

Professional Development Workshop: Preparing Management Students to Address Wicked Problems

ABSTRACT:

The proposed Professional Development Workshop explores the relevance of “wicked problems” for management students and illustrates a way to bring the concept to life, through a short, three-part simulation. The workshop draws on tools and concepts from design thinking, business ethics, business in society, and the emerging research on wicked problems. The exercise is designed to be adaptable for a wide of classes ranging from freshman to graduate courses. However, the main purpose of the workshop is to provoke a broader discussion about how to incorporate the concept of wicked problems into existing management curricula.

KEY WORDS:

wicked problems

design thinking

problem solving

Introduction and Purpose

The proposed Professional Development Workshop explores the relevance of “wicked problems” for management students and provides an accessible entry point for instructors trying to incorporate the concept into their own courses. The workshop provides an overview of the “wicked problems” construct and the recent change in focus to an optimistic, tool-building approach to wicked problems. The workshop illustrates a way to bring the concept to life, through a short, three-part simulation, that showcases three types of thinking that participants might engage in when dealing with complex or wicked community problems.

The proposed session builds on my experience in two distinct roles, as a management professor teaching courses on business in society and courses on design thinking, and as co-designer of a curriculum for community leaders, in my role as board president for a community leadership organization. [The name of the organization has been redacted for review purposes.]

The community leadership organization I am working with has used variations of the simulation proposed for this workshop on two occasions, with very lively discussion and new appreciation for how stakeholder analysis and brainstorming techniques can be extended to unpack complex equity issues. The initial cohort of 20 participants included a deputy city manager, the head of the city’s Chamber of Commerce, a police captain, managers from several technology companies, and several non-profit leaders. We are half way through delivering the curriculum with a second cohort and adding tools to the toolkit as we go.

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Learning Objectives

Participants in the workshop will be able to:

- Describe key aspects of a “wicked problem” and how it differs from a “simple or “tame” problem
- Demonstrate three techniques for beginning to address a wicked problem
- Identify opportunities to incorporate the concept of wicked problems into their own curricula.

Background

In the past few decades, practitioners in fields such as planning, public administration and management have increasingly acknowledged a mismatch between the problem-solving techniques taught in their professional education, and the practical realities of problem solving in the real world. While conventional rhetoric around problems focuses on “solving” them, many of the most significant problems will not lead to discrete final solutions. Instead, they will require a constructive process of continuing engagement, requiring new tools.

This is particularly true for management practitioners. Increasingly, managers in virtually every field of management are called upon to use their technical and managerial skills to help resolve societal problems. Sometimes these problems engage business people in their professional roles and at other times these problems engage them primarily in their roles as community members. In either case, they often experience the mismatch between closed ended problem-solving tools, and the more complex, open-ended character of the problems they encounter.

The proposed professional development workshop is designed to provide a starting point for instructors hoping to broaden the problem-solving toolset for management students, particularly those contemplating careers that engage at the intersection between business and social issues. The interactive exercises are intended to provoke discussion and curriculum innovation, rather than straight-forward adoption as “plug and play” experiential learning exercises.

Theoretical background

The concept of wicked problems has gained currency in a wide range of fields. Wicked problems are social and or environmental dilemmas that are complex and don't lead to closed-end solutions that can be verified as optimal against objective standards.

Rittel and Weber (1973) are widely credited with formulating the original conception of wicked problems. Table 1 summarizes 10 characteristics they identified that distinguish wicked problems from simpler or “tamer” problems.

Table 1: Characteristics of Wicked Problems

1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not true-or-false, but good or bad.
4. There is no immediate and no ultimate test of a solution to a wicked problem.
5. Every solution to a wicked problem is a “one shot operation”; because there is no opportunity to learn by trial and error, every attempt counts significantly.
6. Wicked problems do not have an enumerable(or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.
7. Every wicked problem is essentially unique.
8. Every wicked problem can be considered to be a symptom of another problem.
9. The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem’s resolution.
10. The planner has no right to be wrong.

From Rittel and Weber (1973)

Rittel and Webber’s discussion of wicked problems is pessimistic, reflecting their underlying criticism of the technocratic traditions in planning and public administration.

They observed that many public problems are inherently wicked problems. As a result, they argued, professional training in the planning professions led to unrealistic expectations and often harmful outcomes in planning decisions.

Recent approaches to wicked problems have been more optimistic, focusing on the skills required for addressing the inherent complexity in the problems under consideration.

Bentley and Toth (2020) distinguish between “messes” and problems. Messes are multiple problems hiding under a single label. In practice we refer to the “homeless problem” or the “climate change problem” or “racism problem”. In reality, each of these are messes, with each of us harboring different definitions of the problem, and often different desired outcomes. Bentley and Toth describe a process for teasing apart different problems within a given mess and convening conversations to understand those different meanings, as a first step toward addressing the shared concerns.

Hull, Robertson and Mortimer (2021) articulate a process that builds on long-established approaches such as stakeholder analysis. They identify three broad skill sets for understanding and acting to address wicked problems as “connect, collaborate , and adapt”.

The session would provide an overview of the “wicked problem” construct and show how tools from both business in society, design thinking and other management courses can be combined to create a new and more powerful curriculum for learning about community leadership.

Business in society courses and ethics courses, for example, have provided powerful tools for identifying relevant stakeholders and unpacking equity issues. Design

thinking courses offer a wide range of tools that can be adapted to help understand the perspectives and needs of specific stakeholders.

This hybrid toolset brings together a wide range of familiar and new approaches including:

- Identifying and exploring stakeholder perspectives
- Experiencing “hard” empathy
- Surfacing equity issues
- Defining desired outcomes and impacts
- Exploring conflicting or overlapping mental models
- Problem framing and reframing, and
- Identifying necessary conditions for change to occur successfully

A fundamental premise of design thinking is a promise of more creative solutions, based on an empathetic understanding of the perspectives of those ultimately affected by the solution to the problem. Increasingly, design thinking methods have been applied to a wide range of social problems ranging from addressing homelessness and affordable housing, reducing traffic congestion in urban areas, and the many challenges associated with our need to address and reverse climate change.

But design thinking’s implicit promise of imaginative but closed-ended solutions does not acknowledge the wicked character of the problems under consideration. The focus in design thinking on identifying and serving the needs of the end user begs the question of who the user is. For example, in a project to address a lack of affordable housing, is the

user a person looking for an affordable home, a builder looking to make the economics of affordable housing work, or a city official working to balance the conflicting needs of revenue generation, compliance with legal requirements, and maximizing occupancy rates? In this example, each choice of a particular end user is an implicit definition of the problem.

Bringing the perspective of wicked problems helps reframe this problem. Many problems that involve business in society require meeting the needs of multiple “users” simultaneously. The workshop is designed to illustrate and provoke discussion about how we in the management teaching realm can recombine existing tools into a more effective toolbox for business problem solvers.

Outline of the Session

The proposed session would illustrate the potential of this approach by engaging participants in a short, three-part simulation I helped develop as part of the curriculum for the community leadership organization.

The first part of the simulation asks participants to assist an elementary school principal in a low-income neighborhood to address concerns about unequal access to education in the event that schools return to lockdown during our (seemingly endless) pandemic. The exercise asks participants to identify relevant stakeholders and the equity issues to be addressed.

The second phase of the simulation asks participants to identify criteria for an equitable and effective resolution to the principal’s and the community’s concerns. This phase requires participants to distinguish between criteria (which might be widely shared)

and proposed strategies (which might differ widely among stakeholders). The conversation may also highlight some criteria that are not shared (or weighted equally) by different stakeholders.

The final phase asks participants to propose strategies to address the jointly-created criteria for an equitable and effective resolution. Starting from (potentially) shared criteria is key to building common ground among stakeholders with widely diverging perspectives on the causes, consequences and acceptable solutions to a wicked problem.

The session would end with a discussion about the possibilities for incorporating wicked problems, and approaches to addressing them, into a variety of management courses.

Approximate Timing (based on a 1-hour format)

1. Introduction. Overview of the concept. 10 minutes.
2. Scenario identification of stakeholders and equity issues. 15 minutes.
3. Identification of shared criteria. 10 minutes.
4. Identification of potential approaches to meet the shared criteria. 10 minutes.
5. Discussion. Modes of learning. Ways to incorporate in management curriculum. 15 minutes.

Depending on the depth of the conversation in steps 2 and 3, we can abbreviate step 4, if necessary, to preserve time for the discussion in step 5.

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