the question: “How are you gonna facilitate differently?” Jonathan then asked for ideas from the group. James suggested that he address the challenge with the group itself, and Pauline provided a tool she had developed, “Conscious Cross Talk”, to help. Two sessions later, Jonathan expressed: “I gotta say [Pauline], ever since it was two meetings ago, when we used the conscious crosstalk principles and habits, there was a very noticeable shift...so that was really, really awesome.”

Lastly, we found that **the routine emphasis on embracing the process of co-design** was important to the ways participants became increasingly comfortable thinking and building together. Emphasizing process involves intentionally noticing and re-organizing the tendencies built into our systems towards rushing, focusing on immediate or pre-determined outcomes, and constraining wider forms of dreaming often in the name of feasibility (Bang & Vossoughi, 2016). It also means nurturing the space for slowness, co-presence, and emergence (Brown, 2017) as an expression of generative faith in the work of collectives over time. We found that this processual sensibility 1) took time to practice and involved intentional mediation; 2) created space to deepen relationships and build a more expansive design imaginary—what Pauline described as “working a new form out of current structures;” and 3) was reflected in the ways teachers took up process with their own co-design groups.

## How were these elements embodied in practice?

In one school's first co-design meeting with students, parents/caregivers and teacher colleagues, Toni (lead teacher) said, “This is not something that we have an end goal -- we are really leaning on each other to design and process this together. We really want to learn and grow together.” Here parents were key in helping the group begin with a view of the ways human beings learn as young children as a way to reimagine what is possible in schools. Toni and James also began by sharing an editable google doc with the draft co-design principles (pages 10-12 of this report), inviting participants to annotate and revise.



Navya, a student participant, wrote the following in response to the embracing process principle: “this is not all going to be laid out and figured out before we start engaging with it. There's a lot to be learned in the moment and things are prone to change. Be open! Having the right intentions and learning from what's happening can be impactful.” The practice of treating tools such as the co-design principles as malleable reflects the value of scaling process or method, which can support other schools and educational programs to develop curriculum that is sensitive to local contexts, values, and goals (Booker & Goldman, 2016).

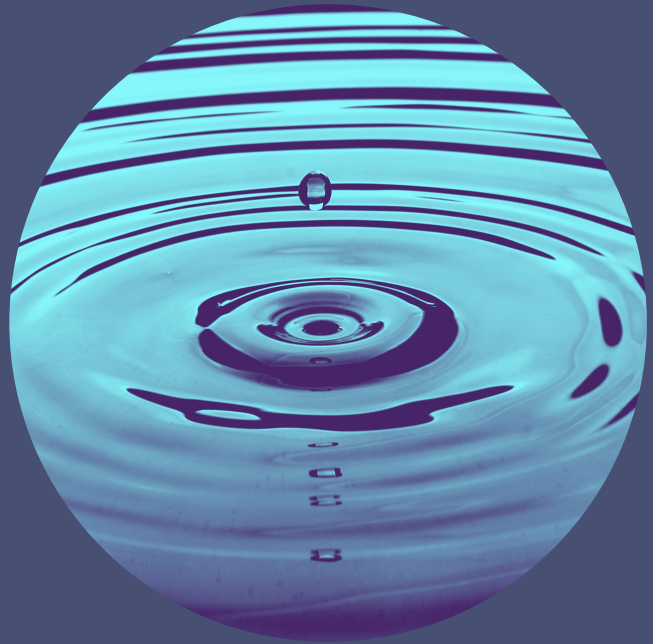
While Shirin (co-design facilitator) emphasized process a total of 8 times, the majority of which unfolded in initial planning meetings with lead teachers, teachers engaged in this practice 28 times. For example: when participants began moving to identify the “next tangible thing,” lead teacher Viola reminded us: “I really like the idea of focusing on the process...documenting and focusing on the process could be important to expanding this work to others.” Another teacher, Adelaide, reflected on shifts in her thinking around teaching itself as tied to process: “As a teacher, I was actually thinking about shifting the way that I introduce a different topic and maybe make it even more open like this to see what topics we generate...so the process of invention and discussion is also just as valuable as whatever unit we end up actually delving into in depth.” These are some of the ways we see co-design as helping expand our views of what is possible in human learning.

We also found a strong connection between moments when process was emphasized and pivots towards a more expansive design imaginary. As James remarked: “If we were able to document [co-design] to focus on process...this is what the work of imagining new futures looks like. This is being done across district lines, across institutional lines, something that's being imagined in community. There's a lot of power in being able to control and articulate our own narrative. Maybe that's another added focus of the work -- so when we go to folks we can show: this is hard work.” We hear in James' words an attention to labor, both in the sense of asserting the value of teacher's everyday work, and in the sense of the processual labor involved in birthing new worlds. Teachers also consistently remarked on the power of connecting with one another across schools and disciplinary domains, particularly given what they see as the dwindling of interdisciplinary professional learning communities (PLC's).

When one teacher raised the tension of engaging students in such imagining without over promising what is possible, Pauline suggested the importance of supporting young people to take a long view of the work involved in social change: “if the kids can understand that this is about five years' worth of work, maybe these same kids will continue to stay connected to the project. **We're doing movement work, not single protest work.**”

# Key Ripples and Forms of Learning

We found a number of important shifts that reflect the potentials of co-design as an environment for learning (Goldman, et. al., 2022). For example, the collective's initial **approach to designing across disciplines** involved challenging settled boundaries, such as the hierarchies between the intellectual and the everyday, or dominant views of who counts as a scientist. Amid widespread social protests following the police murder of George Floyd, as well as the deep racial inequities further illuminated by Covid-19, there was an urgent need to disrupt legacies of harm. We built with these critical stances as interwoven with discussions of educational possibility.

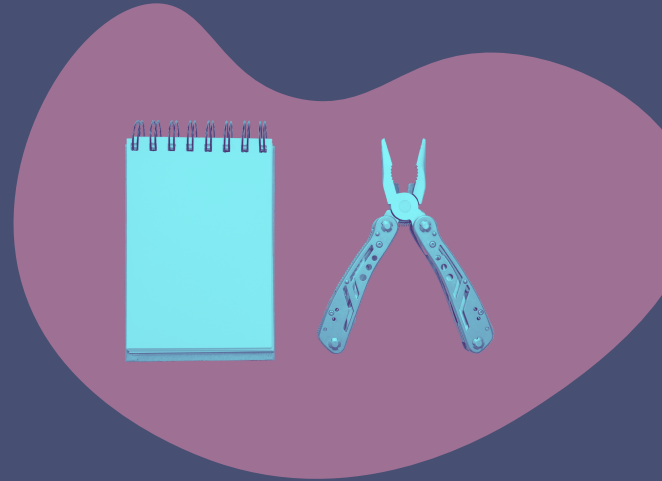


This was supported by intentional pedagogical moves and questions such as “Which histories and ways of knowing are valued or erased? What are the deeper purposes of learning?” Such questions allowed us to dig into the complexities of teaching about urgent social problems in ways that are nourishing to young people, rather than participating in what Viola termed “pedagogies of despair.” Our coding of the data across co-design sessions revealed a total of 157 instances where the collective focused on critically analyzing educational injustice and 284 instances of imagining just and dignity-oriented learning. These movements towards possibility can also be seen in linguistic and curricular shifts that emerged over time. At Senn, for example, the focus shifted from “Inequality in Chicago” to studying local movements for justice and how they connect with mathematical practice. At Payton, teachers worked to expand a chemistry unit on water in ways that connected with Indigenous communities and place, family genealogies, histories of migration, and literature suggested by students.

We also found **key forms of student learning** narrated through our focus groups at each school. These included: new relationships with teachers that challenged normative hierarchies of knowledge and power; a consistent sense of deeper conceptual understanding within the subject areas worked on in co-design; a sense of joy in the intellectual complexity illuminated through transdisciplinary design and the relationships cultivated between academic learning and personal and community knowledges; a revelatory experience of learning as shifting relationships with ideas and the world that is about much more than completing homework and tests; and a carrying forward of key experiences from co-design into other contexts, including advocating for change in other classes or creating similar learning experiences for peers.

Students also astutely described potential challenges, including the need for scaling co-design in ways that adequately prepare teachers for the relational and identity work involved, as well as what it feels like to move from deeper discussions of transdisciplinary learning and educational justice into courses that feel counter to those values.

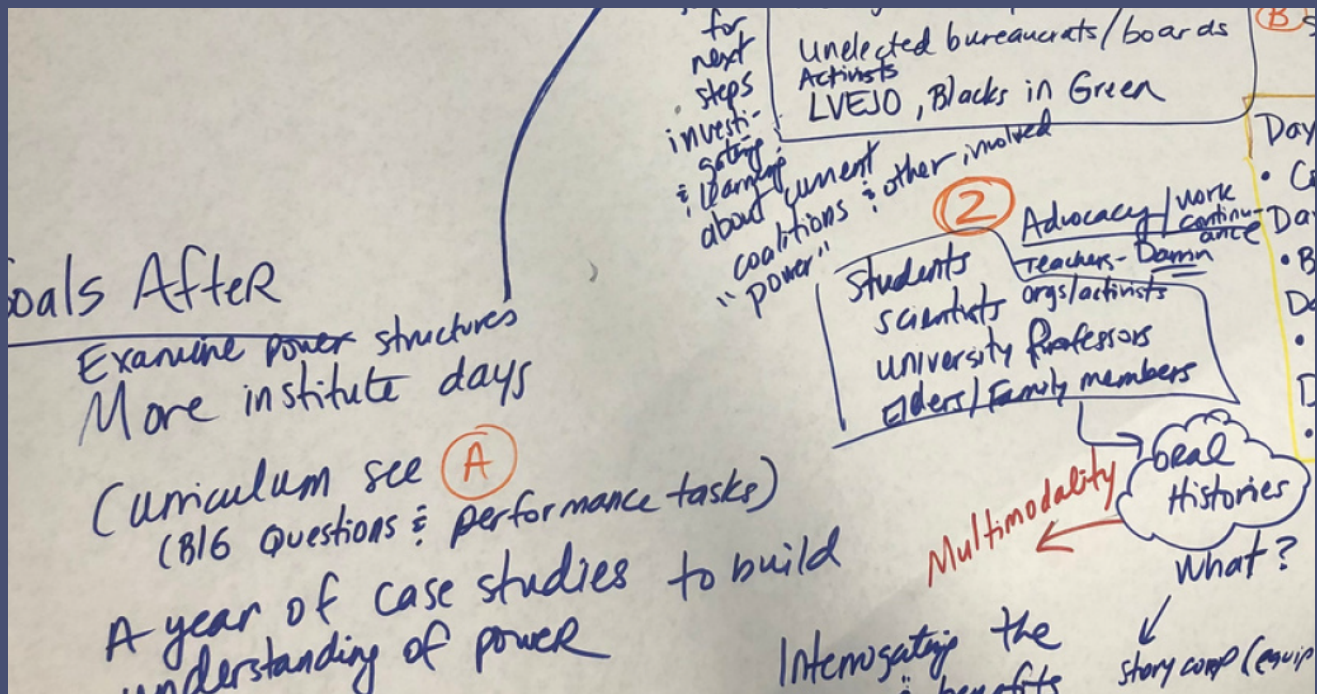
Luna shared: “I think that generally speaking, school, like, in itself, has always been sticking to stuff that you get from a book, you read it, you do it, and you need to just have to go with it. But, with the co-design project that we did, in some of our classes...I think to myself: We could really, like, fix this if we all talk. We could really, like improve the work that we're doing if we talk about it as a class and we really design our own curriculum.”



Students also described gaining a deeper appreciation for the work of teachers, and learning how to design curriculum in ways that provided them a meta-cognitive view of learning in other settings. Lauryn (participating student) shared:

“I'm just like, whoa. I really commend you all [teachers], but at the same time, I feel as if it kinda helped me see school as easier. Preferably history, because it's something that I always kinda saw as hard...now, you kinda tie it to real world experiences, things that happen in life and could kinda piggy back off of the things that happened in the past, as far as discrimination, segregation, um, things that happened in politics, things like that. You kinda get to tie that into the world today, and the world back then, and it kinda made this class a whole lot easier than I expected it to be...I did notice myself engaging differently with my teachers based on that, because...it was like dang. Like, I did this. I, I came up with this idea along with fellow classmates. And it was just, hm. Like, I hope I can continue to do this. I hope other students are able to do this, and get this opportunity. Because at the end of the day, I feel like I'm actually learning something now...So, now I feel very informed to take on the world of history.”

Students often described wanting the experience of co-design for others. Ava shared, “I think that we should be doing co-design regularly...I think that we should have co-design in schools....I mean, we have been not really getting a lot of input by students, but, I think that getting different perspectives of the people who are learning these things is so important and, um, it definitely affects how you learn in the class as well.”



Teachers also described shifts in their own learning.

As Jonathan, one of our math teachers, described, “I think the traditional thinking is teach a skill, hope you can apply it. And I think that what really came out of this was doing an authentic exploration leads to skills that you need to learn.” Another teacher described important expansions in how they understand funds of knowledge and connecting with students’ life-worlds: “I think that I’ve always considered funds of knowledge as like the familial or like everyday knowledge that students already have about topics, as opposed to thinking about their ability to contribute to a lesson based on not only what they want to know, but then what they’re willing to learn about it. Because that’s been something that’s really interesting in listening to these students co-design these lessons is they don’t, like, they’re seeing things that they didn’t know before, and then they are looking into more information about it and bringing that in. So it’s not just about them dumping everything that they already know.”

“...what really came out of this was doing an authentic exploration leads to skills that you need to learn.”

Another key shift emerged when co-design teams began working on curriculum and one teacher contemplated how to provide the frameworks she sensed students needed around curriculum design without overdetermining the process. Co-design facilitators suggested that providing tools is important as a scaffold and adaptable starting point, similar to the tools offered to teachers. This moment supported the group to move further beyond the binary of teacher vs. student led education, and one teacher later described their role as “feeding the ground in terms of ideas but not taking up all the space.”




We also note the increased capacity for co-design amongst teachers who can play a leadership role in this work. One of our participating teachers is now a network instructional support leader who has continued to develop this work by supporting a first-year teacher to co-design algebra curriculum with her students. Three of the educators that worked with our team have been pursuing their PhD's while teaching or staying connected to their districts. Some teachers have also described how they no longer feel content with teaching their disciplines in silos, and continue to seek out opportunities to work across disciplines at the school level—a goal that can lead to new openings as well as challenges in terms of time, co-planning and school schedules. Another ongoing challenge involves negotiating contexts where curriculum is mandated in ways that can be constraining for teaching and learning. Here teachers brainstormed ways of starting with what works and using co-design to support ongoing movement and growth. As Jonathan and Pauline concluded, “curriculum is the starting point, not the end point.”

Finally, some mid-career teachers described how the experience reenlivened their practice and convinced them to stay in teaching (particularly during a turbulent time with a significant amount of turn over). We close with reflections from Pauline, one of the lead teachers in our project:

“What co-design afforded us was an opportunity for collaboration in relationship with students beyond a surface level, extractive interaction with their ideas and experiences. Having carefully cultivated an environment of warmth and care, we were able to engage through conversation in the role re-mediations that allowed us to engage students as equals in the planning process, to reach across differences in age, race, experience, and perspective to generate, from a negotiable framework crafted by the teachers, something that did not previously exist...

That thing was also the framework for a plan to link ninth grade English to tenth grade chemistry in a study of family and community history and genealogy narratives in the context of relations to water and lands. That thing was also a sense, for students and teachers, of the inter- and transdisciplinary nature of real learning, the beginnings of an epistemology that understands disciplines not as separate but as different lenses for making sense of ideas, information, and processes. It was a student-created book club of antiracist texts. It was schoolwide professional development in which students joined course teams for unit and lesson planning. For teachers like me it was the reason to keep my expertise in the classroom. For our students it was affecting material change in service of an equity made of equal parts academic depth and humanity. As a leader of [my school's] Instructional Leadership Team this year, co-design is the ethic at the heart and soul of how we are moving forward.”



**What co-design afforded us was an opportunity for collaboration in relationship with students beyond a surface level...**

After teachers implemented co-design, we revisited our principles and asked the group how they would describe what co-design is and isn't to teachers new to this work. This exercise also served as a way to see how our thinking grew from the process of implementation.

## Co-Design Isn't...

- Receiving feedback from students and/or families on something that is already finalized
- Writing traditional lesson plans
- Teacher-centered
- Efforts to center “youth voice” or “family/parent voice” in ways that tokenize, or fall short of treating people as full partners
- Listening sessions without policy changes
- A transactional attempt at having everyone “get” something out of the final product
- Limited to “see saw” participation; (i.e. the youth lead at one time and adults lead at another)
- A process that gives full “closure”; instead, the work may be productively “unfinished”
- Quick, pre-scripted

## Co-Design Is...

- Creating conditions for liberatory praxis, where teachers, students, families and community members think, learn, and design together
- Interdependent and ongoing
- Connected to deep genealogies of meaningful educational interventions
- A process that draws on the expertise of all members
- Co-design is a “leader-ful” and “teacher-ful” space where multiple people lead at different moments
- Dynamic, non-linear and emergent. Ideas may lead in generative directions that we can't always predict
- Iterative, making room for creating, testing, refining with all collaborators
- An opportunity to improve the practice of teaching and learning dramatically; to remediate relations between school, family, and community; and to seed possibilities for learning and relationality
- Welcoming to ALL family members and community experiences
- Honoring of experiences and knowledges that may not be validated by traditional measures
- A process that requires protected time to collaborate

# Space for reflection, journaling, and dialogue

How are you connecting with the power of beginnings, ongoing relationship building, and an emphasis on process? Where do you see space for these elements in your work? Where do you notice obstacles or structural constraints?

When analyzing social problems, where do you see space for imagination, joy, healing, beauty and the arts? How can young people, families, and educators work together to build life-giving systems?

What stands out to you about the forms of learning students and teachers described?  
What forms of learning are most important to you?  
What are some ideas for co-design in your local context that are percolating for you?





# Getting Started & Going Deeper

Some reflective questions, starting points and ways of going deeper with co-design for school leaders, teachers, students, and families...

## School Leaders

- **Codesigning with Families and Students:** What do you see as the strengths of your school's current models of partnering with families and students? How are you working to recognize, disrupt and transform powered hierarchies and inequities? What do you see as your growth points or goals, and how might they provide opportunities for co-design with families and students?
- **Understanding Lived Experiences of Students:** What are the multiple ways your school does (or could) learn about student experience in and out of school? What opportunities do you see for student leadership and co-design?
  - This might include working with Instructional Leadership Teams and Student Voice Committees to create time and space for co-design, or providing resources for teachers interested in pursuing this work with colleagues, students, and families.
  - Keep in mind how important routine and ongoing opportunities for co-design are for building relationships and trust, and deepening the work over time. This includes substantive efforts to honor and take up ideas offered by students and families.
- **Building & Sustaining Communities of Practice:** Where are current opportunities for teachers to work together across disciplines? How can these efforts be expanded, supported, or initiated?
- **Emergent Practices of Social Dreaming:** When and how are teachers, families, and students supported to engage in educational and social dreaming?

## Teachers & Classroom Instructors

- **Understanding Lived Experiences of Students:** How do you connect with your students about how they are experiencing learning in your classroom? About their educational dreams and ideas for curriculum? How can these spaces expand?
  - Co-design can start small. For example, you might notice opportunities to share your own design process with students and build in feedback throughout a unit or project in ways that allow students to support iteration and ongoing redesign.





- You might weave in moments for meta-reflection that create routine space for students to talk about what best supports their learning, and when they notice feeling most (or least) connected to the curriculum.
- This can build towards working with a smaller group of students to test out and redesign a lesson or project, or creating a team that can work together with you to develop a new unit. Keep in mind equitable processes of inviting students into this work, and the importance of co-designing with students who hold different perspectives, identities, and educational histories.
- **Understanding Lived Experiences of Families:** How do you currently learn about and connect with students' families? How can your curriculum and teaching deepen family connections in ways that build with community knowledges, histories, and futures? How can you partner with parents/caregivers?
- **Building and Sustaining Communities of Practice:** Which colleagues might you connect with further to explore and/or deepen transdisciplinary possibilities? What kinds of supports would you need at the school level to pursue these practices?

## Students and Families

- **Reflecting on Our Experiences:**
  - What are the histories of family/student engagement you have experienced, and where do you see strengths and challenges?
  - Where do you see opportunities at your school to deepen equitable ways of partnering with families and students?
  - Where has learning felt most meaningful to you? How can these memories and experiences support co-design?
- **Dreaming in Our Community:**
  - What are some of the dreams and ideas you have for co-designing curriculum and teaching in your context?
  - How can existing relationships with other students, parents/caregivers, teachers, school leaders and community organizations become starting points for co-design?
  - In thinking about changes you would like to see at your school, where do you see opportunities for collective advocacy with other students and families?
- **Moving Across & Beyond Subjects:** What are some of the connections you are seeing, or would like to see, across subject areas at your school? What projects can you imagine that would bring together multiple disciplines?



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