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Co-designing Prototypes for Future Learning Spaces: A Field Guide for Scaling Future Learning Spaces Innovation in the Philippines

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Table of Contents

Introduction

In its National School Opening Day for the school year 2022–2023, the Philippines welcomed 28 million basic education learners[1] back to the classroom along with approximately 1.2 million Department of Education (DepEd) personnel in more than 60,000 public and private schools. We are indeed dealing with a volatile, uncertain, complex, and ambiguous (VUCA) environment. The Philippines suffers natural and man-made vulnerabilities such as typhoons that occur throughout the year, earthquakes, and more recently, the coronavirus disease 2019 (COVID-19) pandemic. These challenges necessitated the establishment of the Education Futures Program, especially during the height of the COVID-19 pandemic, when DepEd introduced its Basic Education Learning Continuity Plan. While the plan was an immediate response to the pandemic, DepEd recognized at that time the urgent need to "future proof" education. To future proof education in the Philippines, DepEd will have to improve its capacity for futures thinking. This *Field Guide for Scaling Future Learning Spaces Innovation in the Philippines* provides a framework for introducing the concepts of futures thinking and future learning spaces to education stakeholders. It presents some practical steps through the design-thinking process to develop a locally contextualized prototype of a future learning space. The scale-up guidebook is presented in practical and simple terms to benefit both those who have prior knowledge of futures thinking and those who do not.

Background

Technical Assistance to Philippines DepEd is a 2-year U.S. Agency for International Development (USAID) Mission buy-in under All Children Reading–Asia (ACR–Asia). ACR–Philippines is part of the ACR–Asia program implemented by RTI International across the Asia Region.

ACR-Philippines helps DepEd improve reading outcomes for primary learners, with a focus on increasing impact, scale, and sustainability. The activities directly contribute to USAID's education goal to improve early grade reading skills for 100 million children through the provision of technical and logistical services to USAID/Philippines, building the capacity and leadership of DepEd to support high impact early grade reading programs through evidence-based, actionable research and targeted training programs.

In response to the need for futures thinking in education, for readiness to confront the rapid changes, challenges, and opportunities of the future, the former Secretary of the Department of Education introduced the Education Futures Program, which was directly under her supervision. The Education Futures Program is anchored on the following: (1) immediate term: Basic Education Learning Continuity Plan (BE-LCP) in the time of COVID-19; (2) near term: *Sulong Edukalidad*; (3) medium term: Basic Education Development Plan 2030; and (4) long term: education futures.

Capacity-building for the safe return to classroom instruction and preparing for the future of learning took on increased importance in the final year of the ACR-Philippines program (2022). In support of the DepEd initiative to ensure foresight in education planning, RTI and USAID embarked on a set of activities for "Co-creating Learning Spaces for Improved Early Language Literacy and Numeracy in the Philippines." The activity involved a series of capacity building and technical support activities to national, regional, divisional, and school level education officers. This included training and support to selected school division offices (SDO), each working with one collaborating school in the SDO, to develop prototypes that spell out local priorities and processes for establishing targeted "future learning spaces for early grade learners".

The current administration has realized the importance of investing in the long term for education futures, and because of this, the education futures program is now positioned within the DepEd's Human Resource and Organizational Development Department. In order to guide DepEd in its new leadership and management transition on education futures, ACR-Philippines prepared this *Field Guide for Scaling Future Learning Spaces Innovation in the Philippines*. We prepared this scale up field guide to keep the

1. DepEd welcomes over 28M enrollees for SY 2022-2023 | Department of Education

momentum for futures thinking and innovation for futures learning spaces high and at the same time provide the opportunity to spread these concepts and practices across the nation. The guide focuses on the fundamental knowledge and skills needed for SDOs and schools to co-design innovations for future learning spaces using design thinking.

Purpose

The purpose of this field guide is to introduce concepts, tools, and group activities that can be used to guide educators in co-creating locally defined prototypes of future learning spaces that will not only enhance social, emotional, and academic learning for all Filipino learners, but will ensure that learners flourish and develop a sense of agency, proactive citizenship, and work readiness for a successful future. The guide was created from selected content, exercises, and group processes that were introduced in the Leaders in Futures of Education (LIFE) course (June 20–July 19, 2022) and the Prototyping Future Learning Spaces Workshop (August 15–19 2022), which were attended by DepEd central office representatives, representatives from three regional offices (i.e., Region III: Central Luzan; Region VI: Central Visayas; and the Cordillera Administrative Region), and prototyping teams consisting of representatives from five SDOs—Tanauan City, Tuguegarao City, Pasig City, Caloocan City, and Quezon City—and at least one cooperating school in each SDO. This field guide provides a framework for DepEd partnerships across the country to begin their prototyping journey for co-designing future learning spaces for Filipino students.

Users

The primary users of this field guide are the DepEd leaders at the national, regional, divisional, and school levels, who will be responsible–collectively–for diffusing the conceptualization and capabilities of local education teams nationwide to design and implement innovative future learning spaces prototypes that are responsive to the learning priorities, learner interests, and contextual challenges of the school community. The secondary users of the guide will be the future learning spaces prototyping teams formed locally that—after being oriented to the concepts and processes of futures thinking, future learning space innovation, design-thinking, and prototyping processes—will co-design and test locally driven prototypes of future learning spaces, grounded in design-thinking processes.

Content of Field Guide

The *Field Guide for Scaling Future Learning Spaces Innovation in the Philippines* introduces the user to a general conceptualization of futures thinking and the application of futures thinking to education in the Philippines. The primary content of this field guide is the presentation of the foundational knowledge and capabilities required for local education teams from schools and SDOs to develop, test, and implement prototypes of locally co-designed futures learning spaces. To this end a variety of topics, including futures thinking, design thinking, and the prototyping process are formally introduced, followed by an illustrative example of an exercise which facilitators can use to engage each local design team as they progress through their "prototyping journeys," step by step.

Guidance on Use of Field Guide

We anticipate that the DepEd leadership responsible for scaling the co-creation of futures learning spaces prototypes nationwide will use the field guide for two purposes: (1) as a "go-to-guide" for developing—as a collective future learning spaces leadership team—a training-of-trainers (TOT) curriculum to train a cadre of trainers on the content and facilitation methods for promoting local teams in co-designing and implementing future learning spaces, and (2) as a reference for regional facilitators to use as they support local teams as they engage in their prototyping journeys.

The Education Futures Program of the Department of Education

Prior to the COVID-19 crisis, DepEd formed the Education Futures Programme (EFP), which was encompassed within DepEd's Basic Education Development Plan (BEDP) 2030 and the Sustainable Development Goals (SDGs) 2030 Agenda. In July 2021, the Education Futures Program and the Office of the Secretary of Education – with technical assistance from Professor Sheryl Lyn C. Monterola, Director of the Institute of Science and Mathematics, University of the Philippines – developed a concept note titled, "Co-creating Learning Spaces for the Future." The overarching goal of the Education Futures Program and the "Co-creating Learning Spaces for the Future" concept note was to establish a widespread understanding about futures thinking in the education context and the imperative for reimagining and co-creating learning spaces in such a way that all Filipino learners have equitable opportunity to "become self-directed, work ready, proactive and to flourish" in an ever-changing societal and learning climate.

The Education Futures Program has the following objectives:

- **To formulate out-of-the-box solutions to basic education's pressing problems and challenges based on research and consideration of global trends and best practices;**
- **To adopt multidisciplinary approaches and multistakeholder collaboration, and integrate scenario-building to policy making and program development;**
- **To advocate its insights, analyses, and recommendations grounded on futures thinking in the work of other DepEd offices, bureaus and services, and units, and other relevant government agencies; and**
- **To engage in capacity-building, research and development, generation of knowledge products, and communication and advocacy for futures thinking.**

What Is Futures Thinking?

Futures thinking is an approach geared towards identifying long-term challenges and issues for policy development.

– Atty. Nepomuceno Malaluan, Former Chief of Staff of the Secretary and Supervising Undersecretary, Education Futures Program, January 25, 2021, International Day of Education

Futures thinking (the theory and methods) and foresight (the practical application) are a set of approaches and tools designed to help their users identify emerging issues, negotiate uncertainties, articulate scenarios, develop a common vision of a desired future through wide participation, introduce innovation, and design robust policies and strategies.

– Asian Development Bank, 2020[2]

According to the Orgnisation for Economic Co-operation and Development (OECD),[3] futures thinking offers ways of addressing the future. It illuminates the ways that policy, strategies, and actions can promote desirable futures and avoid those we consider to be undesirable. It is about stimulating strategic dialogue, widening our understanding of the possible, strengthening leadership, and informing decision-making.

Futures thinking involves:

- **Practicing collective reflection on change in the next 10, 15, 20, or so years**
- **Using multidisciplinary approaches to examine transformation through the dynamics and interactions that create the future**
- **Looking forward into an unpredictable future, and considering a range of possible futures, asking:**
  - **"Which of these are most desirable?"**
  - **"What is possible?"**
- **Applying a variety of methods and tools (e.g., quantitative methods, qualitative inquiry, dialogue tools) that illuminate what is possible, the choices and decisions that need to be made, and the assessment of alternative actions.**

***Futures thinking* enhances the capacity to anticipate change, which in turn helps systems grasp opportunities, cope with threats, develop creative strategies, and choose pathways of development. Rather than simply responding to change, education leaders and organizations can anticipate and deal with it proactively.**

2. The Asian Development Bank (2020).Futures Thinking in Asia and the Pacific: Why Foresight Matters for Policy Makers. Manila, Philippines. The Asian Development Bank. https://www.adb.org/sites/default/files/publication/579491/futures-thinking-asia-pacific-policy-makers.pdf
3. Organization for Economic Co-operation and Development (OECD). Schooling for Tomorrow Series: The Starterpack, Futures Thinking in Action. Centre for Educational Research and Innovation, OECD. https://www.oecd.org/education/school/38981492.pdf

Activity: Reflection on Our School in the Future

Time: 20 minutes

Preparation: Practice the Guided Reflection (below)

Materials: The Guided Reflection: A School of the Future

1. Explain to the participants that this activity gives them a chance to develop a vision of a "school of the future."

2. Ask participants to:
   a. Position their chairs so that they have enough space in front of them to stand up from their chairs and take two steps forward.
   b. Sit quietly in their chairs, close their eyes, and focus on their breathing for just a few seconds.

3. Read the guided reflection (*see next page*) slowly, clearly, and in a calm, even voice, pausing after each statement.

4. Plenary Discussion:
   a. Ask for volunteers to share how they felt about the guided reflection. Ask for one or two people to share their vision. Make sure that participants mention:
      - The role of the teacher
      - The role of community
      - What students are learning and how they are learning
      - Where students will be learning—the physical learning spaces
      - How teachers are interacting with their students
      - How teachers are interacting with the parents and/or guardians of their students
      - The way students and teachers "feel" in these future learning spaces
      - The role of leadership and education governance
      - New priorities in education systems based on what students need in their future

   b. Ask for volunteers to mention the ways that their schools for the future could make a difference in:
      - Lives of students
      - The community and region
      - The nation

   c. The facilitator mentions items from the list under #1 above that may not have been addressed.

ACTIVITY

Guided Reflection: "A School of the Future"

a. First sit quietly and think about what you believe will change in the next 10, 20, and even 50 years—in society and culture, the physical environment of the country, and the types of jobs and skills that will be needed in this political economy.

b. Keeping your eyes closed, visualize a door before you. The door is closed. Imagine that on the other side of the door there is a school, curriculum, community, and administration 30 years into the future. How would you imagine the following in your vision for education 30 years from now:

   - The role of the teacher
   - The role of community
   - What students are learning and how they are learning
   - Where students will be learning—the physical learning spaces
   - How teachers are interacting with their students
   - How teachers are interacting with the parents and/or guardians of their students
   - the way students and teachers "feel" in these future learning spaces
   - The role of leadership and education governance

c. Sit and think more about your vision of a school for the future. This place you have imagined waits for you on the other side of the closed door. (Give the participants 10 seconds to sit quietly as they visualize this).

d. Now, when you are ready open your eyes. (Pause until most have opened their eyes). When you are ready, stand up and take one step forward toward the closed door. Open the door. What do you see?

e. Now take one more step forward and enter this place that you have imagined. How does it feel to be in your school of the future? While you are there, think about how this wonderful place for learning could make a difference in the lives of students. How could your school of the future make a difference for the community, region, and nation?

f. Sit back down. Take some seconds to reflect on your vision. Write down what you remember about your vision, what you dreamed that a school would look like 30 years from now. Write down how the school might change the lives of students, the community and region, and the nation.

The Philippines Department of Education Vision of Future Learning

Exhibit 1: Philippines DepEd Vision of Future Learning

Credit: Reproduced with permission from DepEd.

DepEd developed a vision of future learning and future learning spaces, applying a learning ecosystem framework (***Exhibit 1***). The Philippines Vision of Future Learning Spaces places the Filipino learner at the center of the framework, with the role of innovative future learning spaces as a pathway by which all learners will flourish in basic education, develop agency, express proactive citizenship, and transition successfully to adulthood and the workplace. These targeted learner traits and capabilities are aligned with the priority learner traits and capabilities described in the DepEd Basic Education Development Plan (BEDP) 2030 formulation.

The bottom section of this figure presents the learning ecosystem. All elements of the learning ecosystem shown in this figure hold potential for contributing to the realization of these learner outcomes. All elements of the learning ecosystem have a role to play in co-creating reimagined learning spaces for Filipino learners.

Activity: Reflection on the Philippines Vision of Future Learning

Time: 30 minutes

Preparation: Post the three topics and talking points on the wall

Materials: Topics and talking points

Ask the participants to sit in groups of 4–6 persons and assign each group one of the following group discussion topics and related discussion points:

1. Learning Spaces of the Future

- Co-created, reimagined learning spaces for Filipino learners
- Physical and remote learning spaces
- Formal, non-formal, and informal learning spaces

2. Characteristics of the Filipino Learner

- Agency
- Proactive citizenship
- Work readiness
- Human flourishing

3. Learning ecosystem

- Industries
- Local Government
- Non-government Associations
- Libraries
- Museums
- Communities
- Home
- Media
- Professional Associations
- Local Student Programs

Talking Points

Learning Spaces

What do each of these "Learning Spaces" mean?

As a group, think and write down an example for each.

Characteristics

What do these characteristics of a Filipino learner mean?

How would a school of the future support the Filipino learner to develop these traits?

Learning ecosystem

How could the elements of the learning ecosystem contribute to education?

Consider formal and informal contributions

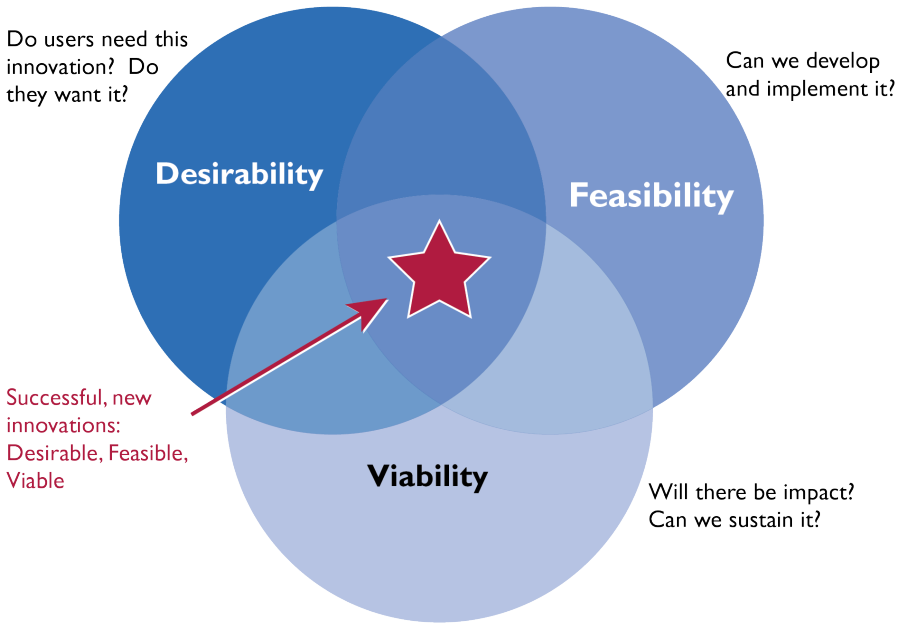
Guide to Prototyping Future Learning Spaces

Introduction to Prototyping Future Learning Spaces: A Design-Thinking Methodology

This field guide is anchored in *design thinking*, a methodology that underscores the centrality of service to people—human-centered design. Thus, there is no single answer to the question "*What is a future learning space?*" Future learning spaces materialize in many forms depending on the individuals who will be using the learning space innovations, which will vary according to local needs and education priorities. The criticality of future learning spaces being locally driven and co-created cannot be overstated. As a human-centered design process, the prototyping of future learning spaces not only entails innovations in physical learning spaces but addresses relevant shifts in mindset and behavior. The design-thinking process provides a creative lens from which educators, collectively, can consider avenues for improving the social, emotional, and academic learning outcomes of all learners from multiple perspectives, addressing immediate and potential future barriers to learning that are unique to the local context.

When developing any new innovation it is crucial to understand the impact from multiple angles. Successful innovations have been able to achieve a balance between desirability, feasibility, and viability. *Desirability* is the key ingredient for ensuring a user-centric approach. The prototype is driven by the needs, interests, and desires of the user. *Feasibility* looks at the technical aspect of the idea, taking into account the required capabilities of the individuals in the organization, access to resources, and available leadership to develop the innovation and move it forward to fully realize and sustain it. The last area we will be looking at is *viability*. In business viability means aligning the business model to the innovation. Would your target customer want to pay for the innovation? Is there profitability in the product, both now and in the future? Would you get a return on your investment? In designing future learning spaces, ensuring viability would involve developing future learning spaces that are aligned with DepEd priorities, such as those outlined in the BEDP 2030. Those priorities are meant to ensure that any spaces meet the immediate and future needs of the Filipino learner, are responsive to the challenges of the learning context and build education resilience, and are sufficiently dynamic to ensure sustainability. ***Exhibit 2*** shows the intersection of these aspects of a successful innovation.

Exhibit 2: Successful Innovations Are Desirable, Feasible, Viable



In the past, in a variety of sectors, such as business, program design, and biotechnology, for example, innovation prioritized feasibility, focusing on the technical aspects of innovations. When these innovations entered the market and were being sold, however, designers often found out that there was not a lot of interest or demand for the product. The innovations were not user-focused. They were designed without sufficient research validating the needs and interests of the intended user. As a result, the products developed were not always aligned with what the targeted users needed or wanted. Deeply understanding the full range of interests and needs of the intended users of new products—in our case, co-designed future learning spaces—is a critical first step in designing a successful innovation. This user-centric approach is where design thinking starts.

Co-creating learning spaces for the future and benefit of the Filipino learner requires a variety of resources, including but not limited to the commitments of individuals that make up a local core design team (e.g., school and SDO leaders) and an expanded team of stakeholders across DepEd and members of the larger school community (e.g., Regional Office, Central Office, Local Government Unit representatives, students, parents and guardians, and other community members). In addition to the human resources for a "desirable, feasible, and viable prototype design", resources for implementation need to be considered, including but not limited to marketing to secure interest, buy-in, and contribution; procuring material resources and/or adapting physical spaces; and securing the required funds.

Before we formally introduce design thinking, we have a few illustrative activities that underscore some important elements of design thinking.

Activity: Attributes of an Effective Learning Space for the Future

Time: 30 minutes

Preparation: (Optional) Prepare a large copy of the Philippines Future Learning Spaces Design Framework (see Exhibit 3) and place on wall

Materials: Post-its/sticky notes, Philippines Future Learning Spaces Design Framework (below)

Give participants 7–10 minutes to think about and write down what they personally feel are key attributes of an effective future learning space.

- Remind the groups that there are no wrong or right answers but to keep these attributes in mind and hold on to their written comments to refer back to those comments as they begin to co-design a future learning space.

Ask groups to take another 5–10 minutes to share with each other their individual ideas, taking note of common elements and diverse perspectives. Ask the groups to:

- Identify their "top three" attributes of an effective learning space for the future
- Place each key attribute on a separate sticky note
- Post the sticky notes on a section of a wall titled, "Attributes of an Effective Learning Space for the Future."

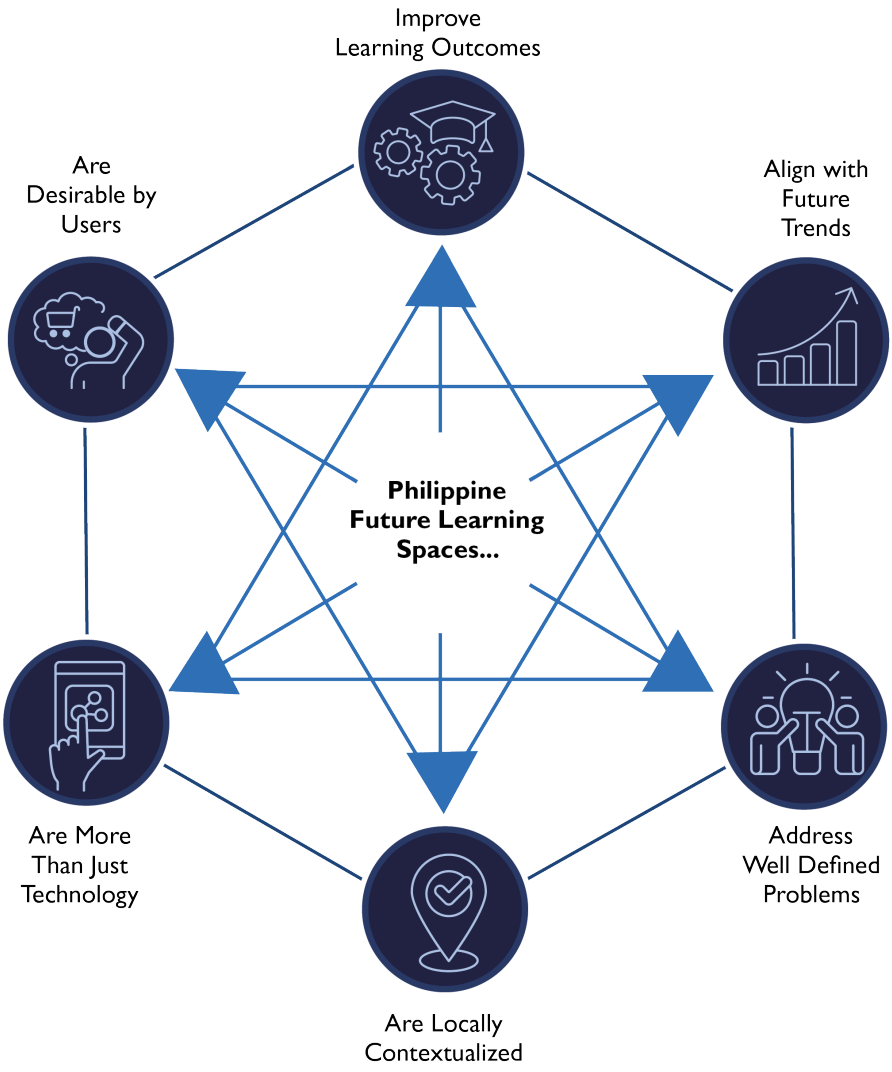
When all the sticky notes have been placed on the wall, invite participants to take a gallery walk, taking notes as they review the postings.

Plenary Discussion:

If possible, a large copy of the framework shown in Exhibit 3 could be placed on the wall in advance. The groups could alternatively add their sticky notes of "3 top attributes" directly onto the copy of the framework posted on the wall.

Show ***Exhibit 3*** and ask the group if the attributes they reviewed during the gallery walk fell into one or more of the categories that constitute the *Philippines Future Learning Spaces Design Framework*. Mention each category and ask volunteers to share the attributes that would fall into each category. If there are categories in which none of the participants' attributes were appropriate, ask for volunteers to think of one or more attributes of a future learning space that would fit in this category.

Exhibit 3: Philippines Future Learning Spaces Design Framework

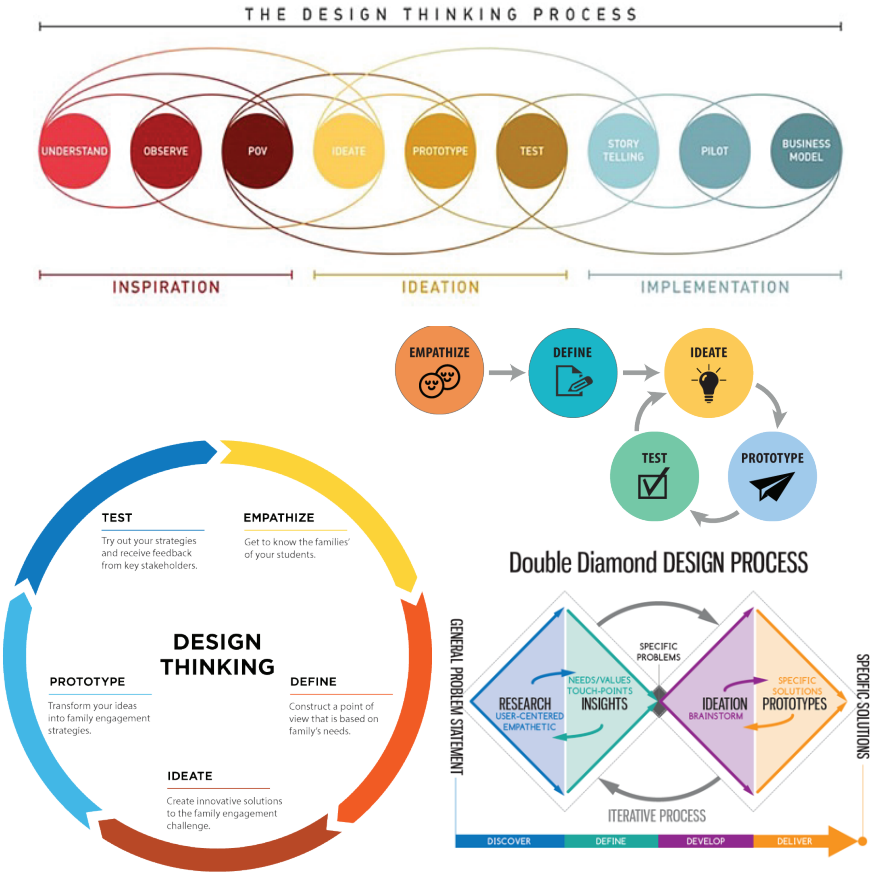


Introduction to Design Thinking

Design Thinking Is Human-Centered

Design thinking is the discipline of developing solutions in the service of people. The key phrase here is *in the service of the people*. Human-centered design is a process that puts real people–the intended users of a new product or innovation—at the center of the design process. This ensures that design teams develop and innovate solutions tailored to the needs of the individuals who will be using and benefiting from the innovation. There are many versions of human-centered design frameworks, all of which lay out the process of design thinking. A variety of these are shown in ***Exhibit 4***.

Exhibit 4: Design Thinking Frameworks



Images from Top to bottom:

Hobcraft, P. (2018, October 23). *An introduction to design thinking: Methods and frameworks*. HYPE Innovation Blog. https://blog.hypeinnovation.com/an-introduction-to-design-thinking-for-innovation-managers

Gousset, D. (2021, July 10). *Design thinking process*. Human Skills. https://humanskills.blog/design-thinking-process/

Source of graph: perspect.it.

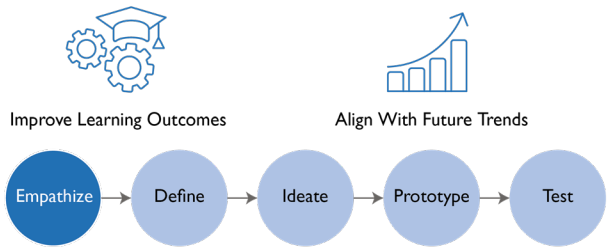
Moran, K. (2021). ***Design thinking: Study guide***. Nielsen Norman Group. https://www.nngroup.com/articles/design-thinking-study-guide/

Service Design Vancouver. (n.d.) The double diamond – service design process. http://servicedesignvancouver.ca/resources/toolkit/

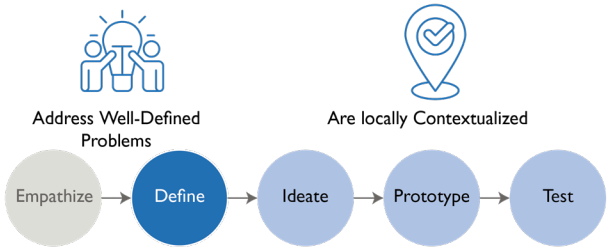
All human-centered design frameworks, including those presented in ***Exhibit 4***, are based on a deep understanding of the user, developed through research, followed by a process of ideating a solution, prototyping that solution, collecting feedback on the prototype from end users, and modifying the design accordingly. Thus, the process is dynamic and progresses iteratively based on user feedback.

Design-Thinking Processes Involve Five Steps

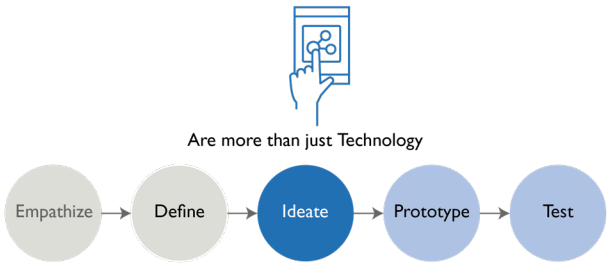
Most design-thinking models, as can be seen from the examples above, involve five key steps. These are: **(1) Empathize; (2) Define; (3) Ideate; (4) Prototype**; and **(5) Test**. The following brief introduction to the design-thinking process demonstrates how each step of the design-thinking process is human centered and user-centric.



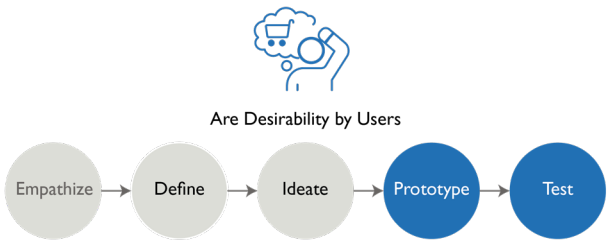
Stage 1. Empathize. Through empathizing with our users we grow our understanding of their problems. We can ensure that the future learning spaces that we create will work to improve learning outcomes for students, as well as align with future trends.



Stage 2. Define. As we grow our understanding of our users, we will be able to better and clearly define their challenges and needs. These needs and problems will be locally contextualized to individual region, province, community, and/or institution, allowing us to begin ideating solutions.



Stage 3. Ideate. As we already have clearly defined and locally contextualized problems, we can begin to ideate solutions. We will think about how our learning space of the future will incorporate more than just a technological solution. When thinking of solutions, we must also consider how the physical space, as well as pedagogy, will influence the learning space, and how these three ideas (pedagogy, technology, and space) interact with each other.



Stage 4. Prototype and Stage 5. Test. We then begin our prototyping module, creating a visual of our idea and solutions. This visual representation will enable us to quickly test and gather feedback from our users that will allow us to create better prototypes and eventually build our future learning spaces.

Design Thinking Processes Are Non-linear and Iterative

In addition to the similarity in the steps taken, design-thinking processes critically involve feedback loops, which represent how what is learned and created in one step or process informs both the processes following that step as well as the processes preceding it. These feedback loops allow for different elements of the process to adapt or be modified because of this feedback from prior or subsequent elements. In some models, as shown in the design-thinking illustrations above, the feedback is directed or directional (i.e., note the arrows in the illustrations) while others more generally underscore that all the processes in design thinking are related and interdependent. These feedback loops underscore that design thinking is not only user-centric, but also non-linear and iterative. If the design process maximally leverages the learning that takes place as a result of these feedback loops, the design team will be able to create and test ideas quickly.

Design Thinking Is a Collaborative Process

What is not made explicit in these illustrations of the design-thinking process is the critical element of collaboration. Integral to innovation is the expectation of collaboration. Though not made explicit in the set of illustrations, all design-thinking processes are co-design processes. Prototyping is a collaborative process, which allows the multiple voices and perspectives of users, developers, and stakeholders to be considered throughout the prototyping process. Identifying and enlisting the interest of a broad set of collaborators, from a diverse core team to a wider set of stakeholders, is a critical activity to engage in prior to starting the "prototyping journey."

Application of the Design-Thinking Process to Future Learning Spaces Innovation

The design-thinking process introduced above is the foundation for the prototyping framework presented in this field guide. The process for developing prototypes of future learning spaces, like any design-thinking process, is fundamentally collaborative and human-centered and depends on the feedback and learning that takes place during each step of the prototyping journey: empathizing and understanding others and the situation, defining issues to be addressed, ideating solutions together, developing a future learning spaces prototype, and testing. The process is non-linear; the prototyping team continuously adapts and learns based on feedback that takes place at each step of the prototyping journey. This is thereby an iterative process involving *continuous* learning.

In the following sections, we look more deeply into each element of the design-thinking process. As we go through the prototyping process, each activity and module will build on the insights and activities preceding it.

Design Thinking Stage 1: Empathize

WHAT: Research your user's needs

WHY: In order to create desirable products and services, you must first understand the users. By setting aside your own assumptions, you can begin to gain insights into what really matters to your users and the problems they have.

"It's not 'us versus them' or even 'us on behalf of them.' For a design thinker it has to be 'us with them.'"

– Tim Brown, CEO and President of IDEO

In Stage 1 of the innovation design process—Empathize—local design teams engage in a "learning journey" to develop a deep understanding about the needs of the intended users in the to-be-developed future learning space. The learning journey starts with the generation of a set of key questions that the design team wants to answer. For example, the team may start with a small set of broad questions and circle back together to develop more specific questions that dig deeper into the issues arising in the first round. The learning journey will involve reaching out to users, observing them in the current learning spaces, interviewing individuals or groups of individuals, and considering learning or equity gaps based on national and local education priorities.

It is important to "go deep," seek to understand not only the academic learning needs of learners, but also the psychosocial needs, feelings, and mindsets about learning and related barriers. For example, learners may mention bullying as a barrier to their learning, and the team will want to take this further to understand what the basis is for bullying and how it interferes with the learners' experience in school and to explore ideas about how this could be changed. The team can apply this process to developing an understanding about what students and other education actors (e.g., teachers, parents, and community members) think innovative learning spaces might "look like" in general and to explore some of the specific challenges mentioned by learners.

During the Empathize Stage (**Stage 1**), members of the design team may want to remind each other that it is important to set aside personal assumptions to open their minds and hearts to what really matters to learners as well as teachers, parents, and other community members. As they engage with these stakeholders, the team also gains insight into what these individuals imagine the challenges of learning in the future to be, which insight is valuable in informing the design. Design teams should be reminded to engage students' voices deeply. Students have innovative ideas about how learning could take place in the future.

Design Thinking Stage 2: Define the Problem

WHAT: State your User's Needs and Problems

WHY: By analyzing and synthesizing observations, you can define the common themes and understand the core problems your users experience. Developing a 'how might we' statement, which outlines the challenge you wish to address, will guide you through the rest of the design process.

The Define Stage (**Stage 2**) focuses on articulating the problem. Surprisingly, articulating a problem statement is one of the most difficult processes of innovation. Often design teams take the problem for granted. They may chat about it briefly and assume everyone on the team knows and agrees on the problem, and with these often-implicit assumptions, the teams dive straight into creating the solution. It takes a lot of time to formulate and analyze the problem. Taking the time to articulate the problem statement clearly and in writing is important, though it is not easy. This process is a crucial element of the design-thinking process.

Activity: Identifying the Problem

Time: 15 minutes

Preparation: Hand out copies of the Steps for Identifying the Problem Tool

Materials: Handouts

The tool shown in ***Exhibit 5*** presents 5 steps that can be taken to help participants clarify and articulate their problem.

Ask participants to:

- Read through the steps in the tool and the illustrative examples of problem statements and tips that are included.
- Begin the process of identifying a problem.
- Take some time and mental space to start your problem identification, using the tool in ***Exhibit 5*** to guide the identification prioritization, and articulation of the problem.

Exhibit 5: . Steps for Identifying a Problem

1 **Start with what you know.**

Reflect on what you already know about the problem. This is a good time to collaborate with people from different departments and sectors to get a better idea or scope of the problem.

2 **Gather information.**

Try exploring your problem further by gathering information. You can do this through interviews, research, or a combination of both. If, for example, your problem is a process, it might be good to take a look at where it takes place and under what conditions. You can also get feedback on how your co-workers, stakeholders, or community feel about the problem.

3 **Define problem in terms of needs, not solutions**

Once you have an idea of the problem and have gathered information about it, you can try to start defining your problem. We will introduce some tools later that you can use to define your problem statement. A key tip is to focus on the need and avoid stating a solution. For example:

a. How do we get each student access to a laptop to facilitate learning and participation in classes as well as group discussions?
b. How do we enable increased student engagement and participation during classes to drive better learning outcomes and a feeling of belonging?

In (a), solutions would focus on how to get students a laptop, as the problem was focused on the solution: a laptop would increase student's outcome and participation. This does not leave a lot of room for creativity or exploring other root causes of the problem.

By contrast, (b) would allow the team to further explore what impacts belonging and learning outcomes—and a variety of ideas to address those impacts.

ACTIVITY

4

Root causes of the problem

When you say learning outcomes of students are low, ask yourselves why they are low. Is it lack of support (from the school or parents), lack of nutrition, or low interest in the topic? Delving deeper into the causes of the problem can help discover where the problem truly lies, and that will help create targeted solutions. Some guide questions that might help you in identifying the root causes:
- What are the causes of the problem?
- What is the impact of the problem?

Think about people, places, equipment, products, processes, resources:
- Who cares the most about this problem?

In addition, you might want to do the "5 why's" exercise:
- Just keep digging deeper by asking why (like many young students).

5

Avoid Placing Blame

An important thing to remember is that we do not ever want to point fingers or place blame when coming up with our problem statement. Placing blame will most likely alienate key stakeholders and hinder problem-solving and implementation. For example:

a. Parents are unable to continue to support learning outside of school, resulting in slower and lower learning outcomes.
b. How do we extend the learning space from school to home? How do we capacitate learners and parents to continue the learning process outside the four walls of the classroom?

If you use problem statement (a), parents could feel attacked, and it would be difficult to work with them through the process. Statement (b) does not place blame, but looks toward capacitating or extending learning spaces to increase learning outcomes.

Double Diamond Method: Diverge and Converge

The double diamond method is a way to clarify the problem. This method calls for teams to first *diverge*, identifying many challenges and problems in current learning spaces and outcomes that could be addressed in the future learning spaces. After this, the teams then converge, narrowing down the priority problems to focus on. This does not mean that the other problems get thrown aside. The full set of problems identified in the *diverge* process can be kept for future projects or future iterations of the prototypes. Having one clear and defined problem leads to the creation of effective solutions that can be measured objectively for process monitoring and evaluating longer term impacts.

Activity: Structured Brainstorming on Problems

Introduction. In this activity, participants will think about barriers to learning or other challenges or problems that deter learners from flourishing in basic education. We focus the problem ideation around the five pillars of the BEDP 2030: Equity, Resilience, Well-Being, Access, and Quality.

Part 1: Ideating challenges and barriers to learning related to each of the five pillars from the BEDP 2030

Time: 30 minutes

Preparation: Prior to this exercise, place large sheets of paper on the walls around the workshop room. On each paper print one of the five pillars of BEDP 2030: Equity, Resilience, Well-Being, Access, and Quality.

Materials: Post-it notes/sticky notes, markers, sheets of papers for wall

Instructions:

1. Tell the participants that they will be working together to answer the following question for each of the five pillars of the BEDP 2030. "For Basic Education, what are the challenges, barriers to learning associated with Equity? Resilience? Well-Being? Access? Quality?"
2. Assign each group one of the pillars of the BEDP 2030. Ask the groups to go stand by their assigned pillar labeled on the conference walls.
3. Give groups 5 minutes to think of potential problems associated with their assigned pillar, and ask the groups to write each of the different problems related to their assigned pillar on a separate post-it/sticky note. Then post the notes on the wall near the label.
4. After 5 minutes, the groups will rotate clockwise, moving to the next pillar and taking another 5 minutes to think of the problems related to this pillar, writing each one on a sticky note and placing the notes on the wall.
5. Continue these steps until every group has thought of problems for every pillar.

6. Gallery walk. Ask participants to take a gallery walk to observe the different problem statements that were generated for each pillar. Ask them to consider these questions:

   a. What problem ideas were most common within each pillar?

   b. Were there problem ideas that were common across pillars?

   c. Did any of the problem ideas catch your eye as being urgently important to address?

Plenary Discussion:

Invite volunteers to share what they observed in relation to each question.

Part 2: Problem Clustering

Time: 15 minutes

Preparation: No additional preparation needed

Materials: No additional materials needed

Instructions:

1. Assign each group a specific pillar.
2. Ask each group to review all the problems and challenges associated with that pillar.
3. After reviewing the posted problems, have each group cluster or group similar problems.
4. Ask the groups to review and discuss the problem clusters they created. If there are specific problems or challenges present in two or more clusters, they may add new post-its.
5. Remind them to think about the root cause! Ask yourself "why" and see if problems or challenges can be grouped under one root cause.

Turning Problems into Opportunities: *How Might We…?* Statements

We have spent some time clustering similar problems together, grouping the same or similar problems under one theme or banner. In this section we focus on shifting our mindsets in order to look at these problems as opportunities. We do this by creating *How Might We…* (HMW) statements.

HMW statements are powerful because they help design teams engage in creative and collaborative thinking and introduce a process that helps bridge problem ideation and solution ideation. The "*How*" of the HMW statement opens our mind by telling us we can consider multiple pathways to innovation and reminds us that we are still explorers without clear and concrete answers. The "*Might we*" of the HMW statement connotes that there are many ways to think about solutions and provides the pathway to bringing innovation into the design process. This process prepares design teams for thinking about the problem from multiple perspectives. Bring attention again to the "*We*" in the HMW statement and remind the group that this represents the crucial role of team collaboration in identifying and prioritizing problems and developing solutions, in our case, solutions that are expressed through learning spaces of the future. Using HMW already creates a subtle influence in our minds, making us more open, creative, and collaborative.

HMW statements can be drafted in different ways. We can amp up the good, focusing on what we want to grow and develop; for example, we can ask *HMW enable self-directed learning?* We could operationalize the barrier or problem by focusing the HMW statement on what is desirable versus what is undesirable, for example *HMW promote critical thinking over memorization?*

We can also explore future learning spaces that focus on a characterization of a learning space that is not desirable; for example, *HMW create future learning spaces without the internet or Wi Fi?* We can question the status quo and move beyond this as we design future learning spaces. For example, as schools are beginning to open after the COVID 19 pandemic school closures, and we have learned about new learning pathways, we may want to develop an HMW statement that underscores the shifting mindset, such as *HMW expand learning spaces through partnerships?*

Creating an analogy is also a great way to draft an HMW question, for example, *HMW make going to school as fun as going to Jollibee?* By questioning specific assumptions we can enhance clarity through comparison, for example, *HMW create future learning spaces that go to the learners instead of bringing learners to the space?*

Activity: Creating "How Might We…" Statements

Time: 20 minutes

Preparation: Place the problem statements generated from each team on single sheets (see example given in ***Exhibit 6***).

Materials: Post-its/sticky notes, markers

Instructions:

1. Take the 15 or more problem statements you have identified as a group.
2. For each problem write 1 to 2 *How Might We* statements.
3. Remember that when crafting HMW statements, we are still focusing only on the challenge and including any solutions just yet.

Exhibit 6: Developing HMW Statements for Each Problem

Problem Statement	HMW HMW

The following provide examples of HMW statements that can be used in case groups or teams get stuck. Sometimes teams simply need to see examples to get their creativity flowing.

HMW…

a. enable self-directed learning?
b. increase access to quality learning materials?
c. enable both students and teachers to learn?
d. foster work-readiness?
e. make schools children's favorite place to go in the community?
f. support mental health?
g. teach digital citizenship?
h. transform under-utilized infrastructure?
i. bring together students and business/community leaders?
j. connect students to the global learning community?
k. promote individualized learning?
l. create the next generation of entrepreneurs?
m. ensure schools, and children, are resilient to natural disasters?

Narrowing Focus of Innovation Through Prioritization

"Most of us spend too much time on what is urgent and not enough time on what is important"

– Stephen Covey

We will be speaking repeatedly about prioritization in prototyping, from problem-identification to solution ideation to drafting the actual prototypes. We have reached the *converge* part of our problem identification.

In an ideal world, you would have unlimited resources and time to address all these challenges. However, since there are inevitably limited resources for innovation, it is important to come to a consensus on the most critical issues to address and effective and efficient solutions. Prioritization activities help teams focus on the highest priorities and most efficient solutions. The following is one example.

Activity: Prioritization

Time: 20 minutes

Preparation: Teams refer to the HMW statements generated in the HMW activity above.

Materials: HMW statements from each group, sticky dots

Instructions:

1. Ask participants to review the groups' HMW statements and decide what they feel are the two most important problems or HMW statements to work on. Encourage participants to make their decisions based on: (1) the most interesting, and (2) the most impactful.
2. Ask participants to take two sticky dots each and place one dot on each of the two HMW statements they selected.
3. Based on these "votes," ask the design teams to reach consensus on three problems in which they will begin ideating solutions.

Design Thinking Stage 3: Ideate

Collectively Creating Solutions Through Ideation

WHAT: Challenge Assumptions and Create Ideas

WHY: Exploring new angles and brainstorming will allow you to generate as many solutions as possible to solve your challenge, before narrowing it down to solutions you wish to tackle. This phase informs your prototyping phase.

"The best way to have a good idea is to have a lot of ideas."
– Dr. Linus Pauling

The previous sections provided information and activities that supported human-centered or user-centric innovations and reaching a consensus on a problem statement. A core practice in this work was to help participants switch their mindsets to consider barriers to learning as opportunities for innovation and change. Throughout the previous chapters, we have deliberately focused the participants' attention on problems, not solutions. For this chapter we are lifting off the brake and moving toward solution generation in the ideation stage of design thinking.

Ensuring there is a safe space for sharing and building on ideas is a number one prerequisite in solution ideation. There are two things that are critical to idea generation: (1) creativity, and (2) discussion. It can be a daunting task to share your ideas with a group, and a negative response may stifle creativity or discourage others from sharing. Safe spaces to encourage creativity and discussion during ideation are crucial to the process.

Here are some things to keep in mind as you think through solutions together:

1. Try to watch out for assumptions: what you assume as fact might stop the flow of new ideas and close a potential direction and solution.
2. Good ideation means having as many ideas as possible; no idea is too crazy or wild, it is always easier to pull back than push forward. So, write all the ideas down.
3. There is no bad idea, commenting on the difficulty, impossibility, or any negative aspect of an idea can stop creativity and discourage people from sharing.
4. Discussion opens the door to other channels and pathways; feel free to build from other's ideas as you get inspired.

Encourage participants to keep these in mind as you facilitate the ideation exercise below.

Activity: Idea Wall

Time: 45 minutes

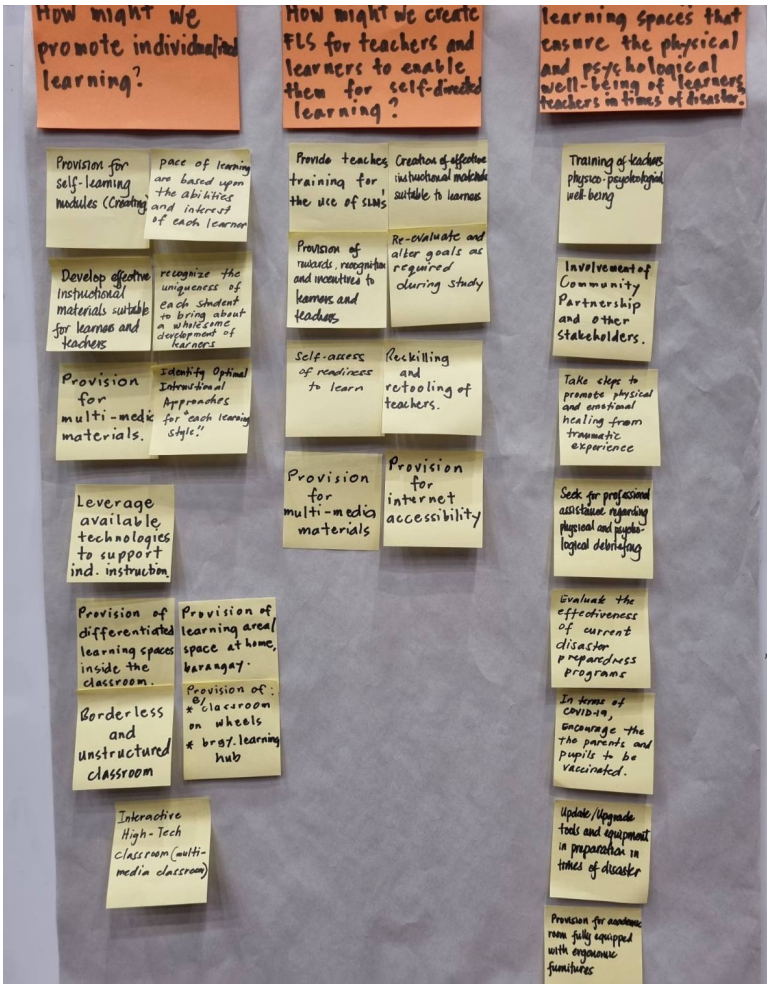
Preparation: For each design team, prepare a 3 X 5 grid on a large sheet of paper posted on the wall or stand near the respective team.

Materials: Paper and large (A4) post-it notes

Instructions:

Ask each design team to:

1. Select the top two to three HMW statements prioritized in the voting exercise above and place these on the top row of the grid for the group, setting up three columns.
2. Allow individual members in the group to take 10 minutes to write as many solutions as possible to each of the group-selected HMW problems. Note: Add more rows as needed to ensure all the possible solutions are posted.
3. Take 20 minutes to discuss the ideas on the grid with each other, grouping or clustering similar ideas. Additional ideas may be generated in the process.



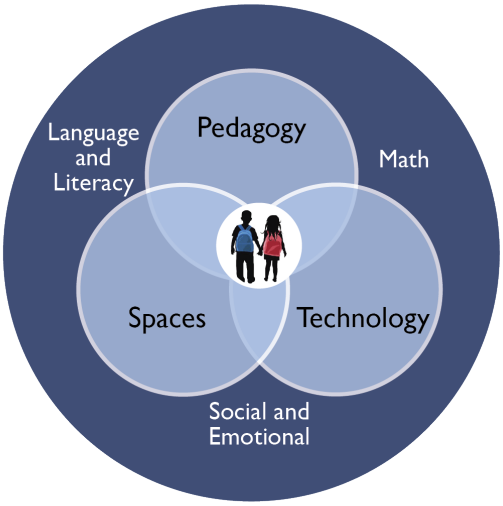
Problem statement: Student dropout is too high.

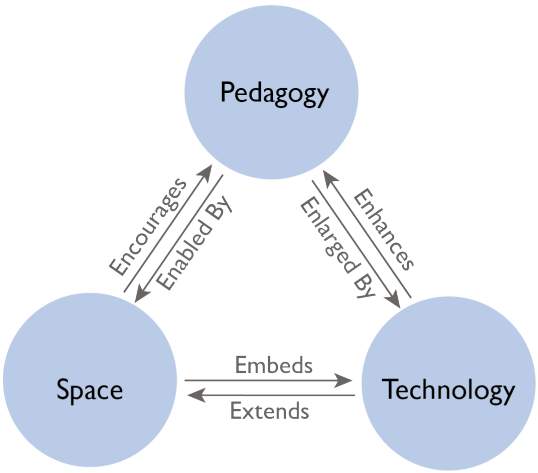
Goal (How Might We statement): Increase persistence and reduce dropout by increasing access to learner-centered learning styles, leveraging multiple intelligences.

Pedagogy, Space, or Technology (PST)

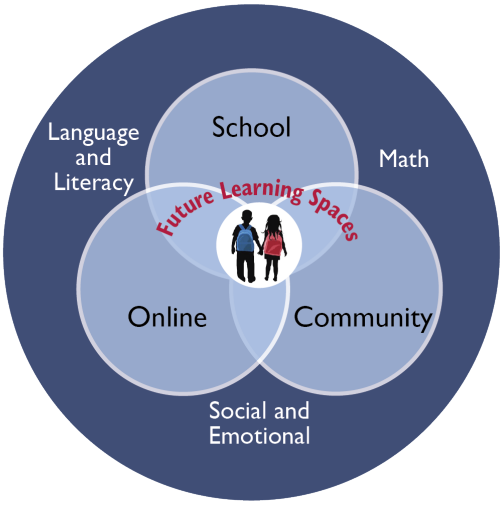
Effective prototypes of future learning spaces take into consideration three aspects of learning: pedagogy, space, and technology. These aspects of the learning space reinforce each other and effectively promote children's social, emotional, and academic learning when all three–learning space, pedagogy, and technologies–are considered in the design of learning spaces for the future.

Different members of each design team may have different mindsets about future learning spaces. Some may focus on pedagogy while others will consider where the learners will be. Still other team members will attend to how technology might be used in the learning space. The beauty of a diverse team with members who hold different priorities and mindsets is that all aspects of a future learning space (e.g., space, pedagogy, and technologies) will be considered in conjunction with and complementary to the other aspects.





Spaces: Physical spaces of the future. Design teams must be conscious of the physical spaces that will serve to enhance targeted education gaps, such as in well-being, education quality, access, equity, and resilience, and at once consider how learners will flourish in basic education, develop agency and good citizenship, and be work-ready in the future. Future learning spaces will extend the traditional classroom context to include a variety of places where children can learn. Not only is online learning an option, but the learning space could include an outdoor space of offerings from the community such as a museum, library, or volunteer opportunities in the community, to name only a few.

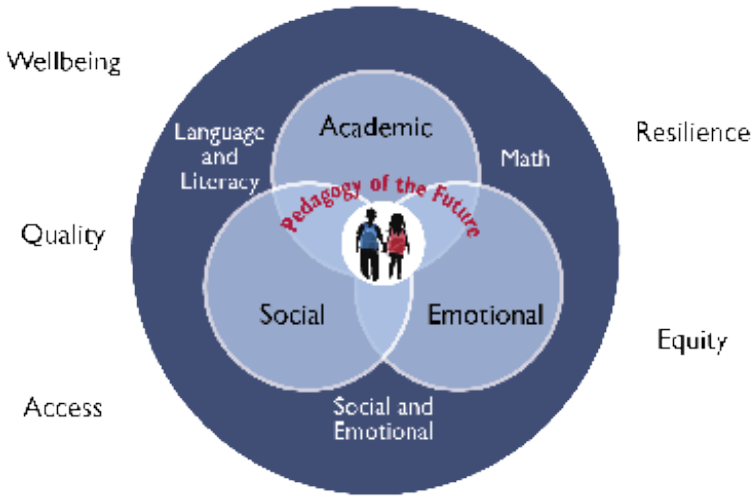


According to the DepEd conceptualization of learning spaces of the future, learning spaces hold the properties described below.

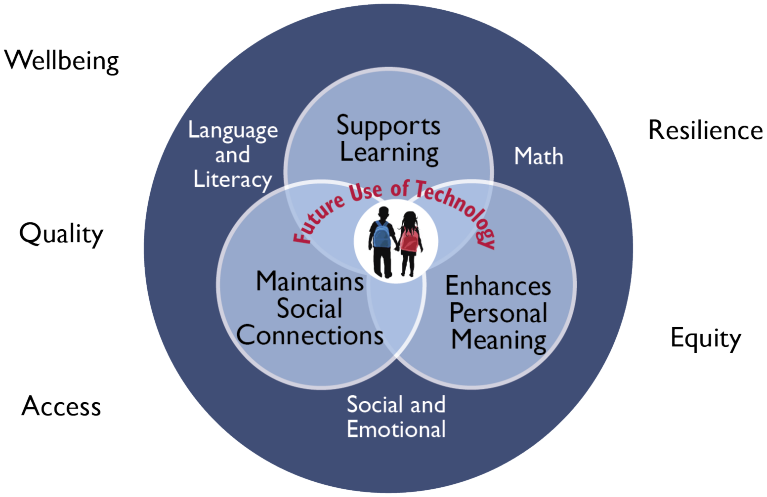
Definition of a Learning Space

- Learning space as a habitat is a place where a learner continuously learns, interacts with others and adapts in order to thrive.
- A learning space, being a habitat, is part of a much bigger ecosystem that has both human and environmental factors. The human factors consist of the community of individuals, organizations, and institutions, both public and private, that interact to support learning. The environmental factors are the resources, tools, and technology for learning.
- This concept emphasizes the role of stakeholders in a learning ecosystem. The responsibility of ensuring that young Filipinos acquire and develop multiple literacies and evolving competencies is often relegated fully to formal education. But while the education sector, particularly formal education, has a pervasive role in ensuring that learners flourish, it is not solely responsible. It is important to acknowledge that the people in the everyday lives of our Filipino learners have an impact on who they grow up to be.
- Learning spaces can be physical or virtual/ remote.

Pedagogy: Pedagogy developed or enhanced for future learning spaces should address the social and emotional as well as academic learning needs of learners. All learning is social, emotional, and cognitive. Thus, well-being and learning should be considered together in pedagogy. Very often the social aspects of learning are overlooked. In the future, social learning should receive more attention. Furthermore, when learners engage meaningfully in content—in emotionally charged learning–there is better application of what is learned outside of school. These aspects of the learning culture can enhance belonging, self-esteem, and agency in learners.



Technology: During the pandemic we certainly learned the value of technology–online learning, use of mobile devices, and access to learning through radio and television programs. The value of these advances cannot be overstated. However, design teams need to keep in mind and ensure that adopted technologies maintain social connections to learning and enhance personal meaning through heartfelt engagement.



Activity: Categorizing Your Solutions

Introduction: In this activity, design teams will have a chance to integrate the PST framework into their solutions.

Time: 20 minutes

Preparation: If possible, post a copy of each element of the PST (see above) on the wall (e.g., the Future Learning Spaces, Pedagogy for the Future, and Future Use of Technology graphs).

Materials: Team HMW statements available at the group table, markers

Instructions:

Ask each design team to:

1. Review all their HMW statements and categorize each one as any one PST element or as any combination of the PST elements, pedagogy, space, or technology. Label the HMW statements accordingly with a marker (e.g., "P", "S", or "T" or any combination).
2. Select one future learning space solution the team agrees would be the best to prototype.

Mention that even though the process of prioritization has been covered previously, it can be applied again to prioritize the single future learning spaces solution that will be prototyped. Also remind teams that the solutions generated that have not been selected are not wasted. As the teams refine their prototypes and move toward implementation, these ideas can be used to build on or refine their future learning spaces.

"People think focus means saying 'yes' to the thing you've got to focus on. But that's not what it means at all. It means saying 'no' to the hundred other good ideas that there are. You have to pick carefully. I'm actually as proud of the things we haven't done as the things I have done. Innovation is saying no to 1,000 things."

– Steve Jobs

Design Stage 4. Prototype

WHAT: Start to Create Solutions. A prototype is a scaled down version of a product or feature.

WHY: Creating a prototype allows you to turn your solution ideas into something tangible, which can then be tested on real users.

When finally landing on an idea for their future learning spaces, teams can now turn their attention to prototyping. But what is a prototype? A prototype is an early model of a product (e.g., future learning space) that is used to visualize, test, and iteratively modify based on feedback and adaptions of the original idea. Prototypes:

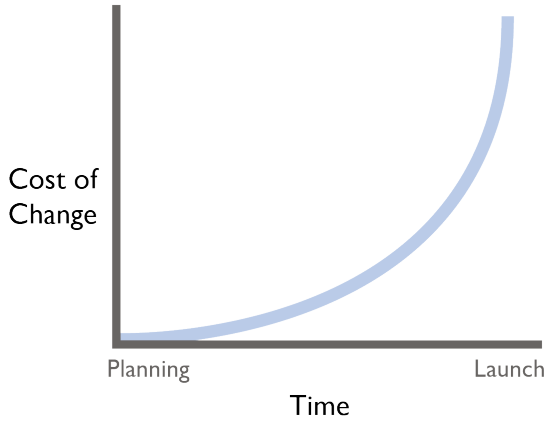
- are experimental models of a solution/product;
- are conceptual models that can be continuously refined and developed through cyclical processes of testing, validation, and rebuilding; and
- allow you to explore real-world impact before full execution of the idea.

Why Do We Prototype?

Prototyping creates a visual and shareable experience for the creators (e.g., the design teams developing future learning spaces), but more importantly for potential users. The prototype makes it easier to "show than to tell," which will help users provide the critical feedback for refining the prototype to ensure its desirability, feasibility, and viability.

Feedback is critical at all stages of the design process. Although some innovations and products have worked with little testing, these are probably exceptions. Gathering feedback early in the design process can significantly reduce the costs for creating the product. This is illustrated in ***Exhibit 7***.

Exhibit 7: Time vs. Cost of Prototype Development



We see that the cost of changing or modifying a product goes up exponentially as you get closer to launching a product. For example, let us say you have designed a 3D classroom, with projectors and screens, back-up generators, and all the work to give students a new way to learn and experience lessons. Making changes during the design phase does not cost that much. For example, you have planned to have multiple projectors in classroom, but a good suggestion through feedback might have been to use virtual reality glasses instead of the projectors to allow a more immersive experience for the students. Switching to the glasses from projectors would not cost that much if you were designing the prototype. However, consider the cost to substitute virtual reality glasses for projectors if the learning space had already been created with projectors in place and set up, electricians had completed the wiring for lighting, and the furnishings to accommodate the projectors had been purchased. Switching to the virtual reality glasses at that stage might require a re-layout of the room, or a different room entirely—you might have spent money on labor that you would not have needed or even already bought equipment you decided not to use. Worse still would be to discover that parents or learners were highly set against the form of learning you planned for. Gathering feedback early is a way to reduce risk and ensure your products meet the needs of your target.

In line with resources, there are also levels to prototyping from a low-fidelity prototype like that in the initial stick figure to the high-fidelity prototype like the finalized sculpture shown on the right.

Low-Fidelity

High-Fidelity

For this guide, our aim is to support design teams in co-creating a low-cost, low-fidelity prototype, which can be refined as more and more feedback is collected from a broad base of stakeholders, including but not limited to the direct beneficiaries of the future learning spaces, the learners. With this feedback the prototype can emerge into a "high-fidelity" protype as some elements are removed and new elements added according to what is learned each step of the way.

Prototyping is not a one-off activity. It is an iterative process. Design teams will be able to change, enhance, and re-design their future learning spaces as they collect more and more concrete feedback over time. There is no such thing as a "bad prototype". A prototype that invalidates your idea or proves you wrong is just as valuable as one that users love. Prototyping is about learning from your users and other stakeholders, such as the teachers, who will be hosting the learning spaces, and community members who may make contributions to the innovation, and applying what is learned to continuously improve the product, not about perfection.

"Fail often so you can succeed sooner."
– Tom Kelley

James Dyson was unhappy with the performance of his current vacuum cleaner and wanted to make it more efficient. His idea was to create a bagless vacuum that would use cyclone technology. His initial prototype used a crude cardboard prototype and his existing vacuum to see if his cyclone technology would work.

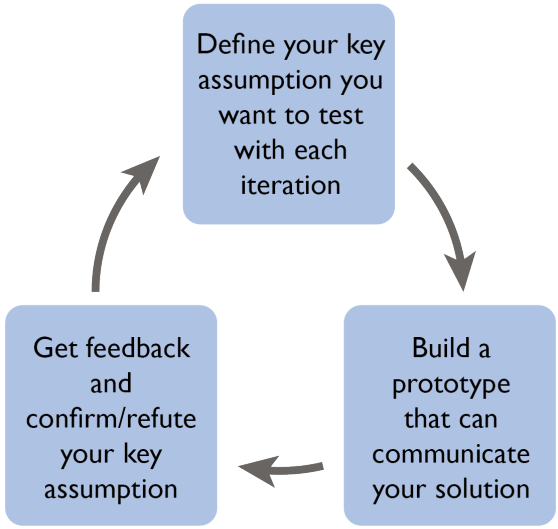
It did work, and Dyson knew this was something that could change the market. He worked to perfect his product, creating 5,127 prototypes in the next 5 years before releasing the world's first bagless vacuum cleaner.

Now Dyson is internationally known, and its vacuum cleaners are among the most sought-after in the market. The Dyson brand has continuously grown and has branched out to other technologies as well.

http://www.jamesdysonfoundation.co.uk/who-we-are/our-story.html

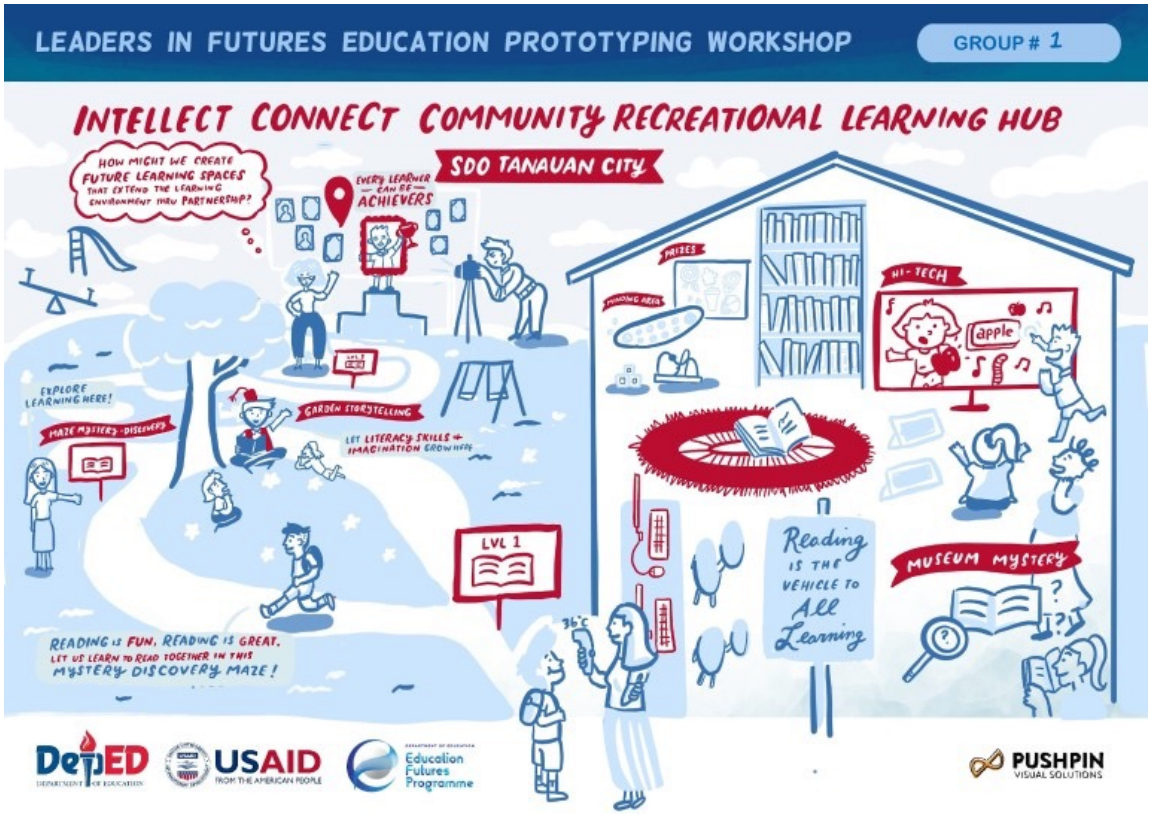
Designing the Prototype

As mentioned in the preceding section, design teams are encouraged to start out with a low-cost, low-fidelity prototype–a simple design, so our prototype design should be simple and focus on the core of your solution. It should be a sharp knife as opposed to a Swiss Army knife. When you have prioritized and selected the attributes of your learning spaces, the most important one should be your focus. Over time you can add additional features and attributes to test and get feedback on, but it is best to start simple and with the most important aspect. Does my prototype sufficiently communicate my idea to enable feedback?



Sample concept poster

Photo Credit: Maria Perlita de Leon



A concept poster can be a good low-fidelity aid to help us visualize and explain the design team's future learning space prototypes. This is the opportunity to capture visually what the team has imagined their future learning space will look like.

In the bottom of the poster, we have also put in two other areas for you to explore. One is to look at the risks involved in your solution, and another is to think about how to measure the success of your solution. These details are helpful and needed for discussing and validating the ideas with stakeholders. Perfection is not necessary at this stage. Clear communication is critical. The prototype design will undergo many changes as you gather more information from your users and other stakeholders.

<table>
<tr><th colspan="3">Title of Concept Poster</th></tr>
<tr><td>What problem are you solving?</td><td>What futures thinking insights is your solution aligned with?</td><td>What Basic Education Plan 2023 pillars does your solution focus on?</td></tr>
<tr><td>Who are your target users and other stakeholders?</td><td>How is your solution locally contextualized?</td><td>How does your solution support enhanced learning for all learners?</td></tr>
<tr><td colspan="3">Visual Depiction of your Future Learning Space Innovation</td></tr>
<tr><td colspan="2">Why might your solution fail?</td><td>How will you measure its success?</td></tr>
</table>

Design Stage 5. Test

WHAT: Try out your solutions with real people

WHY: This ensures the final design solves a problem that users have. By getting out and asking real users for feedback, you will highlight any design flaws that need to be addressed, and continuously make improvements to your product.

Now that the teams have designed their prototypes, they can begin to test the model. For this guidebook, as we have a low-fidelity, low-cost prototype, one of the most important tests at this stage is user feedback. As your prototype matures, your testing may also mature; for example running pilots or simulations.

Collecting user feedback is critical throughout the prototyping process. Early on, design teams need to be provided opportunities to meet and talk to potential users of their learning space (students and teachers) and other key stakeholders (school administrators and parents). User discovery interviews or customer discovery is good way to get quick feedback.

User Discovery

Conducting interviews is perhaps the best way to learn more about user needs and desires and to collect feedback. These interviews can be in person, via phone, or through a meeting application. Interviews are important because they create a space for discussion, unlike surveys, where communication happens one way. Why is discussion important? When you are speaking to people through interviews, you get to delve deeper and gain more insights, while for surveys your respondents only offer answers to the survey questions. A survey might ask: "Are you a healthy eater?" and the response could be a simple yes or no. In a face-to-face interview, you could further ask them what they ate yesterday or the week before, and you would be able to validate whether that person was in fact a healthy eater.

When conducting interviews, it also good practice to research more about your interviewee. The teams should prepare questions ahead of time. This will help design teams make sure that they are interviewing the right people and that you are asking the right questions. For example, the questions you ask of a student might not necessarily be exactly the same as those to ask a school administrator. Consider working in groups, as it is helpful to have two people conducting the interview, one to engage and ask questions and another to document. If you choose to record the interview, do not forget to secure informed consent and written permission from the interviewees and a parent or guardian in the case of children. Interviewers need to listen and learn, not talk, with the exception of briefly but clearly sharing the prototype. The user discovery experience is focused on learning more about the stakeholders, their needs and challenges—not on selling your idea. At the end of the interview, good practice would be to summarize your insights and key points for a final validation with your interviewee.

Feedback Grid

A feedback grid is a useful tool to document interview responses. Following the interview, make sure you take the time to: (1) write up your notes immediately; (2) discuss each interview as a team; (3) analyze data; look for patterns; and (3) re-evaluate your questions for a second round of interviews.

Positive Feedback

- What do you like about this idea?
- What will benefit your users?
- What are you excited about?

Things to Change

- What is not working well?
- What worries you?
- What do you wish was different?

Ideas

- What new ideas do you have?
- How would you build upon the work so far?
- What has untapped potential?

Unanswered Questions

- What is still unclear?
- In what ways do you feel confused?
- What seems to be missing?

Activity: Mock Interview

Ask each design team to:

- Take 10 minutes to work with your team to prepare two to three questions that you may ask to gather feedback during an interview.
- Determine how they want to use the feedback grid: either during the interview with a designated notetaker or through a summarizing discussion with your group members after the interview.

Pair two design teams and

- Ask each to take 5–10 minutes to conduct an interview with their counterpart.
- Fill out your feedback grid!
- Discuss what they learned—how the interview went, what the areas of improvement were, etc.

A Way Forward

"Let him that would move the world, first move himself."
– Socrates

The principles we have placed in this guide support design teams in developing locally relevant, locally defined prototypes of future learning spaces that are human centered. Embarking on a journey toward operationalizing the future learning spaces is the next step. Operationalizing the prototypes may seem challenging. Recognizing that that innovation is a living process is helpful in keeping the process alive and realizing the future learning space planned. Success lies in the team's sustained engagement in the process and continuous learning.

Each idea and prototype developed will be unique, as each will address a problem in your school, community, or region. The design teams may experience challenges in implementing that are faced by teams in other schools. The network of future learning space designers is a good community from which to gain insights and best practices. It will be a strong support for the teams as they continue to refine and begin to operationalize their future learning space prototypes.

Opportunities for Moving Forward Education Futures Thinking in Education in the Philippines

- **Institutionalizing Futures Thinking in Education.** There is a need for DepEd to institutionalize futures thinking at the systems level. This starts with the creation of an education futures unit that consists of any of the following programmatic and/or organizational areas: knowledge and advocacy, capacity-building of teaching and non-teaching personnel, research and knowledge management, communications and advocacy, program and policy development, monitoring, reporting and evaluation, and partnership and linkages.
- **Professional Development Course Modules on Futures Thinking for Teachers and School Leaders.** DepEd can build from previous courses co-developed and delivered with development partners, including the ACR-Philippines-supported course on Futures Thinking and Foresight provided by the National University of Singapore-Lee Kuan Yew School of Public Policy, and the Leaders in Futures of Education (LIFE) Course and the Prototype Development Workshop on Creating Learning Spaces for the Future. In order to benefit more teachers and school leaders, courses will be led and accredited by the National Educators' Academy of the Philippines.
- **On Research Development and Innovation.** Using DepEd research related to education futures such as the Education Communications Review and the Concept Note on Creating Learning Spaces, DepEd can dive deeply into the analysis of the 'deep-seated' issues of Philippine education, review the policies of DepEd, and draw up recommendations for the future of education

- **On Creating Learning Spaces for the Future Through Prototype Development.** LIFE course and prototype development participants, particularly from the SDOs and schools, developed six prototypes of learning spaces for the future. These prototypes of future learning spaces were developed during the Prototyping Workshop August 15 – 19, 2022.

  – Following the workshop, the six design teams prepared a project proposal to market their ideas with key stakeholders. Using these proposals and their prototype posters, the teams proceeded to present their ideas to their respective SDOs, end-users, and local government units.

  – All six prototypes were successful in securing support from their SDOs and funds from their respective local government units.

  – Field visits were conducted by project staff from ACR-Philippines and members of the DepEd Bureau of Learning Delivery to provide technical support to the design teams and schools to help them improve and finalize their prototypes and related proposals.

  – These prototypes of future learning spaces serve as pilots for benchmarking and replication in the future if proven successful. Technical assistance to these schools must be sustained, particularly in ensuring learning delivery, monitoring, evaluation, and reporting.

In addition to the guide, we will be providing additional resources on futures thinking, foresight planning, learning spaces, design thinking and prototyping. Please feel free to use these supplementary resources to guide and develop your prototypes.

References

Duldulao, J.J. (April 2022). Co Creating Learning Spaces for the Future. Presentation during the 66th Annual Conference of the Comparative and International Education Society (CIES): Illuminating Power of Idealism. Minneapolis, Minnesota, April 18-22.

Malaluan, N. (2021). Speech in the International Day of Education. Speech delivered on January 25, 2021.

Philippines Department of Education. (2020, July 3). *Learning Opportunities shall be available: The Basic Education Learning Continuity Plan.* Retrieved from Department of Education, https://www.deped.gov.ph/wp-content/uploads/2020/07/DepEd_LCP_July3.pdf

Philippines Department of Education. (2022, May 30). *DepEd Order No 24 S.2022*. Retrieved from Department of Education: https://www.deped.gov.ph/wp-content/uploads/2022/05/DO_s2022_024.pdf

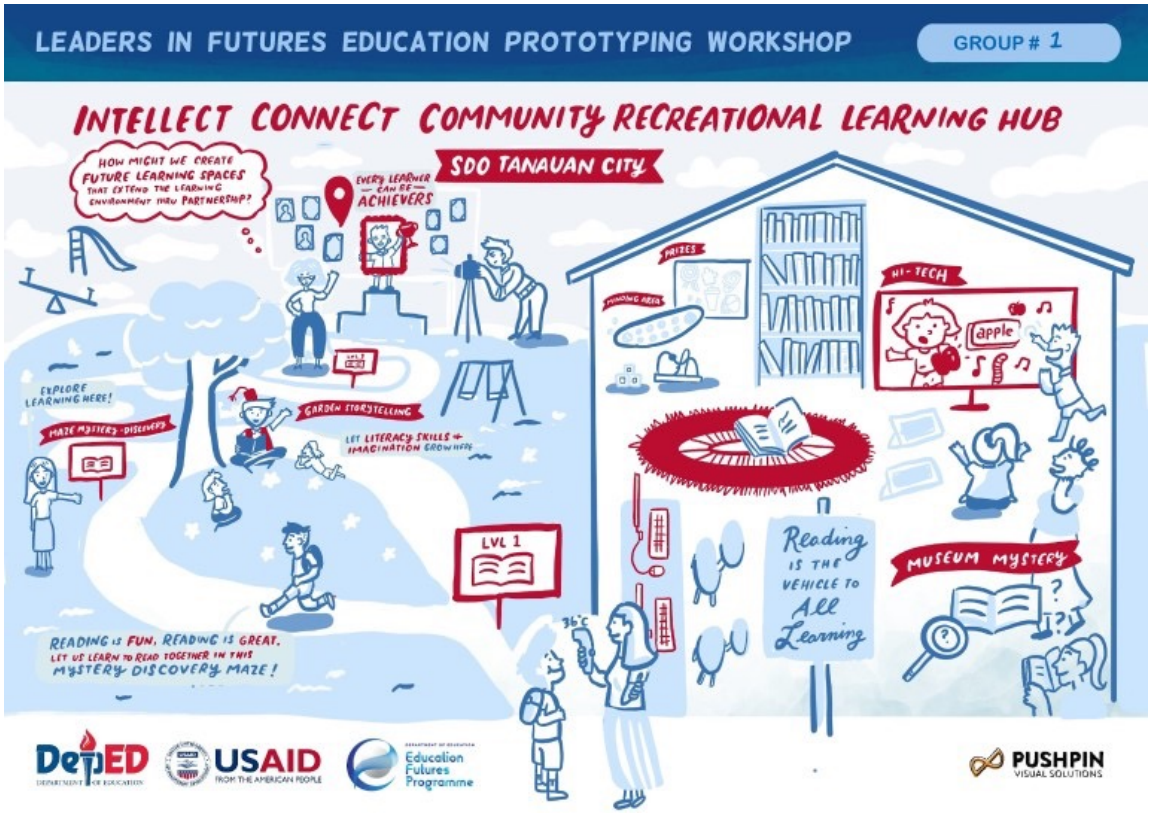
August 2022 Prototyping Workshop: Prototypes of Future Learning Spaces

Team 1: Tanauan City, Talaga Central School

Intellect Connect Community Recreational Learning Hub

Goal: Improved literacy learning and digital literacy within a context that supports wellbeing through active learning through discovery.

Learning Space: Both indoor and outdoor discovery learning, including a literacy maze with graduated literacy learning activities and an indoor learning space which complements the maze and other classroom learning through technological resources.



Team 2: Quezon City, Project 6 Elementary School

Learning BEYOND: Borderless Education for Youth in Optimum and Nurturing Dynamism

Goal: Maximize partnership and engagement with external stakeholders including but not limited to community members, the barangay, higher education institutions and other possible partners to keep youth aware of the many opportunities waiting for them after completing basic education and to enhance inclusion in education and opportunities beyond formal schooling.

Learning Space: The Project 6 Elementary School learning space extends into the community and engages community members themselves, private businesses, tertiary institutions and local government officials to share responsibility and suggest how they or their respective institutions could offer learning opportunities for students.

Team 3: Tuguegarao City, West Central School

Access to Learning Through Multiple Intelligences and Learning Styles

Goal: Improved persistence and reduced dropout by access to learning through learner-centric learning styles and multiple intelligences.

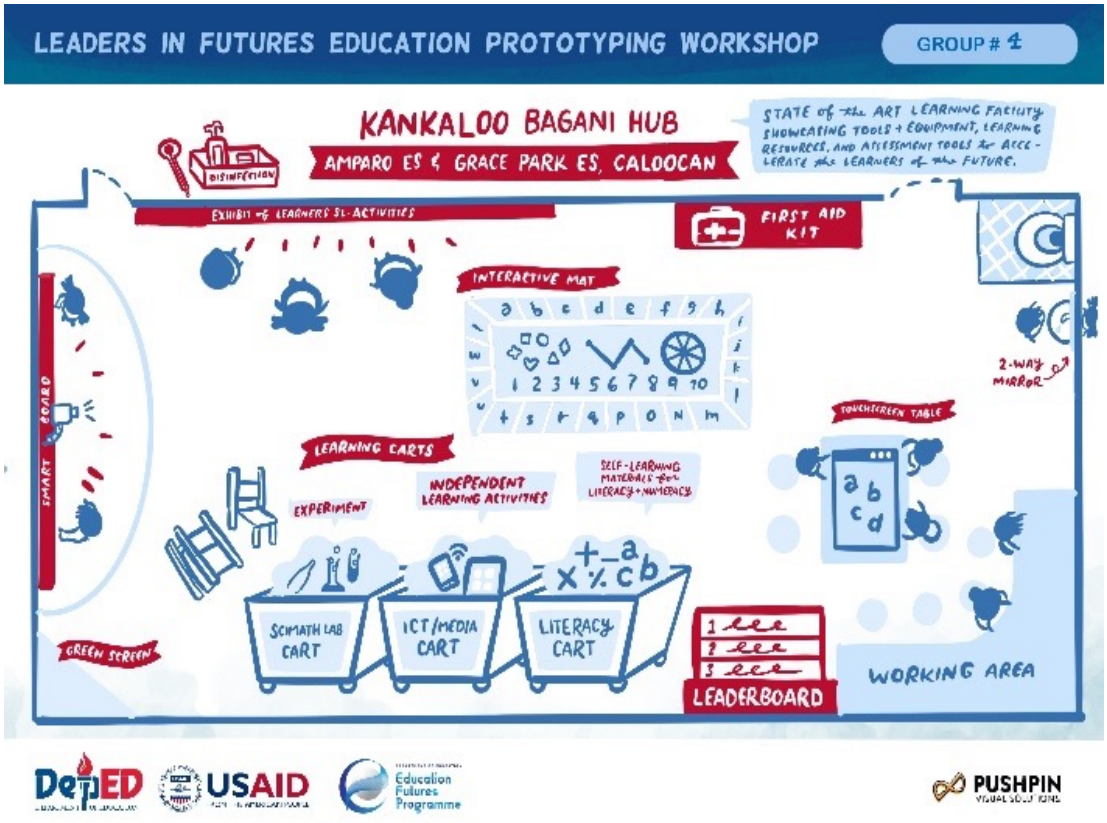
Learning Space: The West Central School learning space will provide access to learning in ways that tap into students' interests, skills, creativity, and learning styles – allowing for learning at a child's own space. Stations will be established such as "learning through visual arts", "learning through technology", "learning through music", and so forth.

Team 4: Caloocan City, Amparo Elementary School

Kangaloo Bagani Hub

Goal: Address digital literacy and responsible cyber-citizenship.

Learning Space: The Kangaloo Bagani Hub showcases state-of-the-art equipment, learning resources, and assessment tools including content centered learning carts and multi-media equipment to maximize self-directed and collaborative learning. The Hub is for all students to be coordinated, with teacher cooperation.

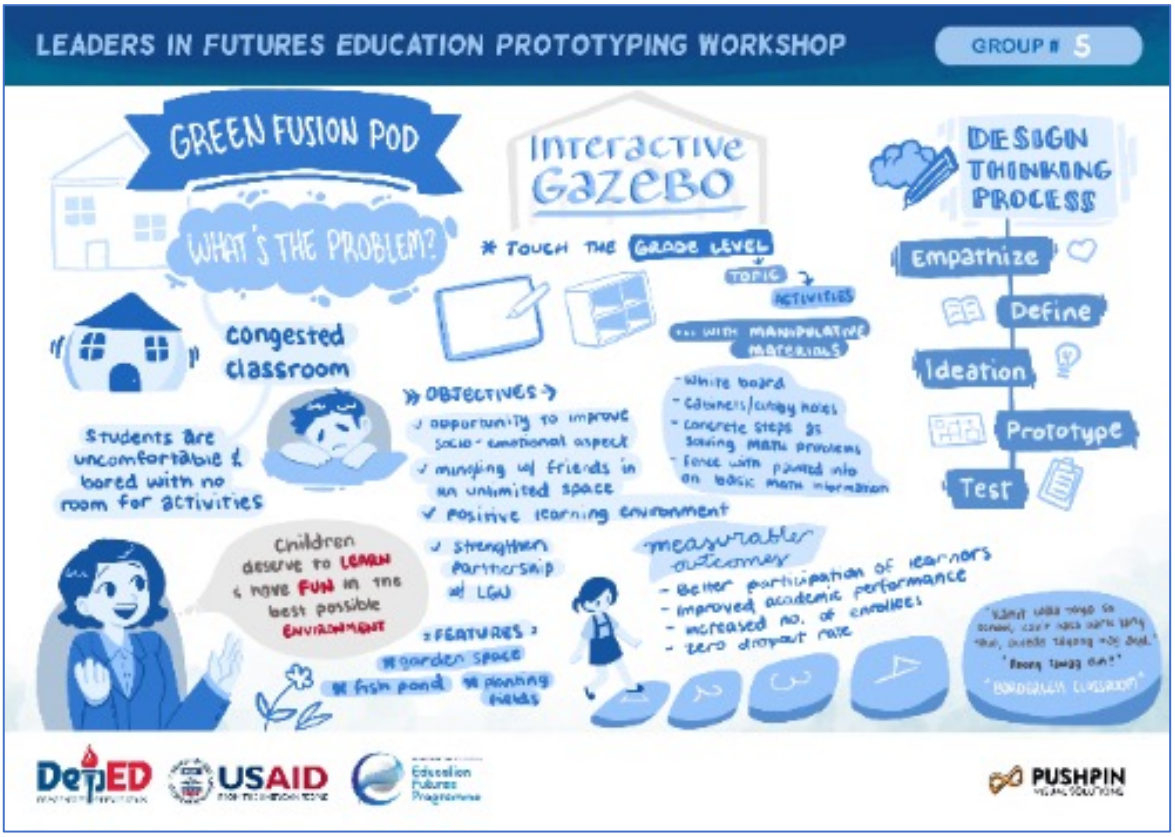


Team 5: Tanauan City, North Central School

Learning Can Take Place Anywhere

Goal: Promote students' holistic development and social-emotional learning and wellbeing.

Learning Space: The learning space leverages the school's existing and extensive gardens for learning mathematics and science, including a gazebo for independent learning through mobile learning and other technologies. The focus is on promoting more holistic learning through a combination of natural learning in a green environment and nature alongside access to innovative technologies to further support and reinforce learning.

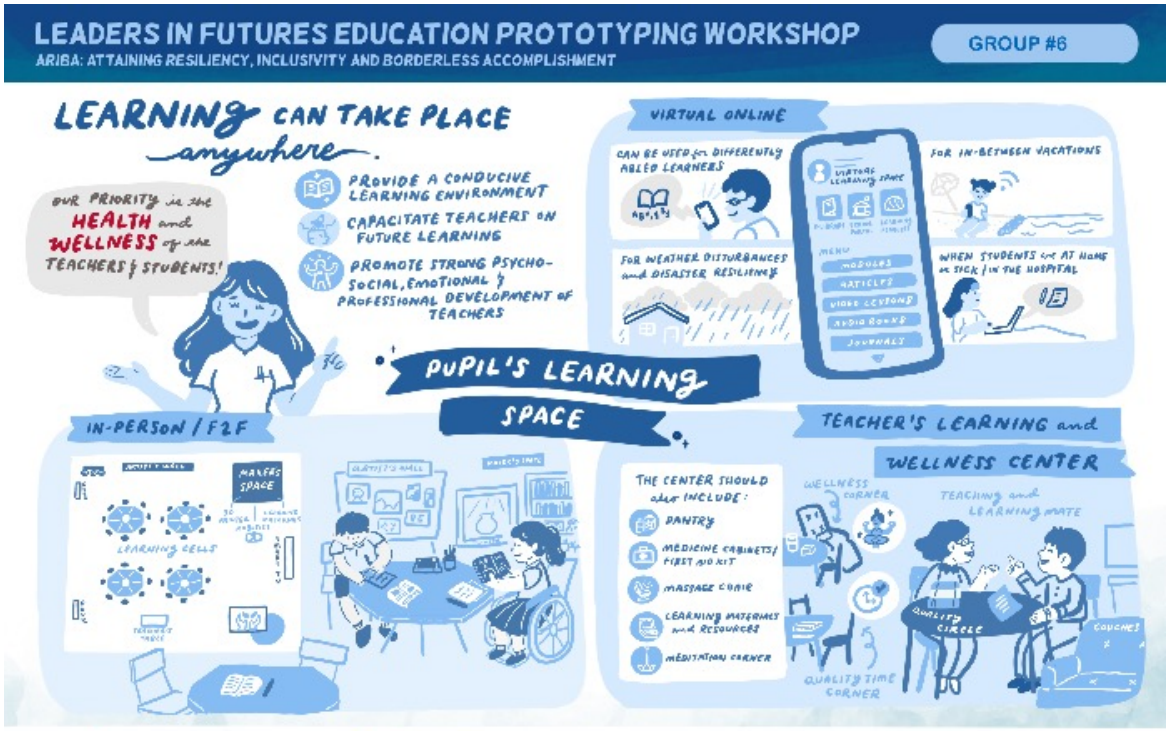


Team 6: Pasig City, Maybunga Elementary School

Learning Can Take Place Anywhere

Goal: Enhance equity in the education experience with attention to wellbeing for both teachers and students.

Learning Space: The learning space envisioned is intended to expand the opportunities by ensuring access to learning for all students, including access for students with disabilities, and expanded learning opportunities using mobile technologies. Flexibility and inclusion enhance resiliency related to crises and to ensure that all children maintain continuity in their learning. Teacher wellbeing was also a special consideration with a learning space for teachers being an integral part of the prototype.



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