CHAPTER 12
Organizational Learning, Innovation, and Change

LECTURE OUTLINE

A. Chapter Purpose
   • Set against the baseline perspective that health care organizations are complex adaptive systems whose future states are unpredictable and unknowable, the purpose of this chapter is to introduce a perspective of health care organizations that borrows from quantum theory and chaos theory to describe innovation and change not as rational, controllable processes, but instead as complex, uncertain, nonlinear sequences of events and activities. This chapter expands upon these perspectives by bridging and integrating them in the notion of the learning organization, where innovation and change are seen as everyday activities and inputs for further learning. The chapter concludes with managerial guidelines for generating learning, stimulating innovation, and implementing change.

B. Change in an Unpredictable, Unknowable World
   • Quantum theory tells us that the world is both unpredictable and fundamentally unknowable, wherein the very act of measurement (i.e., collecting the information) alters the physical systems we hope to understand. Continuous change, activity, and interconnectedness add an element of unpredictability to any system. As such, planned, controlled, orderly approaches to innovation or change are unlikely to perfectly achieve their intended outcomes.
   • Chaos theory also tells us that the future state of the world is unknowable because physical systems are highly sensitive to initial conditions. Even among health care organizations that look very much alike, small differences in initial conditions can lead to radically different outcomes.
   • Given these two perspectives, we need to change the way we think about organizations and the roles of leadership and management in them.

C. Health Care Organizations as Complex Adaptive Systems
   • Health care organizations are complex adaptive systems wherein (1) the individual agents who work in them have the freedom to act in ways that are not always predictable, and (2) the actions of these agents are interconnected such that one agent’s actions change the context for other agents.

1. Health care organizations exhibit two forms of complexity
   a. Combinatorial complexity
      (1) Arises from the number of constituent elements of a system or the number of interrelationships that might exist among them.
   b. Dynamic complexity
      (1) Arises from the operation of feedback loops.
         (a) Reinforcing feedback loops amplify or intensify whatever is happening in a system.
         (b) Balancing feedback loops counteract or oppose whatever is happening in a system.
D. Organizational Learning

- Learning itself is a feedback process. Organizational learning embraces both adaptive and generative learning.

1. Single-loop learning
- A relatively simple error-and-correction process whereby problem-solvers look for solutions within an organization’s policies, plans, values, and rules.
- Promotes adaptive learning, in which problem-solvers adjust their behavior and work processes in response to changing events or trends.

2. Double-loop learning
- Occurs when problem-solvers attempt to close the gap between desired and actual states of affairs by questioning and modifying those organization’s policies, plans, values, and rules that frame organizational problems and guide organizational action.
- Promotes generative learning, in which problem-solvers attempt to eliminate problems by changing the underlying structure of the system.

3. Learning Organizations
- Learning organizations are described as places where “people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to learn together.”
- Through organizational learning, new knowledge and capabilities remain even if individual organizational participants leave.

4. Learning Disciplines
- There are five disciplines that each involves a body of theory and techniques that must be practiced in order for mastery to develop. When combined, these produce an organization capable of “expanding its capacity to create its future.”
  a. Systems thinking: The discipline of seeing wholes, perceiving the structures that underlie dynamically complex systems, and identifying high-leverage change opportunities.
  b. Personal mastery: The discipline of individual learning, without which organizational learning cannot occur.
  c. Mental models: The discipline of constantly surfacing, testing, and improving our assumptions about how the world works.
  d. Shared vision: The discipline of generating a common answer to the question, “What do we want to create?”
  e. Team learning: The discipline of creating alignment such that team members think insightfully about complex problems, synergize their knowledge and skills, and produce coordinated action.

5. Limits of Organizational Learning
- There are significant challenges involved in building learning organizations, and there are seemingly intractable limits of organizational learning:
  a. Organizational members usually possess only limited information, much of which is ambiguous or inaccurate.
  b. Even with perfect and complete information, organizational members routinely engage in unscientific reasoning due to judgment errors and biases.
  c. Organizational learning often bumps up against practical problems and competing priorities.
E. Managing Organizational Innovation

• Learning lies at the heart of both innovation and change. Innovation is the process by which an organization puts a technology or practice to use for the first time, regardless of whether other organizations have previously used the technology or practice. Change is a broader concept that deals with any modification in organizational composition, structure, or behavior—new or not new to the organization.

• Although innovation is perhaps the best-studied phenomena in management research, one of the most consistent findings is how unpredictable and complex the process is. Innovation adoption and implementation processes may differ significantly for different types of innovations. A strong pro-innovation bias exists in management thinking and research and, perhaps, U.S. culture generally.

1. The Innovation Model

• Although innovation in complex adaptive systems rarely occurs through the linear process described by the model, the model nonetheless offers a useful vehicle for discussing what we know, and do not know, about innovation.

  a. Agenda Setting

• The ongoing process within organizations through which organizational members identify important problems and search for innovations to address these problems.

• Often triggered by performance gaps—perceived discrepancies between expected and actual organizational performance—as organizational members look for new ideas or technologies to bridge the gap

• Two factors play a key role: who participates in the agenda-setting process, and how those participants perceive information.

  b. Matching

• The organization’s needs and capacities are matched to the innovation and the decision to adopt or not adopt is made.

• Organizational members learn about the feasibility of adopting the innovation.

• Concludes with the decision to adopt or not adopt an innovation.

• Involves the interplay of two sets of factors: (1) innovation characteristics, and (2) social system characteristics.

1) Innovation Characteristics

(a) Relative advantage: The degree to which the innovation is perceived as superior to current practice.

(b) Compatibility: The degree to which the innovation is consistent with the values, beliefs, history, and current practices of the potential users.

(c) Complexity: The degree to which organizational members perceive the innovation as difficult to understand or use.

(d) Trialability: The degree to which organizational members can experiment with the innovation on a limited basis.

(e) Observability: The degree to which the results of an innovation are visible to others.

2) Social System Characteristics

(a) Network structure: Almost all of the geographic variation in technology adoption occurred between local communities of medical professionals, not within them.

(b) Homophily: The degree of similarity between individuals, groups, or organizations.
(c) Opinion leaders: Individuals who serve as hubs in social and professional networks and strongly influence how innovations are perceived, both within their organizations as well as in others.

(d) Boundary spanners: Employees who have significant social ties both inside and outside the organization.

(e) Absorptive capacity: An organization’s ability to acquire, assimilate, and apply new knowledge.

(f) Organizational readiness: Motivational readiness, institutional resources, and organizational climate contribute to organizational readiness for change.

(3) Restructuring

(a) The transition period during which targeted organizational members ideally become increasingly skillful, consistent, and committed in their use of an innovation.

(b) Implementation almost always involves the mutual adaptation of the innovation and the organization.

(c) Organizational adaptation generally takes the form of implementation policies and practices—the formal strategies that an organization employs in order to put the innovation into use, and the actions that follow from those strategies.

(4) Clarifying

(a) Organizational members gain experience with an innovation, learn about its implications for them and for the organization, and begin comparing the actual versus expected benefits and costs of innovative use.

(b) In this stage, the innovation either diffuses within the organization or stalls.

(c) Innovation effectiveness (the benefits the organization realizes from innovation use) and implementation effectiveness (the overall consistency and quality of organizational members’ use of an innovation) are both critical for success.

(i) Organizations often struggle with a key activity of the clarifying stage: disseminating innovations from one part of the organization to other parts.

(a) Diffusion: A passive process in which a growing body of information about an intervention, product, or technology is initially absorbed and acted upon by a small body of highly motivated recipients.

(b) Dissemination: An active process whereby special efforts are made to ensure that intended users become aware of, receive, accept, and use an innovation.

(5) Routinization

(a) The final stage in the innovation process wherein the innovation becomes incorporated into the regular activities of an organization and loses its distinct identity as new and different.

(b) Depends in part on the extent to which organizational members perceive the innovation as a legitimate and valued practice.

(c) Depends on the continued allocation of five types of resources: budgetary resources, personnel resources, training programs, organizational policies and procedures, and supply and maintenance operations.

(i) Organizational leaders can employ two interrelated strategies to improve the chances that an innovation will become routinized:
(a) Encouraging participation by end-users in decision-making processes

(b) Providing organizational members latitude to “reinvent” or “adapt” the innovation

F. Implementing Large-Scale Organizational Change

- A growing number of management scholars and practitioners have questioned whether successful large-scale change efforts can be implemented in a top-down, linear, planned manner. Although plans provide useful roadmaps, successful large-scale organizational change often occurs through emergent, incremental steps as both problems and solutions arise through repeated interactions among leaders, organizational members, work processes, and environmental factors.

1. Managing Change

- Kotter’s (1996) organizational transformation model: Proposes eight action steps for creating and sustaining large-scale change
  a. Establishing urgency
  b. Creating a guiding coalition
  c. Developing a vision
  d. Communicating the change vision
  e. Empowering broad-based action
  f. Creating short-term wins
  g. Consolidating gains
  h. Anchoring new approaches in culture

2. The Art of Change

- Guiding large-scale organizational change is more art than science. Several concept areas and key questions provide insight into areas that exemplify the art rather than the science of change:
  a. Pace: How long should the organization plan and design the change?
  b. Scope: How much of the organization will be involved in the change process?
  c. Depth: How much change in a given area will be attempted?
  d. Publicity: How will the change initiative be publicized: with lots of fanfare or through a quiet, understated campaign?
  e. Supporting structures: What new management structures or processes are needed to support the change effort?
  f. Driver: Who will drive the change: top management, middle management, clinical professionals, or lower-level employees?

3. Common Organizational Change Approaches

- Health care managers can draw upon several approaches to implementing large-scale organizational change.
  a. Total quality management: Embraces a philosophy of meeting or exceeding customer expectations through the continuous improvement of the processes associated with providing a good or service. Combines organization-wide participation in the planning and implementation of continuous improvement, systematic use of statistical tools to monitor and analyze work processes, and employment of process management tools to help organizational members use their collective knowledge effectively.
b. Business process reengineering: Has the goal of organizing work processes around customers’ needs or wants by breaking down the barriers of excess bureaucracy that may have evolved over time. Instead of attempting to improve existing processes, reengineering seeks to transform the organization by redesigning core work processes from scratch.

c. Patient-focused care: Emphasizes the quality of clinical care and the quality of service the patient experiences.

d. Retrenchment: Also known as downsizing, encompasses a variety of management cost reduction strategies focused on improving efficiency by reducing labor costs, principally through personnel reduction.

e. Restructuring: Focuses on bringing “organizational processes, products and people” into concert around a shared vision and occurs on a more strategic level than reengineering. Typically this means reevaluating which lines of business it should be in.

OVERVIEW OF CHAPTER “IN PRACTICE” AND “DEBATE TIME” MATERIAL

IN PRACTICE: How Will Your Drug Be Affected by Negative Study Results?

1. What do the reactions of the physicians and patients to the “Prove It” study illustrate?
   - They illustrate the difficulty of predicting how events, even seemingly unrelated ones, will affect an organization’s business performance, strategic plans, and innovation efforts.

2. Identify the characteristics that make health care organizations complex in this example.
   - Social systems rarely behave the way we want them to, or even the way we predict they will. “Yesterday’s solutions usually become today’s problem.”

IN PRACTICE: New Concepts for Leading Health Care Organizations

1. What concepts did Dr. James Roberts use to change his organization?
   - Self-organization
   - Coevolution
   - Emergence

2. What are the classical management tasks?
   - Discussions should center on planning, organizing, deciding, and controlling.

3. What is the work of the “new leader”?
   - Among other things, there is an emphasis on nurturing the development of organizations capable of learning in real-time and improvising in the face of frequent, unplanned changes.

IN PRACTICE: Improving Community Cancer Care

1. What form does organizational adaptation generally take?
   - Initially, organizational adaptation takes the form of implementation policies and procedures. It is only over time through repetition to the point that the policies become the norm, where specific circumstances result in an “automatic response” rather than a need to reference those policies.

2. Although some implementation policies and practices represent: (a) short-term temporary measures, others become (b) permanent organizational changes that require ongoing investment and support. Which of the above is the National Cancer Institute’s Community Clinical Oncology Program?
   - (b) permanent organizational changes that require ongoing investment and support.
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DEBATE TIME 12.1

1. After reading Debate Time 12.1, do you feel that there is still a role for planning, organizing, deciding, and controlling in complex adaptive systems? If yes, why? If no, why not?

DISCUSSION QUESTIONS AND SUGGESTED SOLUTIONS

1. As a manager, what does providing a “good enough” vision mean? Why are managers advised to develop a good enough vision of organizational change instead of an expansive, detailed vision?

When uncertainty is high and there is much disagreement, few management or leadership approaches work. Even when only modest levels of certainty and agreement exist, organizations enter the “zone of complexity” or the “edge of chaos,” where high levels of creativity and innovation become possible. In this zone, managers cannot hope to understand what a complex adaptive system will do or how to optimize it. As such, traditional management approaches lose their effectiveness. Instead, managers should be geared toward “bigger picture” leadership by setting a few simple roles, and a few guiding principles rather than detailed, explicit plans. Such broader visions allow for more opportunity for innovation and creativity, and can more consistently remain an accurate framework of guidance, compared to an explicit, detailed plan, which can become obsolete quickly if there is unanticipated or unpredicted change.

2. How does “adaptive” learning differ from “generative” learning? How can managers promote and support generative learning?

Adaptive learning is when problem-solvers adjust their behavior and work processes in response to changing events or trends—their learning is an adaptation to the changing environment and situational needs. Generative learning is when problem-solvers attempt to eliminate problems by changing the underlying structure of the system—this may incorporate actually changing their environment or by effectively redefining the environment and the “rules of engagement,” such as through redefining assumptions and values. Managers can promote generative learning by developing what Senge calls “the learning organization,” places where “people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to learn together.” This may be done through valuing and incorporating the five disciplines.
of systems thinking, personal mastery, mental
models, shared vision, and team learning.

3. What is the difference between technical
innovation and administrative innovation?
Provide an example of each not already provided
in the text. For administrators, what is the
problem with a pro-innovation bias?
Technical innovations include ideas for new
technologies, new products, new services, and
new clinical processes. Administrative
innovations include new ideas or practices in
the areas of personnel selection, resource
allocation, task design, and organizational
structure. Several examples of each can be
provided. For administrators, a pro-
innovation bias can lead to view innovations
as being more favorable than they actually
are. The adoption of such innovations occurs
simply because it is an innovation—it adds
no value and can be disruptive or add
unwarranted cost.

4. When seeking to “routinize” an innovation, how
long must monitoring continue? Is this the same
for all innovations?
Ongoing monitoring of innovation use
supports routinization by signaling to
targeted users the importance of continued
innovation use and by providing performance
feedback to enable users to make adjustments
in their practice patterns. As such,
monitoring, essentially, could go on
indefinitely, though as the innovation
becomes routinized, the resources committed
to monitoring may change, as might the areas
of monitoring focus. While not all resource
types are relevant to all innovations, the more
resource types committed to sustaining an
innovation, and the longer the duration of
that commitment, the more routinized the
innovation becomes.

5. Within the context of organizational change, what
does it mean to “unfreeze, move, and refreeze” an
organization? Is this concept realistic?
Unfreezing involves creating an awareness of
the need for change and removing any
resistance to change. Moving involves putting
into place new strategies, structures, or
practices; this stage often requires
organizational members to accept of new
ideas, attitudes, and behaviors—a process
that managers or other change agents can
facilitate with role-modeling and training.
Refreezing involves stabilizing the change by
integrating the newly adopted strategies,
structures, and practices into existing
operating procedures and work routines and
by reinforcing changes in the attitudes and
behaviors of organizational members
through, for example, altering recognition
and reward systems. This concept has been
criticized for two reasons. First, organizations
and organizational change is a dynamic
process, not a static one. As such, as soon as
the assessment is done, the organization and
its environment have changed and the
assessment is obsolete. Second, it provides
little guidance for managers of large-scale
organizational change.

6. Why should managers create “a climate of
openness”? In what kinds of environments do you
think it is probably most difficult to reconcile
“openness” and accountability?
In a climate of openness, information flows
freely, people can express their views, and
decision making takes advantage of multiple
perspectives. Defensiveness, secrecy, and
disenfranchisement foreclose opportunities
for learning and innovation and generate
resistance to change.

TEACHING TIPS AND EXERCISES

1. An interesting and useful class discussion can be
held regarding why individuals resist change and
the steps leaders can take to overcome this
resistance to change. Ask the students to share
experiences they have had that involved a change
that they wanted to resist. They might offer
examples from their employment, or change that
occurred in their personal lives. Any type of change
they have encountered will serve to illustrate the
basic concepts of change management.

Ask the students to describe why they resisted
the change, and then use these examples to draw
the class into a discussion of why individuals in
organizations often resist change attempts. The
reasons for resistance will probably fit into one of
the following categories (there may be others
also): It required a change of habit (they were used
to routine, predictability, stability); there was loss
of power (or control) or fear (of the future,
uncertainty, the unknown, failure); the change was
uncomfortable, or they did not understand the purpose of the change.

After this discussion, you might offer some suggestions for leaders who wish to overcome resistance to change in their organizations. You might share the following three “keys to the change process”: empathy, communication, and participation. Leaders must display empathy; this involves knowing your employees, and why they resist, and anticipating the effect of change on them. Second, leaders should communicate changes in advance, including why the change is being implemented, how, and the time frame. Finally, leaders should seek participation from employees at all levels affected by the change.

2. Consider reviewing a comprehensive change model with your students. There are several popular models in use, and you probably have a preference. Most of the comprehensive models are adaptations (and extensions) of Lewin’s change model (unfreezing, moving, refreezing). It may be helpful to review Lewin’s model to provide a foundation for understanding the comprehensive change model that you select.

COMPLEMENTARY READINGS


