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(संयुक्तांक)

सपादक

डॉ. बी.एल. भादानी

पूर्व विभागाध्यक्ष

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अलिगढ़ मुस्लिम विश्वविद्यालय, अलीगढ़

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ENABLERS FOR ORGANIZATIONAL CREATIVITY LEADING TO SUSTAINABLE INNOVATION PRACTICES

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Abstract

Many organizations are unprepared to set-up sustainable Innovation practices. The current pandemic situation demands that the organization must act having Innovative mindset; and for that, organizational creativity must be synergized methodically to achieve more than sum of all individual contributions. This paper intends to describe what are the key enablers that organizations should employ to improve organizational creativity. The understanding of creativity can be explained in 3 aspects; (a) Creativity is heavily dependent on products, (b) Creativity is domain specific, yet transferable, (c) Creativity can be destructive also, hence it has to be channelized and controlled. Creativity is classified into 4 types, depending on its organizational impact: mini-C (individual level), little-C (team level), pro-C (organization level) and Big-C (industry/nation/global level). Innovation means successful and effective implementation of a creative idea. 4 enablers that organizations can utilize to generate multiple creative ideas: (a) Diversity of the team composition; (b) Role of Senior Leadership; (c) Support by Human Resource Management team, and (d) Organizational culture. In the current pandemic situation, the Indian organizations need to set-up innovation engine in a rapid manner. The organizations can swiftly establish the framework of innovative practices using the enablers mentioned above. The growth of Indian Organizations in last decade is not significantly based on innovation. This is evidently seen in the number of patents filed in last decade in India. The number of patents filed was ~50,000 in 2018, whereas ~14,000 were approved. Individually the number looks big, yet India features at a lowly 10th rank world-wide for patents approved. Yet, Indian economy has shown consistent GDP growth, even surpassing that of China in 2015.Then what is the secret ingredient of growth of Indian organizations in last decade. It is none other than efficient industrialization, which can be defined as the large-scale introduction of manufacturing, advanced technical enterprises, and other productive economic activity into an area, society, country, etc.

The current pandemic situation of COVID-19, a Black Swan, has thrown many organizations into a crisis. As this situation was totally unforeseen, few organizations were prepared to handle the implications of this situation. In pre-COVID scenario, there was cautious approach towards automation and innovation, due to key factors such as fear of job loss, resistance to change, higher cost, not enough resources available for research, etc. In current situation, the organizations are forced to take steps to survive and sustain business. This includes, and is not limited to, use of latest technology (e.g. drones, online payment, etc.), invest immediately in reducing labor intensive jobs, reduce exposure to imports outside country, utilize locally available resources to full extent, etc. In the past, technology has resulted in new economic opportunities and has ushered in disruptive human development. True, innovative technological advances cause loss of jobs, yet these also create new sets of jobs at the same time which might be outside the current industry itself. A study conducted by Deloitte, UK found that while 800,000 low-skilled jobs were eliminated due to the rise of automation, a staggering 3.5 million higher-skilled new jobs were created, and the new jobs paid an average $13,000 more per year. World Economic Forum has predicted an increase in net employment by 58 million as a result of new roles which are adapted to the new division of labour between humans, machines and algorithms. This is the compelling reason for the organizations to have dedicated focus on Innovation practices to stay afloat and to avoid getting swept away by another such event in future.

Many organizations are unprepared to set-up sustainable Innovation practices. How can the organizations do that? For the same, ISO (International Organization for Standardization) has defined ISO-56002 (July 2019) standard which guides the organizations to set-up Innovation

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Management System in a predictable and repeatable manner. It mentions clearly that an organization's ability to innovate is recognized as a key factor for sustained growth, economic viability, increased well-being, and the development of society. The innovation capabilities of an organization comprise of (a) ability to respond to changing conditions, (b) leverage the knowledge and creativity of people and (c) collaboration with external stakeholders viz. organizations, individuals, and natural resources.

The present situation demands that the organizations must act having Innovative mindset; and for that, organizational creativity must be synergized methodically to achieve more than sum of all individual contributions. This paper intends to describe what are the key factors that organizations should employ to improve organizational creativity utilizing a standard framework.

Let us first understand what is meant by Creativity. It is defined as the ability to transcend traditional ideas, rules, patterns, relationships, or the like, and to create meaningful new ideas, forms, methods, interpretations, etc.; originality, progressiveness, or imagination. In earlier era, creativity was considered to be related to imaginary beings or imaginary events solely. Anything related to practical activity was not really considered as creativity. However, in 20th century many researchers have tried to define the creativity elaboratively through psychological basis. Now it is being regarded as a normal aspect of human existence.

Through various definitions of creativity, we can understand following features which are now associated with creativity.

1. Divergent or Lateral thinking – In 1950, J. P. Guilford was the researcher who made divergent thinking or 'out of the box' thinking as creativity, rather than finding the single best solution to the problem.
2. Generating alternatives – Finding out various routes to solve one problem is considered as key element of the creative thinking process.
3. Paradoxical approach – Creative personalities seem to have combination of two diametrically opposite traits living harmoniously e.g. stereotypically masculine characteristics such as autonomous, self-confident, and tough, co-existing with feminine characteristics such as sensitive, intuitive, and responsible.
4. Motivation – Intrinsic or extrinsic motivation drives creativity strongly. Self-motivated people are driven to carry out the creative activity for the pure joy of doing the activity regardless of external reward.
5. Dependent on feelings – Positive mood facilitates free expression of new ideas, whereas negative mood promotes accuracy and precision. Thus, both types of feelings are strongly associated with creativity.[10]

The above features explain somewhat theoretical aspects of creativity giving us deep insight about how creativity prospers. Yet, to understand its real implications to our practical lives, the creativity can be explained in 3 aspects.

(a) Creativity is heavily dependent on products: Creativity is not now exclusive property of poets, sculptors, painters, or musicians. It is now omnipresent in every field and thus restrictively coupled to the product. Hence practical fields such as manufacturing, medicine, technology, education, and many more are now deeply entrenched in creativity. Thus, creativity must be always viewed in relation with the product. It cannot stand on its own without practical application.

(b) Creativity is domain specific, yet transferable: 10-year rule says that you gain a domain expertise after toiling hard in that domain for 10 years at least. The kind of knowledge and skills that are acquired by this kind of consistent association with the domain will provide an excellent foundation for a creative person to explore. Obviously, his/her creativity will be primarily focused on specific domain, yet a creative person would be able to transcend that knowledge to other domains as well. So, there is specificity to the domain as well as generality about the knowledge. A resounding example is that The Canadian Intellectual Property Office reported in 2007 that no less than 90% of new patents are improvements of existing patents.

(c) Creativity is not always good: There is surely the dark side to creativity. Some creativity can be destructive also unintentionally. A new medicine may save a lot of people from a disease yet cause

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severe side effects later. Creative usage of petroleum has led us to wide-spread pollution of atmosphere. Hence creativity must be channelized and controlled.

Another practical dimension of creativity depends on its impact. In many organizations, there can be a pseudo-creativity or quasi-creativity existent. As Runco and Jaeger (2012) pointed out, genuine creativity requires two further aspects over and above mere novelty. A product must be relevant to the issue at stake and must offer some genuine solution, i.e., it must be effective.

Innovation is viewed as a critical source of organizational competitiveness and important for organizational survival in an increasingly turbulent environment. Many researchers suggest that innovation is defined as the successful implementation of a creative idea. However, some submit that while creativity needs to be truly novel, innovation can be the adaptation of ideas in the current environment (so the idea is novel to the organization, but not completely novel). Others see innovation as a more inclusive term, encompassing both an idea generation and its implementation.

There are two ways utilized by organizations for innovation i.e. exploration and exploitation. Exploration is defined as the search for new ideas and products, developing new capabilities and is associated with risk-taking, experimentation, and flexibility. Exploitation on the other hand is defined as refinement, implementation, and execution and is associated with capitalizing on known strengths of the organization. Research suggests that both strategies are important for innovation and organizational survival. However, exploration and exploitation have been associated with different kinds of innovation. Exploitation, due to its focus on exploiting current strengths, tends to be associated with incremental innovation, whereas exploration, which focuses on searching for new capabilities, tends to be associated with radical innovation or creativity.

Kaufman and Beghetto (2009) developed a terminology for differentiating creativity among different levels of organizational impact: They referred to 'mini-c' creativity (generation of novelty that is meaningful and effective only for the individual who generates it), 'little-c' creativity (novelty that has an impact upon at least a few other people), 'pro-c' creativity (novelty that has an impact in a field and is recognized and admired in at least that field), and 'Big-C' (novelty with an impact that puts the person generating it into the history books). However, as Guilford (1987) himself pointed out, historically speaking only about two in every million people produce effective novelty of Big-C nature with an extraordinarily high impact.

So intrinsic creativity takes people to provide many ideas of mini-c and little-c type. These types of ideas surely are helpful to sustain the business in normal situation. It may help to grow business as well, if multiple of little-c ideas give a combined larger effect. This is the exploitation at its best.

At the same time, it is evident that these types of ideas will not help the organizations in current pandemic situation to survive for a long time. What the organizations need is exploration, i.e. creative pro-c or Big-C ideas, for which it takes much more than individual creativity. Entire organization must synergize together to get such ideas in sustainable and repeatable manner. As every organization is unique, their way of organizational creativity will also be unique.

Yet, to set-up a framework for nurturing and enhancing creativity to generate multiple pro-c or Big-C ideas, following four enablers are essential for all organizations.

(1) Diversity of team composition:

Various researches are conducted about the influence of diversity of the team composition on creative output. A diverse team brings out healthy conflicts which challenge status-quo and pave way for creative ideas. Without diversity, the team remains inside their comfort zone and does not venture out unless drastic events happen. Hence ensuring right amount of diversity at team level should be primary focus of the organizations looking for innovations. Some research suggested that demographic diversity like race, gender; age, etc. have some effects, whereas some research found that these do not have any effect at all. Rather different kind of demographic and functional diversity has palpable influence on innovation as given below. The organizations must work on each of the below contributors to achieve maximum possible diversity in their teams.

1.1] Educational background: Most of the organizational roles at junior level have bachelor's degree as a starting point. Yet not many organizations encourage or provide support for higher education in academic institution after that. Rather most of the organizations create

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their own training materials tailored heavily to their own organizational demands. This has a negative effect on diversity. Academic education provides different perspective and enable diverse conversations within the team members. Hence having a good mix of bachelor, masters and PhD holders in the team would enhance this diversity.

1.2] Location background: India has a vast diversity in its heritage and culture spread across longitudes and latitudes of the country. Every region, state and city have its own culture and perspective, unlike many smaller countries. This can be evidently perceived in the unlimited variety of cuisines that we relish. A decade ago, very few cities had multitude of job opportunities. People across the country travelled to these cities. They settled in their adopted cities for longer duration and essentially diversified the team composition. Today it is amazingly easier to travel across India and settle in new city. Yet the growth is happening across so many cities that many people choose to stay in a city which is their hometown or near hometown. Even if they stay in new city for 1-2 years, they always long to go back. The effect of this is having teams which essentially have lost the diversity factor. The current pandemic situation has removed the constraint of location significantly. Especially the organizations where remote work is feasibility should use this pandemic situation to their advantage. They can now employ real diverse teams spanned across multiple cities improving this diversity.

1.3] Functional background: As mentioned earlier, at least 10-year working experience in specific domain provides for excellent foundation to explore further. Millennials bring out fresh ideas and new energy to the teams, and Gen-X people provide perspective of their experience based on learning on the job for consistent 10 years. The team composition should be such that people with such diverse functional backgrounds are working in cohesion in symbiotic manner. The organizations should strive to maintain good equilibrium of the teams based on years of experience.

1.4] Personal background: Many organizations review utility of a person based on technical skills required for the job to be done in the organization and for the organization. There are many people who perceive their hobbies and personal interests passionately which are not at all related to their day-to-day work. The organizations should be able to recognize these and harness their creativity from their hobbies into organizational work. Remember, creative people can transcend their creativity from one domain to another easily. So, if a person has a great hobby of cooking coming with innovative recipes, why cannot that skill be utilized to find out flaws in organizational processes to come up with innovative changes. If someone is passionate about gardening, his/her creativity skills can be used for mentoring new team members very effectively. Today, organizations are not aware of these skills or if there is some awareness, it is not effectively tapped in the organizational activities.

(2) Role of Senior Leadership –

Having a diverse team is good starting point, but only that does not achieve anything on its own. To have a healthy conflict within the team, every team member should have psychological safety to have open communication on all aspects. The ownership of creating this environment is the primary role of senior leadership or top management team. This layer of people is not only responsible for setting strategies for the organizational growth but they are also custodians of organizational culture. If they do not walk the talk about organizational culture and if they are not seen as role models by the team members for epitomizing organizational values and mission, then most diverse teams will ensure creatively that status quo is not changed. In Agile methodology, an important role is of a scrum master. The scrum master is accountable for guiding, coaching, teaching, and assisting a scrum team and its environments.[17] The main responsibility of this role is to resolve the impediments that the team is facing to deliver the output. Thus, the senior leadership roles must act as organizational level Scrum Masters. They are responsible for resolving all impediments that obstruct the creativity of the teams. Below are the contributors that must be carried out by these Scrum Masters.

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2.1] Lead by example: The first and foremost is that the leader himself must demonstrate creativity. The leader must be seen making creativity and innovation as the primary focus for the organization. Charismatic leaders like Mr. JRD Tata, Dr. Homi Bhabha, Mr. Dhirubhai Ambani, Mr. Narayan Murthy, Mr. Ratan Tata, etc. inspired creativity, and innovation of many other people because they led by example through creativity of breaking the norms and innovating the industries in India. This attitude should reflect in entire senior leadership with no compromises. As the organizations grow larger, the norms get diluted and then the teams lose trust on senior leadership. At such instances, the organizations must take hard decisions of parting ways with leaders who are compromising integrity and culture of the organization.

2.2] Trust Factor: All the organizations today are aware of role of creativity and ingenuity of new solutions to grow. Yet more than 50% of people feel that the organizations are not supportive enough to nurture their creativity. So why such a disconnect? When an organization is small, it is easier for leaders to recognize each individual and trust them to find best solution. When the size of the organization grows, the leaders are not effectively aware of every individual and their capabilities. Hence a system is devised to identify skill-level, evaluate performances and reward only a smaller proportion of people (as per bell curve distribution). The system is devised very generically so that it is fair, ethical, and legally explainable to thousands of employees. Yet, when an individual sees the system from his/her perspective, it does not serve the real purpose. As the individuals are caged in this system forcefully, their ability to be creative is diverted to meet the expectations of the system and they go into a mindset of learned helplessness. The attitude of ownership (even if it is for a smaller task) which is essential for creativity is replaced by resigned attitude that nothing is going to change here. It is the responsibility of senior leadership where they improve this trust factor where individual employees can reach out to them openly, provide feedback about the system, and be a change agent to modify the system wherever necessary. A lot of organizations have internal communities where such forums are available. Senior leadership should be active members of such communities enhancing their reach to team members and build the trust factor.

2.3] Failure mode: The utmost fear in the minds of employees is fear of failure. According to Dr. Diane Hamilton 'Fear' is one of the 4 factors to impact negatively to curiosity and creativity.[19] Although, every individual has different level of fear of failure, the organizations should create a safe environment within which the people are free to experiment. The failed attempts should not be discouraged or demoralized, rather they should be celebrated so that some positive learnings from that can help another creative idea. We often let our children explore the world by watching them from a safe distance. If they fail, we do not disown them. We help them to bet better. Similarly, the senior leadership should define playing arena for the people to explore and experiment. An open environment should be created where failed ideas are also discussed with the intent of learning lessons. If people are less feared about failures, they will explore more to come up with more creative ideas.

(3) Support by Human Resource Management team

Artificial Intelligence is now spreading across all the fields creating machines which can learn on its own to certain extent. We can observe Tesla cars which have auto-drive mode. There are machines using Internet of things, which send out communication to servicing department directly when a fault is encountered. Google home and Alexa machines are now equipped to handle your home lighting and other appliances as well. Yet, these are not yet omnipresent and for more than 99% of the activities today, we need creativity from humans. Most of the organizations today and for next 8-10 years would be looking for creativity coming from humans. Hence the Human Resource Management team has the toughest job of nurturing this creative capital. Today's Human Resource Management teams are using more sophisticated workflow tools to manage all HR operations. The key question is those tools capable of measuring the below contributors related to organizational creativity. To sustain the innovative practices exercised by diverse teams and guided by motivated senior leadership, Human Resource Management team needs to set-up and own an antifragile[20] framework. An antifragile framework is the one which is not fragile against the black swan events, but it gains from the black swan events. Otherwise any other framework set-up will crumble in the

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wake of another black swan event in 8-10 years and the organizations would lose the momentum again.

3.1] Reward for Innovation: Creativity and Innovation mindset cannot be forced through human resources. So, via negativa approach will never work i.e. if you do not innovate, you will be penalized or punished. The only way to motivate the employees would be to recognize and reward creative ideas. Human Resource Management teams must understand that the creativity is scalable like a scientist researching for the ultimate solution of a problem. After many small creative ideas are rewarded, somewhere an idea will pop up which will change the organizational output in drastic measures. Hence the rewards should be more than adequate, slightly inclined on higher side, to motivate the creative employee as well as other people in his/her sphere of influence. Organizations must have an established reward framework for exceptional delivery outputs, financial improvements, operational excellence, and sales target accomplishments. Some of the organizations would also have specific category of rewards for innovation. Human Resource Management team needs to ensure that reward for innovation is the most aspiring reward in the organization, which should drive the culture of the organization. The goal is to have sustainable reward mechanism which ignites passion for creativity in all the employees on consistent basis.

3.2] Support mechanism for nurturing creativity: When organizations hire from colleges or other companies, the criteria are to look for matching technical, managerial, or administrative skills. Very few organizations look for curiosity or creative nature before hiring a person. When someone joins an organization from a college or other academic institution, they inherently bring their own curiosity and creativity levels. Obviously, organizational environment should be able to maintain that level or increase that level ideally. If the organizational environment is having a detrimental effect on the individual's curiosity level after joining the organization that means the environment provided by the organization is of degenerative nature. Apart from this, an organization should have open environment so that employees can look for self-initiated job rotation aligned to their aspirations. The toughest challenge for the Human Resource Management team is in this matter 'no one size fits all'. So, a highly customized support mechanism should be set-up so that different needs of different individuals are taken care of differently. For this, it needs to establish a mechanism to measure the curiosity or creativity levels of employees and their real problems to understand the ground reality. Only after that, the Human Resource Management team will be able to analyze different sets of expectations of employees to take corrective and preventive actions. The support mechanism thus established for nurturing creativity should be agile enough to comprehend the feedback and make change accordingly.

3.3] Evaluation of leaders: As the Human Resource Management team closely nurtures the creativity of the employees, it should not ignore the impact senior leadership is having on the individuals and teams. Hence, it is another responsibility of Human Resource Management team to constantly evaluate the leaders for their own creativity levels also. The team should not assume that simply addressing the employees and teams, the final objective of organizational creativity will be achieved. Again, for this evaluation, a mechanism should be put in place to objectively assess the creativity levels of senior leaders, their impact on teams and individuals, and their own utilization of creative ideas in their own activities. The feedback can be provided tracking the curiosity levels progress and the senior leaders who are not having right impact should be given different roles. More consistently such feedback process is followed by Human Resource Management team, the entire senior leadership layer will be aligned to Organizational creativity in coherent manner.

(4) Organizational Culture

The next enabler is about creating a supportive environment at the organization level where people feel that they are part of something different. This may be least important enabler compared to other enablers, but this is an integral part of organizational set-up. For any graduating engineer, if you say that you will work in Google or Facebook or Apple or SpaceX, you can see their eyes drooling with simply thinking about these organizations. These are dream companies everyone wants to work at, because of the brand of these companies that is built over the last decade. This perception is about the organizational culture that supports freedom of ideas and celebrates that openly in front of

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internal and external stakeholders grandiosely. These organizations have inculcated an important aspect of ownership into their employees i.e. every individual is their brand ambassador. For other organizations, following below two contributors can be considered as starting point towards becoming a dream company for all current and future employees.

4.1] Visibility for Organizational Creativity: All individuals like to have visibility to their creative ideas. At the same time, in an organization they also look out for what others are doing in creative way. There are myriad forums within an organization for variety of topics like delivery of projects, quality assurance, sales and marketing, Corporate Social Responsibility, etc. People observe the amount of creativity happening in those forums as well. Everything that the organization is doing should exude the creativity. And the organization should provide enough visibility to such creative ideas and innovations across the organization in internal and external forums. Providing more visibility of such ideas to individual employees will spur them more into concrete actions. If enough visibility is not given, the organization will lose the opportunity to market its own creativity to the stakeholders and attract right talent for future innovations. This enabler is thus required to sustain the creativity of the individuals when it is already ignited by first three enablers, as now the individuals believe that they are part of the brand that their organization represents. Another part of organizational culture is whether the recognition is provided to the creative ideas in early stages rather than waiting for the actual implementation of the idea. Lot of times the actual implementation of the idea would be too far down the line and the ultimate implementation will have contributions from multiple people in the run. The individual who provided the idea initially may or may not be involved in later stages for various reasons. Yet, he/she should be recognized as the original source. Obviously not all ideas need to be recognized and rewarded in equal sense. So, some team in the organization should curate the ideas before deciding worthy people who deserve immediate reward.

4.2] Partnership with Academic institutions: Very few individuals after graduation, and after fully getting involved into a job, go back into an academic environment. The challenge is of two types: (i) there are fewer interesting courses that attract professionals to academic institutions and, (ii) there are few incentives given by the organizations to allow professionals to pursue an academic course. Focusing on second challenge for this article, the organizations need to provide proactive encouragement for its professionals to study academic courses. Especially during this pandemic situation, the organization can invest in an academic course for certain individuals and let him/her acquire additional skills before re-employing him/her back into the organization in different role. The academic knowledge in addition to the domain experience will provide any individual a better perspective to do the given role more creatively. The organizations need to establish a symbiotic relationship with the academic institutions. The organizations can tap into the latest research material that the academic institutions have, while the academic institutions can utilize the problem statements from the organizations for future research topics. This mutually beneficial model should have an individual's interests at the core of this partnership.

This covers the details about four enablers which are required for an organization to set-up the framework for sustainable innovation practices. Here is the indicative structure of the framework in a short table format. More details should be added in the maturity considerations.

Enabler	Contributor	General Description	Indicative characteristic of contributor	Maturity Level-1	Maturity Level-2	Maturity Level-3
1. Diversity of Team Composition	1.1 Educational Background	Diversity in Educational background	Mix of educational background variety	Team composition has mostly bachelor degree holders from one stream	Team composition has mostly Bachelor degree holders from multiple streams and	Team composition has Bachelors and Master degree holders from multiple

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					some Master degree holders	streams and some PhD
	1.2 Location Background	Diversity in Location background	Variety of across the India cultures	Local people mix > 80% of the team composition	Local and Regional people > 80% of the team composition	Local and Regional people <= 50% of the team composition
	1.3 Functional Background	Diversity in domain experience	Mix of junior, middle and senior domain experienced team members as part of the team composition	Junior and middle people make up 100% of the team composition	Junior and middle people > 90% of the team composition	Junior and middle level people <= to 80% of the team composition
	1.4 Personal Background	Cross utilization of passion and skills from hobbies	Team members follow their passion in work environment constructively	Team members are following their passions outside the office environment regularly	Team members are following their passions within organizational set-up, outside work environment	Team members are following their passions within organizational outside and within work environment seamlessly
Enabler	Contributor	General Description	Indicative characteristic of contributor	Maturity Level-1	Maturity Level-2	Maturity Level-3
2. Role of Senior Leadership	2.1 Lead by example	Senior leaders have skin in the game	Senior leaders demonstrate their creativity openly	Senior leaders are perceived to encourage creativity	Senior leaders are perceived to encourage and reward creativity	Senior leaders are perceived as role models of creativity
	2.2 Trust Factor	Senior leaders can trust the team. Team members express their creativity freely.	Team members have strong ownership mentality to express their creativity to discharge their duties with high quality	Low ownership by junior team members. Only few team members are confident to express their creativity.	Medium level ownership by junior team members. Some team members are confident to express their creativity.	High level ownership by junior team members. All team members are confident to express their creativity.
	2.3 Failure Mode	Perception of failure of creativity by team members	Team members are willing to share their creative failures	A few team members are open to share their creative failures	Some team members are open to share their creative failures. They seek	Entire team works as one Self-sustaining creative team. Every

			openly and seek feedback proactively		the feedback proactively.	failure is openly shared, feedback is sought and next steps identified.
3. Support by Human Resource Management team	3.1 Reward for Innovation	Recognition and Reward mechanism for creative ideas	Team members perceive that they get timely and equivalent reward for their creative ideas	Team members perceive that they get encouragement, but no reward mechanism exists.	Team members perceive that they get some reward which is not timely and not equivalent to the creativity. Mostly it motivates only the creative individual.	Team members perceive that they get timely and equivalent reward which motivates creativity of other team members.
	3.2 Support mechanism for nurturing creativity	Creativity level measured periodically to analyse the trend and make corrections	The creativity level has changed for an individual after joining the organization	The creativity level has stayed same mostly across the team members	The creativity has gone up for some team members accidentally	The creativity is monitored and has gone up for all team members by design
	3.3 Evaluation of leaders	A mechanism to evaluate leaders based on their influence and participation in creative ideas	Leaders are measured and given feedback for improvement areas on creativity enablers	Measurement mechanism not in place	Non-uniform measurement mechanism exists. Feedback loop is not completed effectively	Uniform measurement mechanism exists. Improvements are tracked by HR team periodically.
Enabler	Contributor	General Description	Indicative characteristic of contributor	Maturity Level-1	Maturity Level-2	Maturity Level-3
4. Organizational Culture	4.1 Visibility for Creativity	The perception about the organizational creativity by team members	Team members feel proud of the organization due to creativity culture	Team members feel overall organizational creativity is low to medium. Their passions are not aligned with organizational creativity.	Team members feel overall organizational creativity is medium. Some of their passions are aligned with organizational creativity.	Team members feel overall organizational creativity is high and aligned to their passions

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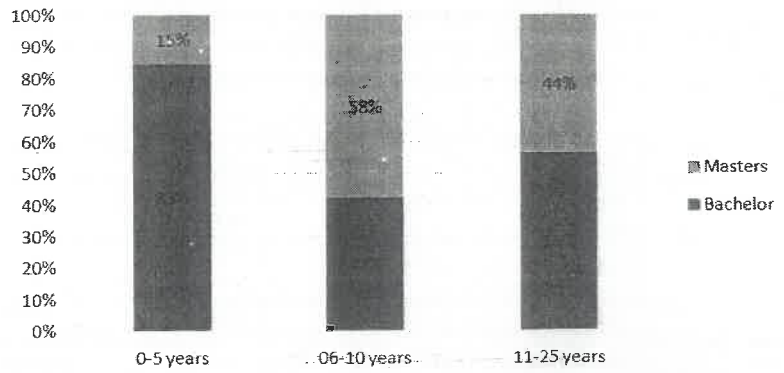
	4.2 Partnership with Academic institutions	Team members are encouraged to engage with outside the organization institutions and use that knowledge creatively for organizational creativity	Contribution of institutions outside the organization is visible in organizational creativity	Team members can engage with outside academic institutions to improve their skills	Team members are supported in all aspects by the organization to engage with outside academic institutions	Team members are supported in all aspects by the organization to engage with outside academic institutions. The skills that are learned are tracked to be put in use for organizational creativity.

Primary data research:

A sample survey was conducted to illustrate some aspects of the enablers and contributors.

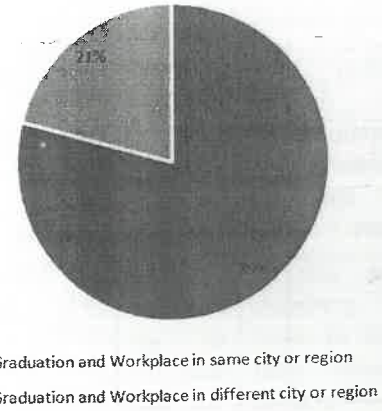
Enabler 1.1] Educational Background:

- Data Representation: % of employees holding Bachelor and Master's degree in different experience bracket
- Inferences: No PhD holders in the sample data. Lesser % of Master's degree holders in 0-5 years and 11-25 years of experience bracket



Enabler 1.2 Location Background:

- Data Representation: % of people having workplace in same city or region as their graduation
- Inferences: 79% of the survey population are working in same city or region from where they graduated. From the remaining 21% population, only 8% have really moved out to different region for work after their graduation.



Enabler 1.3] Functional Background:

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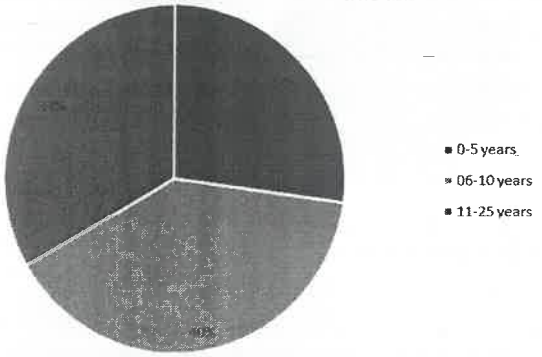
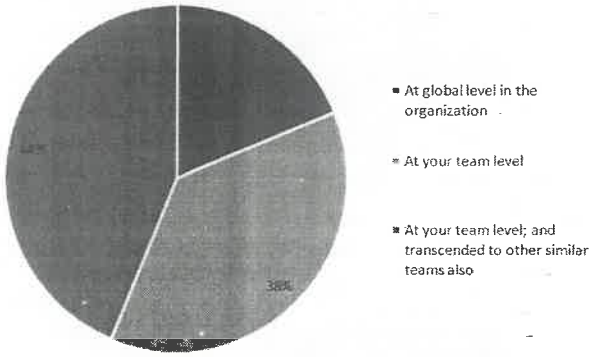
- Data Representation: % of employees having total work experience divided into 3 brackets
- Inferences: 60% of the population has less than 10 years of experience. Remaining 40% represent experience in a wider range of 11 to 25 years.



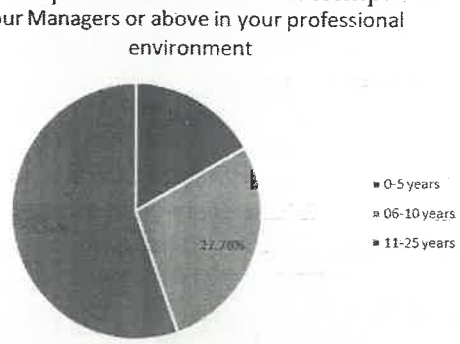
Enabler 2.1] Lead by Example:

- Data Representation: Distribution of creative ideas given by employees from 11-25 years of experience bracket based on their impact in the organization
- Inferences: Only 19% of the senior people have provided global level creative ideas. So, remaining 81% have given ideas only at the team level.



Enabler 2.2] Trust Factor:

- Data Representation: % of employees reach out to their leaders for seeking out answers to their curiosity divided by number of years of experience
- Inferences: 55% of the people who reach out to senior leaders are from higher experience bracket. Lowest percentage is for the bracket of 0-5 years, which means very low trust factor among junior people with respect to the senior leadership.



Enabler 2.3 Failure mode:

- Data Representation: Distribution of employees based on their immediate action taken when they fail in an innovative idea
- Inferences: 72% people share the information about their failures with the team, colleagues or in common repository. Only 28% of the people keep the failure information to themselves.

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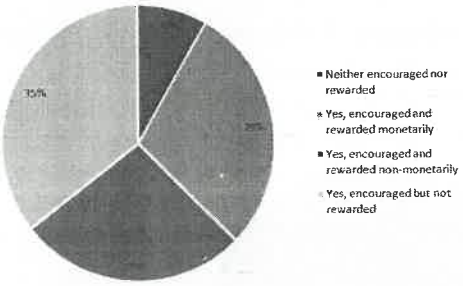
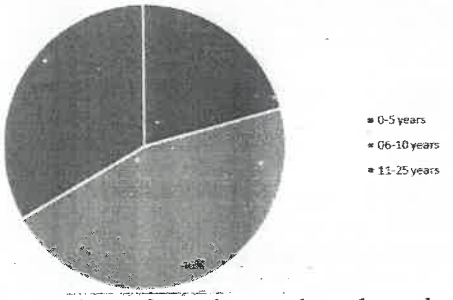
Enabler 3.1 Reward for Innovation:

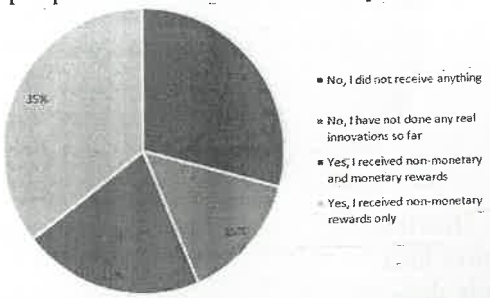
- Data Representation: Distribution of employees based on their perception about rewards provided by the organization for innovation
- Inferences: 92% people perceive that innovation is encouraged. Out of that only 29% of the people feel that a monetary reward is provided by the organization.



- Data Representation: Distribution of employees by years of experience who perceive that not having enough rewards is a strong barrier for their creativity
- Inferences: 46% people who perceive 'not having enough rewards' as a barrier for their creativity are from 6-10 years of experience. Overall only 21% of such people are from 0-5 years bracket.



- Data Representation: Distribution of employees based on the rewards they have received if they have done the innovations in the organization
- Inferences: 29% people perceive that their innovations are not even recognized by the organization. Only 21% of people have received monetary rewards.



Enabler 3.2 Support mechanism to nurture curiosity:

- Data Representation: Distribution of employees based on how confident they feel about speaking up about changing the status quo in the organization

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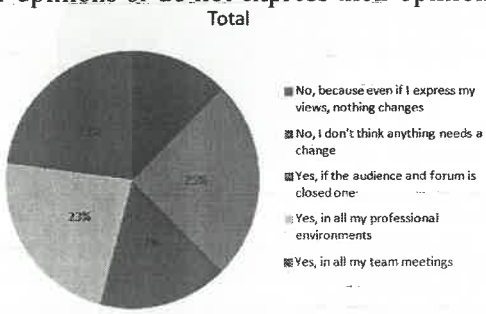
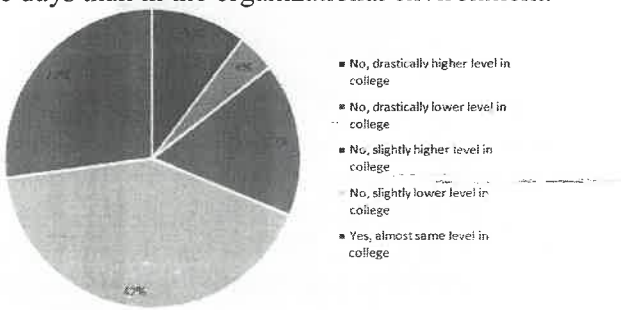
- Inferences: 46% of the people feel confident to speak about their creative ideas in all team meetings and in all professional environments. This means 54% of the people have guarded view about expressing their opinions or do not express their opinions due to some reasons.

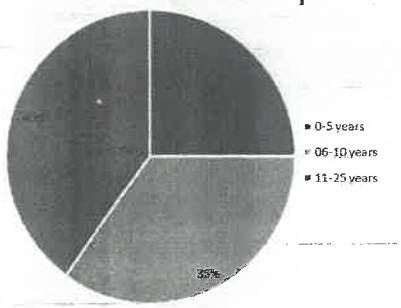


- Data Representation: Distribution of employees based on their perception about their own curiosity level has changed or not from college days to organizational environment
- Inferences: 46% of the people feel that organization has provided them good support so that their curiosity level has gone up after joining the organization. Another 27% mention that their curiosity levels are same. Whereas, remaining 27% people feel that their curiosity had more motivation in college days than in the organizational environment.



Enabler 3.3] Evaluation of leaders:

- Data Representation: Distribution of employees who perceive that 'Too much workload' is one of the topmost barriers for their creativity
- Inferences: As the number of years of experience grows the impact of workload seems to be increasing. This means that the senior leaders and Human Resource Management team are not able to manage the utilization of time in a better productive way.



- Data Representation: Distribution of employees who perceive that 'Too many changes happening around' is one of the topmost barriers for their creativity
- Inferences: This factor seems to be impacting highly to the people having experience of less than 10 years i.e. 80%. Senior people are better able to manage the changes due to their experience.

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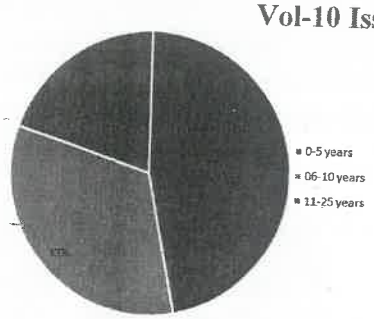
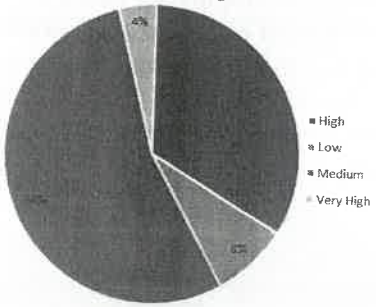
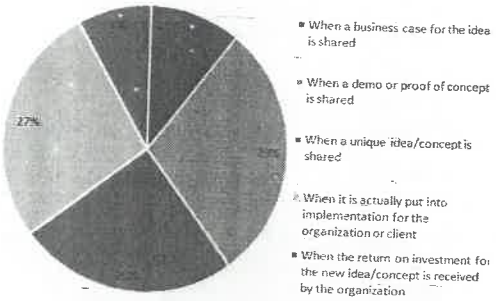


Enabler 4.1] Evaluation of leaders:

- Data Representation: Distribution of employees based on their perception about the creativi that is observed in the organization
- Inferences: 62% of the people feel that the organizational creativity is low or medium.

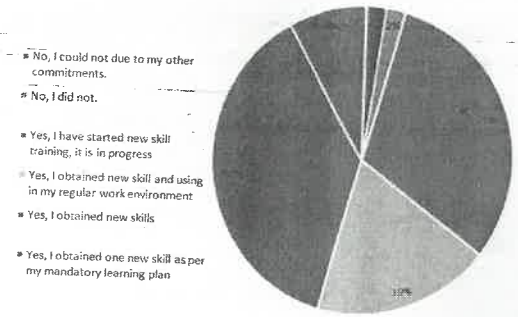


- Data Representation: Distribution of employees based on their perception about at what stag the creativity is rewarded in the organization
- Inferences: Only 25% of the people feel that the creativity is rewarded immediately afte sharing unique idea. Remaining people feel that the rewards are given only after certain othe steps are carried out; with 27% feel that they get recognized only when the idea is put into implementation.



Enabler 4.2 Partnership with Academic Institutions:

- Data Representation: Distribution of employees if they have obtained any new skill in last 6 months on their own
- Inferences: 57% of the people have obtained the new skills in last 6 months. This might be probably due to more available time to people in last 6 months due to pandemic.



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Conclusion:

Organizational creativity cannot be easily measured, and it cannot be equated to financial performance. Yet, when we talk about highly creative organizations, names of Apple, Facebook, Google, and SpaceX instantaneously spring to our minds. These organizations have mastered the above four enablers by many years of rigorous application and have open approach to any improvisation that might be needed periodically.

This framework of enablers and contributors will provide the organizations an excellent staring point. To start with, the organizations can define the low-level details of each enabler and contributor by partnering with academic institutions and Human Resource Management experts. The parameters provided in this paper to assess the maturity levels are indicative and some more analysis needs to be carried out the interpretation of these levels for each organization. As each organization is unique in its domain, the resultant framework may have a flavor specific to the organization. Then the organizations can conduct an honest maturity assessment of these enablers and contributors. Based on that assessment, the next steps can be identified for areas of improvement. With the use of such anti-fragile framework, the organizations can set-up innovation practices and avoid drastic impact of black swan events in future.

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