

CHAPTER 8

LEADING ORGANIZATIONAL CHANGE

ABSTRACT

This chapter presents the design and use of a problem-based learning module, Leading Organizational Change. The PBL module is organized around an interactive computer simulation, "Making Change Happen," which is used to help students learn how to implement complex innovations in organizations. The chapter describes the use of this problem-based simulation as well as its adaptation for the Thai context. The chapter shows how learning technology can be blended with PBL to provide a learning process that could not be accomplished in a either a typical PBL or traditional teaching environment.¹

INTRODUCTION

Every few hundred years throughout Western history, a sharp transformation has occurred. In a matter of decades, society altogether rearranges itself -- its worldview, its basic values, its social and political structures, its arts, its key institutions. Fifty years later a new world exists. And the people born into that world cannot even imagine the world in which their grandparents lived and into which their own parents were born.²

Globalization is reshaping the work lives of people in organizations throughout the world. Emerging technologies, the growth of new knowledge, a rapidly evolving global economy, as well as political and cultural changes are creating a new context for organizations.³ In just a short span of time, the capacity to change has become a core competency for organizations throughout the world. Organizations that are unable to adapt to these changes will not survive, regardless of their sector, industry or geographic locale in which they operate.⁴

Yet scholars and practitioners have long acknowledged that change does not come easily, either to people or the organizations they inhabit. There is a natural inclination among people to avoid the discomfort of the unfamiliar, to seek stability, and to resist change.⁵ The same tendency holds true for organizations whose structure and culture have a built-in bias to maintain policies, processes, and traditions of the past. New managers quickly learn that they will have to "overcome resistance" from individuals, groups, and business units if they seek to initiate organizational change.⁶ Resistance to change is often portrayed in the management literature as the largest obstacle to making change happen in organizations.

More recently, however, a different paradigm suggests that a certain degree of resistance to change is both natural and healthy for people and organizations. Change that is too rapid or comprehensive can overwhelm people individually or

collectively thereby reducing their sense of security and their effectiveness. This implies that rather than viewing people as the problem to be solved or overcome, successful change leaders should take the time to understand the reasons why people resist change. From this perspective, successful organizational change results from managing the tension that results from the organization's simultaneous needs for both stability and change. This task falls to people holding leadership roles in organizations.

However, the organization's capacity to *make change happen* cannot depend only on leaders at the apex of the hierarchy. The rapid pace of change in the 21st century makes it essential that the capacity to lead change is distributed throughout the organization. Change leadership must, therefore, be developed among a broad base of people in a wide variety of staff, supervisory, and formal leadership roles.⁷

In this PBL module students use a problem-based computer simulation, *Making Change Happen*,⁸ as a tool for learning how to lead changes and innovations to achieve results. The simulation was originally designed as a board game with game cards and game pieces to be moved on the game board. It was subsequently converted into a software program⁹ that simulates the process of change in an organizational environment.

The computer simulation provides learners with a common and important problem to solve: implementation of a new enterprise resource management (ERM) system in an organization. Although the simulation focuses on implementation of an IT innovation, the simulation has been designed so that the lessons learned by students are broadly applicable to many other types of organizational change efforts such as reengineering, TQM, reorganization, or mergers.

The broad instructional goal of this PBL module is to develop the ability of students to think strategically and flexibly about the change process. The ERM change implementation problem is used as the stimulus for learning how to analyse an organization as a context for change. Students learn how to apply a variety of theoretical frameworks to the problem of change. However, following the tenets of the PBL process, students only learn these frameworks as a consequence of trying to meet the challenges of leading organizational change, rather than in advance.

During the simulation students learn in teams consisting of three members. Each "project implementation team" is responsible for developing and applying a strategy for implementing the ERM system (fictitiously named *IT 2020*) over a three-year period of time. At the outset, the project team must develop an implementation strategy to raise staff awareness of the change, create a broad base of interest, enable the staff to develop new IT skills, and generate commitment to use *IT 2020* in their daily work.

However, unlike in a case learning environment, through the PBL simulation learners not only *plan* a change strategy, but also *implement* it. During the implementation process, the project team is confronted with widespread resistance to the mandated use of *IT 2020*. The nature, intensity and form of the resistance varies based upon a variety of personal factors including staff personalities, job positions, prior experience with IT, and personal and job priorities. The project team must also deal with obstacles arising from resource constraints, politics,

organizational structure, communication networks, corporate culture, and even “acts of god.”

The team quickly finds out that they must revise their strategy to meet the needs of the real situation. Over the course of the three-year simulation the change team is able to “see” the results of their change strategy both in terms of staff usage of the new IT system and productivity gains arising from its use. The interactive nature of the simulation creates an active learning environment in which students learn to use change theories as tools for solving real problems.

THE PROBLEM

In the initial class session, students are introduced to the problem they must address in this module. The problem is presented as follows from the simulation:

The Thai Banking industry has almost reached the stage where it needs to expand electronic services to cut costs. It cannot afford to keep opening fully-manned branch offices according to leading industry analysts...Technology will become more important than ever in achieving economies of scale, enabling banks to operate at lower costs... Most industries in the United States and Britain are halving their number of full-service branch offices to cut costs and promote efficiency. Banks are instead increasing their outlets by using electronic services such as computer banking, tele-banking, ATM's, Internet, and Point-of-Service sales. All these changes will take time to implement because we are dealing with people...We may have to wait five to ten years before people become comfortable with this change.¹⁰

The Head Office of your company, Best Inc., is implementing a new information technology (IT) system. Under pressure from domestic as well as rapidly advancing foreign competition, the company's traditional methods of managing information are clearly inadequate to the needs of the global age. Processing time for orders, tracking of customer service complaints, maintenance of customer and staff profiles, and inter-department coordination are just a few of the areas in which corporate performance is lagging due to information management problems.

Best Inc. has continued to rely heavily on traditions, policies and practices that may have worked in the past, but that are not working well today. Today's customers expect better and faster service. If Best Inc. doesn't provide it, your competitors will.

The corporate culture at Best Inc. is strong but stagnant. Many employees have been with the company for a long time; some families have worked in the corporation for more than one generation. Thus, they have a deep sense of loyalty to the company.

However, the culture has not readily embraced the rapid changes that have come in the years following the economic crisis of 1997. Senior management has been uncomfortable with the pace at which uncomfortable decisions have been forced upon them. Middle managers have complained frequently at being asked to carry out projects and programs that they never ask for. Veteran workers at different levels have been confused by the new methods and joke about “reengineering the

engineers.” Younger staff, many with higher formal education than their supervisors, have not always found the culture receptive to new ideas. Some have left for better opportunities.

Eight months ago Best Inc. brought in a new Managing Director (MD), John Lee. He came in promising fast productivity improvements and is betting on large gains from new investments in IT. This new enterprise resource management system -- *IT 2020* -- is the centerpiece of his promise of change to the Board of Directors.

The IT system will, however, mean significant change for all who work in the company. In addition to the purchase and redesign of IT hardware and software, the new system will require reengineering of many work processes. This will affect how employees work together across business units as well as their relationships to customers.

While computers have been used increasingly in this business over the past half-dozen years, mostly they have been limited to word processing and email and concentrated in selected functions such as credit and record-keeping. The MD's intention is for *IT 2020* to be used in all departments -- administration, marketing, credit, public relations, production, customer service etc. Moreover, many more employees will rely on the IT system to accomplish basic tasks in their jobs than ever before. Use of IT will no longer be optional.

In fact, the key to its effectiveness depends on maintaining an up-to-date, coordinated database of information across departments. The MD is counting on this system to overcome a wide range of company problems and also to project a new more up-to-date image for the company.

Given the scope of this change, the MD has decided to proceed by implementing *IT 2020* at two branches in the Central Region on a pilot basis. Based on the trial implementation, he will then roll it out to other branches throughout the country. Despite this step-by-step approach, the MD is under pressure to show quick results. Therefore, trial implementation in the Central region will begin right away.

Although this is the MD's special project and he has mandated implementation, not everyone is happy with it. The project's visibility was raised recently when the Board of Directors chose not to go with the lowest bidder for the project's software development. Instead the Board, on a close vote, followed the MD's recommendation and selected Hi-tech International's system, *IT 2020*. Certain Board Directors were upset with the decision to give this contract to a foreign firm rather than to a domestic company with whom they had a long relationship.

Central is the largest region in the company, and also the most political. The Regional Director, Al, is the most senior regional manager. In fact, he was the top internal candidate for John Lee's position as MD. His support is necessary if *IT 2020* will be successfully implemented in his region.

You have just been selected for special assignment to the *IT 2020* Project Implementation Team. You are not happy about this assignment since it could interfere with your own promotion. Being part of a highly visible, but politically sensitive change effort is unlikely to make you popular. Nevertheless, you have no

choice, so you have to make the best of it and hope that success will get some positive attention from the MD.

Your cross-functional team is comprised of people from different parts of the company, but none from the Central Region. You were told to coordinate the work of your implementation with Beth, the Management Information System (MIS) Manager in the Head Office, and also with Al, the Director of the Central Region. Two members of the Board of Directors -- Carol and Dave -- have been assigned by the Board Chairman to monitor this project. Shortly, you will find out more about the other people with whom you will be working to implement *IT 2020*.

As you begin the simulation remember the following points:

1. You will have three years to implement the new IT system in the selected business units;
2. You will *move* people through the *stages of change* by choosing activities designed to inform, interest and prepare them to use *IT 2020*.
3. Before you selected a change activity, ask yourselves: "*What does this person need at this stage of the change process?*" Then select an activity that meets the needs of the individual or the group.
4. Your committee has a budget of 35 bits to spend on change activities in the first year. Bits represent time and money. You will start with a new budget of 30 bits in the second year and 25 bits in the third year. Your resources are limited, so spend your budget wisely each year.
5. You have two criteria on which your team's success will be evaluated: the number of people actually using the IT system after three years and increases in productivity as measured in "Bennies" (company benefits) that arise from the use of *IT 2020*.
6. Your team members will have a limited amount of time to devote to implementation of *IT 2020*. It is recommended that you read the materials and plan your strategy, but then you must act! The MD is expecting results soon and promotion depends on your success!

THE LEARNING PROCESS

The instructional design of this module assumes that students will attend class for weekly three-hour class sessions over a six-week period. Students are also expected to complete weekly readings and play the computer simulation outside of class time. Note that while this is our current configuration, the module has been delivered in a wide variety of formats and sequences based upon the objectives and time constraints of the specific setting.

Activity Flow During the Module

The learning sequence consists of team-based use of the simulation, weekly mini-lectures conducted by the instructor, three instructor-led debriefings in weeks one through three, two student-led debriefings in weeks four and five, two written

reflective assignments, and team-to-team knowledge sharing. The flow of activities in this module is shown below:

Class Session #1

- Introduction to the Making Change Happen simulation
- Complete one year of the simulation with instructor debriefing in class
- Homework: Read Kotter (Heart of Change) chapters two, three, four
- Play all three years at least one time on your own or with a partner outside class

Class Session #2

- Mini-lecture: Goal-setting, strategy, resistance, adopter types
- Complete two years of the Simulation with instructor debriefing in class
- Homework: Read Kotter (Heart of Change) chapters five and six
- Practice the simulation outside class and increase your level of mastery

Class Session #3

- Complete three years of the Simulation outside class
- Instructor debriefing of simulation in class for year three
- Mini-lecture: Kotter's 8 Stages of Implementing Change
- Homework: Read Kotter (Heart of Change) chapters seven and eight
- Write your Strategy Analysis on Making Change Happen

Class Session #4

- Strategy Analysis of Making Change Happen due in class
- Student-led debriefing of change factors, obstacles, strategies
- Read Bridges & on-line resources on Change Transitions and Case Study

Class Session #5

- Mini-lecture: Introduce Change Transitions Framework
- In class case analysis on Change Transitions
- Finish reading Bridges and on-line resources on Change Transitions

Class Session #6

- Personal Case Paper due in class
- Final Written Exam and Play Simulation in Class

Playing the Simulation

After being introduced to the problem and their role as project implementation teams, the learners begin to access other factual information concerning the change context. This information is presented via handouts as well as on the computer screen. It includes information about the 24 people (i.e., the staff members involved in the *IT 2020* implementation) and the 16 activities they can use to engage the staff in the change effort and prepare the organization to use *IT 2020*.

The game board (see Figure 1), displays the organization's members on the left-hand side. Information on each staff member can be accessed by clicking on their icon. Change activities are listed on the right side of the screen, again with clickable buttons providing access to information about the activity and its cost in bits. Listed across the top of the board are five stages of the change process: *Information, Interest, Preparation, Early Use, and Routine Use*. These stages of use are derived from the *Concerns Based Adoption Model* of change.¹¹

The game pieces representing the 24 staff members (see Figure 1) start “off the game board” because they have yet to begin the process of change. Few have much information about the change, except by rumor. As noted above, a key goal of the change team is to move these staff members from a state of knowing nothing about *IT 2020* to a stage of mastery and routine use of the ERM system in their daily work. The other is to gain “Bennies” (productivity benefits) which will accrue as staff begin to do activities with *IT 2020* that increase efficiency and effectiveness.

The People

The project team will work with 24 people in the organization. These staff members work in the two “pilot branches” as well as the regional and head offices. We emphasize at the outset of the module that successful implementation will depend upon the team’s effectiveness in understanding the perspectives of these staff members towards the change (i.e., *IT 2020*) and executing a strategy that addresses their concerns.

The descriptions of the staff members have been conceived taking into account a variety of factors including job position, social networks, organizational power and politics, personality type, and change adopter types. Relevant information about the 24 staff members is conveyed in an organizational chart, as well as through brief descriptions of the staff members accessible via the computer.

Each of the 24 staff members has a position in the organization such as Branch Manager, MIS Manager, Board Director, Credit Clerk, Marketing Officer etc. Job positions are relevant change since they shape the perspective taken by the staff member towards the change. For example, an IT manager could be expected to be more interested in an IT-related change than a credit clerk. Position is also relevant from the perspective of organizational power. Although students are not told this at the outset, the Branch Managers are critical “gate-keepers” without whose support implementation will fail in the branches.

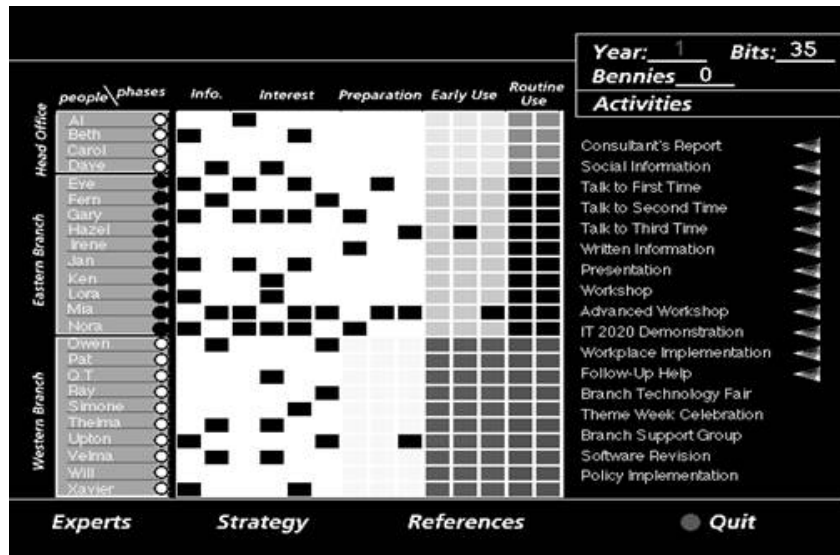


Figure 1: Making Change Game Board

The one paragraph descriptions of each staff member also convey relevant aspects of staff member personalities, experience and attitudes towards IT. For example, the description for Al, the Central Region's Director, reads as follows:

Al is a respected manager who is concerned with maintaining the Central Region's productivity. Although he applied for the Managing Director's position, he was not selected. Recently Al was overheard saying: "The new boss may not understand the way things are done around here."

The description for Irene, a Credit Clerk, gives the following information:

Irene says: "When there's a job to be done, the old ways still work best." She doesn't trust technology or see a need to change the credit system. She will resist anything that results in more work, even in the short-term.

The descriptions of the 24 staff members also take into account Everett Rogers' Adopter Types Theory.¹² This change model suggests that people respond to change in "predictably different ways" that can be classified as five adopter types: *Innovators*, *Leaders*, *Early Majority*, *Late Majority*, *Resistors*. Empirical research has identified both the characteristics and approximate distribution of each type in the population. These characteristics have been embedded into the descriptions of the staff and inform their distribution within in the organization.

We emphasize that, consistent with PBL, the information about adopter types is neither taught to the students in advance nor are the staff "labeled" as one type or another. Instead the learners confront the problem first; then as they begin to implement *IT 2020*, it becomes apparent that people are responding differently to the change. A few – the *Innovators* – jump at the chance to engage in change. Some

others – the *Leaders* – appear to have unusual influence with their peers and so forth. The team will generally begin to notice a “pattern” in the responses.

During the instructor-led debriefing, the pattern of responses among the staff is raised by the students. This leads to discussion about the different ways in which people respond to change. Only then – after it has become relevant to solving the problem -- is the adopter type model introduced. At this point it makes sense to the students and class discussion about the varying strategies to use with different adopter types is followed intently by the various teams.

In sum, construction of the simulation assumes that sustainable change results when we successfully engage and motivate the people who are expected to make use of it in their daily work. While we assume that a certain degree of resistance to change is natural, a variety of organization and personal factors are relevant to understanding the potential causes of resistance. Power, politics, position, personality and experience all factor into understanding how people will respond to the same change. The descriptions and actions of the people who comprise the change effort in the simulation reflect these assumptions.

Implementation Activities

There are 16 activities from which the learners can choose in order to create their implementation strategy (see Figure 1). These are typical activities that a change implementation team might undertake: gathering more information, talking with people, distributing written information, conducting a presentation for staff about *IT 2020*, holding a demonstration of the software, visiting another organization that is using the software successfully already, holding a skill development workshop, using the IT in the workplace, providing follow-up help to support implementation, holding an advanced workshop for experienced users, creating a branch support group, revising the software, policy revision.

Some activities are conducted with individual people such as “Talk to” three people. Other activities may specify an organizational unit such as a Presentation to all 24 people about the new IT system. Other activities may require the change team to select a branch and the specific people who will attend such as a Workshop. This information is contained in the on-screen activity descriptions.

As noted in the problem section, the project team has an annual budget to spend on these activities. Each activity has a different price in bits. Distributing Written Information is relatively inexpensive at 1 bit. Holding a Workshop is more expensive at 5 bits. Revising the Software is very expensive at 8 bits. The cost of the activity is deducted automatically when the activity is implemented by the team. The teams will spend their budgets on a combination of these activities until they run out of time or budget for a given year of implementation.

Interaction and Feedback on Results

A great advantage of the computer technology used with this simulation is that it allows seamless interactivity between the learner and the change context. The

project team will “play” the simulation by considering first its strategy and then by selecting an activity to conduct with the staff members.

Each time that learners “do” an activity, several things happen:

- The cost of the activity is deducted from their budget.
- The pieces representing staff members involved in the activity move.
- Bennies, if any accrue from the activity, are recorded on the screen.
- A Feedback Card pops up describing what happened.

For example, if the team chooses to “Talk to” three people, their budget will be reduced by the cost of the activity (2 bits). If the activity is successful game pieces representing the relevant people will move one or more spaces across the game board (i.e., farther along in the process of change). If unsuccessful, the staff members stay put.

After an activity has been implemented, the team will receive immediate feedback on what happened and why. Thus, the first time they “Talk to” Al, the team receives the following feedback:

Al is very busy. He is involved in other projects to improve the region’s productivity and doesn’t have much time to talk with you today. He suggests that you coordinate with MIS staff at the Head Office. On your way out he says, “I don’t know they are always thinking up these new things for us to do.” Al moves one space.

The first time that they “Talk to” Irene, she responds as follows.

I just don’t like computers. They’re so impersonal. How can this new system help me anyway? And what will I do when the system breaks down and I have to get the credit reports out on time? Will I be blamed for the late report? Irene doesn’t move at all.

Thus, the team proceeds through a process of planning their strategy, implementing it, getting feedback, reflecting on the results, and adjusting their strategy. Through the simulation, the team is able to see the *evolving results* of their strategy as the staff members begin to move through the stages of change. During the class debriefing at the end of the first year of implementation, the instructor introduces the PDCA Cycle (Planning, Doing, Checking, Adjusting). The teams are asked to reframe their strategies in light of this cycle and consider how the framework could be useful for planning change strategies as they proceed.

Development of Strategic Thinking

As suggested above, the instructional model incorporated into the problem-based learning process allows relevant conceptual frameworks to emerge out of the learners’ experience while they play the simulation. The introduction of change theory during the process of active problem-solving enables the students to view theory as a practical tool. When adopter type theory is introduced, they immediately see the benefits of having a conceptual model to assist in organizing their thinking. At this point we would like to reemphasize our instructional goal of developing students’ ability to think strategically and flexibly. To us this means that students will be able to understand and apply the key factors that form the context for change

in an organization and use that understanding to formulate effective change leadership strategies. Indeed, we stress three related points throughout the module:

- Every context is different and there is no single sequence of steps that will bring about effective change in all situations. Therefore, memorizing or even seeking to identify one best sequence is useless.
- There are many possible strategies (i.e., sequences of activities) that will yield excellent results in bringing about the change in any single context. Begin by seeking to understand the underlying needs of people as well as the resources and constraints of the situation.
- The goal of learning through the PBL simulation is to understand how to apply the analytical principles that underlie effective change strategies.

With this point in mind, we would note that a central feature of the simulation is the *interdependence* of the activities that comprise a team's strategy. Interdependence means that the success of certain activities in the simulation depends upon the completion of other prior activities. Again, as with the adopter type information, the decision rules are only discovered through the "experience" of playing the simulation. The interdependence of the activities requires the project team to develop a strategic *sequence of activities* that create a context that supports change in the organization. It causes the team to develop a dynamic view of the change process in which the context is constantly evolving over time. This facet of the simulation is supported both by practical experience as well as by change theories.¹³

By way of example, many teams begin the simulation by sending staff to a skills Workshop on *IT 2020*. After selecting five staff members from the Eastern Branch to attend the workshop, the on-screen feedback tells them: "You don't have support from the Branch Manager so you can't hold the Workshop. Nobody moves."

In this instance the project team has tried to conduct the Workshop activity without the support or approval of the Branch Manager, Eve. This result emphasizes the position power and gate-keeping function held by line managers. The team has learned that they need to gain the branch manager's support before trying the Workshop activity again. To do so they will need to spend some time "Talking To" Eve selling the project to her and seeking her ideas.

Once they gain the Branch Manager's support, the team will often return immediately to the Workshop activity. However, the result is once again unsuccessful. The on-screen feedback informs them: "You have the Branch Manager's support to hold this activity, but staff are not yet interested to attend. You need to take actions that build staff awareness and interest before sending them to this skill development activity. Nobody moves. Get back 3 bits."

The decision rule at work here requires that at least three of the five workshop participants be located in the Preparation stage of the change process in order for the Workshop activity to succeed. If managerial support and staff interest criteria are both met, the outcome will be successful. For example, the feedback could be as follows:

You have managerial support to hold this workshop and staff are eager to attend. The trainer is exceptional and the participants leave with many ideas on how they can use *IT 2020* and positive feelings about the experience. Each participating staff member moves 2 spaces and you gain 200 Bennies. Gain an additional 50 Bennies if the Branch Manager attended the workshop.

This change model underlying these decision rules assumes that successful change results when the activities in which people engage address their needs and concerns. At the outset of the simulation staff know nothing about *IT 2020* or why they should be interested in using it. What will it do for them? They need information, not skills at this point. Therefore, successful change will take place if the team selects activities that inform the staff such as “Talk To”, “Distribute Written Information”, or “Presentation.”

While this appears quite straightforward, organizations routinely “skip” activities designed to create awareness and interest and simply mandate workshop attendance. This often results in a waste of budget and a low level of implementation of new learning as the staff return to their jobs.

The interdependency among the change activities incorporated into the hidden decision rules is central to the design of the simulation. Over 100 interdependencies are built into the simulation as well as some randomly generated responses. These factors increase the life-like nature of the simulation and cause students to view the change process as *systemic* rather than menu-driven.

Another way in which the module fosters the capacity for strategic thinking is by asking students to engage in goal-setting and strategy formulation at the outset of each year of the simulation. Each year the students must set “smart goals” that specify both the desired rate of progress of staff through the stages of the change process as well as the number of Bennies (i.e., productivity increases) they seek to achieve by the end of that year. This creates greater focus as well as reflection among students as they refine their strategies and reduces the “computer game” mentality of clicking away without thinking about cause and effect relationships.

At the beginning the students tend to think in terms of *activities* rather than *strategies*. However, when they are asked to formulate goals and ways of achieving them, the change models becomes more relevant. For example, a team might draw on Kotter’s¹⁴ 8-stage model of change to inform the development of their strategic objectives in the first year:

- Raise awareness among staff in the pilot branches and create a sense of urgency towards the *IT 2020* implementation effort;
- Create a guiding team possessing position power, influence and expertise;
- Engage the guiding team in developing a vision for the change and becoming models who can support others as the change moves forward.

With these strategic objectives in mind, the project team could begin to effectively consider the suitable sequence of *activities*. At the end of the year, the team would reflect on their results in light of their goals (i.e., staff progress and

Bennies) and their strategy. By playing the simulation multiple times, the learners can test out different strategies.

It is through this iterative sequence of planning which activities to choose, implementing them, seeing the results, revising the strategy, and seeing the results that learners begin to see the patterns in the change process. These patterns gradually cohere into identification of underlying *principles* that we would like them to learn from their “experience” of the simulation.¹⁵

Assessing the Results

As noted earlier, the simulation poses two goals for the project implementation team: 1) to foster effective use of the new IT system throughout the pilot implementation sites and 2) to increase organizational productivity. The simulation provides feedback on productivity outcomes (Bennies) arising from the implementation effort. Certain activities – generally those that involve interaction with customers – generate productivity benefits. These are conveyed via the on-screen feedback, accumulate through the three years, and are tracked on-screen.

So, for example, if the activity Workplace Implementation was successful the feedback would note: “The staff appreciated the opportunity to implement what they learned and were pleased with the improved results. Each staff member implementing the new IT moves 2 spaces. You receive 150 Bennies.”

At the conclusion of the three-year simulation the learners will have achieved some pattern of results related to IT adoption and productivity. The level of success of *IT 2020* adoption is assessed by the number of people who reached the Early Use and Routine Use stages of change. Productivity improvement is assessed by the total Bennies achieved in the three year period of implementation.

Using these two criteria and a set of internal decision rules, the computer assigns the project team to one of size levels of expertise in terms of their change management: *Novice, Apprentice, Manager, Leader, Expert, Master*. For each level, additional feedback is offered to the team including advice on how they might improve their strategy the next time they play.

Final Module Activities

As noted earlier, this PBL project is delivered in a six-week format. We typically finish working with the simulation by the end of the fourth week of the module. We use the fifth class session to introduce an additional change framework (i.e., William Bridges’ *Change Transitions*). The teams analyze a short case study using the change transitions framework and then reflect on how this model might further inform their understanding of the problem studied in the computer simulation.

The final class session is allocated for two activities. The students complete a 90 minute knowledge exam. Then each student must play the simulation one time and turn in their result. These represent further bases for student assessment as we shall describe later in the Chapter.

LEARNING RESOURCES

As delineated earlier in the book, PBL uses problems as the stimulus for learning. Knowledge derived from theory, empirical research, as well as from practice is learned in an active context. In order to understand the problem and generate possible solutions to the change scenario, learners can access an array of human resources (instructor, students, video commentary on the case), texts and articles, on-line resources, and video clips related to the theory and practice of organizational change.

This PBL module draws upon several complementary conceptual models related to organizational change:

- Roger's adopter types;¹⁶
- Kotter's eight strategic stages in the change process;¹⁷
- Hall and Hord's Concerns-Based Adoption Model;¹⁸
- Bridges' change transitions;¹⁹
- Senge's learning organization.²⁰

Assumptions derived from these theoretical frameworks underlie the "internal decision rules" that determine what happens as the learners play. That is, the change strategies that achieve good results in the simulation reflect these assumptions. Some of these assumptions include:

- Resistance to change is natural.
- Change is a process, not an event.
- Change is a highly personal experience; people will respond differently to the same change.
- Change is a process that involves the gradual development of new feelings as well as skills.
- Change is both an external process in which people participate and an internal process of transition in personal attitudes, beliefs, and feelings.
- Change is made first by individuals, and then by the organization.

Beyond the change frameworks noted above, the module also highlights several principles of change leadership that underlie effective change strategies. These are highlighted in the debriefing sessions and mini-lectures.

- Think big, but start small.
- Change is an evolutionary process. Learn and adapt as you proceed.
- Focus on understanding the causes of resistance rather than on the symptoms of resistance.
- Adapt your change strategy to meet people's needs.
- Both pressure and support are necessary to foster change.
- Change is more likely to occur when a team is given responsibility for managing implementation.

In particular, the simulation reinforces the importance of maintaining one's eye on the vision throughout the implementation process. A particularly interesting contrast emerges between teams that attain similar numbers of players in routine use but large differences in the number of Bennies. This becomes an opportunity to

illustrate the strategic difference between focusing on fostering use of *IT 2020* without maintaining a focus on enhancing productivity.

STUDENT PRODUCTS AND ASSESSMENT

In this module the products used to demonstrate student learning include a combination of performance products (e.g., the simulation result) as well as written papers and examination. The particular combination of products has been designed to achieve several instructional objectives:

- To foster and demonstrate team learning;
- To demonstrate individual student mastery of objectives related to understanding change theories and application of change strategies;
- To stimulate development of student understanding of key principles of change management through reflection on their experience.

Although the key “performance product” in the module consists of the simulation level attained by students, we go to considerable lengths to deemphasize the importance of this result. We fear that an emphasis on the score could lead to an unhealthy focus on memorizing steps rather than on learning underlying principles. Therefore, we have aligned the mix of student products to support team and individual learning of principles.

Team Product

This is accomplished first by requiring the teams to complete a strategy analysis paper of about 15 single spaced pages. In preparation for this assignment, due in the 4th week of the module, each team plays the simulation through all three years. They must keep track of their goals, strategies, sequence of activities and results. This assignment consists of a set of questions through which the team reflects on its strategy and the change process. The paper requires teams to explicate their strategy and focuses on “why” the change unfolded as it did. We emphasize that the level of the team’s result is unimportant relative to the ability demonstrate an understanding of what happened and why.

Individual Assessments

At the same time, we believe that individual accountability is also essential in a team learning environment. This is ensured in several ways. First, students complete an instructor-developed, student-evaluated Team Participation Assessment rubric on each of their teammates.

Second, on the day of the final exam, each student is given one hour to play the simulation a single time. The level of result is recorded and factored in as 10% of the student’s final grade. Most students excel on the simulation, to the point that we have considered deleting it as an assessment tool. However, we have continued to use it in the belief that it stimulates the students to practice the simulation and rewards them for their effort.

Third, each student is required to write personal case essay of seven to 10 single spaced pages on an organizational change effort in which they have been involved. They must present the case information and then analyze it using a combination of theoretical frameworks. The analysis must culminate in an evaluation of the change effort's success and a set of recommendations for improvement. This stimulates students to think about how they could apply the lessons from the module to other situations and is designed to foster synthesis, retention and transfer of learning.

Fourth, the students take a two-hour final exam that tests their understanding of key concepts as well as their ability to apply the concepts to alternate change scenarios.

Most university instructors who read this list of assessment products would likely conclude that it is excessive for a 1.5 credit course that only lasts six weeks! While our students would no doubt concur, we believe the assignments provide a sound foundation for stimulating learning as well as for reliable assessment.

- The strategy paper fosters teamwork and serious reflection on how to apply change theories to the simulation. Without this assignment, students could master the simulation without learning to apply the underlying principles.
- The personal case assignment fosters transfer of learning and allows us to assess the depth of student understanding, application, analysis, and synthesis.
- As noted, the simulation "test" on exam day stimulates and rewards effort.
- The final exam is a final check on individual student understanding in a controlled environment.

As noted in an earlier chapter, reliable assessment is a serious issue in our College's environment. The "PBL track" represents an alternative route to research and consulting options in which students must defend substantial projects. Therefore, we place great emphasis on designing systems of assessment that stimulate learning and provide a defensible basis for student grading.

ADAPTATION FOR THE LOCAL CONTEXT

Space limitations preclude an extended discussion of how this simulation, originally designed in the USA, was adapted for use in the Thai context. However, given the theme of this volume, we would like to give the reader a flavor of the rationale and method used to adapt this PBL project for our context.²¹

When we undertook revision of the module, our first consideration was relevance of the problem. On this issue there was no question that organizational change was a problem of widespread concern in the Thai management community. Global change forces cited at the start of this chapter are felt strongly in Thailand, even more since the 1997 economic crisis. The specific change incorporated in the US version of the simulation -- IT implementation -- also represents a relevant, widespread, high impact problem in Thailand.

However, the knowledge base incorporated into the simulation's decision rules for effective change strategies was based almost entirely on "Western" theories of change. Our own experience and reading of research on organizational change in Asia suggested important differences between East and West. Therefore, revision of the simulation would revolve less around the problem itself than on the change strategies needed to "solve" it.

Initial revision of the simulation involved consideration of differences in the institutional and cultural contexts of organizations in Thailand and the USA. Changing the institutional context to reflect a Thai organization was not difficult. This involved small changes in the titles of positions, the problem description, and the nature of the organization.

These revisions were far less significant than changes resulting from differences arising from the social culture of Thailand and the corporate culture of Thai organizations. The linkages between cultural characteristics, their effects on change implementation in Thai organizations, the implications for leading change, and the resulting revisions to our change simulation were substantial. Weaving these features into the simulation in a way that would seem realistic to Thai managers and accurately model the process of change in Thai organizations would prove to be the real challenge of adaptation.

In brief we used a two-pronged approach to preparing for the adaptation of the simulation. First we conducted a literature review on the topics of change, leadership, and national culture in Thailand and Asia. This yielded a series of propositions about how change might differ in Thailand from the USA. Second, we conducted a multi-site case study of change in Thai organizations as a means of testing these propositions. The result was a set of guiding propositions about differences in change management in the Thai context.

Based on this analysis, we concluded that the decision rules underlying effective change strategies would need to differ in at least three ways.

- The Thai version of the simulation would require the change team to pay even greater attention to building interest among the staff prior to actual implementation of the new technology.
- The change team must pay greater attention to leading change as a group process and drawing on group resources.
- There is an even greater need for support from the line managers than in the original version.

Specific modifications to the simulation fell into several categories:

- Revision of the descriptions of text descriptions and activity feedback;
- Revision of the actual change activities;
- Revision of the decision rules underlying player movement through stages of the change process and in the Bennies accruing from activities.

For the purposes of this chapter we will limit ourselves to a single example of adaptation. Drawing upon Hofstede's research on national culture, we identified large differences between the USA and Thailand on the cultural dimension of power

distance.²² Thai culture places a much greater emphasis on deference to others based on seniority, social status and job position. Differences in power and status are accepted as “natural” and norms of behavior follow accordingly. Western concepts such as “empowerment” and social equality are paid lip service and even find their way into organizational life in limited ways. However, the deep cultural norms that govern social relations in and out of the workplace continue to emphasize large power distance. This was confirmed both our experience and the case study research.

In the North American version of the simulation, when the change team goes to speak to staff who fall into the Early Majority and Late Majority Adopter Types the staff respond somewhat aggressively. They ask questions and complain respond about “another change”. However, after receiving answers to some of their questions, they move one space. This reflects the cultural expectation and belief among the staff themselves that they “have a right” to know about and influence workplace conditions that affect them.

In contrast, large power distance makes deference to superiors the rule. Thus, we programmed the Thai version so that when the project team “Talks To” the Thai counterparts of the American staff the first time, the staff neither ask questions nor evince negative opinions. They listen politely, nod their heads; some even evince positive interest, saying “It sounds interesting.” However, instead of moving even a single space as in the original version, they do not move at all.

This reflects the tension between the cultural need to show polite deference and the underlying uncertainties that still accompany change. This norm of overt compliance and passive resistance is an important *pattern* that leaders in Thailand must recognize and address before real change can take place. The strategies that are effective in this context have also been modified. Thus, the Thai version of the simulation challenges the learners not only to understand the local norms but also the strategies that will engage people in productive change.

STUDENT RESPONSE TO THE MODULE

This module has been in use at the College over a period of 14 terms with an average of four sections offered per term. Student response to the module has been highly favorable. This is evidenced in a number of ways.

As noted in the curriculum chapter, course registration follows a market system. Students may choose to complete any four of the seven PBL offered each term. Despite the very heavy workload required for the change module, student registration for the module is consistently among the highest in the PBL track.

The course ratings are also consistently high, regardless of the instructor teaching the course. The overall rating on the College’s course evaluations has consistently been in the top 25% of courses during the 15 terms in which it has been taught. In addition, in an unusual number of instances the course rating has exceeded the individual instructor’s overall rating. Moreover, instructors teaching this module have tended to gain higher instructor evaluations when teaching this

course than when teaching other courses. We conclude from these trends that there is a “positive course effect” that can be attributed to the design of the module itself.

We collect anecdotal responses from students every term on summative evaluation forms and formative talk-back sheets. These allow us to monitor student response and provide valuable ideas for improvement. The overall trend of comments on this module has been consistently positive. Examples taken from the most recent term’s Talk-back Sheets include the following.

I feel that studying a Master degree should be practical, not only theory. This course links all theory and concepts to the practical application.

I really like the simulation. It’s a great tool to help us understand theory and at the same time we can try the wrong choice (trial and error) to see the next result (what will happen). Better to make mistakes here than at work.

I learned a lot but it’s not easy to learn the module and finish everything required in time as well as write the exam. But I’m proud that I’ve completed a very worthwhile course.

Nothing to improve the course; it’s quite perfect. Just make it longer because it’s fun.

The class has improved my thinking and enabled me to analyze cause and effect relationships in different situations.

Actually I only took this class because I couldn’t get into the ones I really wanted. I thought I’d already learned about the topic in other courses. But now I’m so glad I took the class. I can apply so much of what we learned to my real life. It has also helped me develop a more open attitude about dealing with people.

Short but sweet; In 6 intense weeks we understand more about changing organizations and the impact on people inside them. It is the most important thing for every course if we can apply what we learned. This course actually makes me eager to make use of what I learned in the real world.

It was one that was unique and that I will cherish.

Lest the reader conclude that the authors are overly self-congratulatory, we would reemphasize that this was the first module designed for use in our PBL curriculum. Moreover, the computer simulation had been in use prior to the launch of our PBL track. Thus, this particular module has benefited from years of formative feedback.

CONCLUSION

The purpose of this chapter was to describe a PBL module on leading organizational change. We designed the module so that learners would construct their own understanding of an important knowledge base that is relevant to a high impact and widely applicable problem. This occurs as students move through an iterative

process of thinking, acting, seeing the results, reflecting and reconstructing their strategy. The simulation is complemented by a series of instructor-led and student-led debriefing sessions as well as mini-lectures and reflective writing assignments. We believe that the module provides a useful example of how learning technology can be blended with PBL to provide a learning process that could not be accomplished under traditional learning conditions.

Some of the distinctive features of this module that we would like to highlight include the following.

- *Common, high impact problem:* Organizational change is rampant throughout organizations and societies. The specific instance of technological change as formulated in this module is one that students can readily accept as real and important. The need for skills in managing these types of organizational changes is similarly urgent for them. Although the project focuses on one type of organizational change, students are able to see how they could apply principles learned in solving this problem to other organizational changes.
- *Implementation focus:* This project is a good example of the implementation focus that differentiates PBL from the case method. Students not only analyze and draw conclusions concerning this change context; they must also formulate and implement appropriate strategies in an interactive, dynamic process.
- *Use of technology:* Finally, the module provides a useful example of how PBL can provide a pedagogical foundation for the use of learning technology. The complexity of this simulation would be difficult to implement in such a seamless fashion without the capabilities of the computer software.
- *Localized application of theory:* This project incorporates a wide range of recognized theories of organizational change. However, instead of teaching the theories didactically, students construct the theories of change via the experience they gain in solving the organizational change problem. In doing so they are able to see the limits of current knowledge as well as its localized application in their own cultural context. This makes the module an excellent example of the premise underlying this book – students should draw upon global sources of knowledge in the process of learning to solve problems as they are presented in their local contexts.

NOTES

¹ The author would like to acknowledge the contributions of Parinya Shwanasai and David Ng Foo Seong as well as staff from The NETWORK Inc. in development of the computer simulation, as well as from Dr. Pornkasem Kantamara in design of the Thai adapted version.

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