

A Design Thinking Approach to Community Engagement to Promote Public Health Intervention Sustainability

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The OPUS learning guides are designed to help professors, students, and early career researchers easily access key takeaways from the OPUS workshop series and incorporate the lessons into the classroom and applied research projects.

In this presentation, Dr. Terry Huang explores how a design thinking approach can help make public health interventions more sustainable by encouraging creativity, curiosity, and community ownership. Drawing from the Systems-science Program and Research Coordination for Sustainability (SPARCS) project case study, he shows how combining systems thinking and design thinking can shape implementation, support community engagement, and drive long-term impact.

A Consolidated Framework for Public Health Intervention Sustainability

Dr. Huang introduced a framework made up of six components needed to sustain public health interventions over time: 1) intervention design and delivery, 2) implementation processes, 3) stakeholders involved, 4) organizational setting, 5) external environment, and 6) resources. This framework can help practitioners think through the many conditions that influence whether an intervention stays effective and relevant in the long term. He discusses the importance of considering sustainability, both before an intervention begins and throughout the implementation process. The framework serves as a planning tool and an evaluation guide, helping public health professionals design their interventions to be sustainable and adaptable.

LEARNING OBJECTIVES

- Describe how systems thinking and design thinking can be used together to improve public health research and practice.
- Understand how design thinking mindsets (e.g., empathy, collaboration) can empower communities and strengthen implementation.
- Describe the six components of Dr. Huang's consolidated framework for sustaining public health interventions.

Key Terms



Design thinking: A people-centered approach to problem-solving and innovation that focuses on possible solutions to a problem rather than the problem itself



Sustainability: The ability to maintain and extend the positive impacts of a program or intervention over time, ensuring benefits persist and are integrated into communities or systems for lasting health improvements



Community engagement: A participatory approach in which people and organizations in communities are not merely involved but are truly empowered as experts and decision makers

How Design Thinking Improves Impact and Sustainability

Using design thinking—both when planning and delivering an intervention—supports sustainability by promoting creativity and continual improvement. It encourages practitioners to embrace uncertainty and learn from failure, which helps them more readily adapt interventions as they receive community feedback and identify new needs. Design thinking requires practitioners to adopt a specific mindset, including empathy, curiosity, and collaboration, to help them more deeply engage with communities and tailor solutions to the community’s needs.

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Design Thinking vs. Systems Thinking

Design thinking and systems thinking are often discussed separately; however, they can be used together in public health research and practice. Systems thinking helps practitioners map the many factors that drive health outcomes and can help them think through how an intervention may play out within a complex environment. In contrast, design thinking focuses on experimenting in real-world communities and rapidly making changes and improvements to interventions. Dr. Huang explains that, together, these approaches bridge theory and practice. Systems thinking helps us understand the “big picture,” and design thinking helps us turn that knowledge into actionable strategies grounded in the community. Combining these approaches helps make public health interventions more impactful.

Using Design Thinking to Improve Quality of Life and Mental Health: A Case Study

Through the SPARCS case study, Dr. Huang demonstrated how engaging local partners in co-designing interventions gives them a strong sense of ownership and empowerment. In turn, this can help make interventions more sustainable over time. The SPARCS research team aimed to develop sustainable, community-informed strategies to promote physical activity and prevent obesity, with a focus on historically underserved neighborhoods. The project engaged youth and families in co-designing a city-wide park renovation, which allowed them to elevate their voices and shape the changes to the park.

The process followed several structured phases—grounding, knowledge mobilization, idea generation, and co-determination—each designed to build trust and support shared ownership with the community members. Tools such as ecosystem mapping, directed storytelling, and impact/effort matrices were used to gather insights and help the SPARCS team identify possible solutions. Although some community members were skeptical at first, they became vocal advocates over time, showing the power of co-design to improve community engagement. By treating the co-design process as the intervention itself—not just a first step, the SPARCS case study shows how community input can directly shape public health solutions and help sustain them over time.

Reflection Questions

1. How do systems thinking and design thinking each contribute to understanding and addressing complex community health challenges? In what ways can each approach support the other?
2. What strategies did Dr. Huang and his team use to build trust and increase engagement among skeptical community members?
3. Why is it important to treat the co-design process as an intervention, rather than just one part of an intervention? How might this perspective change the way we evaluate public health programs?

Dive Deeper: Additional Readings and Resources

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