Implementing Organizational Change Using Action Research in Two Asian Cultures

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Abstract

This paper is based on organizational change projects implemented by two managers, the authors of this paper, who used action research in their own organizations for their doctoral studies. Both projects used action learning and action science concepts as a subset of the overall action research intervention, although not explicitly in the second project. One project was carried out to prepare the engineering division of a Japanese multinational company in Singapore to expand its capability to carry out global projects by making large-scale changes in its structure and processes. The other project was carried out in a very large Indian bureaucracy to introduce total quality management in one part of this organization. This paper will first introduce the concepts of action research, action learning, and action science in management research. The two research projects will then be described. This will be followed by the two researchers comparing their projects and reflecting on what changes they would make to the strategies they used in their projects if they were to do this all over again. The paper will conclude with recommendations for project managers who may want to use action research to implement organizational change projects.

Keywords: organizational change, action research, project management, doctoral research, Asian culture

Introduction

Action research is used as a means of implementing organizational change especially in complex social situations where the people whose lives or circumstances are being changed need to be involved in designing and implementing the change that affects them (Burns, 2007; Somekh, 2006; Parkin, 2009). Brooks and Watkins (1994) used the term “action inquiry technologies” to embrace a number of strategies for learning (and research) through systematic inquiry that used a “recurring cycle of action, reflection, hypothesis, and revised or new actions based on the reflections and hypotheses about what occurred in our previous action” (p. 1). Action research, action science, action learning, participatory research, and popular education and collaborative inquiry were listed as action inquiry technologies in a volume edited by Brooks and Watkins (1994) in the New Directions for Adult and Continuing Education. Action research, action learning, and action science were used in the two research projects discussed in
Somekh (2006) argue d that action research methodology “overcomes the limitations of traditional methodologies when researching situations” (p. 1) as change in organizations often does not take place as planned but using an action-reflection cycle helps to keep the implementation of change on track, as far as feasible, by involving the very people who will be affected by the change. The two researchers whose projects are discussed in this paper found that the power of the plan-act-observe and reflect cycle they used in implementing change, which included co-researchers who were affected by the change, helped them to conduct a systematic inquiry that resulted in both useful management and as well as rigorous research outcomes. Action research, action learning, and action science were concepts that originated from the West, and the two Asian researchers adopted action research in two different Asian cultures: India and Singapore (the latter is a predominantly Chinese culture in a Japanese organization). The two researchers have also reflected on the adaptation of these Western approaches for Eastern cultures in the paper.

**Action Research, Action Learning, and Action Science—A Brief Review**

Kurt Lewin (1946) is often cited as the founder of action research (soon after World War II) as “research that will help the practitioner” (p. 34) to generate knowledge “about a social system while, at the same time, attempting to change it (Eden and Chisholm, 1993, p. 121). In *The Handbook of Action Research*, Reason and Bradbury (2006) defined action research as “a participatory, democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory worldview which we believe is emerging at this historical moment. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions of pressing concern to people and more generally the flourishing of individual persons and their communities” (p. 2). Greenwood and Levin (2006) added that action research leads to a “more just and sustainable or satisfying situation for the stakeholders” (p. 3). Parkin (2009) elaborated “Traditional research collects data and culminates at the point of discovery. Action research collects data expressly to guide the future” (p. 22). Both authors of this paper used Dick’s (2002) definition of action research as “a flexible spiral process which allows action (change, improvement) and research (understanding and knowledge) to be achieved at the same time” (p.1 ).
Reg Revans (1982) developed the concept of action learning in England after World War II to find new ways to develop managers to solve their everyday problems. McGill and Brockbank (2004) defined action learning as a “continuous process of learning and reflection that happens with the support of a group or ‘set’ of colleagues, working on real issues, with the intention of getting things done. The voluntary participants in the group or ‘set’ learn with and from each other and take forward an important issue with the support of the other members of the set” (p.11). According to Revans (1998) Action learning emphasizes the use of “insightful questions” as opposed to “programmed knowledge,” (p.5). Programmed knowledge is technical “(expertise or functional specialism) or the fruits of authoritarian instruction” (p. 29) and questioning insight is the “is the ability to pose useful questions when there is no certainty as to what next might happen” (p. 29). Action learning emphasizes learning by doing and learning as a collaborative and social process. (p. ).

Action science grew out of the work of Chris Argyris and Donald Schon (1974) and is based on the idea that “people can improve their interpersonal organizational effectiveness by exploring the hidden beliefs that drive their actions” (Raelin 1997, p. 21). Friedman (2006) defined action science as “a form of social practice which integrates both the production and use of knowledge for the purpose of promoting learning with and among individuals and systems whose work is characterized by uniqueness, uncertainty and instability” (p. 132).

From these definitions, we see that action research, action learning, and action science have much in common, but they also have some differences in their aim and approach. Raelin (1997) compared the approaches of action learning and action science to knowledge and stated that while “action learning is concerned with making new ideas or recently acquired theories tacit by placing them into natural experience” action science is “concerned with making explicit or bringing into awareness individual’s theories-in-use” and that “whereas action learning seeks to contextualize learning, action science de-contextualizes practice so that participants can become more critical of their behavior” (p. 25–26). Raelin and Coghlan (2006) described action learning as an “educative process helping managers to learn through primarily second-person experience (i.e., inquiring and working with others on issues of mutual concern)” while action research “aims at contributing to dialectical knowledge, especially using second and third person (i.e., takes a broader picture to enable extrapolation and dissemination to an impersonal audience” (p. 685). Although not specifically stated by Raelin and Coghlan (2006), action science, with its emphasis on increasing the awareness of learners to the assumptions behind their actions, seems to focus on first-person skills of learners.
Table 1 summarizes some key characteristics of action research, action learning and action science relevant to this paper.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Action Research</th>
<th>Action Learning</th>
<th>Action Science</th>
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<tbody>
<tr>
<td>Philosophical basis</td>
<td>Gestalt psychology, pragmatism, democracy</td>
<td>Learning from experience, action research, and other eclectic views</td>
<td>Lewinian action research, Dewey’s theory of inquiry</td>
</tr>
<tr>
<td>Purpose</td>
<td>Organizational and social change through involvement and improvement</td>
<td>Understanding and changing of self and/or system through action and reflection on action, management development</td>
<td>Change in reasoning and behavior leading to increased competence, justice, and capacity for learning and human development, individual and organizational change</td>
</tr>
<tr>
<td>Epistemology</td>
<td>Knowing through doing and applying discoveries</td>
<td>Problem solving and also problem framing</td>
<td>Reflecting-in-action, making explicit tacit theories-in-use</td>
</tr>
<tr>
<td>Methodology</td>
<td>Interactive cycles of problem defining, data collection, taking action or implementing a solution, followed by further testing</td>
<td>Cycles of framing, action, reflection, concluding, and reframing</td>
<td>Reflection on there-and-then and here-and-now reasoning, with an emphasis on online interactions</td>
</tr>
<tr>
<td>Forms of knowledge</td>
<td><em>Dialectical</em>; Practical, Propositional</td>
<td><em>Practical</em>; dialectical; Propositional</td>
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*Table 1. Comparing Action Research, Action Learning, and Action Science*  

While action research, action learning, and action science have been promoted as useful in managing change, they also carry some risks (Raelin 1999). An action science intervention can often give rise to defensive behavior as participants’ innermost feelings are exposed through the psychological aspects of the intervention. In action learning, although participants may learn from the project, the project itself may fail and managers are often concerned that failure may be looked upon as incompetence. Action research in organizations often requires the insider researcher to have some influence over the situation that is undergoing change, posing ethical and moral dilemmas of the use of power and influence in a situation that is expected to be democratic and empowering.

The next two sections of this paper will provide an account of the action research projects carried out by the authors of this paper. The first author will be referred to as author 1 and the second author as author 2.
Action Research Project in Japanese Multinational Company in Singapore

This section of the paper describes an action research study of management learning to develop local Singaporean managers by a senior manager, which also formed the basis for his PhD thesis.

Org Japan was a supplier of high technology industrial products headquartered in Japan. As Org Japan’s market was saturating in Japan, it expanded its business overseas by establishing a regional headquarters in Singapore, Org Singapore, and recruited more than 100 fresh engineering graduates from Singapore and sent them for training to Japan.

The Japanese method of engineering was Tayloristic (Schon, 1983, p. 237). The total engineering required for a project was divided into precise tasks, and engineers were trained to do their job over many years so that efficiency, quality, and productivity were assured. Thus, the engineers employed by Org Singapore were first trained as project engineers (dealing with administrative tasks associated with project handling and hardware engineering) or system engineers (mainly responsible for software engineering). Specialist engineers such as computer engineers and start-up engineers were also developed.

Initially, Org Japan subcontracted the jobs it secured from Asia to Org Singapore. The engineering division in Org Japan, which was typically responsible for these jobs, split them into their various parts such as project engineering, system engineering, and software engineering, and subcontracted these to the respective departments in Org Singapore. This helped reduce the cost of engineering by using the less expensive engineers from Singapore to do routine tasks.

As the cost of engineering in Japan started rising, another breakthrough strategy was required. A project called “global engineering” was conceptualized, and Org Singapore was asked to take total responsibility for major projects from its region. Thus, major responsibilities were thrust into the hands of the younger managers in Singapore. An organization called Global Technical Centre was formed to symbolize the metamorphosis of the engineering division at Org Singapore from being a subcontractor to the Org Japan’s engineering division to becoming an integrated operation responsible for total project execution. Since the cost of engineering in Singapore was also rising, although to a lesser extent, Org Singapore then decided to outsource software work to India and the Philippines to manage project costs.
Author 1, as the head of Global Technical Centre, was charged with the task of implementing Org Singapore’s global engineering strategy. To achieve this he had to introduce a large-scale change in his operation. Author 1 had recently completed a master’s degree course in engineering management from an institution in Australia and wanted to introduce the change based on his newfound knowledge. He wanted to build consensus towards this change, a new concept in Org Singapore, which had a top-down style of management.

Author 1 knew that the change Org Singapore was planning would have long-term implications on how projects would be managed in the future. He felt that it could be achieved only if the younger managers took ownership of the change. He saw this as an excellent opportunity for the younger managers to “learning by doing.”

Author 1 had just enrolled in a doctoral program from an Australian university that encouraged its students to use action research and decided to use the organizational change project to conduct his action research with the permission of the Japanese management at Org Singapore.

Six managers participated in this study as author 1’s co-researchers. All six managers were local Singaporeans of Chinese origin, belonging to the majority ethnic community in Singapore. The Japanese management of the company wanted local Singaporeans, whom they employed directly from university, to take over gradually the major responsibilities in the company.

The purpose of author 1’s study was to enhance the learning ability of his managers through the actions they took to solve real problems in Org Singapore. This was necessary, as Org Singapore was not interested in academic research. For top management, even the term “action research” sounded academic and author 1 had to use the term action learning to make it more palatable as action learning had a process similar to quality control circles that were being promoted by the Japanese management for continuous improvement.

**Research Question or Concerns**

While conducting action research, research questions originate from a thematic concern rather than as hypotheses. According to Kemmis and McTaggart (1988), “The thematic concern defines the substantive area in which the (action research) group decides to focus its improvement strategies” (p. 9). Org Singapore had several concerns when author 1 started this study. The first was that it was facing a price war for market share in the fast-growing
Asean region. Although customers valued the quality and reliability of Org Japan and Org Singapore, they were cost conscious. Secondly, the number of Japanese assigned to work in Org Singapore had increased and this was not looked upon kindly by the locals. Although they accepted the necessity for the Japanese presence to help them communicate with the parent company, they resented the cost of expatriates at a time when they were being asked to cut costs. The management was convinced that it had to reduce the number of Japanese expatriates.

Author 1 had his own concerns at the start of the research. He needed capable managers to implement the global engineering strategy. However, he did not want to recruit from outside, since this could create resentment among the local staff. He had to find a way to accelerate the development of local managers to fill this gap while implementing the new strategy.

Taking these concerns into consideration, author 1 concluded that addressing the rapid development of local managers in Org Singapore would be of great value to the organization in general and Global Technical Centre in particular. Therefore, he took up local manager development as the thematic concern for his research.

From the common thematic concern, author 1 developed the following research questions.

The primary research question was *Will developing “conscious learning” among managers make them more effective?*

He also wanted to pass on whatever knowledge he had gained through his international exposure to his managers without appearing to act like the “expert.” Therefore, his secondary research question was *Will a senior manager of his background, with international exposure and experience, be able to channel such knowledge to his younger managers using participatory action research?*

**Why Action Research Was Selected as the Appropriate Methodology**

When he started out on this research, author 1 had a very fuzzy idea about what he was planning to achieve. He also could not wait, as operational problems needed urgent attention. He was not sure what results his actions would have, but felt it necessary to continue with the Plan-Do-Check-Act (PDCA) cycle used in Japanese companies. However, while this cycle was adequate for ensuring continuous improvement in the organization, it lacked the
“reflection” component necessary for action research.

There were two compelling reasons why author 1 chose action research as his research methodology. First, the phenomenon he was studying did not seem to fit traditional research methods as he was studying his managers in their natural settings. Second, he was interested in doing something that he had not done before, both for his personal knowledge and for professional development.

He faced the following constraints:

1. He had to use a small sample of engineering managers within his operation for the study.
2. It was difficult to isolate the sample in a controlled setting, as Global Technical Centre could not afford to take the managers away from their work environment due to the workload.
3. He had to participate actively in the processes and could not stay away from the managers while the research was being conducted as it was carried out along with the normal work.
4. It was difficult to set up measures to check the learning of the managers, and conclusions could only be made about this indirectly.

Action research allowed him to pursue his research despite these constraints.
Research Methodology

Initially, author 1 adapted Perry and Zuber-Skerrit’s (1991, p. 76) model shown in Figure 1 for a postgraduate action research study.


Figure 1. Initial Action Research Model
In author 1’s research model, management learning was the “thesis action research” and the problem that he tackled during this research—a new work model implementation—was the common “core action research” project. Together, these formed the action research approach to author 1’s research.

Although he extended this model to include external action research cycles, he used the terms “core action research project” and “thesis action research project” to identify elements of his research following Perry and Zuber-Skerritt’s (1991) definition.

During this study, author 1 also participated in two other “learning sets” that had a significant impact on his research questions:

1. The PhD set, formed by students doing their doctoral program from the same university and supervised by two common supervisors. This set met frequently face-to-face in Singapore. Participating in this set helped author 1 to answer his primary as well as his secondary research questions.
2. Elogue, an e-mail set, was formed while attending a course called action research and evaluation online. Participating in this set helped him to answer his secondary research question.

His final action research model, including the interaction between his research set and the two external sets, is shown in Figure 2.

Figure 2 Final Action Research Model
The planning phase of the individual cycle drove the action phase of the “participatory cycle.” The reflection phase of the individual cycle was carried out with members of the PhD set and e-mail set. This led to changes in the planning phase of the individual cycle that then acted on the action phase of the participatory cycle. The symbols in the model have been combined to show this relationship.

Action learning was used for involving his co-researchers in management learning activities at the workplace. Author 1 and his co-researchers formed an “action learning set” that worked in parallel with the work model implementation committee, meeting separately in action learning meetings to improve the process by which this committee performed its task. This provided a valuable opportunity for the managers involved in this research, who were also members of the new work model implementation committee, to enhance their learning. Their actions were planned in the action learning meetings, and reflections were carried out in the meetings for taking the next step.

As he approached the end of his study, author 1 decided to leave Org Singapore but continued to work as a consultant to the organization until project completion. During this time, he had occasions to evaluate his own performance as a previous director of the organization, based on his study of action science. Like the famous Pogo (Kelly 1996), he was surprised to realize that “We have met the enemy and he is us.”

On reflection, he became excited about the prospect of adding action science to his management learning model. To help him understand the usefulness of action science, he carried out a detailed analysis of the dilemma of the power relationship he faced in his research with his co-researchers as a personal case study.

Data Collection and Analysis

Author 1 used a purposeful or criterion-based sample for his study. He was introducing Western methods in a traditional Japanese company; so when he started his action research project and set up a learning set, he used managers who either had completed or were in the process of completing MBA programs through Western universities. He needed these managers to initiate and reduce resistance to the program. As the research progressed, he added three more managers to the set who had not joined MBA programs but were core members of the new
work model implementation committee. In the end, the learning set (or sample) was evenly balanced between the two categories of managers.

In all, 12 action-learning meetings were held. Data collected during this phase of the study were mainly minutes of meetings, action-learning guides used to record participants’ reflections and a videotape of the workshop author 1 and his co-researchers conducted. Company records were also used as secondary data. The list of data used for analysis is as follows:

1. Minutes of action learning set meetings, including reflections;
2. Reflective memos written by author 1 during the research;
3. Company records of the work model implementation committee’s work;
4. Company documents relevant to the research;
5. Videotape of an action learning workshop conducted by the researcher and co-researchers at a public conference;
6. Reports of search conferences that were held during the study;
7. Review of work done by the new work model implementation committee by an operation manager who was not part of the learning set and who had taken over author 1’s previous role in the operation for which this study was mainly conducted;
8. Convergent interviews of the research set by independent action researchers from outside Org Singapore.
9. Feedback from the research set on what they had learned;
10. Notes taken during PhD set meetings;
11. Review of management outcomes of the PhD set and e-mails with them about their work;
12. Feedback from workshops conducted during the study with both the research set and PhD set;
13. Emails exchanged with e-mail set;
14. Reflective memos written by author 1 during an online action research program attended conducted by the University of Sydney;
15. Review of author 1’s thesis by an independent researcher doing his research on “learning organizations”; and
16. Feedback on author 1’s conclusions from the co-researchers; and
17. Personal case study of author 1’s “power relationship” dilemma.

All the data collected were systematically coded under specific headings using grounded theory techniques. Since the data collected were not very extensive, author 1 decided that he would look at his data in different ways to make sense of them. Therefore, his data analysis uses multiple methods of analysis, but in each instance, he carried out the analysis to a sufficient depth to bring to the surface the answers relevant to his research questions.
Author 1 planned to start analyzing the data from a “helicopter view” and then go deeper to uncover more findings through iterations as shown in Figure 3. Each of the iterations drove the next one like the action research spiral itself. His data analysis was based on the methods suggested by Chenitz and Swanson (1986), Miles and Huberman (1994), and Dick (1990a, 1990b, 1993).

Conclusions

The action research study had both management and research outcomes. The organization expected management outcomes and the university wanted research outcomes. Table 2 shows an effect matrix that summarizes the three types of outcomes from this research: management, research, and personal.
### Outcomes

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Direct</th>
<th>Indirect</th>
<th>Surprise</th>
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<tbody>
<tr>
<td><strong>Management</strong></td>
<td>1. New work model well established. 2. Promotion of most of the participants to higher positions.</td>
<td>Global Technical Centre met its goals by increasing its income by 2.5 times, while halving the cost and maintaining the same number of staff.</td>
<td></td>
</tr>
<tr>
<td><strong>Research</strong></td>
<td>1. Established criteria for management learning in the workplace. 2. Management learning leads to more effective managers. 3. Surprise is a trigger for managerial learning. 4. The action learning guide which was requested by many practitioners over the world for their own use. 5. Action learning and action research led to the researchers of the PhD set to develop as more effective managers.</td>
<td>1. Action learning/Action research can be applied in Asian cultures with local adjustments. 2. Camouflaging is effective in introducing change management processes. 3. Transfer of learning is possible through participatory action research.</td>
<td>1. Learning set faded. 2. Author 1 did not think of using the PhD set for verifying his hypothesis.</td>
</tr>
<tr>
<td><strong>Personal</strong></td>
<td>1. Smooth transition into a consultant. 2. Author 1 became a reflective practitioner.</td>
<td>1. Learned new skills for own business. 2. Won recognition in the international community as an action learner. 3. Learned electronic facilitation skills.</td>
<td>Author 1’s own weaknesses as a manager were exposed. He learned how to analyze dilemmas using action science.</td>
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**Table 2. Research Outcomes**

The direct research outcome of this study was the establishment of a management-learning model in Global Technical Centre. The answer to author 1’s primary research questions contributed directly to the research outcome that managerial learning is most likely to result in management development both individually and as a team. The
management outcomes achieved by the PhD set using action learning/action research added further credibility to his claim.

Author 1 also learned the value of “surprise” as a trigger for management learning, which matches Schon’s (1983, p. 68) concept about learning from surprises when reflecting-in-action and Foote-Whyte’s (1991) notion of learning from “creative surprises” (p. 97) in participatory action research. Some of these key “surprises” are listed in Table 2.

The indirect outcomes of his research are in the answers to the two secondary research questions. Author 1 felt that his experience with the research set and the PhD set, as well as the feedback received locally, suggested that action learning/action research could be adapted to an Asian environment with adjustments to suit local conditions.

**Action Research Project in an Indian Bureaucracy**

At the start of this research project, an Indian bureaucracy (Org India) was on the cusp of turning over a new leaf from a bureaucratic organization to a customer-centric organization. It was desirable to develop an approach that could guide the changing focus of Org India. Thus, the objective of author 2’s research was to develop a model, and validate it in practice, which could be used by the organization to transform its various units towards becoming more customer oriented and quality conscious. Therefore, the research methodology had to be steeped in practice yet its conclusions needed to be rigorous enough to be generalized to the rest of the organization. Action research methodology fulfilled these criteria. Impressed by its breadth and bottom-up approach but stung by the criticism that action research can neither match the traditional scientific research (Susman & Evered, 1978) nor make a significant contribution to the scientific community (Gronhaug & Olson, 1999), author 2 wished to use action research in a manner that effectively addressed these criticisms. Therefore, he made a deliberate attempt to make the research process recoverable as suggested by Checkland (1999). The multidisciplinary nature of action research had been noted in literature (Aguinis, 1993). Therefore, author 2 used a number of research methods so that the research conclusions would be rigorous. The data collected and analyzed used interviews, open-ended surveys, quantitative
analysis, and case studies, within an overarching methodological action research. Action research is often used as a meta-methodology. These different methods were used to triangulate the conclusions to make them rigorous.

The research questions, their corresponding research methods, and the research outcome are shown in Table 3.
generally been through ISO 9000 certification. ISO certification facilitates total quality management if it is

<table>
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<th>No.</th>
<th>Research question</th>
<th>Research method</th>
<th>Research outcome</th>
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<tr>
<td>1.</td>
<td>What are and what should be Org India’s core values, style of management, growth strategies, competitive strategies, and changes in organizational structure/management system so as to transform it into an excellent organization?</td>
<td>(i) Administration of Khandwalla (2003) – a qualitative survey based on open-ended and pre-coded questions to Org India personnel on different dimensions of organizational policies and practices that promote excellence. (ii) Administration of “behavior preference scale” of Sinha (1995). Data analyzed using “statistical” software.</td>
<td>(i) In general, Org India is rule bound, follows monolithic organizational structure, is poor in inter-departmental coordination and has a directive management style. Indian culture differentiates between persons as “own” or “others” on ethnic criteria. This analysis showed that total quality management and many factors and core concepts of total quality management, such as continuous improvement, empowerment, customer focus, quality-based organizational strategy and a systems approach, have been identified by the respondents as desirable changes which Org India should initiate. (ii) Employees of Org India are hierarchical and dependency prone (Kumar &amp; Sankaran, 2006)</td>
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<tr>
<td>2.</td>
<td>There are no scales that can objectively measure the transition of an ISO-certified organization towards total quality management.</td>
<td>Questionnaire development</td>
<td>Development of “total quality management transition questionnaire” (split half reliability = 0.66, tested for content and discriminate validity).</td>
</tr>
<tr>
<td>3.</td>
<td>What is the impact of ISO 9000 implementation in Org India?</td>
<td>Assessed through qualitative survey based on Acharya and Roy (1999)</td>
<td>Better teamwork. Certification resulted in “better understanding of process and responsibility” and “linkage to other functions”.</td>
</tr>
<tr>
<td>4.</td>
<td>To what extent has the implementation of ISO 9000 brought about a total quality management orientation in Org India?</td>
<td>Use of “total quality management transition questionnaire”</td>
<td>Of the seven units of Org India that were taken for the case study, one could be labeled as a Total Quality Management organization.</td>
</tr>
<tr>
<td>5.</td>
<td>Will a bottom-up methodology build learning capacity among the Org India personnel?</td>
<td>Action research</td>
<td>In contrast to consultant-supported training, a bottom-up action learning-based training provided more enduring learning and faster learning.</td>
</tr>
<tr>
<td>6.</td>
<td>While the moderating influence of transformational top leadership is well documented, what is an effective leadership style for middle managers for effective transition from an ISO company to a total quality management company?</td>
<td>Action research</td>
<td>See Figure 4</td>
</tr>
<tr>
<td>7.</td>
<td>How can the enablers of total quality management be integrated in a model for attaining total quality management within the ISO framework?</td>
<td>Action research</td>
<td>Spiral vortex model (see Figure 4)</td>
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Table 3. Research Questions, Methods, and Outcomes

From the information presented earlier, it was concluded that the spread of total quality management in India has generally been through ISO 9000 certification. ISO certification facilitates total quality management if it is...
supported by transformational leadership, a favorable executive intention towards total quality management and willingness to learn. This brings us to research questions 6 and 7, which aimed at developing a generic model for total quality management implementation in Org India using the ISO 9000 route. The model labeled “spiral vortex model” is shown in Figure 4.
Figure 4 The Spiral Vortex Model for Implementation of TQM in India using the ISO Framework

- Customer Focus
- Work Culture
- Autonomy (delegation & empowerment)
- Teamwork, communication across organization

Work culture

Figure 4 The Spiral Vortex Model for Implementation of TQM in India using the ISO Framework
Unlike most of the reported research on total quality management, this study showed that there is a sequential relationship among the different critical success factors of total quality management. The sequence is shown in Figure 4. Transformational leadership has been considered the most important critical success factors of total quality management. Therefore, the model in Figure 4 deals with this first.

This research revealed that the millennium-old caste system of India has spilled into professional Indian organizations too (notwithstanding their Western façade). Thus, at their workplace, Indians coalesce to form a “professional caste” with members from the same department or division. This provides them a sense of belonging at their work place. These professional castes have all the trappings of the traditional Indian caste system, with their feeling of kinship, hierarchy within their own professional caste, and distrust for other professional castes. Ultimately, the formal organizational rules and structure is supplanted by an informal but vibrant network of relationships, which has its own set of ethics and triggers for action. These act as a surrogate to the formal organizational rules and guidelines. Therefore, Indian professionals tend to become dependent upon their departmental superiors for sustenance in their work. One of the fallouts of all this is that just as one’s biological caste defines the limits of one’s social interaction, the professional caste begins to define the limits of one’s professional interaction at one’s work place. This has made Indians weak in their team orientation.

This brief discussion provides the background for understanding the kind of leadership required in total quality management-oriented transformation. The model addresses the leadership aspect by emphasizing “nurturant task” (NT) style of leadership for middle managers in India. The NT leadership is akin to the “contingent reward” factor of transformational leadership. While the contingent reward factor aims at rewarding subordinates who deliver, NT leadership aims at rewarding subordinates by mentoring them in a more personalized way, i.e., by nurturing them. In the learning-oriented environment of total quality management implementation, the intellectual stimulation factor of transformational leadership needs to be modulated as the hierarchical guru-shishya (teacher-student) relationship. The learning bias of this guru-shishya relationship modulates the hierarchical orientation of an Indian into “respect for the knowledgeable guru” and, therefore, grows into “inspirational motivation”—another factor for transformational leadership. At a base level, the guru-shishya relationship continues to stoke the
intellectual curiosity of the followers (the *shishyas*). The “individualized consideration” factor of transformational leadership needs to be modulated as “equity-based personalized relationship.” The “equity” aspect cleanses the Indian tendency for showing undue favor to members of the same professional caste, while the personalized relationship helps each individual understand to help him/her improve.

The social milieu created by this Indian leadership style creates the initial conditions on which the rest of the critical success factors can then sequentially grow as explained in the following. In the next paragraph, the critical success factors are shown in italics.

With the leadership style in place, the model shows that the key to initiate an ISO organization towards total quality management is by framing process-based quality procedures and objectives. Since primacy of customer is the foundation of process orientation, a process-based ISO documentation injects the “*customer is king*” philosophy into the working system of the organization. Institutionalization of “corrective and preventive action” should be the next focus in this organization. The dynamics of process-based quality procedures and objectives coupled with the need to implement corrective and preventive actions compels employees to reach out beyond the comfort zone of their professional castes. They are now required to interact with members of other departments. This cultivates the *communication across organization* critical success factors. At this stage, the leader should *reward* only such behavior that leads to successful completion of tasks. In line with the tenets of NT leadership, he/she must also display filial affection towards the employees besides rewarding them. The relationship orientation of the filial affection then begins to redefine the boundaries of the erstwhile professional caste. The continual communication across the organization with the prop of filial affection gradually changes the organization to a “professional clan” that now has a pan-organizational boundary and not pan-departmental boundaries. Progressively, this gives rise to *teamwork*. The continuous improvement generated by continual implementation of corrective and preventive actions inculcates in the employees a sense of *autonomy* replacing the earlier sense of dependency on their superiors. At this stage, the organization should formally *delegate* many decision-making processes to *empower* the managers/employees. The cumulative effect of the progressive sensitization of critical success factors lead to a different *work culture*, which has *customer focus* built into it. Therefore, successive corrective and preventive actions supported by a suitable reward system and an Indian version of leadership create a spiral vortex that begins to pulls the organization towards total quality management.
The Two Action Research Projects Compared

The two authors, whose research is described in this paper, are both of Indian origin, and were trained and educated as engineers. In addition, they were involved in total quality management in their own organizations. Despite having come from a quantitative background, both were able to adapt to conduct predominantly qualitative studies. While author 1 used “action learning” as a cover to conduct action research (due to internal politics in his organization), author 2 did not face such an obstacle. Author 1 clearly used action research, action learning, and action science, while author 2 used elements of action learning and action science.

Reason (2001, p. 185) identified three broad strategies for action research practice:

1. First-person action research/practice skills and methods address the ability of the researcher to foster an inquiring approach to his/her own life.
2. Second-person action research/practice addresses our ability to inquire face-to-face with others into issues of mutual concern.
3. Third-person research/practice aims to create a wider community of inquiry involving persons who have an impersonal quality.

Both author 1 and author 2 practiced first- and second-person action research during their projects. Author 1 has since left industry, became an academic, and is now presenting and publishing papers in international conferences and supervising doctoral scholars across the globe. He has also visited several prominent international action research scholars and has engaged in third-person research/practice. Author 2 continues to work in industry but has taken to publishing several papers (sometimes with author 1 who supervised his doctoral studies) in prominent journals that is engaging him in third-person research/practice.

Author 2 notes that both Indian and Japanese societies are hierarchical and command-and-control–based cultures with high power distance. Although Indians are group-oriented, their group orientation is socially expressed in terms of ethnicity, language, and family. This group orientation is not work-group based like that of the Japanese.
In Japan, workers of one organization act as one group to the exclusion of other organizations. Further, Indians value their work only in a personalized context. Thus, work for the sake of work does not hold primary value for them. As Loy (1993) said, “While Indian renunciants abstained from work and begged for their food; Japanese Buddhism came to repudiate most traditional spiritual disciplines in favor of those that promote productive activities” (p. 407).

Nakamura (1964) says that, in India, ultimate value is placed on religion, and in Japan on the state. Thanks to the common origin of Buddhism and Hinduism, professionals of both the countries follow an intricate approach to behavior. Their behavior is essentially a balancing act that is based on the three parameters of time, place, and person (Kumar & Sankaran, 2006). Therefore, Japanese and Indians are not rule-oriented in a Western sense. One of the implications of these Indo-Japanese traits is a possible lack of control in action research-based project management. This was not evident in the action research project in Singapore, as the managers tended to follow the rules probably because of the nature of Singapore citizens who generally follow rules.

Practice-based learning from projects resists a formal closure co-terminus with the project because it is based on real-time enquiries rather than abstract conceptualization (Raelin, 2009). Therefore, if action research is about higher levels of participation, it also means that control over the flow of events in a project is replaced by co-control by all the participants, which will thus be distributed throughout the system (Flatau, 1995). Thus, true action research can tend to be disruptive for a project environment that often has a clear focus and goals. Hence, action researchers in a project environment should focus on the issue at hand and not on the individuals involved. It is the interaction among the roles (with an individual as the carrier of the role superimposing his/her persona onto the role) that decides the fate of different issues that crop up during action research. Thus, more attention needs to be given to the roles and not to the individuals. Issues will resolve only if the roles are tackled in real time.

The issue of lack of control also brings into focus the need to look at action research from a postmodernist angle. Postmodernism allows for the fact that even though at a surface level people may appear to be agreeing, there may well be conflicting values, strategies, meanings, or assumptions at work underneath the action research process (Jennings & Graham, 1996). Postmodernism provokes us to reconceive the concept of action research in terms of the local struggle for power (Jennings & Graham, 1996).
Author 2 visited one of the three units in his organization where action research was successfully completed. He observed that the organization has moved up the quality chain but remained short of becoming a world-class organization of the kind which could have secured it, say the Deming Prize. As far as quality orientation was concerned, thanks to the different worldviews of the current set of managers and employees, there was less emphasis on improving the quality any further. The current emphasis was on improving the volume at the existing level of quality—in the struggle between world-class quality and world-class volumes—currently volume seems to be the winner. This shows the need to appreciate that action research is perhaps just that—a research methodology and not a strategic approach to envision the future of an organization. The future of an organization is more heavily impacted by the ethos of the employees—whether mentally they are systemic or reductionist, if systemic (as in the Indian project), whether they feel more comfortable with hard systems or soft systems, and if it is soft systems (as in the Indian project), whether their continually changing mental models make them more suitable for postmodernist analysis or analysis in line with the recent tenets of complex adaptive systems. And this brings author 2 to the most enduring lesson from this project: that to do research-based project management in India and, by analogy, in Japan—thanks to the many similarities between the two countries—we must learn to reconceptualize their world from the lens of complex adaptive systems. Action research literature on dealing with complex adaptive systems needs to be developed to keep up with organizational change issues.

Author 1 visited the organization where the research was conducted and found that due to the installation of a new CEO, who was head-hunted from a U.S.-based organization focusing on profits, the Japanese organization had become more profit and cost conscious. The engineers were less focused on delivering excellent systems exceeding customer requirements and more on systems that fitted the purpose. New ideas such as action learning, that were introduced during the research project described in this paper, did not continue but the managers who participated in the project said that they continued to practice the art of reflection. They did lament the fact that the organization now lacked some intellectual stimulation. This was not very surprising as new initiatives as action research and action learning require committed champions in influential positions in the organization in order to be sustained.
Reflections of the Researchers

The authors argue that action research, as an approach for organizational change, will find acceptance in societies that are systemic in their understanding of the world. Both Hindu and Buddhist philosophies are systemic (Kumar and Sankaran 2006), and so in the countries where these philosophies are dominant, the employees will find action research an acceptable approach for learning in their organizations.

In doing action research in an Asian setting, there is a need to understand that “communication in the East is often indirect, suggestive and symbolic rather than descriptive and precise” (Abe, 1990, quoted in Chia 2003, p. 957). Action in the West is seen as having a purpose, driven by anticipations, incentives and desires (March, 1996). However, the East gives more importance to perfecting action as the real basis for knowing for its own sake and not for its consequences (Chia, 2003, p. 978). This emphasis on action for its own sake and not for its consequences—embodied in the Indian concept of *nishkam karm* (self-less action) (Kumar, 2009)—and also trying to assimilate and disseminate it in a nonverbal manner is a neglected aspect in action research. A tentative way to do this could be by using a different method of action research in an interactive way (Kumar, 2009).

Author 1 feels that if he were to start all over again, he might not make any significant changes to his original approach, as action research is learned by doing it. He did use action science as an afterthought, but he would have considered using action science right from the start to support the action research initiative. While the change implemented using action research worked well for the new project managers and system integrators, it did not work well for the specialists. Perhaps having a representative of the specialists in the action learning set might have improved the situation.

Conclusions

Action research has proved to be an effective and responsive methodology to implement organizational change in both cases, even though the ideas used to effect the change originated from the West. The answers to the research questions that were raised were answered effectively as shown in the tables in the respective sections describing
each research project. The project management environment is becoming increasingly complex and often project managers have been asked to manage organizational change projects. While normative and reductionist approaches are useful in managing projects, it is becoming essential for project managers to learn holistic and responsive processes like action research and action learning to enhance their effectiveness as project managers and deliver benefits to stakeholders. Knowing about action science will also help them to improve their interpersonal effectiveness as leaders in a project environment.

Coghlan and Brannick (2001, pp. 48–57) caution action researchers conducting research in their own organizations to be wary of some critical issues which project managers need to pay attention to the following:

1. There will be role ambiguity when you are an agent of change that affects you as well. The organizational role may expect total commitment from you while the research role may expect you to be neutral and objective.

2. While you may have access to certain parts of your organization, you may be denied access to other parts due to political situation in the organization.

3. The advantage of being an inside researcher is the valuable knowledge you posses about the culture, power blocks, politics, traditions, and informal structure of your organization. However, this may inhibit you from standing back to be able to be critical of the situations in the organization.

As long as project managers are able to realize the strengths and weaknesses of being an insider action researcher it is a useful way of managing organizational change.

References

Chia, R. (2003). From knowledge-creation to the perfecting of action: Tao, Basho and pure experience as the ultimate ground of knowing. Human Relations, 56(8), 953–981.