Implementing The Change For Efficient Working

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Abstract:
Implementation of change must lead to higher levels of efficiency and effectiveness of organization. As such, empowerment is a crucial component in employee leadership development, a process that can’t be left just to happen by chance. It may require a change in the organization’s chair thinking on how to manage the working of the department. It may also require a change in how workers and chairs perceive and practice relationships with each other within their department. After all, building an effective and successful organization will only happen through building good working environment and schedule. The chair’s have two traditional roles—leadership and management will analyze the main components of the framework for outlining and implementing the required changes to achieve the goals.

Keywords: NEP 2020, Educational change, Engineering Leaders

I. Introduction
Around 1960 and on to today, the environment is customer centric. To achieve this new paradigm, Engineering has to be more flexible and adaptable to the demands and expectations of stakeholders. Hence nowadays more emphasis is on key components of effective engineering leaders, who have the ability to motivate and equip people by being able to communicate clearly, conflict management techniques, develop creativity and technical tasks. Engineering leaders can be called upon to foresee developing threats to our environment and sustainability, and they will need to bring their messages effectively to management leaders. Modern organizations, if they are to survive for the long term then they are to increasingly confronted by an environment that demands adaptation and change (Burke, 2002) [1]. If leaders are to increase their chances for influencing successful change within their organization, it is critical to understand the internal and external forces that have a tendency to impair or impede change efforts. This paper shall examine how internal formal structures, which dramatically reflect societal expectations of the institutional environment instead of the actual demands of work activities, and institutional isomorphism, which finds organizations (and the external actors an organization must interface with) increasingly pushed towards homogenization (DiMaggio & Powell, 1983) [2]. When an organization’s leadership attempts to implement change,
these forces should be given careful consideration regarding their impact upon the change scale, scope, and sequencing of activities. They will have to understand and cross multi-disciplinary boundaries, because solving the most difficult problems will involve multiple, interacting and conflicting causes and effects. Language skills, cultural competency, and other soft skills will be brought into a comprehensive systems analysis of their work. Engineering Leadership methods are useful for mid-level managers due to their responsibility between Top managers (Strategy decision-making needs leadership aspects) and Operational managers (Technical proportion is main emphasize). In the current information technology century to run an organization needs both science and art. The former is engineering and later is leadership. Much of frustration and dissatisfaction in industry is directly related to the lack of these components attachment. The mission is to prepare the next generation of technology leaders, although engineering leadership is known as almost a new paradigm, the latest field called Engineering Leadership Network (ELN) is appeared to face information century issues. ELN recognizes that in addition to the technical expertise, true technological leadership requires several key abilities to such as critical thinking, emotional intelligence, organize people from multiple disciplines and cultures and the spirit for innovation and entrepreneurship. The emphasis in engineering leadership goes to three fields: System engineering concept, Economic consideration and organizational skills.

This paper concentrates on Engineering Leadership for higher education. Section II explains the existing working system of organizations with its hierarchical structure. It also includes the defined Engineering Leadership. Section III concentrates on flaws of working system and its effects. Section IV works on what the actions could be taken to improve working by implementing discussed changes. Section V concludes the work with its possible effects.

II. Existing working system of organizations

The formal structure of the existing organization, and the basic schema for activities that such structures provide is by examining the forces that contribute to both its durability and ubiquity. Adam Smith, in Wealth of Nations (1776), states the case for the agents of falling prices, rising demand, and increased worker productivity leading to greater aggregate wealth in those nations capable of engaging in the division of labor in the various industries within their borders. [3] in 1946 Max Weber, a German sociologist/political economist, with his observations regarding how Western societies had grown in rationality, leading to his coining the term bureaucracy to describe such an organizational condition. It is to these organizational theorists we can trace the initial codification and description of the elements deemed necessary for a modern, “rational” organization. Given the continuity present in the literature describing, elaborating, and even encouraging organization’s formation. It can be surmised that organizations are quite durable. Another dimension upon which to consider modern organizations is their ubiquitous nature as observed in society. There are many powerful forces at work which reinforce and legitimate the organization as an institutionalized social structure. The top - down traditional hierarchical structure does not act properly any longer. Managing change does not mean only controlling it, rather understanding it, adapting to it where necessary and guiding it when possible (Carter McNamara, 1997) [4]. The history of engineering
leadership backs to Cyrus, The Great, Persian king, who combined managerial characteristics with army dexterities to lead the significant kingdom Persia [5]. Three main issues mentioned by Cyrus:

1- Goal setting
2- Strategy decision and determine suitable path to achieve
3- Distribute the results suitably

Engineering Leadership is defined by Cyrus as the technical leadership of the innovative conception, design and implementation of new products / processes / projects/ systems supported by invention of enabling technologies to meet the needs of customer satisfaction as well as the society. It is also defined as Process of envisioning, designing, developing and supporting new products and services to set of requirements, within budget and to a schedule with acceptable levels of risk to support the strategic objectives of an organization. (Dr. Wade H. Shaw, 2003) [6] The first direction for research should attempt to more completely account for prior organizational actions and their impact upon the current options available to leadership. Consideration should be given to those actions, while likely undertaken with good intentions, that may now adversely affect the ability of leadership to implement change. Such actions may include the efforts of the firm to curry favor with both internal (which may include unions and employee interest groups) and external (including socially-conscious or similarly legitimated groups mentioned earlier) constituencies. Such constituencies, over an extended period of time (either with certain individual firms or firms within certain industries), may come to expect certain behaviors or become “conditioned” to receive certain rewards that benefit their members or those individuals they claim to represent. [11] When these rewards are contested, redirected, reduced, or eliminated by the firm, the constituency that has come to expect these will react, often by making statements that call the firm, and the legitimacy it receives from the impacted constituency, into question. For example, for many years, labor unions encountered little resistance in negotiating ever-generous compensation packages for their members. When companies began bargaining more aggressively with the unions (often out of economic necessity), unions reacted in a myriad of ways, including threatening to strike. Despite shrinking percentage of union-represented employees in the private sector, organizations in certain industries have not successfully closed the compensation gap that exists between such employees and their non-union counterparts. Formal organizational hierarchy against the described societal backdrop and within this organizational environment we may begin to consider the internal workings and machinations of the modern organization. Just as the modern organization is very durable and ubiquitous in society, within it we find a structuring perhaps equally common place – a rational, formal, vertically ordered hierarchy. Organizational hierarchy was initially implemented by Fayol (1949) with his administrative theory.[7] Today nearly every organization irrespective of its size remains hierarchical. Subordinates continue to report to superiors, department heads report to division managers, who report to vice presidents, and so on. It has even been suggested that hierarchy is intrinsic to our natures, and despite the organizational problems they foster (authoritarianism and its destructive offspring, including distrust, dishonesty, territoriality, and fear), hierarchy remains the basic structure of most, if not all, large human organizations in existence (Leavitt, 2003). [8] Despite proclamations from academics, consultants, and management “gurus”
alike, that hierarchical organizations will meet their imminent demise. For today, it can be stated that formal organizational hierarchies are the norms in society.

III. Flaws and its Impact on existing Organizational structure
Four common mistakes leaders keep on making. In any organization leaders have been marked by a dizzying rate of economic, social, and environmental change. In response, senior managers and scholars have produced a flood of research, articles, books, and consulting programs offering countless methods for adapting to new circumstances. Strangely, just about all those efforts overlook four basic behavior traps that thwart organizational change, particularly its elusive human dimension. Deeply rooted in the managerial psyche, the traps are extremely difficult to recognize because they are almost and always mechanisms for avoiding anxiety. They serve to protect egos and prevent discomfort. In advising companies on organizational and cultural change. It can be easily seen hundreds of clients fall into these traps again and again—but they’ve also found some ways to mitigate their impact.

Flaw 1: Failing to Set Proper Expectations
Everyone has seen senior managers announce major directional changes or new goals without spelling out credible plans for achieving them or specifying who’s accountable: for instance, “We are going to reduce the use of cash by 40% next year” or “We are going to cut train accidents significantly” or “We are going to shift focus from midmarket customers to the upper end during the next two years.” Such efforts go nowhere. More than 35 years ago, in “Demand Better Results—and get them” (HBR November–December 1974). So can it be asserted that setting expectations that actually evoke maximum performance is executive’s single weakest skill. Nothing has changed. In almost all the organizations it has been observed, managers commit several transgressions when making demands of their people. These are seven deadly sins of setting demands:
1. Establish too many goals.
2. Do not require or have any plan of how and when goals are to be achieved.
3. Failing to push for significant improvement, for fear that people are already overwhelmed.
4. Do not assign clearly one-person accountability for each key goal.
5. Signal an unspoken “if you possibly can” at the end of a statement of expectation.
6. Accept reverse assignments (“Sure, boss, I can get it done if you will see to it that...”).
7. State goals in ways that may not be definable or measurable.
A lot of the time, the failure to define requirements comes down to anxiety. Being clear requires considerable thought and is much more difficult than issuing general statements like “We need to speed up payments, so get off your...”. Managers may worry that if they set specific targets their people can’t achieve, they too will look like failures. They may fear being viewed as unreasonable ogres by those with whom they work and play golf. Or they may secretly dread some sort of subtle rebellion, where employees appear to comply but undermine initiatives through inattention, focus on competing projects, lapsed communication, or the like.
Flaw 2: Excusing Subordinates from the Pursuit of Overall Goals

Every operating or staff manager is naturally preoccupied with the performance of her own unit. People with such singular focus tend to “delegate” responsibility for organization-wide performance upward to already overloaded senior managers, who often don’t push back. For instance, the CEO of a large IT-based company had determined that demographic and technological trends would gradually render many of the firm’s business lines obsolete. When he tried to draft the smartest people in several units to help him develop new strategies, however, their bosses objected. They claimed they understood the dangers of obsolescence but protested, “We have critical problems today that we need these people to deal with.” The CEO backed off in the face of this strong and seemingly valid resistance. Another illustration: The largest division of a global telecommunications-manufacturing company suffered competitive disadvantage due to its slow new-product development. The head of product development worked with each of her units to pick up the pace. She asked for and got faster preparation of drawings, faster tool design and development, faster lab and market testing, and faster manufacturing gear-up—but she never asked any of her people to take responsibility for improvements beyond their own functions. As a result, she was the only one who felt personally accountable for the overall results. Though each unit reported significant gains in its own performance, the lack of joint focus on the big picture meant they didn’t add up too much improvement. Tunnel vision on the part of unit heads is understandable. They’re invested in their own work, and reward systems are typically geared to individual roles and results. But why do senior managers just accept this as the way things are—especially since it forces them to actively coordinate projects their people could be managing independently.

Flaw 3: Colluding with Staff Experts and Consultants

The work performed by internal staff experts and external consultants has multiplied by 20 to 40 times in the past five decades, and the scope of their activity has greatly expanded. But the vast majority of them still get senior management to go along with the same old flawed contract: They agree to deliver their “product” (such as a new system, organization structure, marketing plan, training program, or corporate strategy)—and even to implement it—but they don’t assume responsibility for outcomes. They imply that performance will improve but almost never include measurable gains as part of the deal. The reason is simple: They are confident they can provide their own expertise, but they are not so sure about working with the client to produce results, so they limit their commitment. It is obvious why the world’s experts feel protected by such contracts. But why do clients collude with them? Observed reason for this specifying sharp is measurable goals for a project puts the reputation of the senior executive client on the line. She must play a much more active role in its design and implementation. It’s safer psychologically to place the initiative in a staff expert’s hands or sign a fat check to a consultant and hope for the best. If the project succeeds—or if things seem to be going better for whatever reason—the client executive is a hero. If it fails, she can say, “Even X couldn’t solve this one!”

Flaw 4: Waiting While Associates Prepare, Prepare, Prepare
When senior managers challenge people to improve sales, accelerate turnaround, reduce costs, develop products faster, or make other needed improvements, the usual response is “Yes, but first we have to…” Finish the sentence: Train our people. Study the market. Replace a key player who retired. Launch the new system. Set up focus groups with some customers. Bring in Six Sigma. Make our culture more change oriented. And so forth. Modern managerial culture worldwide is imbued with the notion that the first step in improving performance is finding new programs to produce the gains. Seldom does a leader naturally shoot for improvement within existing systems and structures. That’s because most managers want to believe they are already doing the best they can with the available resources. To safeguard their egos, they conclude that they can’t achieve better results without adding something new. They’re inclined to make announcements like “Once we get the new inventory system in, we ought to be able to get our inventory turns way up”—providing the illusion that the issue is being handled.

IV Overcoming the Traps/flaws

First step is to make out the right time for changes, where changes are required and then accepted in time, irrespective of it is Revolutionary Change or Evolutionary Change. A change is considered evolutionary in nature, if it does not affect or influence the organization as a whole (for example, changing the commission schedule for sales people, as it will likely have a negligible impact on others outside of the position) or if the fundamental structure of an organization remains intact (changing the reporting structure for a specific job function, since those falling outside of such a local structural change will be negligibly impacted). Additionally, evolutionary changes, and their corresponding efficacy, will tend to be dependent upon organization-specific attributes such as how tightly coupled the various organizational interdependencies, including hierarchically sanctioned, formally defined roles and relationships, are. The “looser” the couplings of the interdependencies, the less efficacious an evolutionary organizational change is likely to be Revolutionary change. This domain of change is much less common than evolutionary. It is likely to encounter much greater resistance both within and external to the organization, and is much less likely to be successful.[9]

This may take the form of new technologies that make old ones either obsolete or significantly less efficient (such as moving from typewriters to computers, from carburetors to fuel injectors, or from vacuum tubes to transistors to integrated circuits, for example), governmental actions that remove barriers or restrictions (such as the deregulation of airline, energy, and banking industries, the removal of tariffs and other forms of trade protection, or the enactment of NAFTA, CAFTA, and FTAA), or globalization (significant reduction in the total cost to manufacture certain items, the introduction of foreign engineered and manufactured goods into an organization’s primary markets, etc.). Revolutionary change may be distinguished from evolutionary along the dimensions of deep structure (Gersick, 1991) [10] and survival threats which take the form of restrictions to either key resources (impacting supply) or customers (impacting demand). Deep structure may be regarded as the underlying culture of an organization. It lies in its design for how decisions are made, the accountability of organizational actors, the control and distribution of power, and the manner in
which an organization relates to its environment.[11] Organization must have clear idea about capabilities of Engineering Leaders:
The engineering leaders' potential to put up with issues running in the organization is divided into three group which is followed by some details each;

1. **The attitudes of leadership:** Core personal values and character. Few of them are:
   - Initiatives: It’s basically ability and willingness to take risks. Decision making in the face of uncertainty.
   - Responsibility, Urgency and will to deliver: commitment to the absolute responsibility to find best alternative due to presence of obstacles or constraints.

2. **Public Relations:** Developing key relationships and networks.
   - Inquiring and dialoguing: create constructive dialog.
   - Negotiation, compromise and conflict solution: find mutually acceptable solutions.
   - Advocacy, Diverse connections and grouping.
   - Interpersonal skills: mention both individually and organization needs and objectives.
   - Structured communications: ability to create a structure and strategy for formal communications.

3. **Making sense of context:** Make a mental map of the complex environment.
   - Awareness of the societal and natural context
   - Awareness of the needs of the customer or beneficiaries
   - Enterprise awareness: understanding the goals and culture, shared beliefs and strategies.
   - New technology appreciation
   - Systematic thinking: thinking holistically to focus on critical features.

4. **Visionary:** Future awareness.
   - Creative thinking
   - Defining various solutions
   - Technical knowledge and critical reasoning

Many theorists’ emphasis on Economic side of leadership mentions only three skills including managing people, managing resources and showing technical competence, which is actually not true.

**Effective Engineer Leaders:**
An effective engineering leader categorizes the elements of competency into three main classes:

- Knowledge base emphasis on science and management fundamentals.
- Skillful formulation of engineering ability, Problem identification, cultural understanding, environment and global responsibilities.
- Professional leadership attributes including effective communication, individual welfare consideration, intelligence inspiration and ability to function in multi disciplinary and multi cultural teamwork.

V Conclusion:

Leaders should complement their human related skills with engineering principles. Engineering Leaders qualities can be developed and will be continuously refined by more learning, experience and desire. There are four valuable parameters which is stressed by an effective engineer leader: Needs, Passions, Values and Talents & Skills. As shown in fig. 1, the shared proportion by the mentioned factors gives the "Sweet Spot", the effective engineer leader’s mission.

![Fig. 1](image)

To mention a successful engineering leader, first it is important to understand that employees do not face any challenge in the pathway for progress of the company. Friendly leadership principles among workers needs to be spread over. Effective workforce is known to be the most productive assets in any type of industry. Change is not easy for everyone. Managing change is difficult and requires much effort on the part of a passionate leader who can both offer support and encouragement in a changing environment. If you are the type of leader that really can not lead if you completely lack a passion for what you do, it is important that you reconsider Change Management, although it is a catchy phrase and it seems that everyone should do it or talk about it. It will be a dis-service to your organization and yourself not to implement change management in a healthy environment to be.

References:


