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THE “INNOVATION THROUGH EDUCATION” (ITE) PROGRAM: TEACHING AND ENCOURAGING INNOVATION FOR MIDDLE MANAGEMENT

ABSTRACT Every organization grows and develops according to a natural lifecycle, facing predictable problems at each stage along the way. The lifecycle of organizations has demonstrated that those that have not changed, developed, and understood the dramatic developments in the open market failed and, in some cases, even disappeared. This paper suggests a model of how to educate employees to be innovative and creative. Based on the e-Vision program conducted in the Keter Group (www.keter.com), it has been demonstrated that employees in the right context and setting can change, renew themselves, and eventually create value and promote innovation in the companies where they work. Unlike traditional innovation programs, the difference here is rooted in the idea of how *to educate innovation agents* that will lead a culture of change and innovation. Innovation cannot be delegated down the organization, it requires a strategy and education.

Keywords: Innovation, creativity, education, training, ITE program

Introduction

In his 2013 publication “Ninja Innovation” Shapiro talks about the ten killer strategies of the world’s most successful businesses, and “If you don’t innovate you die” is one of them!. Today, the goal of all organizations is to recognize the patterns of change that can affect their core business, and then to be creative and innovative to meet future threats and opportunities. Innovation Through Education (ITE) is about change, but change is not simple, and resistance to change is a well-known phenomenon. Such resistance is explained as part of the pain, anxiety, and ambivalence that employees experience, along with the insecurity emanating from any program of com-

prehensive change (Suss, 2013). It is often claimed that it is the middle managers who appear to hold back innovation in an organization. This may be the case, as middle managers are focused on the delivery of short-term results even more they are increasingly cynical and distant from their organizations. They are confused about their future and how to manage their careers. This comes at a time when the value of middle management is much greater than ever before (Osterman, 2009). The requirements of their roles, therefore, reduce their ability to engage in innovative and creative thinking. Because of the middle managers' primary obsession with constantly chasing efficiencies, there is little "slack" for innovation and new learning. The measurement of their performance is often based on this emphasis on efficiency and effectiveness, and not on generating innovation. We argue that it is this level of middle managers, which is a fundamental part of every company, that should be educated and taught how think "out of the box," and to understand the world of innovation.

Companies such as Procter & Gamble (P&G), General Electric (GE), Whirlpool, 3M, Google, Apple, and others have created organizations that are based on innovation. Some of these companies had previously been considered traditional and conservative, but by making a decision to change and engage in innovation they developed unique value, new products and services, improved operations, and became innovative and creative.

For example, Whirlpool—under the leadership of Dave Whitman—set out in 1999 to define the company's global innovation strategy. Whitman has been widely quoted as saying "Innovation for everyone and everywhere," but, more importantly, what did he do? Among many actions, he did the following (Skarzynski and Gibson, 2008).

- The introduction of a company-wide training program aimed at developing and distributing the mind-set and skills of innovation
- The creation of "innovation boards" in the units that reviewed ideas and new projects, and allocated resources
- "Innovation days," where teams showed and presented ideas
- The creation of large, cross functional "innovation teams."

The results were outstanding and Whirlpool transformed from a conservative organization to an innovative organization. Action related to training, commitment, open thinking, and teamwork delivered excellent results.

Whirlpool is living proof that it is possible to become innovative and achieve the benefits of doing so.

The ITE program we are presenting in this paper is inspired by the actions taken within Whirlpool, and other outstanding firms. It is based on a program named e-Vision¹ focused on the middle level managers, that was developed within the Keter Group, and aimed to educate the next generation of middle level engineers to become innovative. Engineers play a critical role in driving the global economy. “The industry needs highly educated, corporate engineers to ensure innovation and technological leadership. The industry also needs engineers who strive for the best in a high-performance, and highly competitive global market. In particular, there is a very strong need in modern industry for a new breed of engineer: technically broad, commercially savvy, able to work and cooperate in multi-discipline teams (with designers), and globally adept” (pp101) (Suss, 2010). The results of the e-Vision program were extraordinary.

The seven points to achieve excellent innovation through education among middle level managers

In a changing world, human capital has become of even more cardinal importance, and there is a growing recognition that more and more of the market value of firms rests on their human capital (Lawler and Worley, 2006). Therefore, investing in human capital will have a dramatic return to the investor/organization (Suss, 2010). For most people, the process of growing older and developing knowledge and specialist expertise has both positive and negative dimensions. It may be a blessing, because with experience comes the ability to quickly grasp the complexity of our surroundings, understand how things connect together logically, and become adept at sensing and trimming the nonsensical ideas. Yet, it may also be a curse, because age and experience can also lead to the piling up of constraints/structures and filters that hinder innovation, why is the case? Because people as they grow older tend to be affixed and exhausted. When this happens, creative ideas may be rejected at an early stage because they do not strictly abide by logical rules, and instead are set aside in favor of non-innovative ideas or solutions, whose value is that they conform to the mold that needs to be escaped. It is important for this closed mind-set, which stifles innovation, to be changed within a company’s human capital.

1. (<http://www.d-vision.co.il/groups/e-vision>)

To make innovation truly happen, people throughout the company need to understand that it is not just a corporate initiative, or a one-time project, or an activity for a particular group of people. They need to grasp the fact that for innovation to really work, and to be sustainable, it has to become a systemic and widely-distributed (Skarzynski & Gibson, 2008). Kelly and Littman (2005) in their book “The Ten Faces of Innovation” wrote “At IDEO, we believe that innovators focus on the verbs. They’re proactive. They’re energetic. Innovators set out to create, to experiment, to inspire, to build on new ideas” (pp. 6). Successful businesses build fresh innovation strategies into the fabric of their operations (Kelly & Littman, 2005); they do so all year as they understand the fundamental part of innovation and creativity in the process of success. In an increasing competitive and complicated market, innovation is an opportunity organizations cannot afford to neglect. The second component is Creativity. Creativity is the process of generating *ideas* whilst seeing innovation as the sifting, refining and more critically—the implementation of those ideas. Creativity is about divergent thinking. Innovation is about convergent thinking. Creativity is about the generation of ideas and innovation is about putting them into action (Gurteen, 1998).

The ITE and the following 7 points can navigate organizations to success using methods, tools and mythologies of innovation and creativity.

1. Leadership: Who is the Boss?
2. Innovative and Creative Workshops
3. Hands on Experience with Excellent Mentors
4. Enrichment Courses (e.g., art, design, music, drama, and more)
5. Round Table Sessions
6. Professional and International Tours
7. Teamwork.

Leadership: Who is the Boss?

Building a self-sustaining, “all-the-time, everywhere” capability for innovation is fundamentally a leadership challenge (Skarzynski & Gibson, 2008). Change is a difficult process, and educating managers to change and learn innovation is even more difficult. So the first point is to ask the question: “Who is the boss?” Namely, who leads the program, and who sets an example to the managers during the process? Studies have shown that 20–67% of

the variance on measures of the climate for creativity in organizations is directly attributable to leadership behavior (Hooijberg et al, 2010). What this means is that leaders must act in ways that promote and support organizational innovation. A leader's behavior is a powerful display of mannerisms that convey the expectations and values of the organization, and together these set the tone for the organizational climate (Grojean et al., 2004). It is crucial to find the right leader who must dedicate time to the process, and she or he must be an example to all the participating managers. This requires time, energy, and an open mind.

Innovative and Creative Workshops

For today's organizations to succeed, businesspeople also must become masters of innovation (Shapiro, 2013). Such a process requires developing a culture of innovation, where others throughout the organization apply innovative thinking to solve problems and develop new products and services, requires intense and customized workshops. Therefore, in every process of educating towards innovation, the tools and content must be taught that enrich and prepare the managers with the best knowledge. As the objective is to educate managers to be creative and innovative, the recommended workshops should be based on the following areas (Blue Ocean Strategy, Scamper, Brainstorming, Cause and Effect Diagram, Reverse Innovation, Case Studies, and more). Creativity is essential to success in any discipline or industry (Kelly and Kelly, 2012), from startups such as Facebook and Google to stalwarts such as P&G and GE. It is creativity and innovation that has enabled these companies to rise and succeed. This is the foundation of the ITE program, namely teaching, training, and educating managers. The basic idea of expecting employees, at any level, to adapt new and creative tools or skills without training is ludicrous. Learning is probably the most important part of this program, because when people learn they acquire new skills, habits, and behaviors. They can develop reflective thinking and strengthen memories (Feser, 2012).

Hands on Experience with Excellent Mentors

Hands-on experience is very important, and should be an integral part of the process. Managers (along with the tools they learn) should be involved

in real time projects, enabling them to execute the knowledge they have learned and translate the tools into practice. It is important that this should be done under the supervision of excellent mentors. The presence of a mentor is important for feedback and improvement. We found in the e-Vision program that the interaction of learning and working is the best formula to practice innovation successfully.

Enrichment Courses (e.g., art, design, music, drama, and more)

This point may seem to be the “crazy” part of the program, but it is the spiritual part. There is a very powerful objective in the teaching of the selected managers courses in areas such as art, design, music, and drama. Such courses expose the managers to spirit, passion, philosophy, romance, aesthetics, and more—this is the unique part of the training program. Julie Cameron wrote, in her book *The Artist's Way*, “the central experience of creativity is mystical, opening our souls to what must be made, we meet our Maker.” It is rare to find business firms that commit their revenue and dividends for “indulging” in areas of spirit and art. However, this is exactly what is required to promote creative thinking and the breaking out of borders. Such a process can help managers discover and recover creativity.

Round Table Sessions

Round table sessions allow extended discussions among a small group. Round tables are excellent venues for giving and receiving targeted feedback, engaging in in-depth discussions, and meeting colleagues with similar interests. This part has two objectives. The first is to expose the managers to the executives of the organization and to conduct open discussions about the company and its problems, challenges, and targets. The program has to be aligned with the leading managers and the future plans of the company. These sessions enable a good quality of interaction and open a new level of communication between all sides. The second objective is to engage in a brainstorming process, bringing up as many ideas as possible, driving the managers to be inquisitive, solve problems, and practice seeing things differently. Meetings with the executives of the company several times a year, and exposing the managers to the leaders and their vision of the company

have a great value and creates high motivation among the managers in the program.

Professional and International Tours

Due to the fact that many university faculties teach the same knowledge through the same techniques, the results will often be very similar. That is, they produce good engineers, good managers, or good designers. But what about outstanding engineers and managers who think differently and engage in problem solving using new methods and tools? To achieve this, a wider level of understanding is required, and managers need to learn new methods of management, production, development, and quality from their competitors. Even more importantly, they need to learn this from other industries. To do so they need to visit the sites, talk to the managers and employees, and visually watch and learn. This part is important as it includes local and international tours, learning from different cultures, new languages, and new and different methods of management and decision making. This will lead to collaboration with excellent organizations, networking, and a process of learning from others.

Teamwork

People in innovative organizations communicate well, are open to each other's ideas, and support each other in shared work, likewise teamwork has proven to be an excellent predictor for success (Guimera et al, 2005). Wooley et al, (2010) described in their research variables that predict teamwork success for example, they examined: talking, face expressions, tone of voice, volume, and the distance between participants. In their research all groups were divided randomly, all participants were from diverse backgrounds, and the groups were given missions and projects that required creativity, decision making, and problem solving. Surprisingly, they found that the following four points predicted the success of the teams:

- *Social sensitivity (empathy)*: listening to each other without interrupting, along with showing sensitivity to the face and body language
- *Equality*: giving each participant an equal amount of time to talk (and not having one single dominant leader)

- *Presence of women*: the more women there were in a group the more social intelligence improved, together with the group's result
- *"The mix of the group"*: a combination of young and senior participants was significantly better than a homogenous group of senior and experienced employee

The process of creating innovation is difficult and challenging. An individual on their own cannot succeed, and therefore teamwork is essential for the success of the process. Building the right teams and enabling them to work in harmony, can be a very important factor in the process of educating towards innovation. Senge (1994) finds that "teams, not individuals, are the fundamental learning unit in modern organizations," which confirms recent research. Building the best high potential teams is a difficult but important mission; if teams are selected merely because they are available, rather than for their capabilities, then the project/process will be at great risk (Wilson and Doz, 2012).

Conclusion

The capacity to innovate is a very important function of a business' commitments, what it seeks to accomplish, and its relationship with what it understands as its circumstances. The same is also true on the level of individuals and companies. Likewise, time and budgets are necessary for an organization to achieve a fulfilling and serious process. Many organizations have taken the need to be innovative very seriously. This began 20 years ago and has accelerated in the past decade. Companies such as Google, Apple, Samsung, eBay, 3M, and many others have proven that to be a market leader it is essential that innovation is part of the organization's DNA. According to Skarzynski and Gibson (2008), there are two kinds of companies: either companies, like Google and Apple, that emerged as innovative and creative in the first place, with a strong mythology and culture of fostering and promoting innovation, or companies like Whirlpool and Cemex (a world leading Mexican firm of building materials), that were better in execution than generating innovation. These firms, like others, embraced innovation and have become leading innovative firms, increasing their revenues dramatically and creating a culture of innovation. The success of all these firms, which have engaged in innovation and succeeded, was due to

having training programs that formed an important part of the development of innovation.

How do we achieve engineering excellence? Scolese (2007) answered this question regarding the development of engineering excellence in NASA:

I see it in terms of four guiding principles: clearly documented policies and procedures, effective training and development, engineering rigor, and open communication. All are necessary to enable people to perform at their best in the unique context of NASA, a high-reliability organization that builds one-of-a-kind systems.

The ITE program presented here implements these guiding principles, emphasizing the need for effective training and development and open communication with the managers. However, this is not enough in itself to achieve innovation. A wider spectrum of activities also needs to be implemented to enable the managers to engage in a comprehensive and detailed process. This includes training and open communication, and practical experience, teamwork, enrichment, and exposing managers to the arts and design fields.

Investment in the human capital of an organization is fundamental to the creation of an innovative organization. The ITE program is inspired from the approach that believes that managers must invent and develop institutions that are “learning systems.” That is, systems that are capable of bringing about their own continuing transformation in collaboration with the new developments out of the company (Schon and Argyris, 1978). This can be achieved if organizations understand the need to change, and teach and motivate their staff and culture to be innovative. Organizations that do not reflect on the change experience will not learn as much as they should (Lawler and Worley, 2006). Understanding the need to change is the first step, followed by a mapping of the culture of the organization and the staff, and then building a program to educate them for innovation, which is the fundamental part.

Innovation becomes a priority only when people are given access to appropriate resources, including funds, materials, training, facilities, and information. In many cases, executives may be troubled that such a process will waste time, energy, and resources (Skarzynski and Gibson, 2008), and will lead to the organization going off into all kinds of “crazy ideas and/or

directions.” However, that is exactly what is necessary: crazy ideas, and the more the better. To be innovative, firms will have to think differently, use a new language, engage in new areas, and expose their organizational culture to new ideas. In some senses, this means acting “crazy.”

Innovation Through Education (ITE) is the result of theory and practice. On the one hand, it is based on learning from those organizations that have implemented innovation successfully. On the other hand, it has come out of years of experience in implementing innovation through educating managers and interns in the Keter Group. Innovation is not only about devising new products; it can and should be applied into every process in organizations (Kelly & Littman, 2005) and that’s why it’s such a big issue, Innovation can help break old patterns and encourage creative thinking or at least different thinking. Jack Welch said, “an organization’s ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage.” The need for creativity is changing how the workplace is organized and what people do. These changes center on the use and interpretation of information: the basis for ideas. A company's future depends upon how well it acquires, interprets, and acts upon information. ITE is a training program that can help organizations to become innovative, understand information, change, and create value that will enable them to have the competitive advantage that is critical for organizations to survive and thrive during these hectic times.

References

- Argyris, C. & Schön, D. (1978). *Organizational learning: A theory of action perspective*, Reading, Mass: Addison Wesley.
- Cameron, J. (1992). *The artist's way: a spiritual path to higher creativity*. New York: Tarcher/Putman.
- Feser, C (2012) *Serial Innovators. Firms that change the world*. Hoboken New Jersey. Wiley.
- Grojean, M. W., Resick, C. J., Dickson, M. W., & Smith, D. B. (2004). Leaders, values, and organizational climate: Examining leadership strategies for establishing an organizational climate regarding ethics. *Journal of Business Ethics*, 55(1), 223-241.
- Guimera, R., Uzzi, B., Spiro, J., & Amaral, L. (2005). Team assembly mechanisms determine collaboration network structure and team performance. *Science*, 308, 697-702.
- Gurteen, D (1998) Knowledge, Creativity and Innovation. *Journal of Knowledge Management*. Vol 2, no 1.
- Hooijberg, R., Lane, N., & Diversé, A. (2010). Leader effectiveness and integrity: Wishful thinking? *International Journal of Organizational Analysis*, 18(1), 59-75.
- Kelly, T & Littman, J (2005) *The Ten Faces of Innovation*. Doubleday.
- Kelly, T & Kelly, D. (2012). Reclaim your creative confidence: How to get over the fears that block your best ideas. *Harvard Business Review*, 10:12, 115-118.
- Lawler, E & Worley, C. (2006). *Built to change: How to achieve sustained organizational effectiveness*. San Francisco. Jossey-Bass.
- Osterman, P (2009) *The Truth About Middle Managers: Who They Are, How They Work, Why They Matter*. Boston. Harvard Business Review Press.

Scolese, C. (2007). Developing engineering excellence for programs and projects at NASA. *Ask Magazine* (Policy).

Senge, P. (1994). *The fifth discipline: Strategies and tools for building a learning organization*. Crown Business.

Shapiro, G (2013) *Ninja Innovation: The ten killer strategies of the world's most best successful businesses*. HarperCollins Publishers.

Skarzynski, P & Gibson, R. (2008). *Innovation to the core: A blue print for transforming the way your company innovates*. Boston. Harvard Business Press.

Sloane, P. (2009). *The innovative leader: How to inspire your team and drive creativity*. London, Kogan Page.

Suss, G, (2010). d-Vision: Seeking excellence through A hands on engineering multi-discipline global internship program. *American Journal of Business Education*. 3(4), 99-104.

Suss, G. (2013) .The next revolution will be in education: A new marketing approach for schools. *Journal of International Education Research*. 9(1), 47-54.

Wilson, K & Doz, Y. I. (2012). 10 rules for managing global innovation. Boston. *Harvard Business Review*. 86-90.

Wooley, A., Chabris, C. F., Pentland, A., Hashmi, N & Malone, T., W (2010) Evidence for collective intelligence factor in the performance of human groups. *Science*. Vol 330. 686-688.