

# How to Promote ‘Out of Box’ Critical Thinking in the Armed Forces\*

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“Imagination is more important than knowledge. For while knowledge defines all we currently know and understand, imagination points to all we might yet discover and create.”

— Albert Einstein

## Abstract

*With the emergence of modern-day warfare techniques including Grey Zone/ Hybrid Warfare and given the share of budget allocated to the Armed Forces, it has become imperative for Armed Forces personnel to focus on “out of box” thinking and leverage human potential to overcome constraints that we face today. The problem is to promote out of box thinking. The solution lies in fostering one important attribute i.e., imagination. It is important to understand and imagine how to defeat an enemy or how to provide security in your area of responsibility because those thoughts might constitute a starting point for something creative. The article carries out an analysis on how to promote ‘Out of Box’ critical thinking in the Indian Armed Forces and gives a Road map for encouraging and developing out of box critical thinking as part of its culture.*

## Introduction

The Indian Armed Forces have covered vast swaths from humble beginnings post-independence, to current day avatar. The past

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\*This is the edited version of the paper which won the first prize for USI Gold Medal Essay Competition (Group B) 2021.

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*Journal of the United Service Institution of India*, Vol. CLII, No. 627, January-March 2022.

few years have witnessed a significant spurt in induction of technologically advanced systems with unprecedented capabilities. Further, the prevalent global and regional security scenario coupled with our own national interests, has placed ever increasing responsibilities on the armed forces. With the emergence of modern-day warfare techniques including Grey Zone/ Hybrid Warfare and given the share of budget allocated to the armed forces, it has become imperative for Armed Forces personnel to focus on 'out of box' thinking and leverage human potential to overcome constraints that we face today. It is a known fact that "human mind is a storehouse of ideas which can be useful, useless, inane, harmful, creative or destructive. Ideas lead to creative processes which, in turn, lead to invention and/ or invention".<sup>1</sup>

'Out of Box' thinking in the armed forces has gained momentum in the last decade or so and superior commanders are often found giving thrust on critical, analytical and innovative thinking in their discourses to young officers and men at different forums. It would be incorrect to say that there have been no military thinkers in the past. Greatest military leaders like Sun Tzu, Julius Caesar among others have applied their analytical skills and inference to all levels of warfare and for the same reasons their writings/ tactics are read even today. Many studies have indicated that creativity is not an innate human quality but a developed human ability.<sup>2</sup> History is not devoid of examples which prove that leaders who can think critically in difficult situations and act accordingly come out victorious. This can be attributed to their ability to use information and abstract ideas and interpret them efficiently to arrive at remarkable solutions. Deployment of Indian Armed forces in response to naturally occurring phenomenon viz. COVID-19 pandemic and un-forecasted weather events like cyclone 'Taukte' warranted Indian Armed Forces to operate in an environment of uncertainty, which required adaptability and creative thinking. The unfolding of events proved that human resource and its ability to think, is more important than technology. As a result, it is imperative for the armed forces to invest more in developing the unique talents and diverse cognitive abilities of its personnel.

### **Defining Out of Box and Critical Thinking**

The Job Search & Employment expert Alison Doyle has said that "creative thinking is the ability to consider something in a new

way. It might be a new approach to a problem, a resolution to a conflict between employees, or a new result from a data set".<sup>3</sup> This is akin to 'Out of Box' thinking which is a thought process to find solutions to problems which have never been thought of or new ways to approach to a problem. In military terms, a parlance can be drawn with an 'Operational Manoeuvre' which would put own forces in a position of advantage. It may be in any domain viz. force, time, space or information. In a seminal study on critical thinking and education in 1941, Edward Glaser defines critical thinking as "The ability to think critically involves three things: (a) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences (b) knowledge of the methods of logical inquiry and reasoning and (c) some skill in applying those methods". Critical thinking generally requires ability to recognise problems and to find workable means for meeting those problems by gathering pertinent information.<sup>4</sup> It is, in short, self-directed, self-disciplined, self-monitored and self-corrective thinking.<sup>5</sup> One model presented by Michael Dahlen in his book 'Creativity Unlimited' explains the creative process as knowledge, motivation, and situation.

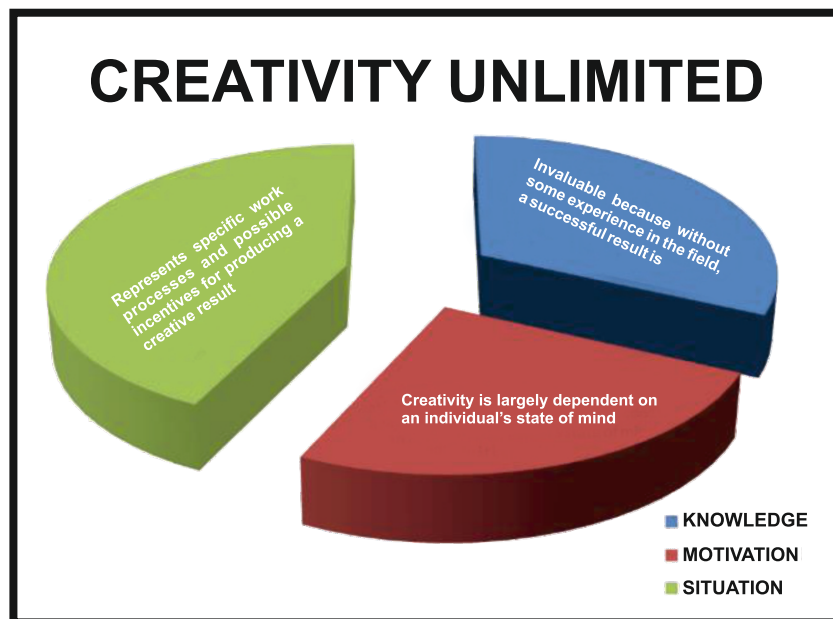


Figure 1 : Creativity Model by Michael Dahlen

### **Reality Check of Critical Thinking and Practice in the Indian Armed Forces**

As stated in the beginning, superior commanders in today's era, vehemently and equivocally support the idea of young officers to be able to come up with different solutions which are not only unique but also critically evaluated. Today, despite successful embracing of technology, the objective to integrate latest/ potent technology with existing sensors/ systems suffers deficiencies because of lack of critical and innovative thinking in the armed forces. These deficiencies may relate to tactics, force structuring and management, teaching and training techniques or re-organised command structures.

Although many discussions, forums are in place by different Services to foster creative thinking and ideation amongst their personnel, but seldom is it found that young officers are participants to these discussions. Non-participation may be attributed to lack of time, busy sailing schedules, increased workloads, risk to 'bell the cat', 'how does it matter to me...', 'these are policy decisions' and many more. The same is the case with organised lectures in peacetime which provide a pedestal to discuss latest technologies, emerging geo-politics, analysis of outcomes of war and other such thought-provoking topics. It is often found that, bare minimum personnel who are nominated by the organising committee form a part of these discussions. They are not intrinsically motivated to be a part of these discussions and hence end up contributing minimally. The whole essence of these organised discussions then turns futile. Rewarding may not be the only solution to foster and boost critical thinking amongst personnel of the armed forces. Many initiatives like 'Chief of the Naval Staff Kindle Award', Essay competitions from United Service Institution of India, 'Chief of the Naval Staff discussion forum' and likewise have been only partially successful to generate interest amongst the young officers to read and think critically. These types of initiatives are based on external motivation related to rewards. We must appreciate that only intrinsically motivated personnel will be able to contribute better because they will do so by choice and out of interest.

### **Why Indian Armed Forces Should Adopt and Encourage 'Out of Box' Critical Thinking**

The Indian Maritime Doctrine is the capstone doctrinal publication of the Indian Navy. It calls for 'intellectual effort' and speaks of



encouraging 'out of box' ideas and concepts. Towards promoting critical thinking amongst officers and men, it is essential that these aspects be followed in both letter and spirit. 'Out of box' thinking is extremely important in professional military education due to its myriad applications. It has proved to be a very powerful tool in a rapidly changing environmental and geo-political dynamics. But teaching and acquiring of these skills in the Armed Forces has not received its due. In this information age, where gigabytes of data are just a click away, human brains have to work faster and smarter, to comprehend such voluminous data to distil meaningful information. A military leader is expected to fine tune this barrage of information and quickly develop the landscape in the Area of Operations to take a swift and befitting decision. According to Greg and Renz, "The understanding and skills retaining relevance are those which enable individuals to sort through the plethora of information and ideas which confront them".<sup>6</sup> A question comes to mind that, are we intellectually prepared to meet the challenges of the complex, ever-changing information age? Unfortunately, professional military education in India has largely laid impetus on 'what to think' rather than 'how to think'. Even the institutions which have the mandate to foster critical and 'out of box' thinking, do so by systematically altering the thinking (template thinking) rather than allowing the young minds to wander and come out with different solutions. This can be attributed to the factor of time.

Why is critical thinking important for military leadership? This is because successful leadership cannot happen without critical thinking. It is extremely important for planners to correctly understand the problem, sequence the events appropriately, define performance requirements and quantify the limits of what could be done in area of operations. High order thinking and reasoning is thus essential in making such decisions which are limited by time and involve risk and dynamics. There will be no strait-jacketed solutions available and most of the time, the commander will be required to take decisions based on partial or inconsistent intelligence. To make this happen, leaders have to be practising the art of critical thinking such that one scan of the area must be enough to evaluate risks and opportunities especially when facing a clever enemy. "Adaptation achieved through critical thinking is important at every level of the military and defence structure today, given the challenges of combating stateless terrorism and violent

fanatical extremism.”<sup>7</sup> If the personnel are not good at critical thinking, they become dangerous for organisational progress, make repeated mistakes, take bad decisions in critical times, make inaccurate assumptions and poorly evaluate the environment.

By nature, creativity requires challenging the status quo in order to come up with better solutions but the hierarchy and procedures of armed forces is quite rigid. Therefore, it could be seen as an obstacle for efficient procedures. The development of imagination and creativity are extremely relevant for the Armed Forces’ efficiency. If commanders and staff are capable of creating better planning processes, they could be able to reduce the decision making time. Moreover, if they manage to plan good courses of actions, they will surprise the enemy. Quick, workable and creative decisions are key elements within the manoeuvrist approach. So, more creative the staff and commanders are, the more the chances to achieve their desired end state. The armed forces contribute actively across the national strategic objectives, which imply their deployment in different scenarios characterised by a combination of factors such volatility, uncertainty, complexity and ambiguity or what we call VUCA environments. The answers to cope up with these challenges vary and creativity offers unconventional thinking about problems and produces resourceful solutions.

### **How to promote ‘Out of Box’ critical thinking in the Indian Armed Forces**

In the book ‘Creativity Unlimited’ by Micael Dahlen written in 2015, the author succinctly writes that ‘out of Box’ thinking cannot happen unless ‘the box’ is understood.<sup>8</sup> It is logical to appreciate that unless one knows what is inside the box, he cannot think what is outside the box. To put it in simplistic terms, one has to be professionally sound and updated to know what exists within the existing realms of rules and regulations and where one requires bringing about change. The box of thoughts can then be expanded to arrive at workable solutions which have never been thought of. To expand the box is not that easy since most of us face myriad challenges in life and find it difficult to finish routine chores of life on time. That’s why, knowing what is ‘inside the box’ provides a pedestal to solving problems in a different way. It is, thus, clear that to promote critical thinking Armed Forces have to lay emphasis on providing a concrete professional foundation to all personnel.

There cannot be two ways about being professional. All levels of leadership have to mould thorough professionals rather than producing 'Yes Men'. The requirement of professionalism must be discernible by the personnel they command so that they know they have to perform their primary duties with élan and alacrity.

Micael Dahlen explains four walls or barriers in order to understand techniques to overcome traditional thoughts and pave the way for critical thinking. Very often personnel of the armed forces are limited by existing conventions and rules that they are bound to follow. After all, the entire genesis of being in armed forces is to be disciplined and be within the gambit of rules.

How do we promote out of box thinking then? The solution lies in fostering one important attribute i.e. imagination. For most of us, imagination is an act of day-dreaming or forming mental images. It is important to understand and imagine how to defeat an enemy or how to provide security in your area of responsibility because those thoughts might constitute a starting point for something creative. Imagination is a means to foster creativity. We have to make efforts to allow imagination of our personnel to run wild and explore the unexplored. Of course this has to be channelized, but once done, it would yield results. We have to strike a right balance between work and leisure in order to motivate personnel to imagine things. If we continue to work in a fire-fighting mode to meet deadlines, we would end up just completing tasks without key takeaways. A serious relook into our work culture is required because many activities/events planned by formations are limited to set themes and patterns. This needs a revamp and new ideas to make competitions innovative are required. Some of the other measures suggested to foster 'out of box' thinking in Armed Forces are as drawn in the figure:



Figure 2 : Four Walls of the Box by Micael Dahlen



**Figure 3 : Suggestive Ways to Foster Creative Thinking Changes Envisaged at Selection and Training Level**

Armed forces have strived to keep pace with changing environments, especially, technological advancements in the field of training. This is evident by state-of-the-art simulators, emulators and various training tools which are in place across our training institutions. However, we need to complement these advances through suitable changes in the training environment to foster concept of 'out of box' thinking in our personnel. Towards this end, the following merit attention:

- **Selection through SSBs.** The testing philosophy of our Services Selection Boards mainly focuses to find trainable minds which could easily be moulded from civilian to military personnel. There is no methodology of thought process evaluation except for psychological tests. These tests are only to measure the consistency of the individual. During the

interview, analytical skills are not judged. Certain questions checking the analytical skills of individual must be asked. Although reasoning forms a part of written exam but that is not sufficient to judge analytical capabilities under stress and meagre information only with this tool.

- **Early training.** Though we may be restrained to acknowledge the fact, but, one of the early things our young, impressionable trainee learns at our institutions, informally, is 'do not apply your brains' or 'do whatever is being told to you'. It aims to convey a need to be flexible in planning, to plan for shortages, to cater for the worst-case scenario, to stick to planned formalised training to facilitate transformation into a military man etc. However, the methodology invoked for this can hardly be accepted. As a young, malleable cadet, these informal 'teachings' tend to remain with an individual for a long time. Therefore, taking a long hard look at eradicating this self-defeating aspect of our training merits consideration. One way to achieve this is repeated reiteration, regularly and constantly – akin to teaching drill.

- **Grooming tomorrow's Commanders.** The young officer of today will inevitably Command our troops in the near future. Therefore, we need to look beyond preparing these officers only for duties that they would need to carry out as a young officer in the field. An analytical mind is not formed overnight. Our current training pattern produces good professionals but does not challenge one's imagination and creativity. As Clausewitz wrote "Everything is simple in war, but the simplest things are difficult...". Imagine if the newly commissioned officer was to be able to provide a simplistic innovative idea in a clouded tactical scenario. But the sad part is that our training pattern neither encourages thinking beyond rote learning and marks obtained in exams, nor does it encourage young officers to fearlessly offer their views. Achieving this, calls for a paradigm shift in our approach to training. It calls for the young officer to be challenged to use his grey cells beyond the realm of pure bookish knowledge. Notwithstanding, we would also need to continue with the theoretical aspects of education, as a poor theoretician would rarely, if ever, be a good practitioner.



Currently, the process of inculcating analytical skills and creativity starts formally, post specialisation course by the end of 6-8 years of service. By this time, most individuals form opinions, beliefs and ideas based on their respective experiences in the Service up to that point. Some do break clear of the webs of following the standard ideas and apply themselves innovatively to problems at hand. However, the percentage of these individuals is very low. The benefits that may be accrued through commencing this process early in an Officer's career, when his/ her mind is in its most impressionable state deserves due thought. The following are suggested:

- **Analytical Skills.** The weightage accorded to develop analytical skills at training institutions needs to be increased to provide due impetus to development of such skills. For instance, research assignments could be included in the curriculum, to include issues related to the military, current affairs, military history, world politics, economy etc. These already exist in some form or the other, but are not institutionalised. For instance, journal writing is a dying art. We could consider making one minor research per six months compulsory for all trainees. Further, these need to be evaluated and corrective guidance provided by personnel of suitable seniority and experience. Similarly, our class room instructions could be augmented with assignments requiring thought process, which would place demands of understanding rather than rote learning.
- **Exposure to Briefings.** The armed forces have a wonderful procedure of briefing and de-briefing for all our evolutions, including tactical exercises. However, the junior officer is not privy to a greater part of these de-briefs. It is recommended that inclusion of trainee and non-specialist officers for these de-briefs, particularly of tactical exercises, be institutionalised. Further, one day in a month could be institutionalised as 'de-brief day' where important aspects of exercise conducted or military event around the world could be covered. This should be interactive in nature and should focus on lessons learnt in respect of procedures, concepts and doctrines. This would go a long way in introducing the officer to tactical thinking and analyses, which would form the foundation for his specialist course. Additionally, the central

lectures organised at Headquarters level should also focus on providing junior officers a forum for testing and showcasing their research and public speaking abilities. Towards this, some of the lectures should be undertaken by young officers with due advice and supervision of superior officers.

- **Specialist Courses/ Mid-Level Professional Courses.**

Officers undergoing specialisation/mid-level professional courses should be considered at a different intellectual and experience level as compared to other trainees. Transfer of knowledge at this level should be in the form of discussions, with little or no recourse to structured class room instructions. This may not be feasible for specific topics or subjects, primarily those which are entirely new to the trainee e.g. Aircraft Direction, Missile technology, Laws of Armed Conflict etc. These need to be identified and dealt with separately. For the balance of the subjects, self-learning and research-based study should be the mantra. These should be augmented with class room discussions and experience sharing. Concurrently, optimum use needs to be made of simulators and practical, application-based training tools available.

### **Road Map for Armed Forces towards Encouraging and Developing Out Of Box Critical Thinking as part of its Culture**

There is no consensus as to whether critical thinking skills are generalizable, in the sense that they transfer from a specific content to broader environments. This presents a challenge, particularly in armed forces where doubts exist regarding whether critical writing skills can translate/transfer to critical decision-making skills. If critical thinking skills do not translate into critical decision-making skills, then trainers must determine specific applications before determining curriculum objectives and teaching methods. This means that our training philosophy has to change with regards to determining specific applications for critical thinking prior to determining a curriculum to foster critical thinking. Whilst designing a curriculum for professional military training, the following need to form a part:

- **Advocacy Groups/ Brainstorming Sessions.** These sessions are a must and yield better results if the participants are from diverse backgrounds and specialisations. This

atmosphere is easily available in professional military training. We only need to have organised advocacy groups for brainstorming on topics of relevance and find different solutions. This can be organised once a month but has to be moderated well else we may end up wasting time in clash of egos.

- **Competitive intelligence.** Competitive intelligence helps in scanning the environment quickly and also assists in shaping our strategies as required by the situation. These strategies are not the ones which are at national level or form a part of doctrines but situation based correct responses. Healthy group discussions are key to enhancing competitive intelligence.
- **Conjoint Analysis.** This type of analysis helps us to analyse and understand what our Commanders one level up and two levels up want from us. We may not have clear picture all the time but this analysis will definitely assist to clear the blur picture. 'De-brief day' will assist this cause.

Apart from modifying the curriculum to accommodate above mentioned factors, following needs to be addressed to encourage critical thinking:

- We need to find ways to bring changes in perceptual ideas of our personnel since these types of ideas prevent an individual to perceiving problem in right perspective. These can be overcome by organising mind games in units once in a month. These can be played on ground and help to look at problems from a different perspective.
- Intellectual barrier due to lack of skill or inefficient choice of mental processing causes interference to explore and manipulate ideas. Therefore, it is imperative to cultivate habit of reading amongst personnel. Although submitting service papers, writing book reviews are mandated as a part of Annual Confidential Reports (ACR), junior officers end up writing only for external rewards i.e. good ACR not because of intrinsic motivation. Hence, the element of critical thinking and evaluation is hardly present. One way to generate thought process is to identify concepts from these books or a broad topic and get a write up on ways in which it can be

conceptualised in their field of specialisation. That would foster creative thinking.

- Our organisations have to start valuing excellence. They have to provide safe environment where mistakes are tolerated or even encouraged, to promote learning and risk taking for achieving long term goals. The way things stand today, leaders who adapt to the working culture of their superior, do well in service. We have to think for the organisational good and this demands professionalism as the foremost requirement. Superior officers have to evaluate everybody based on QRs rather than personal experiences with personnel.
- Two levels of thinking have to be mastered. One at tactical level and the other at operational level. Lateral thinking is to question framework one is applying to a specific situation which can be done by challenging paradigm one is moving in. This has to be mastered by tactical commanders. Vertical thinking means maintaining position but changing the level of detail or abstractness has to be mastered by operational commanders. This will improve with reading concepts and questioning tactics.
- We have to come out from the clutches of giving conformity to opinion of others based on their desire to fulfil superior's expectations. A 'Yes Man' does this often to gain acceptance in a group. To mitigate this, we need to reduce creative risk linked with ACR.

## **Conclusion**

The quest to acquire critical thinking and military leaders embracing analytical skills remains a little behind than what nation would like to have. 'Out of box' thinking in connotation with Critical thinking has acquired reasonable importance in the armed forces. To achieve suitable intellectual capabilities, our personnel have to be challenged at an intellectual level. For them to come up with 'out of box' ideas, they have to be given professional thinking space and we also have to guard against their thought process being influenced by stereotyped thinking. Towards incorporating this aspect, it is important that personnel do not work under fear of failure. It is, therefore, incumbent upon the system that a clear distinction be drawn between genuine mistakes and negligence.

Towards this, officers in general and young officers in particular, need to believe in the fairness of the system and in second chances.

Challenging the status quo is normally hindered by cultural obstacles, particularly in the armed forces, but the necessity to be every time more efficient in operations, along with necessary answers to cope the challenges presented by the contemporary operating environments make creativity as a very important skill to be developed or improved if we are to meet the security challenges of the 21 century.<sup>9</sup> In order to develop creative leaders and men, the armed forces must develop mechanisms that facilitate rapid institutional change to incorporate creative ideas from a variety of sources.

### End Notes

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<sup>4</sup> "Defining Critical Thinking". Available at: [www.criticalthinking.org](http://www.criticalthinking.org). Accessed on 13 July 2021.

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<sup>6</sup> George A. Emilio, Major, USAF, "Promoting Critical Thinking in Professional Military Education", Thesis at Air University Alabama 2000. P.4. Accessed Feb 15, 2022 from <https://apps.dtic.mil/sti/pdfs/ADA394086.pdf>

<sup>7</sup> Narrowing the Creativity Gap: The Moderating Effects of Perceived Support for Creativity Article in The Journal of Psychology Interdisciplinary and Applied. March 2011

<sup>8</sup> Micael Dahmén (born 18 June 1973) is a Swedish author, public speaker and Professor of marketing and consumer behaviour at the Stockholm School of Economics, Sweden. His award-winning research within marketing, creativity and consumer behaviour has been published in four books and numerous journal articles.

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