

A LEARNING-BASED APPROACH TO ORGANIZATIONAL CHANGE:
FIVE CASE STUDIES OF GUIDED CHANGE INITIATIVES

EXECUTIVE SUMMARY

Five successful examples of a learning-based approach to organizational change were studied in order to identify some key success factors. All five change initiatives, in major manufacturing corporations, were guided and supported through the MIT Center for Organizational Learning . Following the change there were dramatic improvements in business results . This article examines several factors that made these change initiatives successful.

One central finding is that the goals for a successful learning-based change initiative are typically formulated in a way that combines two crucial elements: 1) meeting a critical business need, through 2) making fundamental process improvements. In each case there is a different solution to the seemingly-contradictory demands of work and learning, short-run business results and long-run process improvement.

An important role is played by a "core learning team", a reflective leadership group that develops collaboratively a shared vision and strategy for the initiative which combines the two key elements in a way that works for the setting. The learning-based initiative is viewed as a living system that typically progresses through three phases, centered around the pilot project.

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INTRODUCTION

By the end of the 1990's "the learning organization" and the concept of "organizational learning" had become indispensable core ideas for managers, consultants and researchers. For any business or organization, it is understood, the ability to learn better and faster than its competitors is an essential core competency. Here we shall look closely at how five businesses successfully changed to become more like learning organizations, responding more creatively and effectively to the problems and opportunities they faced.

A learning organization can be recognized from the outside by its agility in changing how it relates to the external world and how it conducts its internal operations. It can be recognized from the inside by an ethos in which learning from challenges and mistakes is central. While successful results are very important to learning organizations -- typically they set very high standards -- they recognize that often success is only achieved after initial mistakes, and what people learn from those early mistakes is often the key to eventual success. And people must learn from everyone's mistakes, not just their own. It is too costly to have people repeating mistakes that have already been made by others. A story from IBM tells of a very worried manager going in to see his boss right after the failure of the big innovation project that he had headed. Wasting no time, he said, "I suppose you're going to fire me" . "Why should I do that," replied the boss, "when I've just invested \$6 million in your education?" That tale reflects several ways of thinking that are characteristic of a learning organization: important learning comes from mistakes -- once they have been properly analysed; this form of learning is at least as important

as formal training, and a company must take good care of the people who develop this knowledge .

A learning organization is good at two kinds of learning: good at creating new solutions and good at sharing knowledge with other members who may need it. So there must be openness to new ideas, wherever they come from, and to sharing knowledge for the good of the business -- setting aside the embarrassment over sharing one's mistakes and the reluctance to ask for help or to borrow someone else's solution. It is not just individual attitudes that have to change, though, it is also the policies and patterns of management behavior that make it harder for employees to be good learners and sharers. When employees can trust that their bosses will not penalize them for revealing mistakes or for seeking help with a difficult problem then there will be more organizational learning and better solutions to be shared.

Lack of openness in the workplace is very costly. Design engineers who say nothing about the problem they cannot solve run the risk that, when they do solve it, they will require other key parts of the design to be changed. And by that time others have made costly investments in tooling that must now be scrapped, compounding costs and delays. In one of the cases we studied, the Epsilon new car design project at a leading auto-maker, major cost savings were achieved (over \$60 million) through their ability to confront and change this powerful pattern of secretiveness, a long-standing part of their workplace culture. They recognized that this tacit norm was based on deeper-lying assumptions (shared by all of them) about what is expected from "a good design engineer" and that those "mental models" were reinforced by the behavior of managers who consistently chastised and humiliated engineers who brought up unresolved problems. So, naturally they concealed their problems, reporting nothing, until they were close to a solution. During the Epsilon change process, Epsilon's top managers learned to

see how their own behavior was creating results they did not want and they learned how to behave differently and get better results -- both in terms of cost savings and in the satisfaction they all derived from their work. With less blaming, there was more trust, openness, and better results. In order for the engineers to learn new ways of behaving, though, their bosses first had to learn new ways of supervising.

In the last two paragraphs we summarized some key features of a learning organization, what such a workplace looks and feels like. In most of this article we shall focus on the change process: how to become more like a learning organization. It involves difficult changes for the leaders and for all members of the organization. We will present five successful examples of transformation that all used a learning-based approach to guiding their change process towards the ideal of the learning organization.

One of the first steps in the transformation is for members of the organization to begin to change how they think about organizations, for those mental images affect how people act at work and that is what needs to change. For well over a century mechanistic metaphors, images, and models have dominated most people's thinking about organizations of all kinds. Metaphorically, the learning based approach sees the process of managing organizational change as more like that of raising healthy plants or children, as opposed to the mechanistic metaphor which sees it as more like adding a turbocharger to the automobile that does not move fast enough or making some other change to a helpless machine on a workbench. Learning-based approaches to organizational change, however, see organizations as living systems with people in essential roles. People can think for themselves and often resist those who try to change them. We will never reach the goal of building a learning organization if we continue to use mechanistic ideas of change management.

FINDINGS

This article will examine five cases, all premier examples of the learning-based approach. All five cases were planned and supported by the former MIT Center for Organizational Learning. This is the Center started by Peter Senge and associates to develop a body of experience and knowledge in learning-based organizational change, along the lines indicated in his first book, *The Fifth Discipline*. From these cases we shall reach several main findings:

(1) there is a typical sequence of stages in the life of these learning-based change initiatives;

(2) the success of each case is due to the way its leaders brought together two elements to form the central goal of the initiative -- resolving the seemingly-contradictory demands of work and learning, of business results (in the short run) and process improvement (in the long run);

(3) participants had to develop new skills in learning, especially in discovering and testing their mental models, so that they could begin to modify them, when necessary;

(4) organizational change involves significant personal change.

These conclusions about some of the key factors involved in bringing about significant change in organizations are only possible because we can study these five cases, in which there was a clear strategy for guiding the change process and because each one was followed by clear improvements in business performance. We shall now briefly review that evidence on results for each of our cases, with a brief overview of each case. Three different corporations are represented here, with one of them contributing three cases, each in a completely separate area. All three are famous names, though I do not have approval to reveal their names here. From

"AutoCo" a leading global automobile maker, we have three cases: one is a vehicle assembly plant, one is the design and launch team for a new model of automobile, and the third is the division that manufactured a range of components for many different models. From one of their competitors, we have another assembly plant. The fifth case comes from the product development division of another manufacturer of large, expensive machines. It may be significant that all our cases come from the "old" (mechanical engineering) economy. While the role of micro-electronics has become very significant in automobiles, this industry has a definite "old model" management culture. This works to the advantage of this research in one important way. When we show how companies that were originally saddled with such old-model ways were still able to change to become new-model learning organizations, the force of the demonstration is all the stronger, than if we had shown this change using companies that were already half-way there.

THE FIVE CASES: BRIEF PROFILES AND IMPROVED RESULTS

Here are brief introductions to the five cases which will be examined in more depth in the main body of the article.

• **Delta Assembly Plant at AutoCo.**

This plant at a major North American auto producer was in danger of being closed because its recent quality ratings were the lowest of the three plants making a similar product. That was the impetus for the initiative which aimed to improve significantly the quality of vehicles made in this plant through a radical change in management style and methods, turning away from "command and control" through intimidation. Leaders of this initiative had been impressed by the results of the Epsilon project in another part of AutoCo. Delta achieved its

major goal: the quality of Delta's output increased by 25%, compared to 8% and 10% at the other two similar AutoCo assembly plants. Meanwhile, Delta also recorded improvements in some process areas, showing part of how they improved quality: there was a greater level of trust among managers and supervisors, and there were many fewer calls to HR concerning conflicts on the floor.

- **GenAutos Assembly Plant.**

This plant, owned by another of the big-three US global auto companies, is a similar story. Initially it was "over budget and had labor problems, low morale, so-so quality, poor safety". The new plant manager believed that a major cause was a tradition of dictatorial management. He and a dozen of his managers went through a five-day Organization Learning workshop sponsored by GenAuto and they brought back key learnings to the plant by presenting a shorter version for their own staff. Together they set "stretch" objectives in safety, quality, delivery, cost, morale (with measures). To reach these objectives they saw they had to "drive fear out of the organization" through open and honest communication. They reached out to the union, which became closely involved.

"By the end of first year of operation staff began to change. They began to speak their minds." Results were positive in all areas targeted. In SAFETY both severity and incident rates were more than halved, while Workers' Compensation went from \$6m. to \$1.3m. In QUALITY they surpassed two of the other three truck plants. In DELIVERY (units produced) they met the current year's target and exceeded the next year's target. In COST Improvements they met the target. In MORALE absence rates dropped from 6.6% to 3.9%, and grievances dropped from 1335 to 373 (during a contract year with an election for local union officers).

- **Epsilon New Model Design and Launch Program at AutoCo.**

This change initiative, the first conducted from the MIT Center using the principles outlined in Peter Senge's The Fifth Discipline, sought to improve the way that a new model automobile was designed and launched into production. This was not a “brink of survival” situation, but one where two veterans of previous new-design car projects had come to believe there were serious flaws in the usual way of managing such projects and aspired to make the necessary changes – without at first knowing what they would be. It would be a learning adventure for three years. In the first eight months the initiative was mainly concentrated in a core leadership group, then fanned out to a network of some 300 employees, out of a total of some 1,000 team members (mostly engineers) on assignment from their functional departments.

The results were remarkably successful: the launch was one week ahead of schedule (unheard of in this industry) and unusually trouble-free; the new model exceeded its product, cost and quality objectives and received favorable new owner ratings; its development and tooling costs were significantly under budget – out of the \$90m budgeted for late changes to parts Epsilon spent only \$25m. Those were the direct, measurable results of the improved learning patterns in the workplace that this initiative produced.

- **Mighty Motors.**

For several decades Mighty Motors was one of the leading manufacturers in its category (not one of the Detroit big three). In the 1980's, though, foreign competition almost destroyed them. Drastic action rescued the company. While thinking about what could help the company avoid any repetition of that trauma, the CEO encountered “The Fifth Discipline” and its author, and embraced the notion of “the learning organization”. While he remained committed over at least eight years, he did not personally direct any specific learning initiatives. Those were cultivated by several different groups at different times, starting with an effort to improve the

company's product development process. The initial locus of the learning initiative was in a newly-chartered Product Development Leadership Team. By contrast with the Components case, this company quietly supported the various later projects using organizational learning, with a strong aversion to publicity – lest it might seem to employees to be a “program” pushed by management, rather than an indigenous, voluntary activity, justified pragmatically. Hard data on results are not available for this case.

- **AutoCo Components Division.**

This division produced a significant portion of the components that went into AutoCo vehicles. There was concern that the Components Division could be closed or sold off because it had just lost \$50million in the prior year. The general manager of Components firmly believed that “organizational learning” could help him to turn around the business (employing some 8,000 persons) and appointed a “Learning Leader” to promote this initiative. “Learning teams” were recruited to work on key business problems. The numbers of teams expanded rapidly and the initiative fanned out to include suppliers and Components' overseas plants. From two “learning teams” in 1992, the number increased to 30 teams by 1996. Results: Components went from a \$50 million loss to a profit of \$150 million, though a major growth in the volume of business was responsible for some of the new profit. Still, the top executives of Components credited the initiative with being a major contributor to the turn-around. The new learning-based approach helped them to manage successfully such a huge expansion, including the opening of new overseas plants.

STAGES IN THE LIFE OF A LEARNING-BASED CHANGE INITIATIVE

So far in this article we have done two things: provided a sketch of the learning organization, and introduced five examples of the kind of improved results achieved by some companies which have made this change in this direction. Now we begin the core of our topic: finding some of the critical success factors involved in a successful, learning-based organizational change process.

- A learning-based change initiative typically goes through the same three major phases, centered around the pilot project as the pivot point.

1) Pre-pilot Phase

This is a time of deliberate and direct preparation for change. It runs from the time when the pioneers are discovering their own co-conspirators to the time when they are joined by more fellow-enthusiasts to form a core learning team to prepare for "prime time" when the pilot project will be launched. If this were a stage show, it would include everything up to dress rehearsal before out-of-town try-outs, as the show continues to evolve. The pre-pilot phase covers three sub-phases.

1.1 Initial (inner) commitment. This is the time when someone ("the initiator") becomes willing to take action to try to make change happen. There may be a magic moment of sudden illumination or a slow, imperceptible movement to this state of readiness. It may be brought on by reading an article, hearing a speaker, seeing what is happening in another part of the workplace. Either way, it may be unknown for a while to all except the initiator. An intent is formed, a spark (not yet a plan) a personal vision, a mental image.

1.2 Conspiracy and conception. This is when the initiator finds a like-minded or compatible partner or "co-conspirator". One person can act alone but the chances of success jump a lot higher when there are two. Two together can incubate the process in crucial ways:

they work together to develop their personal visions for change and a shared vision; they act as reflective partners to each other, giving feedback and coaching; they do research; they give each other precious moral support; often they seek sponsorship from a senior executive; and they seek support from consultants or colleagues who have some experience with managing change.

1.3 Commitment to action. Now they have at least a semi-official agreement to go ahead with the first project. They gather a few fellow-enthusiasts, early adopters, usually working as a "core learning team", preparing off-line, applying and testing their understanding of the ideas of the learning organization acquired through reading, instruction, or the observation of another project. They develop their vision and strategy, and how to secure resources (advice and guidance, as well as budget). Epsilon, as the first of all these initiatives, got its serious education and skills training from its MIT Center for O.L. consultants. Later initiatives usually sent their leaders to the "core competencies" course in Boston. On their return from the course, it was common practice for them to form a "core learning team" to start using and practicing the new methods, while planning for the next stage. This is what happened at Mighty Motors and AutoCo's Delta Assembly Plant, for example. After about 8 months, these teams each presented an all-day "Learning Lab" to some of those who reported to them (volunteers). Though the consultants played some part in most of these labs, a large part of the presentation was done by the colleagues and managers of the learners. This expressed an ownership of the new material and a new relationship between work and learning. It challenged the presenters to learn the material thoroughly and, above all, to internalize its lessons about a more thoughtful approach to problem solving and more open, respectful relations between managers and those who report to them.

2) Pilot Project

This is IT, the first concrete effort to achieve better results through "a better way". This is when the new ideas are actually put to work, not just in the core learning team but in a larger work group; with specific goals, officially approved, that address the priorities of the business unit or organization. This is the most visible stage so far. For example: at the AutoCo Delta Assembly Plant the Quality Meetings were chosen to be the focal area where the new methods were applied, with the goal of making significant improvements to quality results, and raising the plant's ranking relative to its peers. At Epsilon the senior management team was the main focus, with the larger goal of improving the entire design and launch process.

More staff are needed, so outreach, recruitment and training begins -- often through a "learning lab". Mistakes are made and a big effort is made to learn from them. Within the project thoughtful, on-going, candid assessments of progress are conducted by participants -- in the main core of the project and in various work groups, where these develop. These informal, internal assessments are a defining feature of the learning-based approach to change.

3) Post-pilot Phase

The results of the pilot experience are examined for their overall lessons. These lessons plus the readiness of some participants to volunteer as leaders of further projects influence how the post-pilot stage proceeds. This is the stage of outgrowths and additions. If the pilot is sufficiently successful, it expands, grows off-shoots, or the parent organization charters new projects to expand the scope of the changes. Assessment of the pilot experience may lead to developing new infra-structures to support the development of further pilot projects.

Even after the successful pilot of a learning initiative, there is no conventional "roll out" as a mandated program. That would fit the conventional model of change management but not the learning-based approach. In these five cases expansion came, not by push, but by

encouraging the interest of new volunteers to create new initiatives or to expand the pilot. Management may designate where they want new projects and seek volunteers, and volunteers may suggest new projects. Relative to the common practice in change management, the learning-based model is willing to sacrifice short-term control for long term sustainability, through building on employees' commitment, energy, and creativity.

In the Components case a series of "learning teams" was chartered by the Divisional Operating Committee, which contained the original leaders of the initiative and which itself served as the equivalent of a core learning team. The pilot project was the "Product Launch Success Team", with the goal of learning everything possible from the experience and mistakes of several recent product launches in order to improve the launch process. Based on the success of this team, another one, with its own assignment, was chartered by the Operating Committee during the first year. Based on the success of the first two, a total of seven were created in the second year, and twice as many in the following year.

The post-pilot stage may be considered as the readiness stage for a new generation of projects, led by new volunteers whose experience in the pilot project (as major players, affiliates, or observers) motivates them to be initiators of a new pilot project based on the same learning-based approach. Such second generation or "follow-on" projects sometimes shorten the "core learning team" stage. Their advantage is having seen with their own eyes: 1) it can be done, 2) this is how you do it, and 3) it works.

GETTING THE GOALS JUST RIGHT

A very important part of the "magic" of becoming an agile, high-performing learning organization comes from the way that leaders of the initiative formulate its goals. The basic formula can be briefly stated but this whole section will be needed to provide illustrations so that

it can be well understood. The formula states: the goals for a successful learning-based change initiative typically state the purpose of the initiative in some way that combines two essential elements: (1) addressing a critical business need, through (2) developing new work processes and capacity to collaborate more effectively. Both elements must be present and the relationship between them is crucial. In the vernacular of the workplace these are often called the "hard" stuff (1) and the "soft stuff" (2). The so-called hard stuff is easier to see and measure than the so-called soft stuff (people skills and practices), which is harder to see and harder for many people to manage.

Core Learning Team

All five of our cases started out their pilot phase with a "core learning team" and this was an important element in achieving the results we saw earlier. What made these teams different from most other work groups is that their purpose was to create new work processes that would enable them to achieve significantly better results (with hard measures) through the changes they made in how people worked together (the "soft stuff"). Their mission was not just to get better results but to create a new model for the business that could be replicated more widely. The issue of direct business pay-off was held off longer than usual because this was seen as an R and D project -- not in the usual sense of new hard technology, but in the sense of going into the poorly-understood territory of socio-technical work processes. The core learning team needed to learn some new theory and methods of organizational learning (OL) and to figure out how to apply them in the context of their own company.

In four out of five cases the main executive body of the unit (not the whole company) became the first locus or home of the initiative. At Mighty Motors members of the top executive group (of the whole company) educated themselves by reading and by some of its members

attending the core course. Sooner than the three AutoCo projects, the Mighty Motors executive group turned over the pilot stage of the initiative to a newly-formed, cross-functional Core Learning Team within the product development area, with the mandate to improve the company's product development process. At AutoCo's "Components" Division the Divisional Operating Committee stayed involved longer (over several years) and served initially as the Core Learning team for the initiative themselves. This is similar to what happened in two other cases. The DOC at Components hosted several presentations on OL to DOC members, sent many of them to the OL core course at MIT, and used OL approaches to develop its own shared vision. They also set up the first pilot project, named the "Product Launch Success Team". Meanwhile the DOC had also appointed a Learning Leader, who was responsible for running the pilot projects, for being a resource and coach on organizational learning to the whole Components Division, including the DOC itself. The Product Launch Success Team, on which many other "learning teams" in this company would be modeled, had a clearly business-critical assignment (to improve a bad product development and launch process) that required the application of improved learning methods. The DOC and the PLST both worked simultaneously, pursuing their work of learning, each taking a different approach to the challenge of integrating the two requirements (business application and learning integrity).

The DOC made much use of OL tools in the way it conducted all of its business, providing leadership to the entire division, and, in addition, for two years it conducted a separate, monthly dialogue session. These dialogues focussed on better understanding of serious issues through reflective conversation, in which participants made a serious effort to understand each others' thinking, without the defensiveness and posturing that characterizes most meetings. In order to keep this dialogue free from the many, pressing action items that usually crowd out more

fundamental thinking about important (but not urgent) matters, the DOC's firm rule was that no decision-making was allowed at the dialogue meetings. This may sound very "academic" but these hard-pressed business leaders were convinced that this approach to managing their business was effective in allowing them to turn around their profit results, while managing a major, world-wide expansion.

Pilot Projects

While the DOC at Components continued to work on learning the new OL approach and on developing their own shared vision for the DOC itself, they also chartered the Product Launch Success Team to improve the processes used in that area of the business. The PLST included two managers of recent, troubled launches and several managers who would soon be launching new products. Sitting in their circle, this "learning team" (as it was called) rigorously and openly analysed the many mistakes disclosed by the managers of the recent launches, using various learning tools including systems thinking to get beyond superficial fixes, and began making changes in the launch processes. In other words, this group did the important work of making sure that the company learned from experience that lay within the company but which previously would not have been used. That organizational learning earned the company serious money on subsequent launches – something that would not have happened before this learning initiative. This "learning team" was quite literally "taking care of business" and it did so through learning better. In this context "learning" meant, firstly, that the managers with up-coming launches learned from the openly-told mistakes of their colleagues, so that the next launches were more successful (earning more profits). Secondly, this learning involved investigating the systemic problems in the company's launch processes (affecting all future launches), designing improvements, and taking action to change practices that had caused those mistakes in the past.

Note that this learning team was also empowered to take action on its learning – it was not just a study group or advisory committee -- hence its learning could become the organization's.

The results of these improvements became obvious within months, so it was not possible for this team to be (convincingly) accused of “wasting time in learning and soft stuff” instead of “working on the business”, an accusation that sometimes follows OL initiatives in other situations. This way of integrating the two essential elements (business and learning) may not apply universally but I believe it to be widely applicable. It should not be hard to explain to the average worker or manager, since it looks superficially much like the familiar CQI or TQM working group – but with two indispensable additions. One is that the PLST had the power to make changes – not just suggestions, backed up by the fact that it had the attention and the respect of the senior executive group; the other addition is that this group had some training and coaching in the basic learning tools of dialogue, involving (amongst other things) open conversation, with mutual respect among members, willingness to probe below the surface into areas of discomfort to find answers to serious problems.

These issues regarding how goals are set and how work-learning teams are chartered, integrating the dual claims of process and business performance, link closely to the issues of finding the right location for the initiative, which we shall consider in the next section.

Goals of the OL initiative may either focus primarily on specific results that need to be improved and secondly on the chosen means, i.e. process changes – or the reverse. At an early stage a “core learning team” may be focussed on mastering new skills and principles of process before knowing exactly where they will be applied. How process changes and “bottom line” results are both integrated into a set of change goals seems to be a crucial factor.

Finding the Right Problem

Increased trust and respect in a work group enable colleagues to talk more effectively about difficult subjects and hence enable better problem solving to occur. This organizational learning (learning on behalf of one's organization) is the key to improvement, innovation, and greater competitiveness. Problem solving is a major part of learning. The toughest part of problem solving often is finding the right problem to solve in the first place. And the toughest part of problem finding is that almost every organization has its undiscussable subject, the fundamental ailment (which may be curable) that is relentlessly killing the host because members dare not talk about it together, openly and make changes. They only mention it one-to-one in oblique references in private hallway whispers ("isn't it a shame?"). The undiscussable matter may be the sacred cow of a powerful player whose reactions are feared. The net result is just as if members were tacitly colluding to hide this important problem.

It is a working hypothesis in the learning organization that major breakthroughs in organizational performance can occur when a new approach is finally used to enable such killer topics to be addressed. One example of this was described earlier: it was the existence of a powerful, unspoken norm in the Epsilon new car design project that prevented design engineers from revealing when they were having difficulties with a component that would cause major extra costs when it was eventually revealed. In the old culture, before Epsilon became more of a learning organization, the engineers feared both the punitive reaction of their bosses and the loss of respect from their peers if they showed themselves to be struggling. If it was hard to speak up and say, "I'm having trouble with this", it was also very hard to say "this whole group has a problem with this harmful norm". Not only was it hard to see the norm, it was hard to speak about it -- that is, until the group began to build up more trust both in each other and in the belief

that managers were becoming more accepting of new ideas, especially the idea that no-one knows all the answers all the time.

The change goals may focus primarily on the business results needed and secondarily on the changed methods or process – or the reverse. In some cases the goals combine both elements so intimately that it is impossible to say that one or the other is dominant. Over time, the leadership group develops its thinking and the relationship between the two elements may change. For example, after starting out feeling that quality must be improved (through "better learning") several groups came to see that better learning would require "better relationships" in the workplace. Hypothesis: it makes a great difference exactly how the initial goals are defined and how they are later modified.

The core learning team plays the key role in all of this. The team must focus on learning and applying new skills for communication and learning; and on trying to understand new concepts of process, perhaps before knowing exactly where and how they will be applied. Determining where and how to apply them is also an essential part of their function. With much trial and error, and constant assessment of its efforts, the team develops a strategy for change, especially the way to combine the two crucial elements of the initiative's goals. Dialogue is an important way for the core learning team to accomplish its essential work. The core learning team may also help its members to develop their personal visions and all of them together to develop their shared vision for the initiative. It can be very helpful for this team to have a facilitator, but the heavy lifting of organizational change must be done by line managers and workers.

As we have stated, one central issue in understanding OL and the success or failure of OL initiatives is to understand the different ways that initiatives may combine two vital elements: (1)

meeting a critical business need, through (2) developing new processes and capacity (which usually will have further application). There is typically a special kind of tension between the two elements. The issue is not so much to find a balance, I believe, as it is to find a good way to integrate the two parts. Both are needed. When correctly mated they strengthen each other mightily but when wrongly combined they fail.

CHOOSING A “HOME” FOR THE PILOT AND MOVING IT THROUGH THE ORGANIZATION

After considering how to get the goals of the change initiative right, we turn to the decision about where the pilot project should be located. For this part of the discussion we shall lean heavily on some metaphors, risky though this method can be. The new initiative must “reside” somewhere. The “home” metaphor implies a starting place where it will have shelter and facilities from which to learn and to build up its capabilities. This home may include caregivers or guardians, who accept responsibility for the new “child”. The natural parents (initiators) may do this themselves, as we have already noted in cases where the Operating Committee (containing the initiators) became the first home, e.g. the three AutoCo initiatives, or they may turn it over to a “foster home” (as in the Mighty Motors case). In the AutoCo Components case, the Divisional Operating Committee created a full-time position of “Learning Leader”, while continuing to host the initiative within their own Committee. Once the initial placement is made, with necessary supports provided, the initiative may mature and the locus that was right for the new arrival may not be right when it is older.

The importance of placing the new initiative in the right kind of group to start out can be seen from comparing two initiatives. The Mighty Motors initiative began not long after the one at AutoCo Epsilon, which was the first of the MIT projects. The Mighty Motors initiators

compared their own success against that of the AutoCo project and for the first year or so they felt that they had made little progress. After about a year, after the Mighty Motors Core Learning Team had presented its in-house Learning Lab, the team collapsed and was inactive for over six months – until a new leader was hired by the company, who redefined the goal of the team. The issues of goals and locus are deeply intertwined here. One reason for the difficulty at Mighty Motors might be where they placed the new initiative, a matter of locus. The AutoCo Epsilon initiative was located in the top management team of the Epsilon program, as a task-focused group responsible for concrete deliverables (designs, components, and launch arrangements for the new Epsilon model). However, the Mighty Motors initiative was started by a group of senior executives then turned over to a newly-created Product Development Learning Team, which was asked to improve the whole product development process for the company. This was not a task group with concrete deliverables; and it had no line authority. There may be a lesson here.

Is there a problem per se in giving a new initiative its first home in a “Learning Team”? Not necessarily; and especially not when the initial learning team is the Executive Committee which contains the initial enthusiasts for the initiative, as happened at AutoCo Components and AutoCo Delta. A little later Delta’s Operating Committee set up training for its members’ direct reports and set up a “practice field” for its Quality Team (whose membership significantly overlapped with DOC), for them to work on learning how to improve the work of the Quality Team. The “work of the Quality Team” was to reduce the rate of defects in the vehicles they produced and in fact they improved their quality statistics twice as much as did their two peer plants in the same period.

At Components, as we have seen, the Operating Committee set up a second learning team (in addition to itself), i.e. its first “second-generation” learning team, with an assigned mission. It was “second-generation” in the sense that the initial team (the DOC) designed and chartered the second team. Later second-generation teams were chartered by the DOC and some of these teams spawned their own off-spring as “third-generation” teams.

When we consider the implications of locating an initiative in one type of group rather than another, we cannot completely separate location from the goals of the different groups. As foster home choices, we need to make many comparisons: peripheral with central locations; specially sheltered locations with regular, operational groups; newly-formed groups with established ones; established, well-functioning groups with dysfunctional ones; placing a specific, task-oriented initiative in a newly-formed group as opposed to giving the task to an experienced “learning team”. These comparisons cannot be tested in this small sample, of course. We shall examine just one comparison within our five cases, as follows.

“Improve the product development process across this business.” This was the mission of the Product Launch Success Team (PLST), the second generation learning team at AutoCo Components; it was very similar to that of the Core Learning Team at Mighty Motors but the way each one went to work was quite different. The Components Team went straight to work by enrolling managers who had already experienced recent launches, their role being to describe their lessons learned (including plenty of mistakes), and members who were soon to be managing a launch, their role being to ask tough questions. Although there was no concrete deliverable, their task was relatively tangible and its bottom-line value was obvious. That approach was highly successful in that setting. The PLST at AutoCo Components became the prototype for another team in the next four months, another five teams in the next year, and

another thirteen in the year following that. The rate of expansion then slowed down. Whereas PLST was a new group that went straight to work on a concrete task (in a non-traditional, learning-oriented way), the Core Learning Team at Mighty Motors had a year of history and struggle together. Whereas the Team at Mighty Motors started from some fundamentals in learning about OL (learning first, application next), the PLST at Components jumped right into the assignment, learning their new competencies along the way, with coaching and modeling from their Learning Leader.

At Components there was a significant division of work between the Operating Committee, which addressed the fundamentals of organizational learning and company mission, and PLST, their first Learning Team, which had the first directly applied business assignment. Many variables are tangled together in this comparison. One final thought or hypothesis will be offered from this analysis: sometimes, when an initiative gets stuck, it may help to move it to a different locus in order to emphasize the need for a change of focus.

METHODS

In our discussion of goals we saw the importance of integrating (1) attention to learning and process improvement with (2) attention to work demands and business needs. In our discussion of "choosing a home" we saw the importance of locating the initiative in a suitable place. Now, from the perspective of methods we shall now see another facet of what is required for a successful change initiative.

Reflection and Dialogue

Any learning-based change initiative involves changing the way people do their work together, their working methods. One common denominator across all the varied methods that

are favored by OL initiators is the use of more reflection. If learning and continuous improvement is to occur, attention must be paid to reflection in the action-reflection cycle that underlies all work – that is the "learning-based" approach. We must assess our results, the processes we used to achieve them, and reflect upon the thinking that went into them. This is what the change leaders in these cases were taught by their MIT mentors. Reflection is greatly underused in the typical workplace. Short periods of reflection can be inserted into longer meetings. A "dialogue" usually refers to a more extended period, usually an entire meeting dedicated to reflective conversation.

From the early days of the initiative at AutoCo Components Division the Operating Committee established a regular, monthly two-hour dialogue which ran for at least two years. If we had the means to measure the total time spent in dialogue in a given workplace, that might be a good assessment of the intensity of organizational learning found there.

Reflection, practiced here and there, and dialogue, more formally scheduled, are different ways of inserting more reflection into the workplace, into the flow of actions and unreflective adjustments. This same organization (AutoCo Components) also shows how groups can start with a fairly formal, scheduled dialogue then, as members became more comfortable with the dialogue method, some groups became able to shift informally back and forth between dialogue and "ordinary business" within the same meeting. Whether the switch in manner of conversation comes about through this kind of informal virtuosity or through a more formal move by the group leader calling for a period of reflection, the point is that these groups demonstrate a heightened level of skill in the way they conduct their thinking together at work.

After an OL initiative has been active for a certain amount of time it is sometimes observable that dialogue sessions or reflective interludes are regularly occurring in a certain

group. This tells us that something is changing in the methods of doing work here. This is what happened at each of these five cases. This is a significant change in the way people function at work, in how they see themselves, their colleagues, and their work. In these cases it led to some marked improvements in work performance and bottom line business results: for example, the record-setting launch of the new Epsilon model ahead of schedule, the Delta Assembly plant which raised its quality ratings more than twice as much as its two sister plants, and AutoCo Components which went from a \$50million loss to a profit of \$150 (while managing a huge expansion).

Practice Fields

An important method of learning is the “practice field”, where a work team is helped by a coach or consultant to learn and practice more effective skills in team learning and collaboration, directly applied to the priorities of the team and the business. The Delta plant and the PLST at Components both had internal coaches and use of the practice field method was woven into their working schedule. The Delta Quality Team renamed its meeting room as “The Practice Field”. Along with the change of name they adopted a number of new learning tools, aiming to make this body more of a learning organization. Intact working teams may go off-site for a practice field session, especially when they are new to this approach. The “practice field” approach utilizes a coaching and practice model with an intact working group, working on actual, current problems, instead of the traditional classroom, “training” model. Both the practice field and the importance of reflection-dialogue show how the boundaries and methods of “work” are redefined in the era of the learning organization.

Systemic Improvement

Thanks to the quality movement, workplaces have become more accustomed to time-outs from operational routine, even stopping production, to focus on finding and fixing problems in the systems and work processes which are producing defects or inefficiencies. Many OL initiatives may be seen as following in that tradition, probing more deeply into the hidden parts of the system to find scope for improvement, not just in the machinery (technology) but also in the socio-technical systems, the ways that human and technical factors interrelate, including the (deeply hidden) mental models of the participants, which control their behavior. To find those opportunities for improvement and to take creative advantage of them requires the use of reflection, which surfaces and questions those mental models. Then it may be possible to change them.

This is learning-as-part-of-working, learning-as-part-of-of-attending-to-business. The Quality Team at the Delta Assembly Plant and the Product Launch Success Team (PLST) at Components are two examples. Both went far beyond the standard quality improvement group. In both cases they provided coaching and training in OL skills, and in both cases the “work” of the team was precisely to learn about the flaws in the system (for Delta it was the production system and for Components the product launch system) and to make improvements based on their systemic understanding. Dialogue and reflection were key parts of their working method. PLST was called a “learning team”, as were the numerous other working-learning teams formed at Components (after three years there were thirty of them). The Product Launch Success Team (PLST) kept up a swift cycle of learning and implementing its learnings, with results being seen in just months. Their method ensured that (in that case) no gap could be perceived between their learning and their business results, no gap that would allow skeptics to claim that this learning was academic, unproductive, or frivolous -- though it was systemic. It could happen, of course,

in other cases that were not managed as well, that a learning team did lose focus on the business results and so exposed itself to criticism with good cause. That is a constant danger. And so is the opposite extreme (more common) that work teams stay fixed on usual activities and weak symptomatic fixes, without reflection or systemic improvement.

CONCLUSION

We have studied five successful examples of a learning-based approach to organizational change (becoming a learning organization) in order to identify some key success factors. All five change initiatives, in major US manufacturing corporations, were guided and supported through the former MIT Center for Organizational Learning (now the Society for Organizational Learning). All provide compelling evidence of improved business results following the change. This article has examined several features of the "learning based" approach to change management that made these initiatives successful.

- The goals for a successful learning-based change initiative are usually two-fold: they focus on improvement in specific, short-term business results through making major improvements in the work processes and inter-personal relationships at the workplace. Because of these goals, "work" includes certain kinds of "learning".

- In most cases a key role in formulating these dual-focus goals, and in negotiating the strategy is played by a "core learning team", a reflective leadership group of volunteers who initiate the change process.

- This learning-based change process depends upon change bubbling up from the core of the organization, rather than on a program cascading down from the top. Although the top executives of Epsilon, Delta, and Components were the change leaders in their programs or units, it was their initiative. They were volunteers, not under orders to do this; and in presenting

it to their followers, they sought volunteers who wanted to become engaged in the initiative. The emphasis was on "growing" support, not on "driving" a program forward.

The learning-based approach, represented by these five cases, introduces into the workplace ways of thinking and behaving that are significantly different from what has been ingrained by over a hundred years of the industrial tradition. The new economy demands a new kind of organization, based on new ways of thinking. For an established company to make such a change is a huge accomplishment -- even in just one segment of the whole. These five initiatives not only succeeded in improving their business results -- in several cases saving the life of the business; they also succeeded in improving the fundamentals of their work processes, including the way people worked with other people. They succeeded in pulling themselves out of the old industrial culture, using a learning-based approach to change.

A LEARNING-BASED APPROACH TO
ORGANIZATIONAL CHANGE:
FIVE CASE STUDIES OF GUIDED CHANGE INITIATIVES

BARRY SUGARMAN

Lesley College School of Management
and
Society for Organizational Learning

77 Oakdale Road, Newton, MA, 02459

Phone: 617 332 0642;

E-mail: sugarman@mail.lesley.edu

Dr. Barry Sugarman is Professor of Management at Lesley College and a former Research Associate at the MIT Center for Organizational Learning.

Selected Bibliography

The book that made the learning organization an indispensable, big idea was Peter M. Senge,

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One book that reflects two of those, a book that first put the learning organization on the

intellectual map, is Chris Argyris and Donald A. Schon, Organizational Learning II, Reading,

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The book which brings us up to date with the thinking and practice of some of the practitioner-

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A distinguished slim volume by one who has greatly influenced this group, as well as the entire

fields of organizational culture, organizational learning, and change is Edgar H. Schein, The

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Dialogue is a key aspect of the learning organization and a more subtle concept than many

readers realize. "The intention of dialogue is to reach new understanding and, in doing so, to

form a totally new basis from which to think and act. In dialogue, one not only solves problems,

one dissolves them. We do not merely try to reach agreement, we try to create a context from

which many new agreements might come." p. 19 See: William Isaacs, Dialogue and the Art of

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When attempts are made to introduce innovative ways of running a business, after pilot testing them in a secluded part of the organization, often they are ignored, undermined, or co-opted (converted back to the old way). This phenomenon is common enough to have a name of its own: it is known as "the cultural immune system" of the organization asserting itself. According to the learning-based approach to change, we can understand this immune response if we consider that change may occur on different levels: change of behavior and change of daily operations is one level; but change of those peoples' underlying assumptions and mental models is another level of change, deeper and harder to make. The surface changes are hard enough to make but they can sometimes be made through conventional approaches. But they are very hard to sustain. Not only do they tend to crumble when exported to other parts of the organization, but they also fizzle out when there is any slackening in the push from the top to maintain them. Sustainability is so hard because the new surface behavior changes are in conflict with the old assumptions and values that still lie deep and powerful in peoples' minds. (For example, the company wants its design engineers to spend more time talking to customers but for twenty years they have identified themselves as technology wizards and been rewarded on that basis. (Nevis et al., Senge et al.). These deeply embedded ways of thinking cause people to resist the changes, especially when the initial investment in pushing the change effort eases off.

So these five cases should provide us prime examples of uncompromised learning-based change initiatives. Two other cases that met these requirements were rejected because the change in their business results could not easily be shown and one of those involved the whole organization, whereas the five all occur within substantial divisions but not the whole organization.

And so they do; they also reflect some interesting, within-sample differences in strategy.

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