



Reimagining the K12 Library

A Student-Driven Approach

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Abstract

What would a student-designed library look like, if they were empowered to imagine it?

The library has traditionally been the academic heart of every school. As access to information and resources has fundamentally shifted, so has the identity and function of the school library.

To remain relevant, libraries are becoming reflections of the needs and aspirations of the students and communities they serve and the unique places they inhabit. As a reduction in physical collections has left open space, other uses have been added to fill the void. Some libraries have added maker spaces, student commons or community forums. These libraries embody a new and evolving academic vision, and, if they don't, they become largely underutilized.

Now is the time to redesign future K12 library and do it in a way that empowers and engages future learners in a dialog about their needs, experiences and vision for the future.

In partnership with librarians, educators and students, we developed a game-based engagement tool that empowers students in the design process while educating them about the design-thinking process.

Why does it matter....

The environments where we learn have a profound impact on learning outcomes and our sense of wellbeing. Learning environments should be designed through the lens of student experience and a deeper understanding about how the spaces we design impact a range of students. This requires a dialog directly with students to understand their unique experiences and emerge the needs and issues that are most relevant to them. Impactful design requires thoughtful dialog.

Who is it for...

Librarians and Educators – This game is a tool for librarians and educators to engage students in a dialog about their needs, values and ideas about the future of libraries in a game-based approach that leverages and educates about the design thinking process.

Design Professionals – This is a tool for design professionals to emerge student voices in the design process, giving them more agency in their learning environments.

Students – This is a tool for students to develop their design thinking skills and to develop a collaborative dialog about their needs, values and ideas with other students.

What does it do...

The game is a collaborative programming tool, based on the design thinking process that gives students agency to influence the design process. To best serve students, school libraries should be designed through the lens of student experience, developed in dialog with the students that will be using them. This game facilitates a design dialog around ideas and values. The outcomes include a prioritized set of design ideas and drivers developed from a dialog between students as they play the game.

Introduction

How can we give students agency in the design process? What are the challenges? What are the opportunities?



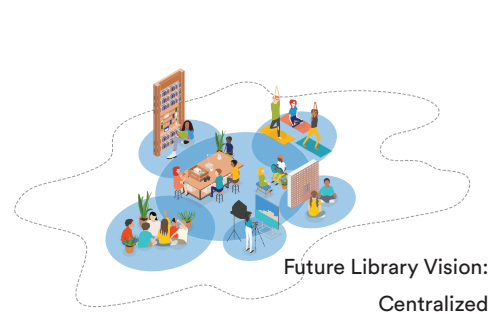
EHDD Team:

We are a group of designers, architects, and researchers with a passion for the transformative power of education, the value of good design and the magic of the K12 experience. Our team includes:

Emily Bello
Charlotte D'Acierno
Lalyn Yu

The ONEder Grant:

This project was supported by a ONEder Grant by ONE Workplace. The guidance and resources provided by ONE Workplace throughout this process have been invaluable and have allowed us to directly integrate meaningful research into our work.



In recent years, much has changed in education – mostly by necessity. Now is the time to reimagine the future K12 library, and to do so in a way that empowers and engages future learners in a dialog about their needs, experiences and vision for the future.

As we began this process, the following questions shaped our initial discussions:

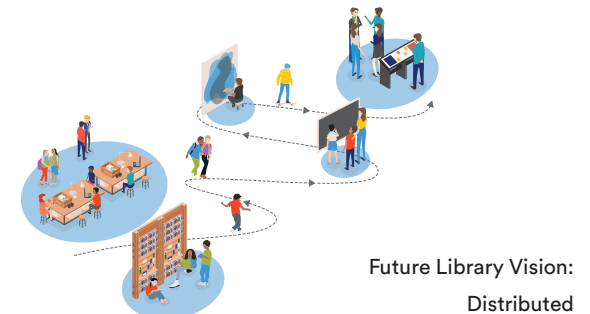
How can the library be reimaged as a place of discovery, agency, of advocacy...?

How can we better help librarians and educators in the process of imagining the potential of this space?

How can we meaningfully involve a broad range of students in this discussion in a fun and creative way?

Special thanks to those who contributed their time and ideas to this project:

Carolyn Clark Beedle, Marketing Dir., One Workplace
Karen Ehrke, Designer, One Workplace
Alexei Greig, Regional Dir. of Culture, KIPP Public Schools (Northern CA)
Claire Danna, MLIS (Library Science), University of Michigan
Daniel Nero, English Teacher, Advisor, Librarian, Equipo Academy
Derek Anderson, Librarian, Marin Academy
Joseph Blasher, Co-Principal, Castlemount High School



Our design process included three parallel investigations:

Research & Define: Discussions with thought leaders, educators and librarians. Literature review. Defining our tool, process and desired impact.

Ideate & Prototype: Development of a physical and virtual tools to engage students. Ideation, prototyping and test-play sessions with several high school student groups. Feedback sessions with our design and research colleagues at EHDD.

Test: Share the game, process and ideas. Collect feedback and plan for future evolutions of the game. Plan for a way to collect and share student ideas in an interactive database.

Tamecca Brewer, Librarian, Castlemount High School
Allison Escoto, Head librarian, The Center for Fiction
Equipo Academy Students, East Las Vegas, NV
Marin Academy Students, San Rafael, CA
Castlemount High School Students, Oakland, CA
Y Plan Students and Staff from the Oakland Unified School District
EHDD Staff

Reciprocal Design

Collaborative Board Game Design

The engagement tool was born out of an urgent call-to-action for youth inclusion in the design and planning processes, especially in projects pertaining to their own communities. To do so, the separation of design professionals, educators, and constituents must be broken to create a power-sharing, interdisciplinary community of practice. By leveraging student perspectives, knowledge, and resources, all participants are empowered to reimagine their environment and develop unconventional strategies for making communities more just and joyful.

As designers, planners, and educators, it is our responsibility to cultivate open dialogues with the constituents we are working for; the goal of the game is not to tokenize student voices and extrapolate their needs, but rather equip students with the power and tools necessary to advocate for and center their self-identified desires.

From our conversations with students, we decided the best way to create an engagement tool that was empowering and playful was to create a board game that draws on existing modes of play.

The game serves a mutually beneficial purpose:

For students, it's a medium to learn and practice the Design Thinking Process through shaping their learning environment. Because the game is free, open-access, and made from easily accessible materials, it's an asset for schools that may not have a design curriculum and/or ready access to design education resources.

For educators, administrators, and library professionals, it's an opportunity to understand their students from vast perspectives and include them in the decision-making process. In addition to that, it's a priority-setting tool that helps decision makers identify urgent needs to be addressed through the lens of their constituents.

For all, it's a library of ideas fueled by knowledge-sharing and curiosity.



Engaging Play

Centering an Empathic Design Process

For all, the outcomes of gameplay create a **library of ideas** fueled by knowledge-sharing and curiosity. At the end, the players can share their results online and receive a customized toolkit including strategies and opportunities to activate their ideas into their learning environments. Available at no cost, the game transforms from a dialogue facilitator into a powerful, accessible toolkit that participants can embody in their actual spaces when design professionals are not a feasible option. Users are also encouraged to explore other groups' outcomes, as collective curiosity aids in the discovery and development of new ideas and innovation.

The first page of the game manual reiterates the human-centered design process:

Empathize is the work you do to understand people, within the context of your design challenge. It is your effort to understand the way they do things and why, their physical and emotional needs, how they think about world, and what is meaningful to them.

Define is all about bringing clarity and focus to the design space. It is your chance, and responsibility, as a design thinker to define the challenge you are taking on, based on what you have learned about your user and about the context.

Ideate is when you concentrate on idea generation. Mentally it represents a process of “going wide” in terms of concepts and outcomes. Ideation provides both the fuel and also the source material for building prototypes and getting innovative solutions into the hands of your users.

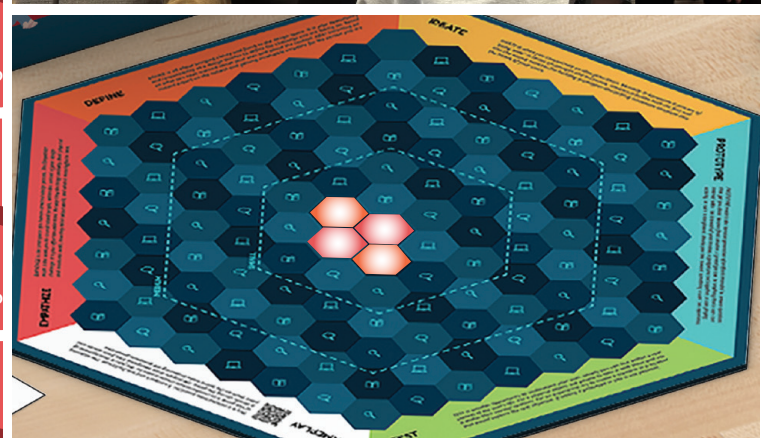
Prototype mode is the iterative generation of artifacts intended to answer questions that get you closer to your final solution. A prototype can be anything that a user can interact with – be it a wall of post-it notes, a gadget you put together, or a role-playing activity.

Test is the chance to refine your solutions and make them better.





Prototyping Session (in-person)



Working as a group, sort the tiles into piles. Make sure the tiles are within everyone's reach and that you have ample table space to play.

Choose (2) mission tiles, (1) site, and (1) size tile.

Set up the board by placing the mission tiles around the center and the remaining tiles touching it in any configuration you please.

Step 1: Empathize & Define

What is the mission of your library?

Every project begins by aligning the team around a core mission. The vision cards creates the high-level motivation for the project, while the other categories (budget, place, deadline) create the context of the project. Not only this, but these cards also serve as a constraints to the game.

The constraints are unique to each card and are stated on the back of each card. For A, drawing an urban place card will challenge players to play within the small board size, due to spatial limitations.

Motivation

What impact will a new library have on your school?

Site

Where is your school located?

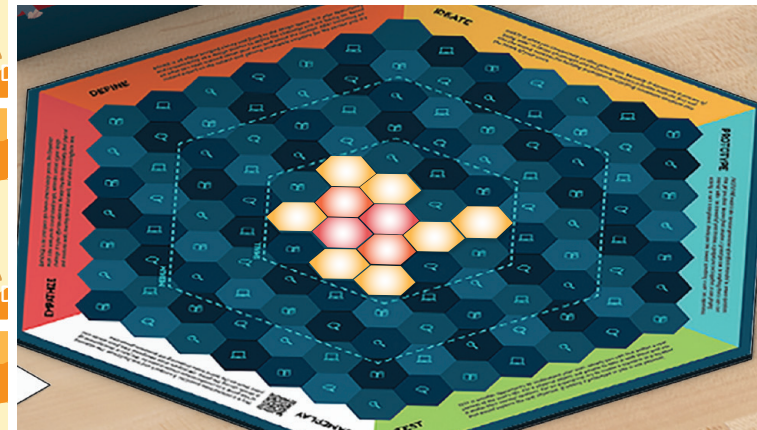
How will the site constrain the space?

Size

How many students will this library serve?



Prototyping Session (online)



Working in teams of 2, take turns selecting cards from the stack of driver cards, and placing them next to the motivation cards.

If a team chooses a 'CHALLENGE' card, all players discuss the prompt the player types in the team's answer and places the challenge card on the board.

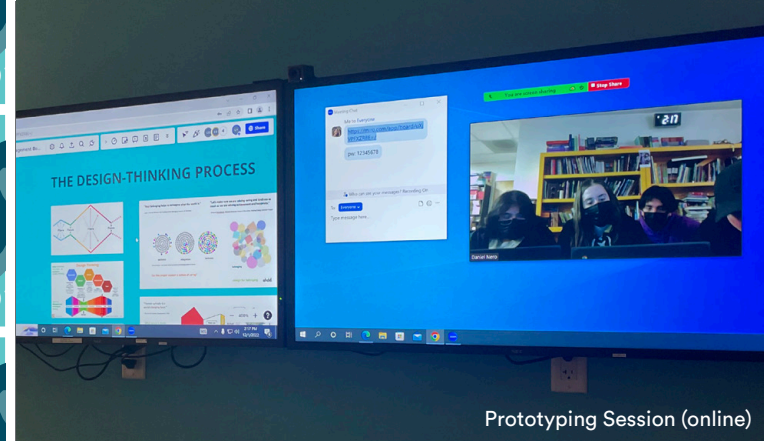
The turn continues clockwise and the next player begins at step 1. This round ends when all cards have been drawn.

STEP 2: IDEATE

What constraints drive your library?

The driver cards challenge the team to identify and scope the potential opportunities, constraints, and users that come with a project. These aren't quite as high level as the motivation, but they're not specific solutions quite yet. To start, you can ask yourself:

- Who is the community?
- What do they need?
- What makes the context of your school unique?



The team whose turn it is selects a program card and places and placing it next to a relevant driver card.

If a team chooses a 'DIVE DEEPER' card, all players discuss the prompt the player types in the team's answer and places the card on the board.

The turn continues clockwise and the next player begins at step 1. This phase ends when your team runs out of cards or the timer runs out.

STEP 3: PROTOTYPE

How will you fill your library?

The program cards challenge the team to build spaces that execute the project drivers. The goal is to ideate on the ways physical space can address opportunities and constraints in the planning process.

- **Space.** A card might ask you to create a space to support your library's mission.
- **Staff.** A card might ask you to identify a staff member who can help support one of your spaces.
- **Dive deeper.** These cards will challenge your team to dive deeper into the planning process.

Our Future library is...

"a place to make connections + meeting people from the outside world."

"a place to showcase student work."

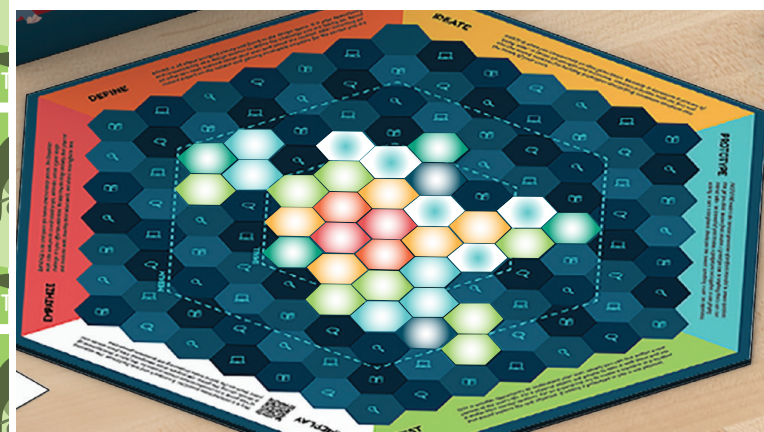
"a place to be exposed to different cultures"

"a resource for diversity resources (social justice, LGBTQ+, race, culture)."

"a resource for college-ready opportunities."



Prototyping Session (hybrid)



The team draws a budget card. Individual players then use green tiles to ‘eliminate’ the required number of program tiles based on your project priorities.

Keep Score: +1 point for every side of a blue card touching another side of a blue card.

Share your results: scan the QR code to upload your score and a photo of your favorite create-your-own card!

Step 4: Test

How well does your library reflect the values you created during the earlier steps?

The budget cards challenge the team to reflect back on what they’ve created on the board. The team will draw a budget card and then use the remaining test cards (green) to cover the required number of program tiles (blue) on the game board.

By asking players to identify what’s most important to them only after all ideation occurs, it allows participants to approach design with the abundance mindset, rather than the scarcity approach where players have a limited number of resources to begin

with. It’s important to practice the abundance mindset because that’s when change thrives.

After gameplay is complete, each player can scan the QR code on the gameboard, and upload a photo of their favorite tile on the board. The QR code also allows viewer access to this online repository of create-your-own cards from other schools’ test play sessions.

Post-Game Play

The following themes emerged from the student gameplay that shaped the game's concept libraries. While there were overlapping themes, the needs and solutions that varied greatly from school to school based on the unique circumstances and student experiences at each school.

A place to find and share your passions: Students described their ideal library as a place of discovery to spark their curiosity and discover new ideas.

A Technology-enabled Learning Hub: The integration of technology into the library was a recurring theme that represented a large spectrum of student need. Some student saw the library as a place that could promote equity through access wifi which some students wouldn't otherwise have access to. Others talked about it as a place to borrow cameras, laptops or other equipment to support their projects. On the other side of the spectrum, students saw the library as a multi-faceted tech-enabled exploration hub with AR/VR rooms, a tech prototyping studio or a place for immersive digital visualizations.

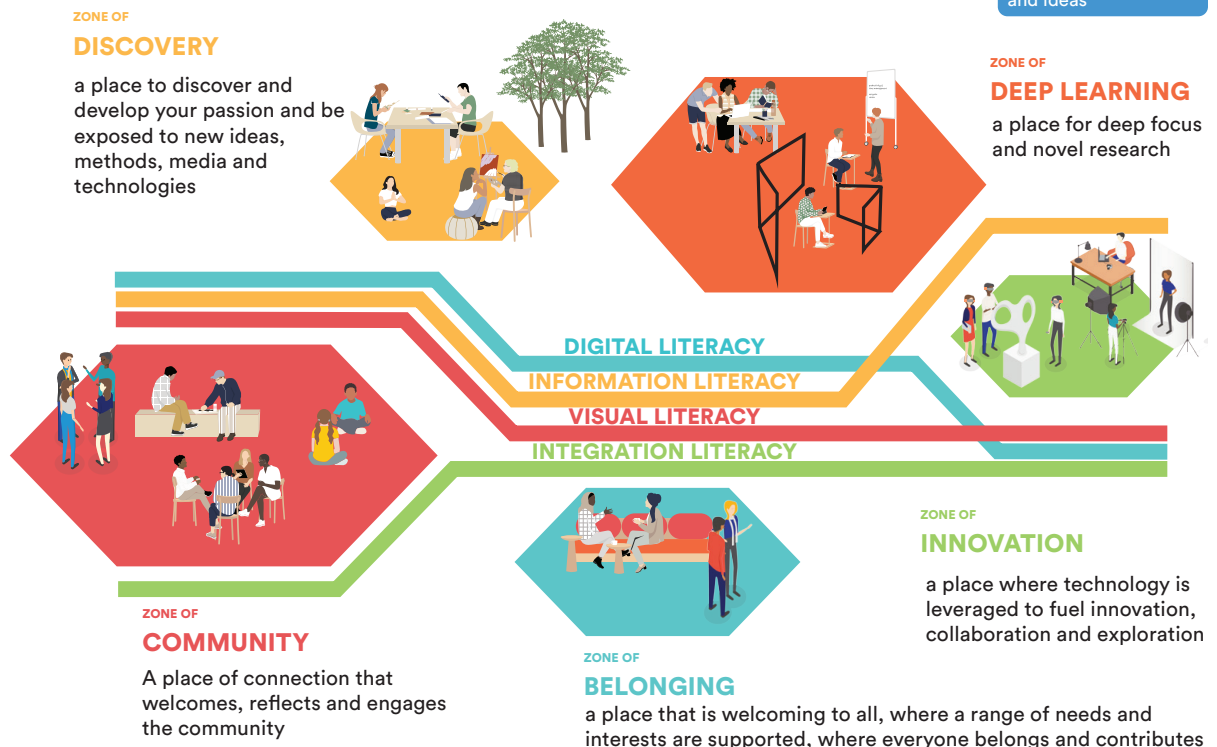
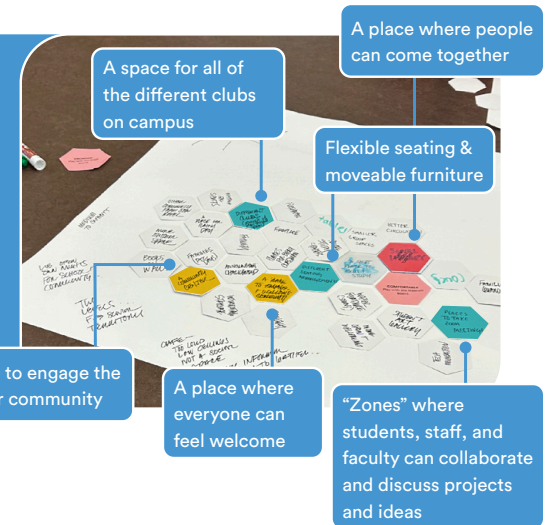
A Safe Space: Students talked about the importance of having a place to go where they knew they would be safe and feel welcomed.

A place for Collaboration: Learning is social. Many students talked about the library as a place to meet, study and collaborate on group projects with other students.

A place for Connection: The students talked about the importance of having a place to meet with outside groups or advisors, clubs, faculty and staff. They talked about community galleries and student galleries to share student work and ideas.

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Student ideas were collected into 6 **concept libraries** that could serve as models for the transformation of school libraries. These models integrated 4 types of **literacies** and were meant to support the development of a range of learning and life skills. The intent is for these concepts to serve as inspiration for schools and designers to shape their **own vision** of the K12 library.



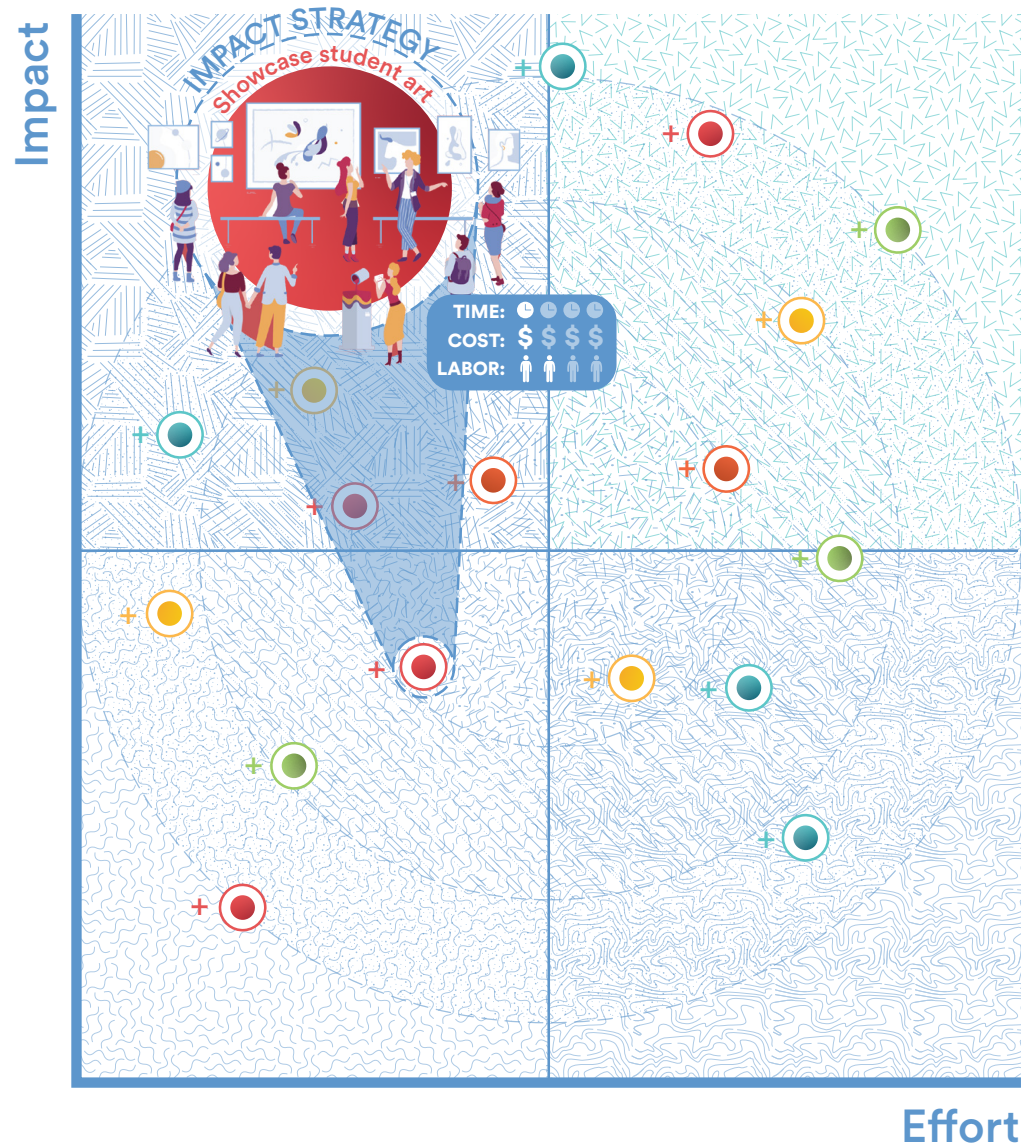
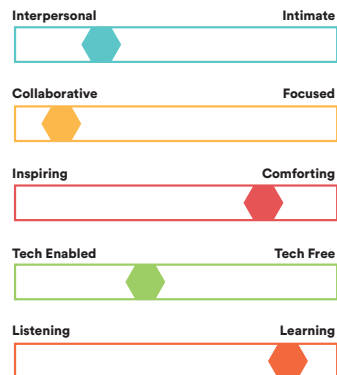
Impact Assessment

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A place for Community: Each school defines community a little differently. Some students talked about the library as a place to host community events and to bring in outside presenters or mentors. Others talked about it as a resource for unmet community needs such as wifi access, language resources, or Immigration information. There was agreement that the library should reflect the school's unique community through the collections it houses and what is displayed.

A Student Space: Many students talked about the desire to have a library environment they could adapt to suit their needs. In some cases, this was as simple as being able to move furniture or displays of student work. Others talked about reimagining the use and character of the space on a regular basis.

Right: Strategies for creating these concept libraries can be mapped on a scale of impact vs. effort to help chart a transformation plan. Each school can best reimagine their library in a way that meets their unique needs and budget.



Takeaways

Through this process we have been struck by the brilliance and creativity of our student collaborators. Empowering student voices in the design process is a powerful strategy in designing more effective and inspirational libraries.

We are encouraged by the conversations that have been started and the ideas that have emerged from our “Collections” game. We look ahead to the opportunity to share the tool with a larger audience and develop a way to collect and amplify the ideas that emerge from the game in a public digital dashboard.

We imagine the following next steps and are open to any ideas or feedback that could help make this tool more effective.

Creating a Dialog: By sharing the game we hope to gain feedback about how it works and opportunities for future development.

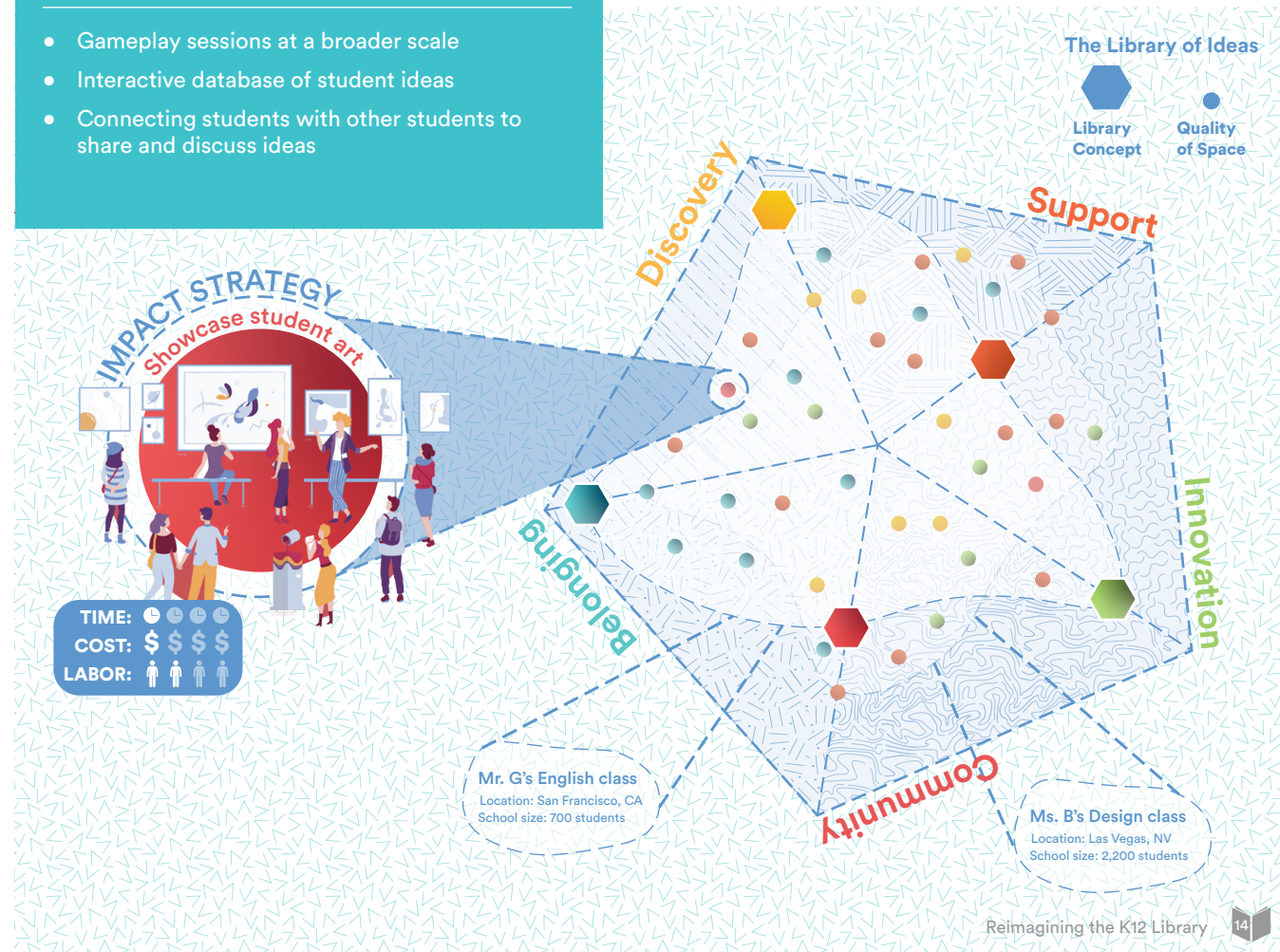
A Library of Ideas: The next step in the process is to build an interactive database of student ideas as a resource of student-driven ideas about the future library. This database would be an evolving resource to spark change. We see this as a living, breathing library of ideas.

Inspiring Transformation by Empowering Students: Our goal is to give students agency to reimagine their learning environments to inspire transformation of school libraries to better meet student’s needs. We hope to build a way of sharing student ideas that empowers student voices and allows them to share ideas with each other. This empathy-building tool, will allow students and designers to understand a range of student needs and experiences.

Through this process, we have seen first-hand the power of the design thinking to emerge ideas and build a dialog. We have seen even small student-driven modifications have a transformative impact on the library experience. We are inspired by the potential of elevating student ideas and giving them agency in the design process.

Future Goals

- Gameplay sessions at a broader scale
- Interactive database of student ideas
- Connecting students with other students to share and discuss ideas



Team Profiles



Emily Bello

Senior Designer

I am a designer with a passion for creating inspiring educational environments and for crafting creative and innovative design processes. Specializing in stakeholder engagement, programming and early phase concept design, I believe that the best design is human-centered and emerges from a culture of curiosity and discovery.

Education

Masters of Architecture,
Columbia University
Bachelor of Arts in Architecture
University of California, Berkeley
DIS Copenhagen

My Favorite Class/Subject:

Archeology of East Asia,
Japanese Urbanism



Charlotte D'Acierno

Designer

As a designer, I enjoy working with creative teams and taking on responsibilities in graphic design and the fabrication of material, physical prototypes. I bring to my work a standing commitment to what the feminist historian Donna Haraway has called “response-ability”—the ability to respond to advance social and environmental justice through the agency of design.

Education

Masters of Architecture,
MIT
Bachelor of Arts in Chemistry
Harvard University

My Favorite Class/Subject:

History of the Soviet Union,
Biology



Lalyn Yu

Research Specialist

I believe in using our profession and expertise to work for less powerful constituencies in the city. Design should be rooted in community-led practice and activism – as a researcher, I am interested in ways to meaningfully activate and engage lived experiences in design and urban planning, especially centering marginalized voices who have been historically excluded from the decision-making process.

Education

Bachelor of Science in Civil Engineering
University of California, Berkeley

My Favorite Class/Subject:

Sustainable Aviation and Infrastructure
Contemporary Urban Dynamics

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