

Learning to Lead Global Changes in Local Cultures:  
Designing a Computer-based Simulation for Thai School Leaders

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## Abstract

The process of globalization is carrying educational policies across borders to an extent and at a pace never seen before. Growing international concern with educational reform has highlighted the importance of school leaders in educational change. This has in turn led to a global focus – for the first time -- on the training of school leaders. A key issue in the design and delivery of training and development for school leaders concerns the knowledge base for school leadership.

This article presents the results of a research and development project that has sought to understand the cultural basis for educational change in Thai schools. Our research found that leading change in Thai schools bears similarities and differences from educational change in the West. This article focuses on the cultural adaptation of a computer-based simulation – *Making Change Happen!*<sup>TM</sup> -- for use with Thai school leaders. We describe the methodology employed in our cultural adaptation of the simulation, highlighting ways in which successful change strategies grounded in Thai culture.

**Key Words:** change, simulations, leadership, school improvement, educational change, problem-based learning

Over the past decade, policymakers in the Asia Pacific region have conceived ambitious educational policies consistent with evolving social, political and economic aims (e.g., Abdullah, 1999; Cheng and Townsend, 2000; Gopinathan and Kam, 2000; Ministry of Education-Thailand, 1997a, 1997b; Ministry of Education-ROC, 1998; Suzuki, 2000). However, with the ever-increasing rate and scope of global changes, governments are finding it more difficult to put their new policies in practice (Caldwell, 1998; Cheng and Townsend, 2000; Dimmock and Walker, 1998; Fullan, 1990; Hallinger, 1998; Hargreaves and Fullan, 1998; Murphy and Adams, 1998). As a result of this gap between reform in educational policy and practice, a global consensus has emerged on the need for more adept leadership at the school level.

This has led to a new focus on the training of school leaders, especially principals. Moreover, for the first time, this trend is evident throughout the world; for example, in England (see Reeves, Forde, Casteel, and Lynas, 1999; Tomlinson, 1999), Australia (see Davis, 1999), East Asia (see Feng, 1999; Hallinger, 1999; Low, 1999) and North America (see Bridges and Hallinger, 1995; Hallinger, 1999; Leithwood, Jantzi and Steinbach, 1999; Murphy, 1992). This reflects an optimistic belief in the capacity to develop more effective school leaders as well as in the impact of leadership on school improvement.

Despite this optimism, the knowledge base on which to build leadership for school change remains uncertain, unevenly distributed, and poorly integrated into training programs. Thus, Evans concludes:

Over the past few decades the knowledge base about . . . change has grown appreciably. Some scholars feel that we

know more about innovation than we ever have. . . . But although we have surely learned much, there remain two large gaps in our knowledge: training and implementation. (Evans, 1996, p. 4)

Evan's observation is especially salient in the developing nations of East Asia where the need for educational change is acute, but the knowledge base is even less mature than in the industrialized West (e.g., see Bajunid, 1996; Cheng, 1995). When Asian school leaders receive formal administrative training, they generally learn Western-derived frameworks. This knowledge base, which is not without critics in the West, usually lacks even the mildest forms of cultural validation (Cheng, 1995; Swierczek, 1988).

This has led scholars in the Asia Pacific region to advocate steps to develop an "indigenous knowledge base" on school leadership (Bajunid, 1996; Cheng, 1995; Dimmock and Walker, 1998; Hallinger and Leithwood, 1996, 1998; McDonald and Pratt, 1997). Calls for culturally-grounded research on school improvement set the context for our research in Thailand. This research has sought to understand the nature of successful school improvement in a rapidly developing Asian nation.

As our understanding of school improvement in Thailand began to grow, we became interested in finding means of transferring that knowledge into practice. A research and development (R & D) approach appeared well suited to this goal. Research and development is a strategy designed to integrate formal knowledge into products or tools for the improvement of practice (Borg and Gall, 1989).

Unlike many R & D efforts, however, we began this project with a fully-developed product: a computer-based simulation, *Making Change Happen!*<sup>TM</sup> (Network Inc., 1999). This simulation had been designed to teach leaders how to

implement change in schools. The simulation was, however, grounded exclusively in research on educational change conducted in North America and Europe.

The challenge for our R & D effort was to use knowledge of educational change and improvement in Thailand to create a Thai version of the *Making Change Happen!*<sup>TM</sup> simulation. In this article, we have two goals:

1. To describe the *Making Change Happen!*<sup>TM</sup> simulation (Network, 1999) and its use as a tool for leadership development;
2. To describe the process of adapting the simulation for use in Thailand.

### *The Making Change Happen!*<sup>TM</sup> Simulation

The *Making Change Happen!*<sup>TM</sup> (Network, 1999) simulation has been employed in training school administrators, teachers, parents, and improvement teams in North America, Europe, Asia, and Australia. The simulation provides a challenging and active learning environment for learning how to think *systemically* about organizational change. Its interactive design enables school leaders to refine their understanding of *how to apply best practices in school change and improvement to predictable problems of innovation implementation*.

The *Making Change Happen!*<sup>TM</sup> was designed to provide the feel of implementing change in real schools. At the same time, the simulation is grounded in theoretical models of change that have been extensively studied in Western societies. These include the concerns-based adoption model or CBAM (Hall and Hord, 1987), change adopter types (Rogers, 1971; Rogers and Shoemaker, 1982), knowledge diffusion and dissemination (Crandall, Eiseman, and Louis, 1986) and more general

change implementation and leadership (Evans, 1996; Fullan, 1990; Sarason, 1982, 1990).

Consistent with its overall purpose of teaching how to implement change in schools, the simulation has several specific learning objectives. These include:

1. To learn how to develop effective strategies for overcoming predictable obstacles to change implementation in schools;
2. To learn how to bring about change when working with different types of people in organizations;
3. To learn how to lead change efforts in ways that create a positive impact on teachers' classroom behavior and student learning;
4. To learn how to work as a team in bringing about change.

#### Instructional format

The original simulation was developed as a problem-based, interactive board-game designed to be played by teams with a facilitator (Network Inc., 1988). The board game was recently redesigned as a computer-based simulation (Network Inc., 1999). While the learning objectives remain the same, the use of technology makes facilitation of the simulation easier for the instructor. It also enables users to extend their learning since they can play the computer-based simulation on their own following use in a formal classroom setting.

The simulation requires no prior knowledge of computers. Its initial introduction is usually in a structured instructional session in a computer lab under the guidance of a facilitator. Learners play the simulation in teams of two to four persons at each computer. We have found this cooperative learning approach more effective at achieving the simulation's learning objectives than individuals working

on their own in the classroom environment. Learning with peers forces learners to question of one's own assumptions and also to share prior experiences.

An instructor facilitates the session in a cycle that alternates the learners' active engagement of the simulation with teacher-led debriefings. The original North American version of the computer simulation typically consumes between four and eight hours of instructional time. The amount of instructional time allocated depends upon the depth of understanding desired, the prior experience of the learners, and the nature of the instructional setting (e.g., an in-service workshop or a masters or doctoral course).

The problem. The simulation employs a "problem-based learning" approach in which learners encounter "the problem" before they become aware of the simulation's theoretical content (Bridges and Hallinger, 1995). The instructional design embedded in *Making Change Happen!*<sup>TM</sup> invites learners to construct the embedded conceptual frameworks out of their experience in the simulation. The actual frameworks are only presented and discussed in the final debriefing.

When learners begin the simulation, they confront the following statement of the problem.

#### *The Problem*

The new Superintendent of the Best Public School System has mandated implementation of a new learning technology system -- IT 2020. The Superintendent has said, "It's time for change. Our traditional methods of teaching and learning are inadequate to meet the needs of the global age." IT 2020 is the Superintendent's first step in acting on his promise of change to the School Board.

IT 2020 will, however, mean significant change for all who work in the school system. In addition to the purchase and redesign of IT hardware and software, IT 2020 will require changing the way staff teach and share

information. This will in turn affect their relationships to students and to each other.

Moreover, in the Superintendent's words, "The Best Public Schools have been slow to adopt practices and policies necessary to 21st century education." Principals, teachers and other front-line staff are, however, already uncomfortable with the pace at which other recent changes have been forced upon them. Some veteran staff have begun to joke that the learning technology advocated by the new Superintendent just might get used by the year 2020.

Given the scope of this change, the Superintendent has decided to proceed by pilot testing the use of IT 2020 at two schools in the Central Region of the system. Based on results of the trial implementation in these schools, IT 2020 will then roll out into other schools. Despite this step-by-step approach, the Superintendent is under pressure to show results soon. Therefore trial implementation will begin immediately.

You are part of a school support team that has been selected to help manage implementation of IT 2020 in the two trial schools. Your team is comprised of people from different roles in the Central Region. You will coordinate with Beth, the Technology Coordinator in the Central Office, and also with Al, the Regional Assistant Superintendent. Two members of the system's School Board -- Carol and Dave--have been assigned by the Chairman of the School Board to monitor this project.

Your team will lead implementation of IT 2020 over a three- year period. In each year you will have a budget of money – *bits* -- to spend on activities – presentations, workshops, classroom lessons, follow-up help -- designed to foster use of IT 2020 in these pilot schools.

Your success will be assessed annually. At the end of three years you will be able to see how widely staff are using IT 2020 and the effects on student learning. Based upon your success you will reach of six levels of expertise in leading change: Apprentice, Novice, Manager, Leader, Expert, Master.

The people. Any school change effort involves working with the people who will actually implement the innovation. After encountering "The Problem" the teams find that they will work with 24 staff members to implement the new learning technology, IT 2020. The staff are distributed across two schools and the central office (see Figure One).



(Insert Figure One: Gameboard about here)

Prior to beginning the actual change effort, the teams must become familiar with the staff. Thus, the next step is for each team to access short profiles of the 24 staff members. These profiles were written to reflect the range of “adopter types” typically found in schools (Rogers, 1971; Rogers & Shoemaker, 1982).

Based upon empirical studies, researchers have found a predictable breakdown among schools staffs in the U.S. on five change adopter types: Innovators (8%), Leaders (18%), Early Majority (38%), Late Majority (38%), Resistors (8%). The designers used this breakdown as a means of creating profiles for the 24 staff members. For example, the profile for the Assistant Superintendent in charge of the Central Region reads:

“Al is a respected manager who is concerned with maintaining his Region’s productivity. Passed over for the Superintendent’s position, he has been heard to say: “The new boss may not understand how things are done around here.”

Or the description of Irene, a second grade teacher:

“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 her method of teaching. She will resist anything that results in more work, even in the short-term.”

The team will need to help all staff – from innovators to resistors -- learn to use the new technology. Note again, however, that while these profiles were written to reflect the five adopter types, the people are not labeled as such. The learners simply read the profiles and process the information as they would “in the real world” as they develop and implement their strategies for change.

Implementing change activities and receiving feedback. After familiarizing themselves with the staff, the change teams must examine the activities they will conduct in order to foster change. These activities reflect typical activities used in school improvement (See Figure Two). It is by conducting these activities with staff that the team will begin to *move* them through the stages of change.

Note that each activity has a cost expressed in *bits*. The teams will spend from their budget of 35 *bits* to implement these activities with staff. The game is played in three one year cycles and the budget is replenished annually.

[Insert Figure Two: Change Activities about here]

At the outset, the staff know nothing about IT 2020. Thus, the “game pieces” representing the 24 staff members start “off the game board”. The team’s goal is *move* staff through stages of the change process represented at the top of the game board. These five stages are based on the CBAM research (Hall and Hord, 1987). They include Information, Interest, Preparation, Early Use, and Routine Use stages (see Figure One). Only by employing a “successful” change strategy, will the teams be able to move most of the players into the Early and Routine Use stages after three years of implementation.

The change team will conduct activities with staff to help them move through the change process. Each time a team implements an activity in the simulation, several things happen. Following the conduct of an activity, the team receives feedback via the computer describing what happened and clues as to why.

If the activity was successful the game piece(s) representing the staff involved in that activity may move one or more spaces on the game board. If the activity was less successful, the staff member(s) will move more slowly or not at all.

For example, if the team chooses to *Talk To* three people (see Figure Two), those three people may respond in a variety of different ways depending upon their backgrounds, personalities, roles, and level of interest in learning technology. When the team *Talks To* Al, the Assistant Superintendent in charge of the pilot region, for the first time, they receive 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 Central 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.”

If they “Talk to” Irene, she responds differently.

“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 teach my classes? Will I be blamed when students don’t learn?” Irene doesn’t move at all.”

Talking to other people will generate a variety of reactions and different degrees of movement (i.e., change).

Some activities also generate student benefits or *Bennies* (e.g., teaching a classroom lesson, holding a technology fair), while others do not (e.g., talking to people). If an activity generates benefits for students, this is noted in the feedback and tallied by the computer. This feature of the simulation serves to highlight the distinction between fostering interest and fostering effective use of the innovation. The teams are able to see not only their success in fostering change among staff, but also in improving learning outcomes. The instructor uses differences among the

teams' results on these two dimensions as a basis for the debriefing that occurs following "each year of implementation."

Through this process of planning, doing, getting feedback, reflecting, and acting, learners see the evolving results of their strategies for bringing the new learning technology into the schools. Yet, as becomes apparent to the learners, not all improvement strategies – the sequence of implementation of activities -- are equally effective. Understanding how to implement change successfully entails the use of a "strategic systemic approach" (Evans, 1996).

Creating effective strategies for change. The success of activities in the simulation depends upon two sets of factors. First, consistent with the research of Hall and Hord (1987), change activities must meet the needs or concerns of people. Consequently, in forming their strategy, the change team must match their selection of an activity *to the needs and concerns of the particular people at any given point in time*. Those needs are based on a variety of factors: their personal feelings about the innovation, their change adopter type, their role in the school, the attitudes of their peers, and most important their stage in the change process.

If staff are in the *Interest* stage, activities that inform and increase interest meet people's needs. Activities that meet people's needs result in some level of change in attitudes and movement on the game board. In contrast, activities that focus on building skills may *not* succeed if the people are not yet interested (i.e., ready). An analogous "decision rule" operates for people as they reach each stage represented on the gameboard.

Successful conduct of a given activity may also depend upon the creation of certain conditions in the school (i.e., completion of other activities). For example, the change team cannot successfully conduct a *Workshop* at a school site until they have gained support from the principal. If they conduct the *Workshop* activity before they have the principal's support, the feedback will say that they were unable to hold the workshop because they did not yet have the principal's permission.

This highlights the importance of administrative support. It also prompts the question for team members, "How can we gain the principal's support?" In order to obtain the support or permission of the principal, the team will discover that they need to *Talk To* the principal until he or she agrees to support this initiative. This particular decision rule highlights the importance of the principal's role in implementing school-level change.

In all cases, the feedback provides not only information on the results but also provides contextualized cues as to the nature of the obstacles the change team has encountered. The team reviews this information and considers how to revise their strategy – what to do next -- in order to overcome the particular obstacle (e.g., lack of principal support or lack of staff readiness).

This simulation was designed to help leaders learn how to *apply* knowledge of school change and improvement. Thus, at the end of the simulation (i.e., after three simulated years), the computer provides an assessment of the team's success. Two criteria are used: how many staff are using IT 2020 (i.e., game pieces in Early or Routine Use stages) and how many *Bennies* (i.e., student benefits) the team

accumulated. Based on these results, the team is assigned to one of six levels of expertise in leading change: Apprentice, Novice, Manager, Leader, Expert, Master. Specific diagnostic feedback is provided based upon the level achieved.

As noted we use the simulation initially in a structured, team-based, cooperative learning environment. Following this initial exposure, however, we encourage individual learners to use the simulation on their own to further refine their understanding of strategic school improvement. Indeed, we use the outcome-based feature of the simulation for the purposes of grading and assessment for individual learners in classes and leadership development programs.

The simulation has been used extensively in a variety of Western industrialized countries (e.g., USA, Canada, United Kingdom, Netherlands, Belgium, Australia) with a highly positive response from practicing school leaders. Yet, both theoretical analysis and practical experience with the simulation suggested that use of the original version in Thailand would not yield the desired results. Simply stated, educational change in Thailand is based on different cultural assumptions (see Hallinger & Kantamara, 2000a, 2000). Adaptation of the training simulation therefore would require not only translation but also cultural adaptation.

#### Development of the Thai Version of *Making Change Happen!*

Borg and Gall (1989) describe research and development as, “a cycle in which a version of the product is developed, field-tested, and revised on the basis of field-test data” (p. 781). The initial phases of the R & D cycle entail research and information collecting, planning, and developing a preliminary form of the product

(Borg and Gall, 1989). Thus, our first task in approaching adaptation of the simulation was to identify the knowledge base that would underlie our Thai version. Next we developed a preliminary form of the Thai simulation. Then we finished with a cycle of field tests and further revisions of the product. We describe each of these in turn.

### Research and Data Collection

The authors drew upon several sources to inform adaptation of the simulation: our experience working with Thai schools, theoretical and empirical literature, advice from practitioners, results from our own case studies, field-tests and evaluations (see Hallinger and Kantamara, 2000a, 2000b).

A cultural synthesis of Thai approaches to change. Our research synthesis identified both similarities and differences between school improvement and change as reported in Western schools and Thailand. It is interesting to note that many of the change obstacles identified in Thailand also appear in the Western literature. These include shifting goals and policies, insufficient resources, the need for new skills among staff, staff resistance, political opposition, unclear articulation of needs, conflicting policies, traditions, lack of administrative support.

Certain “strategic” dimensions of the change process observed in Thailand also appear similar:

- the need for administrative support,
- stages in the development of new skills, attitudes and understandings related to a given innovation,

- the need to engage people’s commitment in order to bring about lasting change,
- the importance of institutional elements in solidifying changes in the school,
- individual differences in response to the same change,
- the impact of individual “school cultures” on change efforts, and
- change as a process of development of technical skills and feelings.

Identifying these similarities in the process of school change in Thailand and the West was important. It suggested that certain fundamental dimensions of the simulation might remain more or less intact.

At the same time, however, we also found a range of differences in the response of Thai educators to change. Understanding the nature and source of these differences held the key to our R & D project. We used a cross-cultural framework developed by Geert Hofstede to assist in analyzing the characteristics of Thai responses to change.

Hofstede defined culture as the *collective mental programming of the people in a social environment in which one grew up and collected one’s life experiences* (Hofstede, 1980, 1983, 1991). His cross-national research identified four dimensions on which national cultures differ: Power Distance, Uncertainty Avoidance, Individualism-Collectivism, and Masculinity-Femininity. The dimensions yielded a useful point of departure for comparing how Thai people respond to change.

Power distance describes the degree to which large status differences exist among people in a society and also the extent to which these differences in power



are accepted. The *large power distance* characterizing Thai culture shapes the behavior of administrators, teachers, student and parents in important ways. People of lower status show much higher deference towards those of authority or senior status in social relationships than is typical in the West.

Students naturally defer to teachers, teachers to principals and principals to their superiors. This results in a pervasive, socially-legitimated expectation that decisions should be made by those holding positions of authority and reinforces the strength of hierarchical relations. Large power distance creates a cultural tendency for administrators to lead by *fiat*. There is a cultural assumption that leading change entails establishing orders – which will be followed naturally by others -- and applying pressure in special cases where it is needed.

It is critical to note that large power distance describes a web of social expectations. It is not simply a matter of superordinates desiring authority, but within this culture subordinates expect them to exercise their legitimate power. Thai's refer to this cultural deference or inclination to show consideration to seniors as *greng jai*. *Greng jai* is a dominant norm that influences all social relations, not simply inside school or other formal organizations (Holmes and Tangtongtavy, 1995).

Hofstede contrasted *collectivism* and *individualism*. Collectivist societies value social relations over individual performance. People in a collectivist culture think naturally in terms of “we” rather than “I”.

The highly collectivist nature of Thai culture shapes the context for school improvement by locating change in the social group somewhat more than within

individuals. As with other Asian societies, Thai's look primarily to their referent social groups in order to "make sense" of events (Herbig and Dunphy, 1998; Holmes and Tangtongtavy, 1995; McDonald and Pratt, 1998). Consequently, staff are more likely to "move in the direction of change" as a group than as individuals.

Hofstede refers to a dimension of *high uncertainty avoidance*. In cultures with a high degree of uncertainty avoidance, there is a low cultural tolerance for ambiguity and non-conformity. In Thailand, which ranks moderately high on uncertainty avoidance, people tend to avoid risks, place a high value on conformity of opinion and behavior, and seek a high level of control over their environment (Hofstede, 1980). Thai's are strongly socialized to conform to group norms, traditions, rules and regulations. They find change more disruptive and disturbing than in "lower uncertainty avoidance" cultures.

People who innovate by definition tend to stand out from the group. In some countries innovators are admired, but Thailand's heroes are not great individual achievers. Rather they tend to people who quietly represent the traditional aspirations of the group. This dimension suggests that Thai schools represent an even less fertile ground for innovation and change than the much criticized schools of Western nations.

The fourth dimension of Hofstede's framework contrasts femininity and masculinity. Feminine cultures place a high value on the maintenance of harmonious social relations. Masculine cultures focus on achievement and performance.

The *feminine* dimension of their culture leads Thai's to place a high value on social relationships, to seek harmony, and to avoid conflict. Thai's place great

emphasis on living and working in a pleasurable atmosphere and on fostering a strong spirit of community. Anything that threatens the harmonious balance of the social group (e.g., change) creates natural resistance.

In contrast, masculine cultures such as the U.S. emphasize results, performance, and productivity (Herbig and Dunphy, 1998; Hofstede, 1980). This dimension has implications for a variety of factors often associated with school change and improvement including responses to pressure, the use of accountability, measurement of performance outcomes, and the role of informal social relationships during change.

We employed this conceptual framework to analyze the process of change in Thai schools (Hallinger and Kantamara, 2000b). We also conducted empirical case studies of selected “successful change schools” in order to fill in the outlines that emerged from the literature review (Hallinger and Kantamara, 2000a). We then synthesized these data to generate propositions about the nature of leadership and change in Thai schools. These included the following.

1. Target formal leaders and obtain their support early in the change process.
2. Formal leaders should use strategies that deemphasize traditional norms of deference to authority and bring staff concerns to the surface so they can understand and address causes of potential staff resistance.
3. Change leaders should pay special attention to creating group consensus around the nature of the change.
4. Leaders should take more time and effort to inform and interest staff during the initial stages of change.
5. Leaders should not assume that a policy adopted is a policy implemented. Implementation must be viewed as a long-term process that requires ongoing support for the staff as a whole and as individuals.

6. Obtain and cultivate the support of informal leaders and leverage resources of the social network to create pressure and support for change.
7. Use formal authority and policies selectively to reinforce expectations and standards consistent with implementation of the innovation.
8. Find ways to inject fun, encourage group spirit, and celebrate shared accomplishments in the workplace while maintaining accountability.

On the surface this list appears similar to recommendations that might be offered to an American, British or Australian staff. This reflects several factors.

Thai society is in a process of integration into a global culture. While the process of *cultural* change is slow, it is taking place nonetheless. Thus, certain global norms and values (e.g., regarding participation in decision making) are gradually filtering into all societies.

In addition, as noted above, certain dimensions of the change process appear to carry over across cultures. Thus, even some of the differences observed in Thailand are essentially differences of degree. For example, it has become a *sine qua non* in the Western school improvement literature that the principal is a key gatekeeper in the process of school improvement. Obtaining principal support is an important ingredient in successful educational change (Evans, 1996; Fullan, 1990; Hall and Hord, 1987).

In Thai culture, the “large power distance” associated with social relations makes support from the principal even more crucial. Thai staff simply cannot move towards implementation of an innovation until their principal has signaled active support. Moreover, because decision-making in the Thai school is more centralized

than in the West, the Thai principal plays a similarly critical role at each stage of implementation.

In selected cases, these differences in degree attain a level where the cultural distinctions are quite dramatic. For example, we asserted that the *collectivist* nature of Thai culture makes the group the central locus of movement during change. In combination with the *uncertainty avoidance* characteristic of Thai culture, this leads staff to avoid actions that would make them stand out from the group or disturb the status quo.

The combination of *femininity* and large *power distance* all combine to create an interesting contrast with the West. Even when Thai's disagree with a proposal, they will seek to avoid saying so. The cultural emphases on politeness and moderation blend with the need to *greng jai* or defer to those of higher status.

As noted earlier, the R & D process also entailed conducting a set of case studies of schools that had successfully implemented long-term innovations in the recent past. The case studies were designed to begin to test and elaborate on the propositions that had emerged from the literature reviews. Space limitations prevent the presentation of these data here (see Hallinger and Kantamara, 2000a). Table One, however, displays how we translated findings from the literature and case studies into changes in the simulation.

[Insert Table One about here]

#### Planning and Preliminary Development of the Thai Simulation

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

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

In terms of change strategies embedded in the Thai version, we concluded that learners would need to develop a change strategy that differs in at least three important ways from the original version.

1. 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 learning technology.
2. The change team must pay greater attention to leading change as a group process.
3. There is an even greater need for support from the principal than in the original version.

Space limitations preclude us from describing all of the changes made to the simulation. Instead we focus on providing *representative* types of changes made to reflect the cultural adaptation of the simulation (see Table One). Specific modifications to the simulation fell into several categories:

1. Revision of the descriptions of text descriptions and activity feedback;
2. Revision of the change activities;
3. Revision of the decision rules underlying player movement through the stages of the change process and in the student benefits accruing from activities.

Descriptions of staff and feedback dialogue. The original version used Rogers' (1971) *adopter types* to classify staff's attitudes towards change. Given the absence of similar data on Thai schools, we stayed with the same breakdown. We only changed the descriptions of people to reflect differences the more "polite" and conservative nature of Thai people.

Considerable revision was made in the feedback and dialogue provided in response to activities. For example, when the team *Talks To* staff in the original version, there are many questions a fair amount of overt resistance is expressed. In the Thai version staff ask no questions, and the tone of resistance is softened considerably. Their responses reflect the cultural tendency towards overt, polite compliance (i.e., *geng jai*) even in the absence any change in behavior. This type of revision was carried out as deemed appropriate throughout the simulation text.

Activities. The change activities represent the vehicle by which the team fosters interest, acceptance, learning, and long term use of IT 2020. The activities included in the original version of the simulation (see Figure Two) represent the same activities Thai schools typically use to foster change. However, our research suggested a need to add one additional activity to the Thai simulation: an overnight visit to observe the use of IT in another school.

Typically such visits involve the staff travelling together to another school some distance away from home. Teachers will observe in classrooms and talk with other teachers. In the evening they will typically eat, talk, and perhaps sing together.

This activity provides an opportunity for *the group* to make sense of the change outside of the formal school setting. Consistent with the importance of *sanook* (fun) in Thai culture, the trip builds a bond among the group members and set the stage for building support back at the school. Like another of the activities, the *Demonstration of IT 2020* at the school site, this activity is an important stimulus for creating interest and making the abstract notion of IT 2020 more real. Given the more passive orientation of Thai staffs, it is even more critical for leaders to create opportunities where teachers can ask questions and find personal meaning in the early stages of the change process.

Decision rules. When revising the decision rules to reflect the Thai context, we needed to maintain the theoretical integrity and internal coherence of the simulation. Revisions in one decision rule could have an unintended but potentially



important impact on another dimension of the simulation. Again, however, revision was informed by three general differences observed in Thai schools.

By way of example, one significant change entailed the *Talk To* activity. In the original version of the simulation, it is critical that the team take time to *Talk To* people as a means of informing them about IT 2020, but also as a means of finding out staff perspectives on the change. When the team *Talks To* individuals their responses and subsequent movement are linked to their adopter types; the staff member may move 3 spaces (Innovators), 2 spaces (leaders) one space (majority) or not at all (resistors).

Based on the *large power distance* observed in Thai culture, we made two relevant changes on this activity. We changed the programming so that staff falling into the Early Majority and Late Majority Adopter Types respond politely and/or positively the first time the change team *Talk To* them. They ask no questions, and evince no negative opinions. However, instead of moving 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 school leaders in Thailand must recognize and address if real change is to take place.

Another decision rule adaptation involved the role of the school principals. In the original version, the principal's support is necessary in order to conduct activities in the schools. To reflect the even greater importance of the Thai school leader in the change process, we increased the *Bennies* accruing from school-level

activities (e.g., *Workshops*) if the team has obtained strong support from the principals.

These are just a few examples of the revisions made to the simulation. See Table One for a fuller but list of the revisions.

### Field Tests and Further Revision of the Thai Change Simulation

Field testing of the simulation proceeded through several phases. Four separate field trials were conducted with the simulation. Each field trial consisted of using the simulation in a computer lab setting with between 25 and 45 school leaders in a full-day workshop. Between each field trial, revisions were incorporated into the simulation based on formative and summative evaluation results.

Formative evaluation. Formative and summative evaluation of the simulation were conducted using a variety of instruments including:

1. direct observation by the authors,
2. a talk-back sheet soliciting formative feedback on strengths and weaknesses of the simulation and the accompanying instructional process,
3. verbal debriefings with the workshop participants.

The formative evaluation data informed the further adaptation of the simulation and the instructional process. Revisions included a variety of minor revisions to the game's decision rules to maintain its internal consistency.

Summative evaluation. Summative evaluation was conducted using two main data sources:

1. pre-post test on relevant concepts derived from the learning objectives of the simulation,
2. short (two page) essays in which the learners focused on key learnings they acquired from the simulation.

Taken together the summative evaluation results yielded several conclusions. First, the simulation met the goal of introducing important strategic concepts of change leadership. It was useful at stimulating the learners to think more deeply about change in their own schools. The results suggested improvement on the primary goals of understanding obstacles to change and the elements of effective change strategies.

At the same time, the degree of understanding of change strategies did not meet the authors' desired level of mastery. The dramatic change in the nature of instruction led the authors to underestimate the amount of time needed to solidify the learnings. Thai school leaders are accustomed to a lecture format. Few had ever worked in either a formal cooperative learning or computer-based learning environment.

It took them longer than North American educators to adapt to the computer-based instructional design. However, once they got over the initial confusion, they enjoyed it and remain highly engaged. In the fourth field trial we allocated eight hours instead of six hours and obtained better results on the summative evaluation. Thus, we concluded that eight hours of instruction would be needed to meet the learning objectives at a high level of mastery in Thailand.

Second, we observed an unanticipated outcome of the simulation. It appeared to have a significant impact on the learners' attitudes towards the use of learning technology. Learning through the computer-based simulation appeared to stimulate new attitudes towards both technology and change. It also changed the perspective of numerous participants towards the value of learning technology.

Future research. The evaluation program undertaken to date with the Thai version of the simulation has focused on ensuring a high level of face validity. The Thai school leaders concurred that characters and process of change as it unfolds in the simulation "feels real" to them. The embedded change strategies also made sense to them, despite the fact that conceptualizing change as a systemic strategic process was new to them.

At the same time, we do not yet have data that shed light on the external validity of the program in Thailand. This will entail using the program with leaders engaged in the change process and subsequently observing the extent to which their leadership strategies and behaviors have changed. A program of validation could also compare more systematically the degree to which the strategies conceptualized as effective in the simulation result in change in a set of real schools. We view this as an important extension of the current research and development project.

### Conclusion

The trend towards globalization makes it even more critical that we ground future leadership development efforts in a "knowledge base" that is not only relevant to global trends in educational development but also grounded in the norms of local cultures (Bajunid, 1996; Cheng, 1995; Hallinger and Leithwood, 1996,

1998). The findings from this project highlight the inherent limitations of applying knowledge gained in one cultural context to another. While we have only begun to understand elements of successful school improvement in Thailand, there is no question that substantial culturally-derived differences exist when compared with Western nations. We believe that many of these differences are shared by other Asian nations, though this awaits empirical verification.

Despite our confidence in the efficacy of this type of cultural analysis, we would also caution against the reification of indigenous knowledge during this global era. We agree with McDonald and Pratt's assertion that training programs: "need to be directed at educating tomorrow's professionals and leaders, and therefore we should be including in curricula not only extant knowledge, but also academic fundamentals in support of future scenarios" (1997, p. 55).

Globalization will continue to influence the "future scenarios" that shape education in all societies. Therefore, an emerging challenge for scholars and practitioners in school improvement is to generate, interpret and balance knowledge gained from global and indigenous sources. Our experience suggests that this challenge not only holds potential for improving educational practice, but also for breathing new life into the academic enterprise of higher education.

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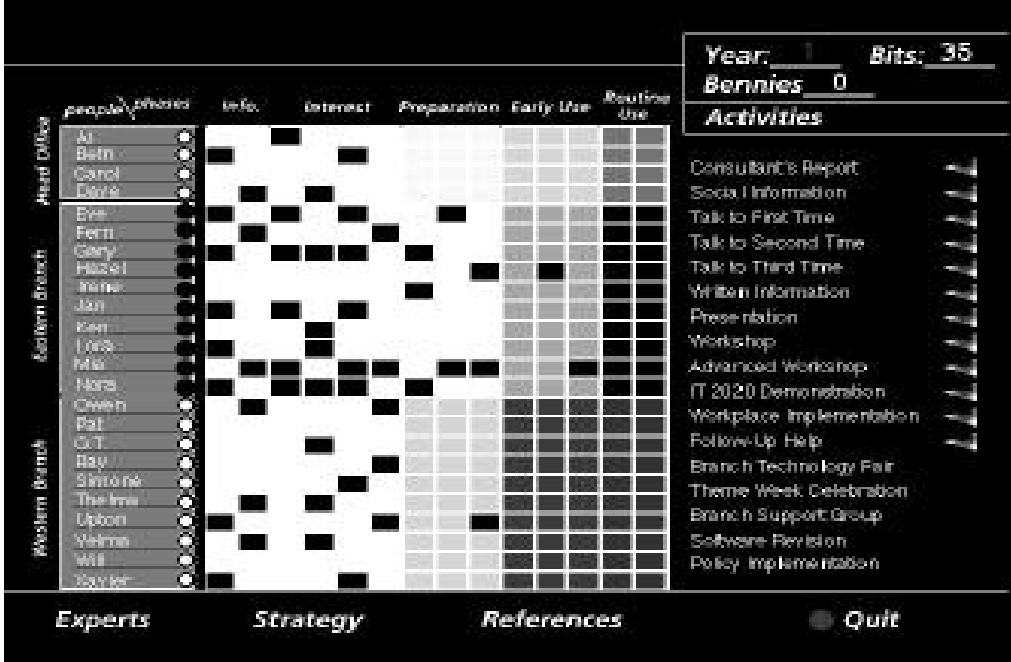
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Figure One: The Making Change Game Board



## Figure Two: Change Activities

### CONSULTANT REPORT

Information about the schools from a recent consultant's report.

Cost: 2 bits

### SOCIAL INFORMATION

Information you obtained from colleagues in the schools about the informal relationships of staff with whom you are working.

Cost: 1 bit

### TALK TO

Your 1st conversation with individual people to introduce learning technology issues and IT 2020. Choose three people.

Cost: 2 bits

### TALK TO AGAIN

A follow-up conversation to discuss questions about IT 2020. You must have talked to each of these people once.

Cost: 2 bits

### TALK TO THIRD TIME

You go back for a 3rd conversation to discuss concerns and answer questions about IT 2020. You must have talked to each of these people 2 times before you can talk to them a 3rd time. Choose three people.

Cost: 2 bits

### WRITTEN INFORMATION

A short informational brochure about IT 2020 distributed to all staff in the district (i.e. in the Central Office, and 2 schools).

Cost: 2 bits

### PRESENTATION

A short presentation to all school about IT 2020 (i.e. Central Office and the schools).

Cost: 3 bits.

### WORKSHOP

How to use IT 2020 in the classroom. Hands-on training designed to promote the ability to use IT 2020 in the classroom.

Choose five people from one school.

Cost: 5 bits

### ADVANCED WORKSHOP

Advanced strategies for applying IT 2020. Training designed to encourage discussion other applications of IT 2020 to improve learning. Choose 5 people from one school.

Cost: 6 bits

### IT 2020 DEMONSTRATION

An on-site demonstration of IT 2020 for school staff. Following the demonstration, a demo model is left on display so it can also be viewed by parents and students.

Designate whether the demonstration is at the Secondary or Primary School.

Cost: 3 bits

### CLASSROOM LESSON

The staff that you select begin to try out IT 2020 in the classroom. Choose three people from anywhere in the Region.

Cost: 2 bits

### FOLLOW-UP HELP

A conversation with staff to solve problems they have encountered in using IT 2020.

Choose three people (Note: The people must have conducted a classroom lesson).

Cost: 1 bit

### SCHOOL TECHNOLOGY FAIR

A staff initiated fair that shows off the advantages of IT 2020. It's open to students, staff and also to parents. Designate 1 school.

Cost: 6 bits

### THEME WEEK CELEBRATION

A major event showcasing how staff in the pilot schools are using IT 2020. Staff, parents, and the media from the Region are invited to participate.

Cost: 8 bits

### SCHOOL SUPPORT GROUP

A group of staff who are using IT 2020 meet weekly to help each other solve problems.

Choose five people from 1 school.

Cost: 4 bits

### IT 2020 SOFTWARE REVISION

Revision of the IT 2020 software to better fit the needs of the schools based on staff feedback. Form a committee of five staff.

Cost: 8 bits

### POLICY IMPLEMENTATION

Change systems policies to reflect changes in curriculum and instruction resulting from adoption of learning technology. Form a committee of five staff from anywhere in the Region.

Cost: 8 bits

Table One (attached as a separate file)

## Bio Notes

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