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Contents

Editorial

We do express immense pleasure to publish the 61ˢᵗ issue of Bangladesh Army Journal for our valued readers. We are highly enthusiastic and dedicated to make our readers' interest in exploring an undiscovered world. The subject matters of the articles encompass multifarious facets of military profession with glowing representations on the leadership challenges for the generation gap, mastering the art of negotiation, mechanized infantry, use of electronic gadgets and social media, modern technological outlook, command, leadership, and tactics, etc. We strongly rely on the thought provoking dissertations of the current issue which will gratify our readers.

We need to acquire the knowledge on various disciplines to keep pace with the fast changing and progressive world of today. In this perspective, we have always taken care of publishing the scholarly articles in Bangladesh Army Journal which would not only create interest but also enrich the knowledge of its erudite readers. In this regard, we extend our gratitude to all the authors for taking keen interest and promoting the farsighted concepts exploring the untrodden domains of professional life.

At the end, we would like to express our sincere thanks and heartfelt appreciations to all concerned who have endeavoured and cooperated us in publishing the journal. We do believe that the future issues will foster new ideas with vibrant topics. We look forward to the continued support of all in our relentless quest for attaining the best.

GENERATION GAP AND THE MILITARY LEADERSHIP CHALLENGES

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Introduction

A military leader's prime role is to influence the under-commands towards mission accomplishment. The ultimate military mission,'to fight and if necessary sacrifice life for the nation', requires high moral obligation and strong mindset to obey orders. This presupposes prevalence of a common value system manifested in words and in deeds among all military personnel of all ages and ranks. It is a demanding charge on leaders to possess the ability to impact upon the personnel of all ages on common ground. It is not an easy task when different generations are at work together.

Generational differences are an age-old phenomenon. Historically, philosophers who attempted to describe generational theory include Auguste Comte, Maximilien Littre, John Stuart Mill, Gustav Romelin, Ottokar Lorenz, Wilhelm Dilthey and Emile Durkheim. A 14th century Bedouin, Ibn Khaldun, was the first philosopher to describe a four-generation cycle in detail. Greek historian Cicero, Greek writers Heraclitus and Homer, Chinese philosopher Lin Yuang, and the writers of the Old Testament (especially the book of Judges) show that this cyclical nature of history and generational development have not just been recently noticed. The first serious modern scholar to explain and describe 'generation gap' was a German named karl Mannheim in the 1920s.[1] Gradually this gained focus in other western societies. The term 'generation gap' got prominence because of the fast changing nature of the societies around the world. The influence of newer technologies has added momentum to this change. Generation gap is being widely discussed in Bangladesh as well. The fast changing social order influenced by booming technological use is triggering change of attitude and behaviour of the younger generation, and seemingly widening the gap between the younger and the elder generations day by day. The young and the old are possessing conflicting attitude. Failure in creating a healthy balance in the gap may lead to blameworthiness.[2]

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[1]Codrington, Graeme (July 2008); *Detailed Introduction to Generational Theory*; in Tomorrow today; http://www.tomorrowtoday.uk.com/articles/article001_intro_gens.htm

[2]Ghosh, Prodip Kumar, Mahmud, Md. Saleh (November 21, 2011); *The Social Construction of Generation Gap: A Comparative Study into the Process of Thinking and Implication on Adolescent, Young and Elder*; https://www.amazon.com/Social-Construction-Generation-Gap-Comparative/dp/3846554707

In Bangladesh Army, 'generation gap' has been rightly considered and directions are given to eliminate the gap so that no differences of mentality exist in between.[3] How does it matter and how to eliminate the gap are the points to ponder by leaders at all levels. This apparent deficit encourages to probe into the issue of 'generation gap' andits challenges for military leadership at the levels of direct command, and discuss as to how it can be addressed. The paper is based on the review of existing generational literature, articles and data on socio-political and socio-economic transformation of Bangladesh, and the writer's own views gathered through experience.

Understanding Generation Gap

Defining Generations. A generation is defined as a "group of people born in the same general time span who share some life experience—such as big historical events - pastimes, heroes and early work experiences".[4]

When Generation Gap Occurs. "Generation gap analysts believe that the shared life experiences condition generational groups to see and act differently than other generational groups, and there lies the emergence of a Generation Gap. These generational differences, they believe, cause people to communicate and use technology differently and have different worldviews and perspectives on family and work-life balance."[5]

Generational Personalities. Aneclectic search on generational personalities has found almost similar result with slight differences in their names and time span (Figure 1). Thus, it is seen that the living generations are broadly categorized into five generational groups.

Gener ational Break down	Time Span											
	1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	2010s
Type A[6]	Traditionalists (1900 – 45)					Baby Boomers (1946 – 64)		Generation X (1965 – 80)		Millennials (1981 – 2000)		

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[3] Minutes of Formation Commanders' Conference 4/2016.

[4] Blauth, C., McDaniel, J., Perrin, C. & Perrin, P. (2011); *Age-based Stereotypes: A Silent Killer of Collaboration and Productivity*; Achieve Global . Tampa: FL.

[5] White, Marion (July 02, 2015); *Rethinking Generation Gaps in the Workplace: Focus on Shared Values*; in UNC Executive Development; https://www.kenan-flagler.unc.edu/executive-development/about/~/media/C8FC09AEF03743BE91112418FEE286D0.ashx

[6] Generational Differences Chart, http://www.wmfc.org/uploads/Generational Differences Chart.pdf

Generational Breakdown	Time Span											
	1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	2010s
Type B[7]			Veterans, Silent Generation, Traditionalists (1922 – 45)			Baby Boomers (1946 – 64)	Generation X, Gen X, Xers (1965 – 80)		Generation Y, Gen Y, Millennials, Echo Boomers (1981 – 2000)			
Type C[8]	Traditionalists, Silent Generation (1945 and before)					Baby Boomers (1946 – 64)	Generation X (1965 – 76)	Gen Y, Millennials (1977 – 95)		iGen, Gen Z, Centennials (1996 and later)		
Type D[9]	GI Generation (1901 – 24)		Silent Generation (1925 – 42)		Baby Boomers (1943 – 64)		Generation X (1965 – 79)		Millennials (1980 – 2000)		Generation Z (2001 – 13)	
Type E[10]	GI Generation (1900s – 1920s)		Silent Generation (1920s – 45)		Baby Boomers (1946 – early 1960s)		Boomer-Xercuspers (1964 – 1969) Xers (Late 1960s – 89)			Millennial Generation (1989 – 2000s)		
Type F[11]			Veterans (1922 – 43)			Baby Boomers (1943 – 60)	Generation X (1960 – 80)		Millennials (1981 – 2000)			

Figure 1: Generational Personalities

[7]Hammill, Greg (2005); *Mixing and Managing Four Generations of Employees*, in FDUMagazine (Online); http://www.fdu.edu/newspubs/magazine/05ws/generations.htm

[8]*Generational Breakdown: Info About All of the Generations*; in The Center for Generational Kinetics; http://genhq.com/faq-info-about-generations.

[9]Raphelson, Samantha (October 06, 2014); *From GIs To Gen Z (Or Is It iGen?): How Generations Get Nicknames*; http://www.npr.org/2014/10/06/349316543/don-t-label-me-origins-of-generational-names-and-why-we-use-them

[10]Codrington, Op Cit.

[11]Hamacher, Bridget V, Lt Col, USAF (April 2010), *Different Generations and Challenges of Leadership - Does it Matter?*;www.dtic.mil/get-tr-doc/pdf?AD=ADA600681

Describing the Generations. Features that best describe these five generations are summarized in Table 1.

Features	Generation Name				
	Traditionalists/ Silent Generation	Baby Boomers	Generation X	Generation Y/ Millennials	Generation X/ iGen
Birth Years	Before 1945	1946 – 1964	1965 – 1980	1981 – 2000s	2001 – Now
Influencers	World Wars, Great Depression, Rise of Corporations	Post-World War II rebuilding, Civil Rights, Cold War, Space Travel	Energy Crisis, Dual Income families, Single parents, Corp. Downsizing, End of Cold War, First generation not to do as financiallywell as their parents did Originally "baby busters" for decreased birth rates. Generation	Digital Media, child focused world, terrorist attacks, AIDS	
Reasons for Naming	Abided by state decisions and fought World Wars, children grew up quietly and waited for their turn in state/societal affairs	Named to describe the economic boom after World War II and, later, the rise in fertility rates.[12]	X first appeared in an essay on young adults coming of age after World War II. Became preferred label in 1991 when Douglas Coupland in his book, *Generation X: Tales for an Accelerated Culture*, explained - "X" meant to signify generation's desire not to be defined.[13]	"Millennial" referred to an attitude, a lens through which people viewed the near future.[14]	Born with internet

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[12]Raphelson, Op Cit.

[13]Raphelson, Op Cit.

Features	Generation Name				
	Traditionalists/ Silent Generation	Baby Boomers	Generation X	Generation Y/ Millennials	Generation X/ iGen
Values	Adhere to rules, Dedication/Sacrifice, Discipline Don't question authority, Loyalty, Patriotism, Respect for authority, Responsibility, Trust in Government	Anti war, Anti government, Anything is possible, Optimism, Team Oriented, Want to make a difference	Balance, Diversity, Entrepreneurial, Independent, Lack of organizational loyalty, Pragmatism, Think Globally, Techno literacy	Achievement, Avid consumers, Confidence, Diversity, High morals, Hotly competitive, Like personal attention, Self-confident, Members of global community, Extremely techno savvy, Optimism, Realism, Street smarts	Techno savvy
Technology	Adapted	Acquired	Assimilated	Integral	Inherited

Table 1: Features Describing the Generations

Generation Gap – The Bangladesh Perspective

Factors Shaping Generations in Bangladesh. The five generations, as described in Table 1, represent the Western views and are influenced by global markers. Though the global events do have more or less implications all over the world, yet, there are certain regional or domestic happenings that ultimately shape the generations of that region or country.[15] A closer look into the affairs of Bangladesh is discussed below:

Defining Events. After world War II, following the partition of India and Pakistan the socio-political environment of the then East Pakistan was dominated by succeeding major events like the language movement of 1952, formation of the United Front and subsequent legislative election of 1954, the six-points demand of 1966, the mass uprising of 1969 and finally the war of

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[14]Lafrance, Adrienne (February 3, 2016); *How Generations Get Their Names: Millennials weren't always Millennials*; in The Atlantic; https://www.theatlantic.com/technology/archive/2016/02/how-generations-get-their-names/459720/
[15]Codrington, Op Cit.

independence in 1971. The newborn country then went through a period of fragility in democratic culture till the parliamentary form of government was reinstated through a mass struggle in 1990.[16]Thus, the political environment of Bangladesh can broadly be divided into three periods; pre-independence, post-independence till 1990 and from 1990 till date; the influence of which will be perceived in subsequent discussions on other factors of shaping social order.

Economic Growth.   After independence, Bangladesh economy grew slowly throughout the 1970s and the 1980s. But, since 1991 the growth has been much better with steady rise in graph. In the past decade, the economic growth has been better than ever before with remarkable progress in the last couple of years.[17] Gross Domestic Product (GDP) in Purchase Power Parity (PPP) terms (Figure 2) also justifies this trend.[18]
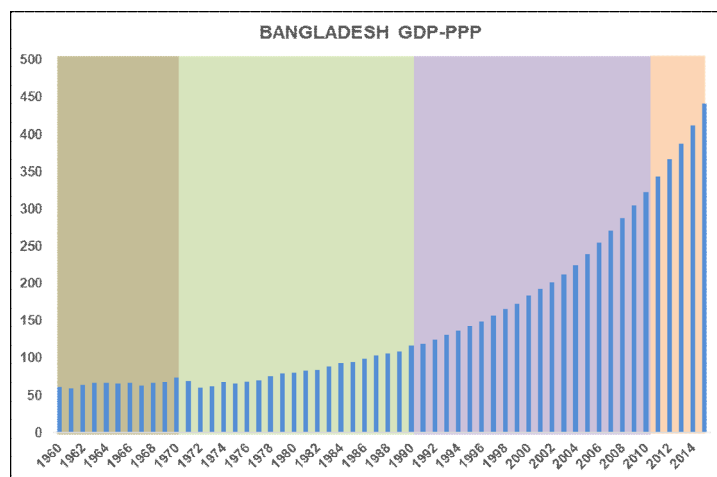
Figure 2: GDP-PPP of Bangladesh (GDP in Bn Dollars; PPP in 2011 prices)

Influx of Technology. Bangladesh Television (BTV) was the only media from the 1960s telecasting mostly domestically produced items. The Video Cassette Recorder/Player (VCR/VCP) boom in the late 1970s allowed coloured foreign films to flood the market of Bangladesh. BTV went colour

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[16] Khan, Monirul I.; *Social Changes in Contemporary Bangladesh* in Journal of the Asiatic Society of Bangladesh (Hum.), Vol. 58(2), 2013, pp. 263-276; https://www.asiaticsociety.org.bd/journal/04MonirulIKhan.pdf

[17]Helal, Mohammed and Hossain, Md. Amzad; *Four Decades of Economic Development of Bangladesh: An Assessment* in Journal of the Asiatic Society of Bangladesh (Hum.), Vol. 58(2), 2013, pp. 335-362; https://www.asiaticsociety.org.bd/journal/08MohammedHelal.pdf

[18]World Economics, The First Measures of Global Growth Every Month; http://www.worldeconomics.com/GrossDomesticProduct/Bangladesh.gdp#LatestData

in the 1980s. Satellite Television (STV) came in 1992 through the use of Television Receive Only Dish (TVRO). Cable TV came in 1993 and made the world come in a box in much affordable cost.[19]Mobile phones came in 1992 and gradually surpassed fixed line phone access in 2001. But the significant change in mobile phone use came since 2003. The number of mobile phone user per 100 people increased from 1% in 2003 to around 56% in 2011.[20]Internet followed suit in the mid-1990s. The internet usage increased tremendously within a few years, from 0.1% of population in 2000 to 31.9% of population in 2015.[21]It is now the smart phone that has the most technological leverage over the people of Bangladesh because of its portability and affordability as compared with personal computer.

Categorizing the Generations. While gradual improvement towards stable political environment allowed economy to flourish, the economic emancipation facilitated better living standards and affordability of modern technological gadgets. Technology then further complemented economic development. Newer technologies made lives faster than ever before opening doors to globalization for the Bangladeshi society. All these made slower progress till the late 1980s, but got accelerated better and better from the early 1990s. Thus, the living generations in Bangladesh can be categorized and defined as Traditionalists (up to 1945), Pre-independence generation (1946 – 1971), Post-independence generation (1972 – 1990) and the Millennials (1991 – present) as shown in Figure 3.
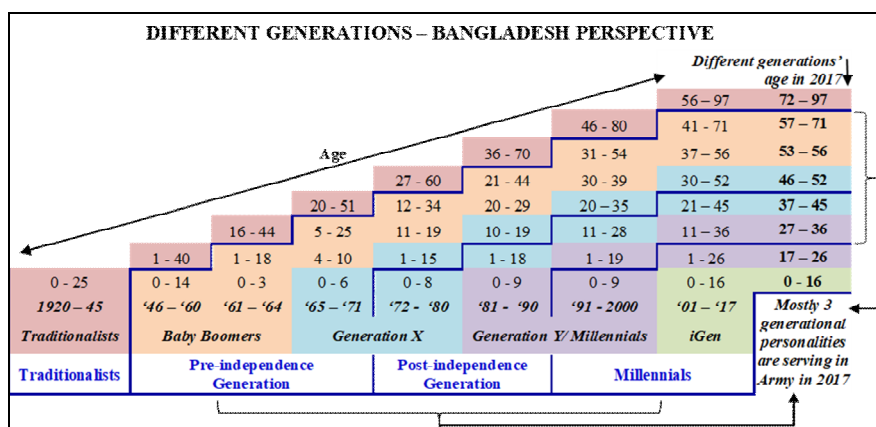
Figure 3: Different Generations – Bangladesh Perspective

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[19]Robaka, Shamsher and Abdullah, MohhammadNayeem; *Effect of Satellite Television on the Culture of Bangladesh: The Viewers Perception* in European Journal of Business and Management, ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol 4, No.9, 2012; http://www.iiste.org/Journals/index.php/EJBM/article/viewFile/2202/2215
[20]Helal, Op Cit.
[21] Bangladesh Internet Usage Statistics; http://www.internetworldstats.com/asia/bd.htm

Generation Gap in Military– How Does It matter

Military Generational Landscape. Military is a hierarchical organization comprising of two classes of personnel; officers and the soldiers. Together they constitute an intergenerational mix of manpower. While drawing the military generational landscape (Figure 4), the entry and retiring ages of both officers and the soldiers have been considered 20 and 55 years respectively. Thus, from Figure 3, it may be discerned that mostly three generational personalities are presently serving in the Army, ie, pre-independence generation, post-independence generation and the millennials. The command hierarchy in Figure 4 has been arrayed into four groups with duration of stay in particular groups basing on general trend of promotion to higher ranks. The vertical lines in blue indicate current composition of three generations. Today's pre-independence generation was the youngest in the early-1990s and today's youngest generation will be the oldest in the 2040s. Thus, it's a repeating cycle of similar generational mix all along the timeline of military generational landscape.
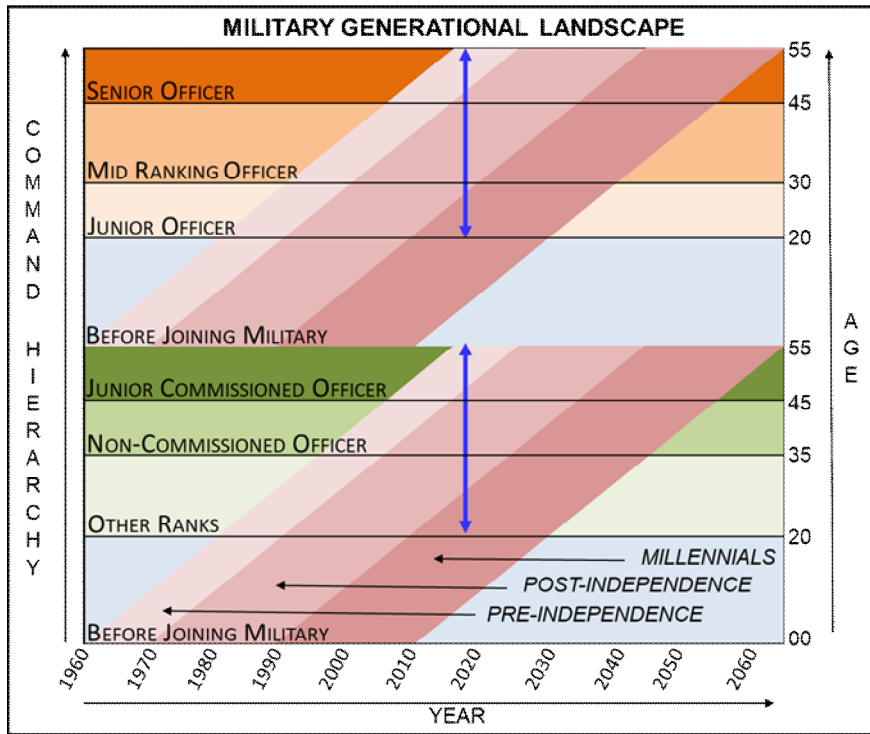
Figure 4: Military Generational Landscape

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Intergenerational Understanding and Communication. The problem of generation gap is the older generation's difficulty to understand and effectively communicate with the younger generation, and vice versa. The military command hierarchy pronounces this (Figure 5). The senior officers or the senior leadership at the top seatsof command hierarchy need to understand the younger generations and communicate down the chain of command. But, the junior officers being in the middle of the command hierarchy have to act upon orders by superior officers of older generations and at the same time lead their under-commands where, down the chain of command, the immediate lower subordinates are the Junior Commissioned Officers (JCO) who belong to the oldest generation in service. Figure 5 shows four types of intergenerational relationship requirements for senior leaders (senior officers), mid-level leaders (mid-ranking officers) and junior leaders (junior officers, JCOs and Non-commissioned Officers (NCOs) up or down the chain of command. Among twenty intergenerational relationship requirements, as shown in Figure 5, four are for senior leaders, four are for mid-level leaders and twelve are for junior leaders. While the senior leaders need to communicate with the younger generation only, the mid-level and junior leaders need to communicate with both older and younger generations all together. So, the problem of generation gap matters most at the junior leadership level.

Figure 5: Inter-generational Relationship Challenges

Implications on Military Values and Culture. Shaped by the same economic, social and political times and influenced by the s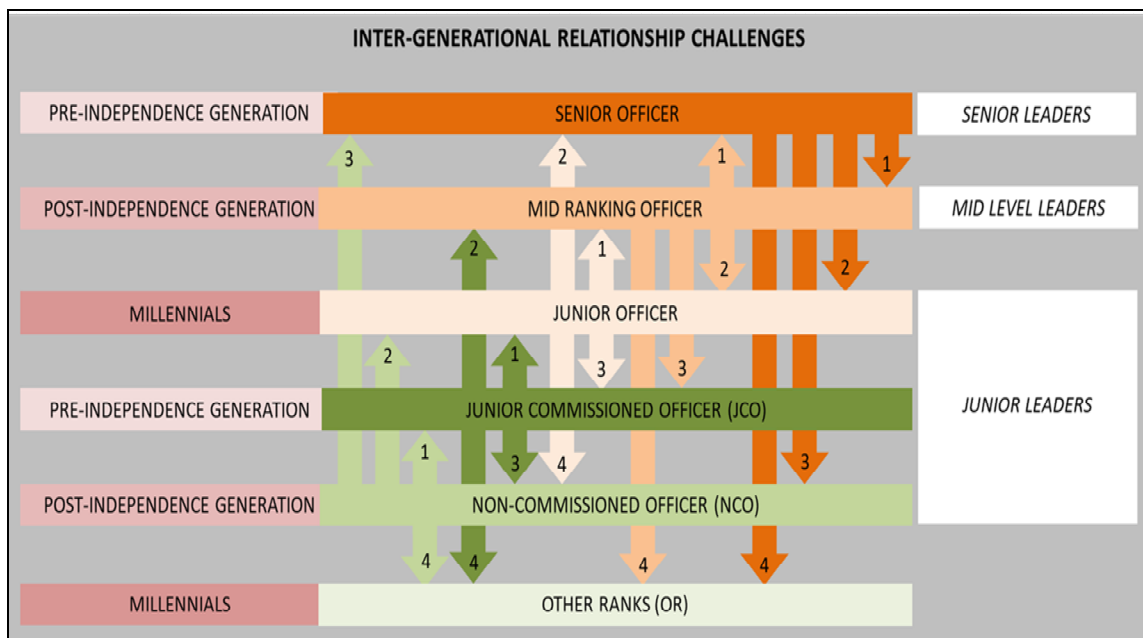ame social markers and events which occurred at critical stages of their lives, different generations bring different strengths and weaknesses to the workplace.[22] Notwithstanding the generational differences, the pre-independence and post-independence generations have commonalities in regards to the technological influence. Needless to say, they were less technology driven when they grew up. But, the millennial generation here makes a sharp difference. They are techno-savvy digital residents. They are well connected in the era of globalization. Military is perhaps not their only preoccupation. They do not live to work like the older generations, rather they work to live. They make their own work-life balance. There would be no worry if one could make good use of the wonder gadgets and learn the best things being influenced by globalization. Unfortunately, there are risks of going off-track. This could become immensely disturbing among the soldiers. It may be mentioned that the ability to socialize anonymously or with fake personification in the social networking sites not only allows one to relegate from truthfulness but also triggers the negative instincts of character like developing inappropriate virtual relationships. Too much of addiction to smartphone usage may be traded with personal off-duty nightly hours when soldiers are supposed to take rest and prepare for next day events, thereby compromising with discipline and punctuality. Indeed, this kind of moral erosion may affect the attitude and behavior of the millennials in great numbers which is in contrast with military values and culture.

Technological Generation Gap at Soldiers' Level. Today's JCOs/NCOs could not be enough technology-oriented when smart phones took the society at its hand to the fullest. They possessed simple phones and most of them are still comfortable with those. But, the new generation soldiers are attracted to smart phones that serve multi-purposes at a go. Internet connectivity along with the access to social networking sites has not only allowed them the wider reach but also holds the potential of influencing their language and behaviour. The JCOs/NCOs who cannot make the good use of those are facing difficulties to match with them.

Rising *Preponderance of* Millennialsin Military Make Up. The military pyramidical *hierarchical structure permits lesser numbers in higher ranks and more numbers in the lowest ranks. The presence of the millennials, what is about 50% now*

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[22] Tanner, Leesa; *Who are the Millennials?* (December 2012); Maritime Operational Research Team, Defence R&D Canada, Centre for Operational Research & Analysis; www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA550986 A

in the lowest ranks (Figure 4), will rise in next few years changing the generational make up; hence compounding the present concern of generation gap.

The Challenges of Leadership. It is the intergenerational gap that is causing all concerns. It is the crux of everything. It should be addressed right now, or else the Army's greater interest will be affected. From the discussions above, the challenges of leadership clearly stand out are;

(1) How best the intergenerational understanding can be developed?

(2) How best the communication between the generations can be strengthened?

(3) How the long-inherited military values and culture can be transferred and retained inall generations for the best interest of the organization?

(4) How best the millennial generation can be managed and prepared to undertake the next generation of leadership?

Addressing the Challenges – Connecting the Generation Gap

The responsibility of the leadership for connecting the generation gap cannot be generalized, as has been shown in Figure 5 that intergenerational communication is contextual to the levels of command and leadership. However, the complexities of generation gap demand due attention at officers' level. And, it is more at the levels of mid-ranking and junior officers. The senior leadership is well aware of the issue and doing whatever appropriate to eliminate intergenerational gap. It is also beyond the scope of this paper. It is the mid-ranking and junior officers in direct command of the soldiers who need to be resolute in bridging the generation gap. Few measures and processes are suggested in the succeeding paragraphs.

Find Common Ground, Don't be Drawn into Ethnographic Dazzle. Theterm "Ethnographic Dazzle" was coined by British anthropologist Robin Fox to explain blindness to underlying similarities between human groups and cultures because one is dazzled by the more highly visible surface differences.[23] The millennial generation's attitude and behaviour are mostly influenced by modern technology and globalization. This influence makes highly visible differences,but does not necessarily make them totally different. They belong to the same society, only born in different times, thus share many things in common with the older generations which may include patriotism, religious and cultural values, social norms, etc. These

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[23]Codrington, Op Cit.

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underlying similarities, often considered "very normal" and "ought to be", may be explored to negotiate the differences between generations.

Utilize the Cuspers. Johan Huizinga, a Dutch historian and one of the founders of modern cultural history, posed the problem: How to specify the boundaries of generations in the seamless continuum of daily births?[24] Indeed, it is very difficult to specify boundary between two generations. Instead, there can be foundcuspers,[25]a group of people, who fall into the overlap between two generations, born in a time between eras and influenced by both eras. Interestingly, most cuspers tend to choose characteristics of one or other of the generations they straddle, rather than displaying characteristics of both.[26]For example, those who were born in the late 1980s and in the early 1990s is a cusp group between post-independence and millennial generation. They know when to wear a formal dress and have a sense of etiquette to behave appropriately so they do not irritate the seniors in the way that the millennial soften do. But, when off-duty, they change into casuals and easily mingle with the millennials where none can identify them separately. Thus, cuspers have a hugely important role to play in bridging the gap that so often exists between two generations. This makes them extremely valuable in multi-generational workplaces for their capacity to make great generational mediators.[27]

Understand, Recognize, and Embrace the Differences. Once a leader understands that the generational differences are not necessarily personal in nature, he can then recognize what causes the miscommunication, misperception, and tension.[28] For example, asking a "why?" or asking questions by a millennial soldier may sound disrespectful to his superior officer or JCO of the older generation. It is to be understood that all the millennials are always not being disrespectful, rather the reason for asking a "why?" could be his effort for getting truly deeper understanding of the task given to him. Because, this millennial soldier is influenced by the characteristic that no more holds "traditional society views" of accepting things without logic, purpose or understanding. Likewise, when a millennial soldier wants to have some leisure time does not necessarily mean that he has no dedication for work.

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[24] Spitzer, Alan B.; *The Historical Problem of Generations*; *https://www.jstor.org/stable/1854096*
[25]A "cusp" is the point at which two parts of a curve meet.
[26]Codrington, Op Cit.
[27]Codrington, Op Cit.
[28]Hamacher, Op Cit.

Recognising the generational differences allows to understand that he values his work-life balance and would like to have a life outside the duty. Again, when a JCO wants to enforce things saying "during our times we used to do like ….." may not draw attention of the millennials, rather alienate them. Understanding and recognizing the generational differences will help leaders of all ranks embrace these differences and help them find the positivity in these differences. The key to all these steps – understanding, recognizing, and embracing – is respect and communication.[29]An environment of respect and communication will help overcome generational differences basing on these three steps and focus on uniformed commitment.

Explore the Core Competencies of the Millennials. Core competencies define the key values and strengths shared by the entire generation. The millennials' core competencies are instigated by their extreme technological orientation and expanded by the all-pervasive globalization. They are able to communicate effectively across multiple media and for various purposes. They are able to work effectively with diverse groups and exercise flexibility in making compromises to achieve common goals. They are team oriented, optimists and used to multi-tasking. Perhaps, creativity and critical thinking can also be attributed to them. Such core competencies, if explored properly, can help prepare a tremendously agile and motivated generation of officers and men who will be able to provide the right kind of leadership in future.

Organize Cross-Generational Mentoring. Cross-generational mentoring recognizes that both older and younger generations have many things to teach and learn from each other that can benefit both individuals because there are skill gaps on both sides. The mentoring process involves pairing a person from one generation with a person from a different one with a goal of mutual learning and growth. It creates a bridge to eliminate both the generational and skills gaps that exist. It also promotes a greater sense of community within the organization.[30] For example, a Platoon Sergeant's personal supervision and mentoring of a young soldier can keep him more motivated and committed to the unit, bring him good course results and make his increased visibility in the unit; thereby making him a respectful and valued member amongst all other soldiers. Similarly, the Platoon Sergeant can benefit from

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[29]Hamacher, Op Cit.

[30]Wloczewski, Ceil; *Cross-Generational Mentoring* (28 July 2014); http://www.cellaconsulting.com/blog/cross-generational-mentoring/

reverse mentoring in the areas of technology like handling of computer, making presentations, etc. Thus, by organizing cross-generational mentoring it is possible to keep the values of the previous generations alive by instilling their hard-working and loyal culture in the younger generation while at the same time prepare them to undertake the next generation of leadership.

Conclusion

The living generations, in accordance with the Western views, are broadly categorized into five generational groups. Such categorization, being influenced by global events and markers, do not equally apply to the situation of Bangladesh because of the local political, economic and technological developments. Considering those, the living generations of Bangladesh can thus be categorized into Traditionalists, Pre-independence, Post-independence and the Millennial generations. Out of them, three generations (less the traditionalists) can be found currently serving in Bangladesh Army.

Generation gap matters much in the military. Army being a retiring service with fixed entry and exit ages, in fact, will always have a repeating cycle of intergenerational mix of manpower. Army's hierarchical command structure having a three-generational mix at both officers' and soldiers' level requires intergenerational understanding and communication for being more effective. But, this requirement is more prominent at junior leaders' level as they have to interact both ways, up and down the chain of command, and with both the older and the younger generations simultaneously. Besides, the millennial generation's excessive indulgence in modern technological gadgets along with the influence of globalization on them have resulted into certain negative implications on their attitude and behaviour, which are in contrast with Army values and culture. This technological division is very prominent at the soldiers' level. Such concerns could only be compounding in the coming years due to the rise of the millennials number.

Given this account, the prime challenge of leadership remains as to how to bridge the inter-generational gap. Faced with this broad challenge, the actual leadership challenges that clearly stand out are developing intergenerational understanding, strengthening communication between generations, transferring and retaining military values and culture across the generations, and managing and preparing the millennials to undertake the next generation of leadership. Addressing these challenges needs due attention of mid-ranking and junior officers who are in direct

command of the soldiers, and also holding the position of mid-level and junior-level leadership. Their resolve is very important in bridging the generational gap. While dealing with the issue, it is suggested that they do not miss exploring the underlying intergenerational similarities being dazzled by highly visible surface differences. They should utilize the cuspers as mediators who fall into the overlap of two generations. In connecting the gap they should create an environment of respect and communication so that intergenerational differences can be understood, recognized and embraced effectively. The millennials have certain core competencies that should be explored to prepare a highly motivated and agile future generation of officers and men as well. Finally, cross-generational mentoring should be organized to derive mutual benefits for both older and younger generations. It is to be noted that generation gap if allowed to continue will result into generational conflict, and the conflict of generations is by no means the harbinger of any kind of progress.

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MECHANIZED INFANTRY – A FUTURE ARM OF BANGLADESH ARMY

Colonel Md Ziaul Hoque, afwc, psc

"Victory smiles upon those who anticipate the change in the character of war, not upon those who wait to adapt themselves after the changes occur".

- Giulio Douhet

Introduction

The changing and varied nature of battlefield with wide spectrum of modern man-portable anti-armour weapon system has brought nature of threat and task of mechanized forces more challenging. Nowadays, battles are drawn into urban areas in an obstacle-prone terrain where heavy tanks are at peril.[1] Heavy tanks often become prey to enemy due to complex terrain. Russian initial invasion of Grozny in Chechnya with heavy tanks proved to be liabilities due to the inherent shortcomings and complexities of terrain.[2] It is a painstaking task to dislodge foot infantry who are sitting in well-prepared position surrounded by restricted terrain. However; its weakness is more vivid in defensive operations where terrains are less restricted. They can dig in and may very well deny attacking formations out of their prepared positions. Moreover, their lack of mobility makes it hard for them to re-orientate or relocate in order to counter mobile forces that are not directly attacking their front. Standard infantry is also unable to trade space due to less mobility. They either win or overrun in many situations.

The concept of mechanized infantry practiced through the ages with chariots and cavalry where soldiers fought hand-to-hand for decisive result. The modern mechanized force took its shape from the German concept of 'Blitzkrieg' during the World War II adopted for annihilating French and Polish Army. This was the classic combination of tanks and motorized infantry. In blitzkrieg, mechanize formations moving at a rate at least four times that of dismounted infantry were sure guarantors of tactical and operational success. In above-mentioned instances, the concept of mechanized forces easily achieved due to massing of combat forces and firepower at

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[1] Spencer C. Tucker "Weapons and Warfare" Sanata Barbara, California, 1937, p-5.
[2] N. N. Novichkov , The Russian armed forces in the Chechen conflict: analysis, results, conclusions (in Russian), Paris, Moscow: Kholveg-Infoglob, Trivola, 1995, p. 64.

the decisive point, as stated by Karl von Clausewitz.[3] The operational concept executed in field by incorporating the technological advancement. Through the mechanization, battles and campaigns acquired degree of mobility that was never seen before in the field of warfare. Mechanize force is one of the critical assets to the commander for seeking decision in the battlefield.

The threat based capability and emerging geo-political condition surely necessitates the requirement of force structure and humble beginning of mechanized infantry in Bangladesh Army. However, development of technology in the contemporary world will also prompt any capable nation to secure latest technology for upsetting enemy plan, which is a threat to independence and sovereignty. Bangladesh Army may face more challenges, related to non-traditional, asymmetric wars and natural disasters. However, traditional threats should always get preference over asymmetric threats. Future war will be short, intense, net centric and in the form hybrid warfare.[4] The commander will largely depend on firepower, mobility and concentration of forces in the battlefield to support armour and foot infantry. It is instructive to analyze the reasons for the slow demise of the heavy tank and increasing numbers of infantry battalions equipped with versatile combat vehicles. The aim of this article is to examine the contemporary trends of mechanized forces in various armies of the world with a view to drawing suitable lessons for Bangladesh Army.

Evolution of Mechanized Infantry

In 1918 during the Battle of St. Quentin, A7Vs were accompanied by 20 storm troopers from Rohr Assault Battalion, but it is unspecified if they were acting as dismounts or were accompanying the tanks on foot.[5] During the battle, tank crews reported to have dismounted and attacked enemy positions with grenades and flamethrowers on numerous occasions.

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[3] Clausewitz Carl Von "On War" London Printing press 1909, p-249
[4] Hybrid warfare is a military strategy that blends conventional warfare, irregular warfare and cyber warfare. By combining kinetic operations with subversive efforts, the aggressor intends to avoid attribution or retribution. Hybrid warfare can be used to describe the flexible and complex dynamics of the battle space requiring a highly adaptable and resilient response.
[5] https://www.revolvy.com/topic/Mechanized%20infantry&item_type [accessed on 21 July 2017]

**German A7V tanks in Roye, Somme during
the Battle of France in 1918**

Another example of the use of such a method of fighting is the capture of Villers-Bretonneux (30 March – 5 April 1918), in which A7Vs would suppress the defenders with machine gun fire and assault teams would dismount and attack them with grenades.[6] During and at the end of World War I, armies faced the difficulties in massing firepower and maintaining impetus while launching offensive. Infiltration tactics frequently used in order to break the solid defence line of enemy, but most of the offensives stalled by 1918. The foot infantry quickly became exhausted and fresh formations could not be brought forward for maintaining momentum of success over the battlefields quickly enough to maintain the pressure on the regrouping enemy. It was widely acknowledged that armour played significant role during the World War II despite its vulnerability in the western front. However, motorized infantry gave mobility in the battlefield, but their trucks required either a good road network or firm open terrain, such as desert. They could not negotiate battlefield hindered by different types of obstacle belts and craters. Tracked or wheel vehicles or combination of both to be the solution for the battlefield.

J. F. C. Fuller advocated for "tank fleets" as a components of mobile warfare for future battlefield.[7] Other proponents of mobile warfare such as Heinz Guderian from Germany, Adna R. Chaffee Jr from the United States and Mikhail Tukhachevsky from the Soviet Union suggested that tank units required close

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[6] https://en.wikipedia.org/wiki/First_Battle_of_Villers-Bretonneux [accessed on 21 July 2017]
[7] https://www.biography.com/people/jfc-fuller-36936 [accessed on 24 July 2017]

support from infantry and other arms and such supporting arms needed to maintain the same pace as the tanks.[8] Having achieved spectacular successes in the offensive with tank-heavy formations during the Six Day War, the Israel Defence Forces found in the Yom Kippur War of 1973 that a doctrine that relied primarily on tanks and aircraft had proven inadequate.[9] As an improvised arrangement, paratroopers were provided with motorized transport and used as mechanized infantry in coordination with the armour in Yom Kippur War.

Deep Penetration by armour formations with huge firepower and manoeuvring capability might not achieve desired goal without consolidating the gain and holding the ground physically by infantry. Battle winning fact of having both Infantry and armour in the same pace was intensely felt between World War I and ll which ultimately ensued a transformation from armoured infantry (panzer grenadier) to motorized infantry and then to Armoured Personal Carrier (APC) based battle taxi infantry to the present day Infantry Combat Vehicle (ICV). To improve speed a military force can be mechanized being equipped with armoured and motor vehicles like APC and ICV. Infantry and armour accolades and augments the capability of each other retaining their primary role. Finally, the mechanization process of infantry commenced with the beginning of World War II owing to its pre-eminence in a volatile and mechanized battlefield.[10]

Evolving Threat Matrix

After the World War II, the world saw increased mechanization by the super powers and the developing countries. With the end of the Cold War, increasing technological improvements and uncertain political conditions, the future strategic environment cannot be predicted with any degree of assurance.[11] The extent of the mechanization varied due to a number of factors. The structuring of Bangladesh Army today has manifested as to how Bangladesh protect their national interests in the coming years. Bangladesh Army has planned for a particular level of mechanization/force structuring based on the threat envisaged in its strategic interests.[12]

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[8] https://en.wikipedia.org/wiki/Mechanized_infantry [accessed on 22 July 2017]

[9] Lieutenant Colonel Horvits Avraham, Israeli Air Force; "The 1973 Yom Kippur War" 1993, p-8.

[10] https://www.ukessays.com/essays/history/infantry-battalions-to-mechanised-infantry-history-essay.php[accessed on 23 July 2017]

[11] J. Hogan Michael "The End of Cold War" Cambridge University Press, 1997: The Cold War, the long peace and future, p- 25.

[12] Forces Goal 2030 - Bangladesh Army

The armed conflicts are likely to take a hybrid form, covering the entire spectrum. Hybrid warfare is set to be the most common form of warfare in the 21st century.[13] The internal turbulences with threats of insurgencies and Low intensity conflict (LIC) have insisted Bangladesh Army for few mechanized components as critical assets. Moreover, minimizing the number of soldiers exposed to risks, mechanized forces support the adoption of manoeuvre strategies, which emphasize shorter and lower cost wars.[14] The Mechanized Infantry plays a lead role in United Nations Peacekeeping Operation (UNPKO) owing to its versatility. Bangladesh is no exception to that, she is always at the forefront to assist UN for establishing peace around the globe by deploying peacekeepers with latest armaments and equipment.

The doctrinal perspectives to prosecute future wars and the prevailing nuclear equations indicate that future wars in the regional context will be "limited in nature and scope". Technologies are gradually placing a higher premium on basic infantry skills to higher-level integration of theatre wide operation.[15] Warranting victory in a limited high technology war in search of short and swift engagements will solely hinge on firepower, mobility and force projection. Advanced technology and its waves will be the sore issue in vindicating the future conflicts. Strategic, operational and tactical distinctions are likely to be distorted by rapidity and intricacy of operation. Future battlefield is likely to be non-linear and fluid as there will be multidimensional and concurrent engagements of forces in the entire spectrum of the combat zone.

Paradigm Shift from Battle Taxi Concept to ICV Concept

The Mechanized Infantry Battalions are authorized with APC BTR-80 and for few particular weapon systems Light Armoured Vehicles (LAV) are incorporated. At present our training system of mechanized infantry are basically based on the above fighting vehicles. The integral weapons and with its present capability, these equipment has got protection only against small arms fire but very limited anti-tank protection. Moreover, as it is wheel based, therefore, their movement is restricted within roads/tracks and their cross-country mobility is subjected to terrain and weather conditions. All the attributes and limitations mentioned above regarding

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[13] Frank G. Hofman, Hybrid Warfare and Challenges, JFQ, issue 52, 1st quarter 2009, pp36-38.
[14] The US Army, 15 September 2015 "Combat Vehicle Modernization Strategy" p-03.
[15] E. O' Hanlon Michael "The Future of Land Warfare" 1775 Massachusetts Avenue, 2015. p- 56

APCs commensurate with 'Battle Taxi Concept'.[16] Seeking a decisive result with a mechanized force as striking force in a defensive battle (Covering Forces Operation, Reserve Operation and Counter Offensive Operation) through 'Battle Taxi Concept' will be a difficult proposition. Similarly, in offensive operations, especially during attack following the 'Battle Taxi Concept', it will be possible to utilize them well short of objective method but will be quite difficult to employ them short of objective, on objective and beyond objective due to the inherent limitations of APCs.[17]

In the battlefield, tanks and mechanized infantry will operate in support of each other in the form of Combat Team (CT), Combat Group (CG) and Combat Command (CC). With the existing armament, protection and maneuver capability of APCs, it will be difficult to provide such intimate support. The APCs being the main stay of Mechanized Infantry will not be able to deliver decisive punch for the commander having less anti-tank protection, absence of required armaments for effective engagement of enemy tanks and infantry from a long range and less maneuver capability considering the terrain configuration and weather condition of Bangladesh. Therefore, to employ mechanized infantry in a more effective manner, Bangladesh Army may take a robust approach for procuring ICVs instead of APCs to support the doctrine of Mechanized Infantry.[18] However, APCs may be employed in LIC, counter terrorism operations and United Nations Peace Keeping Operations (UNPKO).

Training Modalities

Combined arms team concept implies that, units and sub units are organized for combat with mixed grouping of all arms and are customized for specific tactical mission. The nucleus of such a team is armour and Mechanized Infantry. Around this nucleus, a team/ group is formed supported by elements of self-propelled Artillery, Air Defence Artillery, Engineers, Electrical and Mechanical Engineers (EME), Signal and air assets (Attack helicopter). At present training modules are conducted in isolation, not keeping harmony between armour and mechanized infantry as

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[16] Lighter protection against small arms and not designed for combat in conjunction with armoured, due to limited range, fire power and ability to carry troops upto selected dismounting area well short of objective.

[17] Draft Doctrine of Mechanized Infantry Battalion in Battle (MIBIB), June 2013, pp 18-8 to 18-10.

[18] ICV is a mobile platform which is armed with 20 to 40mm Cannon, Anti Air craft Machine Gun and Anti-Tank Guided Missile and also provides better protection and manoeuvre, as it is mostly tracked vehicle and designed to fight more effectively in conjunction with armour rather than APCs/LAVs.

combined arms concept (CT/CG/CC). In addition, ongoing training (Mechanized Infantry Course -UN, conducted by SI&T and ACC&S) on mechanized forces focused on UN employment rather than their conventional employment. Therefore, it is necessary to redesign the overall training concept keeping in mind the classic role of mechanized forces.

Bangladesh Army may take a closer look for developing a separate center and school for mechanized infantry. A separate institutional training and formation training curriculum for the officers and men need to be developed in order to strengthen the effectiveness of mechanize forces. Besides, few designated training areas (Sarnaw Deep and Hathazari Field Firing Range) need to be developed to conduct CT/CG/CC level maneuver exercise with live firing, at least once in a year/alternative year.

Efficacy of Mechanized Infantry

In Operation DESERT SHIELD, during the built-up phase of the first Gulf War, the army was concerned about the lack of mobility, protection and firepower offered by rapid deployment (i.e. airborne) formations[19]; and about the slowness of deployed regular armoured units. Increasingly, the US Army in its several conflicts all over the world is using lighter vehicles. The total ratio of heavy tanks to ICVs/APCs/Light Armour Vehicle (LAVs) works out to 6344: 19772, or approximately 1:3.11. The UK has relied upon its mainstay on Challenger tanks till date.[20] However, a relative doctrinal shift has been observed in its plan of further expansion and restructuring of UK Armed Forces. Emphasis has been laid on employment of heavy mechanized superiority compared to pure armour elements. Under the proposal of future army, the UK Armed Forces will have an overall ratio of heavy tank units to lighter mechanized units of approximately 5:11 or 1:2.2[21]. After the 1965 war, the Indian Army felt the necessity to provide matching mobility to the infantry units operating with the armoured formations. Indian Army moved from ICV to IFV concept in 1980 by incorporating BMP I (Boyevaya Mashina Pekhoty) from Russia in order to

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[19]Hosmer Stephen T, "Why The Iraqi Resistance To The Coalition Invasion So Weak" Coalition Armour Dominated in the Ground Fighting, published in 2007 by the RAND Corporation, p.118

[20] http://www.dailymail.co.uk/sciencetech/article-3633165/The-future-British-battle-tanks-Challenger-2-new-weapons-thermal-imaging-extend-life-20-years.html [accessed on 23 May 2017]

[21] https://en.wikipedia.org/wiki/Mechanised_Infantry_Vehicle [accessed on 23 May 2017]

support maneuver of the Infantry.[22] Indian Army has transferred technology for producing BMP II by Ordnance Factory Medak under the supervision of Defence Research and Development Organization (DRDO). Mechanized Infantry has a separate training centre at Ahmednagar known as Mechanized Infantry Regimental Centre (MIRC) co-located with Armour Centre and School (AC&S).[23] The centre endows with all possible training infrastructures where recruits and officers of Mechanized Infantry Regiment are being trained.

Each nation maintains its armed forces and shapes it in a manner that the military hardware best suits to meet its envisaged threats.[24] Traditionally, heavy tanks or armour has dominated the armies of the world. The ratio between tanks and infantry depends on many factors. The most important factors are the type of combat and nature of engagement. If the engagement is in maneuver warfare over open terrain, the infantry is there to support the tanks. In that case, the ratio of infantry to tanks depends a lot on the specific type of terrain and how many close assaults that are anticipated. However, in recent years, due to the changing nature of warfare, shrinking reaction time, rapid urbanization in almost all parts of the world and emergence of new threat heavy tanks have not been used in many conflict scenarios. It is instructive to analyze this aspect.

Conduct of Different Types of Mechanized Training with APC BTR-80

Cutting-edge military hardware and software is must to furnish any army with the delivery time and to keep pace with the emerging armies. The theory of warfare is in the process of continuous transformation and qualitative expansions in weaponries are on the rise. A military commander gets the aptitude to reach unprecedented levels of acquaintance, swiftness and harmonization from a wide range of new

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[22] http://www.army-technology.com/news/newsindian-army-upgrade-bmp-22k-infantry-fighting-vehicle-fleet[accessed 02 May 2017]
[23] https://www.careerszine.com/hq-mirc-ahmednagar[accessed on 23 May2017]
[24] National Strategy for Combating Terrorism, February 2015, USA; p-9.

digital information technologies. Future wars will be predominantly asymmetric in nature based on the technology and economic aspects, which is exposed by a contemplation of the current trends of warfare. To cultivate finest power at the point of resolution against the nemesis a cohesive employment of all arms is essential.

The combined arms concept envisages employment of two or more arms in mutual support of each other to achieve the desired results that neither can obtain on their own. The Mechanized Infantry best compliments the firepower and shock action of armour, the pre- dominant arm to be employed in the northwestern part of Bangladesh. Today, the terrorists are not insurgents, but a lethal and potent tool in the hands of ideologically deviant, with a capability to disrupt the social fabrics and law order situation of Bangladesh. Since the training, ethos and regimentation of mechanized infantry are reflecting this aspect, therefore they can be employed to counter asymmetric threat if necessary.

Most countries have adopted for a force structure that can quickly become effective at a place and time where it is required. Such a force must have the ability to face the plethora of threats that are envisaged in near future. The mission of Mechanized Infantry Battalion as specified in the proposed TO&E '***To close with and destroy the enemy'*** is similar to Standard Infantry Battalion.[25] Thus, it clearly emerges that the role of the mechanized infantry needs review keeping the trends world over and emerging future battlefield with existing capabilities of ICVs/APCs. Since Mechanized Infantry Battalion will always deploy in consonance with Armour Regiment, therefore the mission may be reviewed as *'**To close with and destroy the enemy by fire and maneuver'.*** The mechanized force of Bangladesh Army is likely to operate across the wide spectrum of threats, which must have the following:[26]

All training and exercises should be organized as Combat Team, Combat Group and Combat Command in order to create mechanized psyche in Bangladesh Army.

The Mechanized Infantry training should be developed according to their trade and reorientation of basic training for soldiers and need review keeping in mind the existing terrain and the emerging threat scenario.

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[25] Draft TO&E of Mechanized Infantry Battalion, Army Headquarters, 2016
[26] Ziaul, Op Cit p 9

Training area including live firing is a necessity to build cohesion amongst Mechanized Infantry and armour. Shorno Dweep (SD) is one of the options for such training however there may be more training area adjacent to formation and school where units can undertake routine exercises.

The mechanized infantry needs to evolve from the 'Battle Taxi Concept' to the 'ICV Concept' backed by its robust 'all terrain' capabilities.

The mechanized force should have adequate number of ICVs that must confer versatility by having the capability to operate in closed and obstacle-ridden terrain.

The actual ratio of tank units to Mechanized Infantry units would depend on a case-to-case basis. However, the ratio of Mechanized Infantry Battalion and Armour Regiment will vary considering classical maneuver warfare in open and close terrain.

Possibility of employing mechanized forces particularly in LIC and counter-terrorism operations, also need to be considered.

ICVs may be utilized in seaborne role in conjunction with the Bangladesh Navy along the southern coastlines for amphibious operations. Mechanized Infantry has the capability to deliver decisive combat power on beachheads and may be required for future landing operations.

Recommendations

From the roles enunciated for Mechanized Infantry in above paragraphs, it clearly emerges that Mechanized Infantry will be the '**Arm of the Future**' owing to its inherent capabilities to undertake operations in different operational environments. The footprint of Mechanized Infantry needs to be increased considering emerging geo-strategic environment. A set of recommendations is proposed to overcome the forthcoming challenges in regards to Mechanized Infantry of Bangladesh Army:[27]

*The existing mission i.e. '**To close with and destroy the enemy**' of the Mechanized Infantry Battalion may be reviewed with the proposed mission i.e. '**To close with***

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[27] Ibid p 13-14

and destroy the enemy by fire and maneuver'*, considering its role and employment concept.*

Bangladesh Army may incorporate ICVs in its inventory for Mechanized Infantry in order to shift from 'Battle Taxi Concept' to 'ICV Concept'.

There may be a separate center and school for Mechanized Infantry for conducting different types of courses and training for officers and men. Besides, there may be a dedicated training area for mechanized forces, where conduct of live firing is possible.

Bangladesh Army needs to develop separate training modalities for Mechanized Infantry considering environment of the combined arms concept.

Conclusion

The importance of Mechanized Infantry cannot be stressed further. ICV/APC is an integral part of the mechanized forces and it has prescribed tasks. The tanks have relied heavily on the Mechanized Infantry since World War II for their survival. This reliance is stated in a memorandum by the German Oberkommando des Heers (Commander of the Army), "There can be no doubt that, without the closest cooperation of the panzer grenadier and the tank, the latter is of limited value ... It is even said by some that commanders would prefer to lose tanks rather than their infantry....".[28] Instead of questioning the relevance of Mechanized Infantry, there is a need to increase its numbers and provide it with a better platform for allowing it to perform its task in a better way.

The patterns of mechanized warfare have not changed much; rather it became well-accepted concept in 21st Century. There is a necessity for effective training at formations and schools for making mechanized forces operationally ready with their armament and equipment, to deliver the maximum. Thus, the role of the Mechanized Infantry in Bangladesh Army needs due attention. The mechanization effort should continue as per the Forces Goal 2030 for preparing Bangladesh Army to face challenges of 21st Century.

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ATTRITION OR MANEUVER? THE AGE OLD DILEMMA AND OUR FUTURE APPROACH

Lt Col Abu Rubel Md Shahabuddin, afwc, psc, G, Arty

"Maneuver includes both fire and movement, and the ultimate aim of maneuver is to facilitate fire...in the future we shall maneuver battle field fires rather than maneuver units."

Robert Leonhard

Introduction

Attrition (firepower) theory and maneuver theory are observed as the two main theories of warfare from the ancient age by the war historians and practiced with great mastery by renowned generals for centuries. There always remained a dilemma of adopting a single particular theory for ultimate victory over the adversary. Availability of appropriate force, equipment, firepower assets, and maneuver technology coupled with terrain difficulties had made it difficult for armies to adopt a solo approach. In a textbook situation, with sufficient military capability, every military would strive for a balance between these two complementary theories to have a dominant invincible force. As the military missions are getting complex day by day with frequent changes of technologies and doctrines, the balance can be very hard to define.

Maneuver is the movement of forces supported by fire to achieve a positional advantage. Maneuver includes both fire and movement. Maneuver warfare practitioners attacks the enemies decisive weakness from unexpected direction with astonishing means in order to paralyze his decision-making structure and cause morale collapse. Contrary to attrition theory by fire power, maneuver theory attempts to defeat the enemy through placing his force in advantageous position in the context of time and space. Each time the commander successfully applies maneuver, he preserves his resources. The purest form of maneuver theory suggests neutralizing the enemy before the fight starts (pre-empt). If not possible, dislocating the enemy from the decisive points and thus rendering him useless and irrelevant. If that is also not possible, destroying the enemy's Centre of Gravity (CG) by attacking with friendly strength. It is like a chess game; once the king is taken, it does not matter how many other powerful pieces are intact on board.

The classical maneuver formations of Greek phalanx and Roman legion have evolved over the centuries. These have gone through many transformations like Napoleon's oblique column to combined arms maneuver to recent day's air land

battle. The battlefield is also expanding; the volume of Area of Operation (AOP) for formation is increasing significantly. During the Napoleonic wars, a corps had a frontline of 8.05 kilometers where the same corps dealt with 57 kilometer in the Arab Israel war (1973). Though greatly desired by all the armies, maneuver has become a gigantic affair in terms of time, manpower, equipment and casualties. Besides, there are numerous examples in history where maneuver obsessed armies ultimately could not defeat their adversaries. The Germans failed in World War (WW)-II with their much reliance on famous Blitzkrieg maneuver doctrine alone. A systematic destruction of enemy leading to sure victory always remained as the trump card for the generals like Montogomery in El-Alamein.

The rapid advancement in the field of devastation and accuracy of firepower are outpacing the advantages of maneuver which still is limited with the capabilities of internal combustion engines of 20th century. It can be argued that, with latest technological advancement of firepower having real-time datalink, radar, satellite and GPS coverage for target acquisition and engagement by smart munitions, the same pre-emption, disruption and destruction can be achieved by firepower alone. The limited speed of maneuver forces and their constant tie with logistic bases are yet to be overcome. The risk of a decisive battle at a decisive moment for neutralizing the CG always entails the danger of own attrition. Thus, the notion which is gaining ascendancy in many circles is 'maneuver battle field fires than maneuver units'.[1] The extended range, accuracy, target acquisition and ultimate devastation at target end are allowing commanders to create desired maneuver effect without committing his forces to a prolonged deadly combat. Nowadays, a commander only needs to synchronize operational and tactical fire (both lethal and non-lethal) to accomplish this task. Modern attrition warfare has taken a revolutionary shape of an exclusive fire power warfare which is centred on maneuvering battle field fires rather than maneuvering units.

With the Forces Goal - 2030 in the hinge sight, Bangladesh Army is also incorporating significant fire power and maneuver assets to her inventory these days. It has also hinted a remarkable shift in operational posture by raising mechanized units and regiments with latest Armoured Personnel Carrier (APC), Main Battle Tank, Anti Tank Guided Weapon (ATGW), etc. Not only maneuver assets are beefed up, the fire power assets like Self Propelled (SP) guns, Multiple Launched Rocket System (MLRS), etc are also included in the inventory. However, a definite approach for utilizing these arsenals are yet to be decided. In this back drop, this

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[1] Leonhard, Robert, *The Art of Maneuver*, 1991, p.19.

paper attempted to identify the latest trend of fire power and maneuver doctrine around the world including their duality and adoptability concept in different armies. Finally a probable modalities for Bangladesh Army is suggested in broad out lines with likely operational employment.

Distinguishing Firepower from Maneuver - the Traditional Viewpoints

Definition of Maneuver. Maneuver is defined as "the employment of forces, through movement combined with fire or fire potential, to achieve a position of advantage with respect to the enemy to accomplish the mission. Maneuver is the means by which commanders concentrate combat power to achieve surprise, shock, momentum, and dominance".[2] One of the best examples of maneuver warfare was the German Blitzkrieg of WW-II. Blitzkrieg did not rely on maneuver alone to accomplish its effect; firepower was a critical part of the softening of Allied positions at the thrust point, and firepower in the form of aircraft as 'flying artillery' was used once the rolling out or penetration outpaced the artillery. Even in this maneuver-dominant form of warfare, firepower still played an important role.

Definition of Firepower (Attrition by Fire). Firepower is defined as "the amount of fires that a position, unit, or weapons system can deliver".[3] Fires are effects of lethal and nonlethal weapons. Fires include fire support functions used separately from or in combination with maneuver. The longer reach, huge payload, devastation capabilities, and accuracy of modern weapon systems together with precise target acquisition systems making fires more lethal than ever before. These capabilities are also allowing commander to create effects throughout the AOP without significant physical movement of his troops. Commanders integrate and synchronize operational and tactical fires to accomplish their mission. Firepower, or attrition warfare, is much more methodical and systematic than maneuver warfare.[4] Firepower warfare requires extensive synchronization, centralized control and planning. This theory of warfare also minimizes the risk to friendly forces while focusing on the destruction by fires of the enemy's strength.

Fire Power Warfare through the Ages

The biblical description of David and Goliath is the most glaring example where a single sling shot of David away from the reach of giant Goliath decided the fate of Israelis. In 1346, in battle of Crecy, the English king Edward III, with a weak army

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[2] Field Manual (FM) 3.0,*Operations*, Department of the Army, 2001, p.4-2.
[3] ibid.p.4-6.
[4] Degen, Admund J.*Dominant Land Forces of 21ˢᵗ Century*, 2009,p.9.

defeated a stronger French Army entirely by the action of his long bow archers-without ever closing for shock action. Though a master of maneuver warfare, Napoleon was the first general who realized the potential of firepower at its best. Napoleon's strategic aim was to gain a decision by destroying the enemy forces;[5] this he achieved mostly by concentration of only fire and maneuver later.

During World War-II, The Germans relied mostly on aircraft to support their *Blitzkrieg* tactics. *Blitzkrieg* utilized aircraft as a form of artillery to support the deep encirclement of enemy forces. On the other hand, Soviet Army placed a great reliance on firepower taking lessons from Russo-Japanese war and WW-I. Their centralized command structure and sheer quantities of fire support units enabled them to mass their fires on the German forces with very good results. Although the Soviet tactics emphasized artillery, their efforts were truly combined. The soviets were simply exploiting the effects of their firepower with maneuver, rather than vice versa.

As a result of Operation Desert Shield, Desert Storm, Allied Force in Kosovo, Enduring Freedom and Iraqi Freedom, USA has become increasingly focused with firepower, more specifically with Precision Guided Munitions (PGMs). Leaders in both diplomatic and military communities, along with numerous think tanks, have concluded that PGMs very well may be the 'silver bullet' in future conflicts.[6] Former President George H. W. Bush stated that stealth technology, coupled with precision munitions, is a "revolution in warfare."[7] Nowadays, the USA and the NATO mostly relied on firepower to achieve the strategic end states. NATO Forces used firepower in the form of air and cruise missile and were successful in dislocating Yugoslavian Forces from Kosovo. Iraq's defeat in the Gulf War was arguably accomplished more by a systematic program of destruction by fires than by adapting Blitzkrieg like maneuver.

The Duality of War and the Classical Dilemma

The Dual Nature of War. T. R. Fehrenbach, in his book on the Korean War mentioned," You may fly over a land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life, but if you desire to defend it, to protect it and keep it for civilization, you must do this on the ground, the way the Roman legions did, by

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[5] ibid. p. 62
[6] Degen, op.cit.,p. 8
[7] ibid,p.17.

putting your young men into the mud".[8] Another famous US Military writer Rupert Smith stated, "Modern war is war among the people."[9] This is very true today as most of the battles are contested in the urban areas where the 'shock and awe' of traditional combat style with huge firepower do not bring a fruitful solution or end state. Battlespace has become complex and congested with people which ultimately restricting fire assets, even the precision munitions to limited utility. Many military and strategic experts have addressed this issue and have advocated for a balance between the two poles.

Striking a Balance or Taking a Side? So, it can be stated that a duality exists, specially at operational level of warfare where operational art (maneuver theory) and operational science (fire power theory) are complementary to each other.[10] Brigadier Richard Simpkin, a famous British military theoretician who had many literature on 'Deep Battle' and 'Deep Operation' also mentioned that maneuver theory and attrition theory (firepower) are "the two main principal theories of warfare"; both methods are ideal types, and in practice some sort of blend will normally occur.[11] However, seeing back in military history it was observed that, in practice, the generals tempted to incline to some particular theory alone. For example, Montgomery and Patton- they distinctly represented two different methods of prosecuting operational level of warfare. Patton practiced 'maneuver warfare' while Montgomery was representative of 'firepower warfare'. Even today, the focus of US military is heavily oriented on maneuver. American military doctrine consistently held that maneuver, speed and tempo are the keys to success in the future battlefield.[12]

The Same Old Maneuver Theories. Maneuver theories evolved over the centuries and have taken new shapes with the changes of technology, socio-economic, political and other considerations. Sun Tzu's indirect approach has taken the shape of "Surface and Gap (Flachen und Luckentaktik). The British "Expanding Torrent", " Baited Lure" or "Defensive Offensive", Sherman's "Deep Strategic Penetration" or "Deep Operation', German's famous "Blitzkrieg", "Thrust Point and Roll Out" (Schewrpunkt Aufrollen) and "Auftragstaktik" are almost same idea adopted in different term by different militaries in different time frames. Even the very recent US Military maneuver theoretician John Boyd's OODA (Observe,

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[8] ibid,p.4.

[9] ibid

[10] Raymond, Major, *Firepower, Manuever, and the Operational Level of War*, 1992, p.2

[11] ibid.

[12] Degen, op.cit.,p.8.

Orient, Decide and Act) loop is also age old as Napoleon used to practice the same- "I attack first then I look."   In this backdrop, it may be examined that whether the modern technology with information revolution fundamentally support those maneuver techniques which are some hundreds years old.

Technological Advancement Denies Maneuver Advantages. Since maneuver force aims at paralyzing enemy's action rather than destruction of enemy force, it requires a phantom force capable of swift movement avoiding opponent's detection and then identify the suitable nerve centre, plan, communicate and deliver the decisive stroke. The Germans could do it initially against France during the WW-II. But giving the latest technological advancement a rational credit, today it can be debated that with a modern military, having a reasonable Command, Control, Communication, Computer, Information, Surveillance and Reconnaissance (C4ISR) system, the outcome could be something else. Besides, the chance of getting a sufficiently large maneuver force into the theatre fast enough to paralyze enemy's decision cycle without detection and engagement is very slim today. On the contrary, it may be argued that the same paralyzing effect can be materialized by the quick deployment of fire units and delivery means and their mass concentration on enemy's nerve centre. Due to the risk elimination posture of opponents, force protection is also becoming questionable in maneuver warfare. We know that maneuver warfare accepts and encourages risk taking at all levels.

Maneuver Warfare Flexibility or Too Much Uncertainty?   An indirect approach may take too long a time which subsequently would degrade the force strength and morale. It may also be too vulnerable to fog and friction due to constant adjustment with situation and changes of plans. Changing decisions continuously to keep up with the ever-changing circumstances (OODA loop) is also a part of the game. There is an old saying in the US Navy about it, "Order, counter order, disorder!" Again, in the process of attacking the enemy's weaknesses, there comes up the requirement to fix the enemy's strength. If there is no 'the vulnerable ground' (VG), a force may attack series of relative weaknesses and become susceptible to ultimate attrition. On the other hand, the same result with less time and casualties may be achieved by a decisive engagement of enemy's critical strength. The most important requirement for a successful maneuver warfare is accurate, up-to-date intelligence on the disposition of vital enemy command, support and combat units. As no one can guarantee intelligence of maximum accuracy; implementation of strategies based on inaccurate intelligence can become problematic. Again, when faced with an opponent, capable of maneuvering and redeploying quickly and discreetly, the prospect of maneuver strategies to deliver victory become more

challenging. Lebanon War in 2006 may be sited as an example where such shortcomings had been exposed as Israeli forces were unable to deliver a decisive blow to the flexible command structure of Hezbollah.

Firepower Warfare in the Modern Days - A Significant Leap to Achieve End States

Firepower Warfare – A Systematic Approach. On the other hand, firepower warfare is methodical and systematic. Risk elimination is the key in this approach. This method of warfare is characterized by extensive planning, synchronization, centralization, risk minimization, focus on the enemy's main strength, and finally destruction by fires. Such methodical firepower existed in different ages as mentioned before. Sebastien de Vauban, a seventeenth-century military engineer, devised methods to exploit the defender's advantage (fortifications) and also to overcome it (siege methods). Both activities involved meticulous planning and incremental execution, with little or no risk-taking at any specific instant.[13] Fire Power approach, a scientific revolution with new machines and methods of warfare required intellect with detailed attention to planning. This operational science exploited the defenders with enormous pounding until it was certain that the enemy had been sufficiently weakened by a thorough campaign of operational fires. It was a deliberate and calculated approach where warfare was solely an exercise of targeting and neutralizing by massing systems. These days, the operational science has achieved desired end states by quick achievement of air superiority and a successful, centralized counter-battery fight. Once these two main objectives have been achieved, the defeat of the enemy is pursued at will, again by relying heavily on fire power assets. Therefore, it can be stated that the ultimate objective of maneuver or operational art, i.e., paralysis of enemy's decision making appartus can indeed be achieved by operational fire as well.[14]

Maneuver to Facilitate Firepower.   Lind, the famous maneuver theoretician narrated, "Firepower/attrition warfare uses firepower mostly **...** to reduce enemy numbers through attrition. Movement serves firepower; you move to get into a better firing position to cause more attrition."[15] Patton, the master of maneuver, also mentioned the same, "The purpose of the movement is to get the fire in a more advantageous place to play on the enemy."[16] Maneuvering to gain a positional advantage and to cause capitulation of the enemy may rarely work in modern day's

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13 Raymond, op.cit., p.17.
14 Ibid,p.41.
15 Lind, *William, Maneuver Warfare Hand Book*, 1985,p.19.
16 Patton,George,S. *War As I Knew It, p.*340.

battle environments. On the other hand, destruction is easily quantifiable with numbers. Defeat in a maneuver warfare may be referred as a vague term; a temporary situation which is subjective and imprecise. Reliance on the advantages of precision fires on enemy's key capabilities to bring him on his knees will be critical in future conflicts. However, Firepower delivered from air, sea and land could be the key element for risk elimination and a quick victory.

Clinging to Duality or a Deliberate Inclination to Attrition-Bangladesh Perspective

Cost-Benefit Analysis for Firepower Approach.   The terrain configuration hinders maneuver warfare significantly in Bangladesh. On the other hand, reliance on firepower alone may cause huge casualties on both military and civilian which may ignite a repercussion. Like Lebanon and Gaza, a firepower warfare in the densely populated cities and countryside may bring unbearable devastation and misery for the general people. The economy may not support the expenditure require for acquisition of huge fire supremacy delivery means, aircraft, helicopters, missiles, radars, target acquisition, Electronic Counter Measure (ECM) system etc. In fiscal year 2003, Operation Iraqi Freedom costed USA total $78.5 billion dollar (6,28,000 crores taka) for their much discussed 'shock and awe operation' by the ultimate fire supremacy means from land, air, surface and subsurface platforms.[17]But again, the difficult terrain of Bangladesh suggests attrition warfare which would be fought by a reasonably large standing Army duly supported by huge resilience and homogenous population. Hence, a firepower warfare may become a much suitable option for Bangladesh. If the decision can be sought over a protracted war where every dead opponent soldier shakes the decision making hierarchy and national consensus, the attrition warfare again have an edge over maneuver. It is a matter of fact that, in the present scenario, a swift maneuver to paralyze the likely adversaries to obtain a quick decision is very much improbable. Besides, the technological superiority of likely adversaries, requirements for C4ISR to support such maneuver is also very expensive and beyond the reach of developing nation like Bangladesh. On the other hand, the Army is well trained in positional defence, accustomed with concentration of firepower and massing units at the point of decision.

Force Development and Need for Deciding a Fair Option. With the advent of modernization, the Army is keeping pace by introducing latest SP gun, MLRS, Main Battle Tank, fourth generation anti-tank weapon, ground surveillance radar, air defence radar and missiles. Many more are yet to be included in the inventory. Besides the firepower assets, many maneuver assets and units are also coming up.

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[17] https://en.wikipedia.org/wiki/Financial_cost_of_the_Iraq_War

Yet, the doctrinal aspect of deciding a fair warfare theory based on terrain, population, environment, adversary's capability, intention and own likely end sates are yet to be defined. It may be stated that, the more the maneuver elements, the more is the requirement of firepower assets and attitude to support that. A balance approach thus is needed in deciding the fair option for the country and adopting appropriate doctrine and force structure.

Utilization of Existing Firepower Assets for Attrition Warfare

Developing the Fire Supremacy. Air superiority and neutralization of Hostile Battery (HB) by Counter Bombardment (CB) are the key capabilities in making operational fire effectiveness in a theatre of war. The existing capability needs enhancement to achieve such superiority during the time of need. The CB capability both by artillery and air also need attention. The tactical missile is yet to be included in the inventory. Therefore, required fire supremacy to make firepower warfare effective throughout the campaign may be a difficult proposition. If the tempo of fire supremacy cannot be sustained all along, it can be preserved cleverly and concentrated during the later phases of war when a suitable force ratio would be obtained by the shaping up battles offered by the forward formations. Fire power assets from the forward formation and adjacent formations may be readjusted and massed. Sufficient artillery concentration and limited air parity may be expected around the point of contest to deliver the final punch. For that, an enhanced Air Defence (AD) capability utilizing AD aircraft, full spectrum of low and high level radar coverage, low to medium altitude Ground Based Air Defence (GBAD) system, effective Electronic Intelligence (ELINT) and coordinated approach of all the services may be fruitful during that critical time. Besides, to neutralize the potential HB, inclusion of tactical missiles and long range delivery means for the formations should also get active considerations.

Firepower Resources under Centralized Control with the Operational Commander. The MLRS regiment, the SP regiment, the remainder medium and field regiments and the helicopters of Army Aviation may be utilized for delivering the operational fire for the final contest. To have a profound impact on the opponents nerve centre, those required to be massed and synchronized. The assets should be employed under a centralized command following a shelf plan with a well calculated fire support plan backed by a sound logistic arrangement conceived and organized much before. If these can be materialized, a concentrated fire with these huge resources around the pre-selected killing ground will cause ultimate destruction and dislocation of enemy advancing column. If not fully destroyed, the dislocation effect

will hinder enemy advance significantly allowing a great scope for the operational reserve to organize and deliver the final blow.

Utilization of Naval and Air Fire Power. Available aircrafts and attack helicopters should be directed to synchronize the Army's operational fire effort. The helicopter gunships and Fighter Ground Attacks (FGA) should be integrated in the overall operation fire scheme so that the effect on advancing enemy is unbearable. Threat forces armour and engineer concentration should be the prime targets. The air assets should be directed to neutralize the enemy's Command and Control (C2) structure and create a great confusion amongst the adversaries. Attack helicopter and FGAs should take the leading armour echelon and force them to be dispersed and dislocated thus making them irrelevant at that point of battle. All available Fast Attack Crafts (FAC), riverine and Offshore Patrol Vessels (OPV) and any naval vessel passable through major rivers near the point of contest (average depth of significant major rivers is more than 100 meter) should bring concentrated missile and artillery fire coming closest to the battle ground. If these could be done, the amount of operational fire will surpass any ratio so far seen in the contemporary history and the adversary must face a grim prospect of peril at once.

Conclusion

Maneuver and firepower are so closely knitted that one become irrelevant without the other. However, with the development of technology, now-a-days, accurate and devastating fire from long range weapon and other delivery means can bring the same effect of maneuver. The desired positional advantage over enemy by destruction, dislocation and disintegration now can swiftly and without any significant casualty be achieved by the firepower warfare alone. Firepower approach is historically tested with numerous instances where firepower alone decided the fate of many battles. It is much more methodical, systematic and risk evasive than maneuver approach. Today, most of the modern armies have not only significantly invested in developing their firepower assets but also have adopted it in most of their war winning events.

The duality of war suggests both the approach to be integrated complementarily in a sound operational plan. With the rapid change of security situation wherein an army need to fight in a densely populated urban area with sensitivity to collateral damage, the devastation of firepower and attrition is a less desirable method of waging war. Not only that, the expenses of such warfare in terms of costing and casualties are not also bearable by even many modern armies. But again, maneuvering to gain positional advantage, thus causing capitulation of the enemy

may rarely work in modern day's battlefield. The chance of getting a superior maneuver force into the theatre fast enough without detection and hostile engagement is also very slim due to the latest advancement in the C4ISR system. Systematic destruction by attrition method is more quantifiable and a decisive engagement with concentrated fire on enemy's critical strength has a greater margin for victory.

Bangladesh Army may adopt the concept of firepower warfare as this is being widely practiced by the modern armies from the last century. The terrain, existing doctrine, threat situation, own present and forecasted capability and preferred end state hint at adopting the firepower/attrition approach as a suitable option for Bangladesh. Capability enhancement by enhancing air defence system, integrating tactical missile system and other long range delivery means, carrying out joint exercises regularly incorporating all the fire power assets of Bangladesh Armed Forces will definitely ensure the attainment of own strategic goal.

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COMMAND PHILOSOPHY BENCHMARKING THE PROFESSIONAL COMPETENCY FOR COMMANDERS AT BATTALION LEVEL – A PERSPECTIVE OF BANGLADESH ARMY

Lt Col Mohammad Monir Hossain Patwary, psc, ASC

"Command is that mixture of example, persuasion, and compulsion by which you get men to do what you want them to do, even if they don't want to do it themselves. If you ask me really to define it, I should say, "Command is the projection of personality—and like all true art, and command is an art, it is exercised by each man in his own way."

Field Marshal Sir William Slim

Introduction

Soldiering is one of the oldest professions of the world. A soldier is one who fights as part of an organized, land-based armed force. A soldier can be an enlisted person, a non-commissioned officer, or an officer[1]. Being a soldier is an opportunity and it is a profession for which one can really be proud of. The basic fighting entity of an army is unit. Units are commanded by Commanding Officers (CO). Command is a sacred trust. Typically, the CO has ultimate authority over the unit, and is usually given wide latitude to run the unit as he or she sees fit, within the bounds of military law. In this respect CO has significant responsibilities (for example, the use of force, finances, equipment, the Geneva Conventions), duties (to higher authority, mission effectiveness, duty of care to personnel), and powers (for example, discipline and punishment of personnel within certain limits of military law)[2]. The commander thus must have a clear vision and command philosophy to lead his under commands. No organization can progress without a clear and well defined command philosophy and more importantly it must be understood and practiced by all leaders at all level within the organization. It is the responsibility of the CO to make his vision and command philosophy understood to his followers. General Collin Powell once commented "Great leaders are almost always great simplifiers, who can cut through argument, debate and doubt, to offer a solution everybody can understand"[3]. For any command philosophy to work it must be believed and lived on daily basis. It must stand on its own merits and easily understood by all. The commander must always keep in mind the importance of establishing high yet realistic standard. High standard lead to professionalism and professionalism should always be the hallmark of a battalion. Bangladesh Army at present puts a lot of emphasis in selecting its COs. A

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[1]https://en.wikipedia.org/wiki/Soldier
[2]https://en.wikipedia.org/wiki/Commanding_officer
[3]https://www.brainyquote.com/quotes/quotes/c/colinpowel144992.html

handpicked lot of officers with exemplary enthusiasm, having very high professional standard, who proved their competence in past works are generally selected as COs. A recent trend of training them in a pre-command course has been started. The course started as such is termed as Unit Leadership Training. It has already been proved to work as a good tool for the current/ future COs.

War fighting mechanism in 21st century will be different than any time before. Like any other armies, soldiers in Bangladesh Army at present are better educated. Socio-economic condition has improved a lot in the past decades. The whole world including military is moving into a SMART (Specific, Measurable, Achievable, Realistic and Time Bound) system. In order to adapt the organization with SMART system, Army should have a very tangible yard stick to measure the upbringing of the units. This must be progressive and dynamic. Keeping visions and command philosophy of commanders as documented can lead any outfit to the progression. Bangladesh Army, being a highly professional organization has gained a lot of reputation home and abroad. It is a call of time to recon how best the organization can excel in the days to come. To make the units and commands more fruit yielding system of having command philosophy documented may be introduced. At the moment there is no such provision is in vogue. Such vision and philosophy should be known to at least one step up and two steps down. Once documented and known, these vision and philosophies can be traced back and implementation can be measured. Successive COs will get a solid base to start with. This will collectively make the organization professionally progressive.

This write up will initially determine what a vision is. Immediately after that an analogy will be made with vision against command philosophy. Following this an elaboration will be made as to what could be the vision of a CO at battalion level in Bangladesh Army perspective. This will be followed by the implementation strategies taking note of current values and ethos of Bangladesh Army. Probable grey areas and remedies will be narrated in order to support the implementation strategies. In addition, some useful tips for the COs will be offered. The Scope of this paper is kept limited to battalion level only. Successive research can be made on other tiers of command gradually if felt necessary.

VISION, COMMAND PHILOSOPHY AND GREY AREAS

What is a Vision?

"Vision is the art of seeing things what is invisible to others[4]" is a definition proposed by Jonathan Swift. However the dictionary meaning of vision is a thought, concept, or object formed by the imagination[5]. The act or power of anticipating that which will or may come to be - can be termed as vision. Famous actor and film maker Joel A. Barker said "Vision without action is mere a dream. Action without vision is just passing the time. Vision with action can change the world"[6].

Vision and Command Philosophy

Vision is basically forecasting of an event or a situation which will come in future. It is the perception and doesn't exist physically. Command Philosophy is the broad ways and means through which vision is materialized / implemented. A set of beliefs, values and principles that strongly influence people constitutes command philosophy. If vision is the state then command philosophy is a Means / Tool to achieve the vision. Vision and command philosophy are connected to each other. In order to command a battalion the CO should have a clear and well defined vision and vision such defined should be achieved through his command philosophy. The vision of a commander is how he forecasts his tenure of command, whereas, the command philosophy is a framework which will guide how to operate in all environments in peace or war. It's a commander's philosophy and interpretation of leadership, which affects how he reacts to people, events and situations around him.

Vision of a Commander at Battalion Level

Vision is an achievable dream. As specified before visions are to be clearly articulated and are to agree with current values, ethos and command philosophy of the higher commanders. Vision at battalion level can be categorized into two types; unit centric and individual centric. A commander's vision at battalion level should mainly be concentrated / focused within his men and resources. At battalion level followings can be the unit centric vision of a CO:

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[4]https://www.brainyquote.com/quotes/quotes/j/jonathansw122246.html
[5]https://www.merriam-webster.com/dictionary/vision
[6]https://www.brainyquote.com/quotes/quotes/j/joelabark158200.html

Serial	Vision Factors	Indicators
1	Improve Basic Soldiering	Turn out and Bearing, Saluting, Loyalty, Integrity, Selflessness, Discipline etc. are improved
2	Physical Fitness	Decrease number of overweight personnel and Increase number of Individual Physical Fitness Test (IPFT) pass percentage
3.	Range Efficiency	Efficiency in shoot to kill and smartness in handling of weapons
4.	Improve Trade Knowledge	Efficient handling of equipment, vehicles and stores specific to trades
5.	Welfare	Improvement of living and messing standard
6.	Congenial Working Environment	Elimination of zero error syndrome, Initiative at all level, fear free working environment
7.	Training	All members are meticulously trained to feel confident

Table -1: Probable Vision at Battalion Level

Illustration on Vision Factors

a. **Basic Soldiering.** The qualities which differentiate a solder from a civilian is called Basic Soldering. In other sense, the minimum characteristics that a soldier should possess can be termed as Basic Soldering. Basic soldering is a benchmark composed of number of traits which clearly make a difference from soldier to soldier. A soldier must possess the basic soldiering traits; but unfortunately there is a growing dent in it due to socio-cultural changes. A commander's focus should be on developing basic soldiering by imparting proper training, improving standard of military knowledge, custom and ethics. If these can be ensured, the unit will perform well both in war and peace.

b. **Physical Fitness.** The term physical fitness in army would mean passing in IPFT and absence of obesity. Like many armies, it is a prerequisite to be good and smart soldier in Bangladesh Army. A CO must try for 100% IPFT pass. Obese and IPFT fail individuals look shattered and have low morale. Working environment in the unit having many obese and IPFT fail cases will be automatically unfavourable. Additional IPFT facility can be arranged in the line area so that soldiers get more scope to practice. CO should also aim at decreasing the number of overweight personnel in the unit. Over weight/look obese

personnel doesn't represent the standard of a professional army like Bangladesh Army. Moreover, obese cases are more prone to cardiac arrests, diabetes etc.

c. **Range Efficiency.** Apart from being physically fit, a soldier needs to be efficient in weapon handling and firing. He must be the master of his personal weapon. A soldier must be well prepared for war and that is why he keeps on training himself during peace time. CO should focus on training/handling of weapon in such a way that his under commands become expert and trained in line with the motto "One Bullet, One Enemy". Individual weaknesses are to be found out and corrective measures are to be enforced in order to attain progressive development.

d. **Welfare and Improvement of Living and Messing Condition.** Like a classical British officer, Field Marshal Montgomery was tough on the outside but soft in the inside. Outwardly, he was very hard in discipline and strict with his units and soldiers. But inwardly, he always had the morale and welfare of his outfit and men close to his heart; and therefore really cared for his soldiers.[7]An improved living and messing condition can create an enthusiastic working environment. The accommodation of the troops should be maintained in good standard. Duty personnel should be employed to oversee the standard. Besides, personal visit by the CO himself can be very useful in this regard. There is a saying that "A well fed body is always energized to perform any task". Troop's welfare should be one of the top agenda of CO during his command tenure.

e. **Congenial Working Environment.** The working environment of the unit must be congenial and friendly. Under commands should not suffer from any fear to do the assigned task. If they are given with freedom/flexibility upto a limit, they can show their potentialities. CO should not stick to age old zero error syndromes. Thus he will ensure initiative at all level so that everybody can play their role. CO must ensure a healthy command channel in the unit and a balanced reporting environment as well.

f. **Training.** Commanders must take an innovative approach to the training with special focus on the basic soldiering skills and battle drill procedure at all levels. Training should be meticulously planned, innovative and challenging in its approach. The motto of training should be set nothing less than "Train to Win". Training should be oriented to accomplish mission essential tasks. All training will be performance oriented and should have a tangible evaluation after the termination of it. CO must try to impart the basic and standard training to the

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[7]Philosophy of Command: Ten Classical Examplesby BG Yeo See Peng, Singapore Armed Forces.

troops with the limited resources that are available. The main focus the training plan will be to make the soldiers efficient in their own trade. In addition to formatted trainings, COs should take the advantage of currency training for the weak drivers/cooks/tradesmen like carpenter, painter and tailor etc. and on job training for clerks. If these things can be ensured, two of the objectives will be attained. First one, none will remain underemployed in the unit and the second one, manpower shortage can be dealt with very smartly.

As for individual centric visions the CO should take every tier of his command on board. The command echelons of a battalion are typically the Officers, Junior Commissioned Officers (JCOs) and Non Commissioned Officers (NCOs). All must be taken into confidence for a healthy command climate at the unit level.

a. **Officers.** Field Marshall Helmult von Moltke wrote "Diverse are the situations under which an officer who has to act on the basis of his own view of the situation. It would be wrong if he had to wait for orders at times when no orders can be given. But most productive are his actions when he acts within the framework of his senior commander's intent"[8].Officers are the mentors of the under commands. If officers are fine, the battalion will run smoothly. Officers should be professionally sound and they must lead their under commands by setting personal example. They should have a clear idea about the working procedure of the battalion and in simple words they have to know about everything what is happening around. To improve the professionalism of the officers, they need to study on different subjects like Military History, Command and Leadership, Current Affairs etc. For their own improvement they should be closely monitored and their work must be supervised. Officers should be self-propelled and self-motivated. To do that they have to be physically fit and they must maintain the standard of physical fitness. Officers must know their under commands and their problems. "Leadership is solving problems. The day soldiers stop bringing you their problems is the day you have stopped leading" said by Colin Powel.[9] They have to be meticulous enough in employing their JCOs and NCOs and know how to bring out the best out of them. They must have the in depth knowledge about every individual and only then they will be performing their responsibilities properly.

b. **JCOs.** JCOs provide vital link with the soldiers in the battalion. JCOs play an important role imparting proper training to the soldiers. They should be proficient enough to lead their under commands. JCOs must be employed in all

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[8] Frederick Ernest Whitton, *Moltke*(Freeport, new York: Constable & Company Ltd, 1921)
[9] Colin Powel, themilitaryleader.com

the unit affairs. They should be made accountable for their works/deeds. They must be given with important responsibility to accomplish. They must provide feedback once they are tasked. Commanders should have faith/trust that they can accomplish any task they are assigned with. A commander have to keep in mind that JCOs should be efficient enough to lead the under commands in absence of the officers. Bangladesh Army is facing some serious deficiency of officers. This may continue for several years. This crisis of officers can be mitigated only by employing the JCOs in the leading roles. Formal trainings for the JCOs are meager. At formation level command, leadership and management trainings may be organized regularly for them in order to make them more proficient.

c. **NCOs.** To make a unit effective the employment of NCOs in the unit affairs should also be taken into serious consideration because they are the future JCOs. A commander should believe in the saying, 'Efficient NCO, Effective unit'. NCOs should play adequate role to groom up the soldiers. Earlier it was observed that the NCOs are not giving their best to the unit. Like the JCOs they should also be given with important responsibilities/mission oriented tasks so that they also remain accountable. Bangladesh Army at present places a lot of importance in training its NCOs. Yet units should train and employ them before recommending them for next higher rank.

Grey Areas/Challenges

a. **Lack of Focus.** Although the COs have the will and initiative to achieve the vision, due to over commitment, they are to divert from their focus. Thus it becomes very difficult to achieve their vision. After sometimes it becomes a "somehow complete the tenure" for many. Most of them spend their time not keeping a vision ahead of them. All these result into losing of focus. In a research conducted in Harvard University in 1979 showed that those students who wrote their vision became more successful than those who did not.[10]

b. **Lack of Documentation.** Presently command philosophy is an intangible thing which is hardly documented. Due to lack of documentation of command philosophy, continuity or progression cannot be monitored. If it would have been documented, successive COs would have got important guideline from their predecessors to command the unit. As "Many men, many minds", their command philosophy is also different. Thus the continuity of good work is lost most of the times as there is absence of documentation of command philosophy.

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[10] https://www.youtube.com/watch?v=BnJuM0hBK4M

c. **Shortage of Manpower.** Acute shortage of manpower has always been a challenge for the units. Almost 20% manpower is deficient (of the posted strength) in many units. Nearly 40% - 45% of the posted strength remains on parade. With this huge deficiency, it becomes difficult to ensure proper training for the troops and to accomplish the additional tasks given by higher headquarters. One has to perform the task/job of minimum two/three personnel. On the other hand, the work load has been increased and the dimension of work has changed in manifold.

d. **Frequent Posting In/Out.** Frequent posting in/out is a common phenomenon in many units. This is a gigantic challenge at the same time. Sometimes it happens that a soldier has to be sent for attachment in a short while after he joins the unit. Proper regimentation cannot be ensured in such cases. For nurturing a soldier properly and to make him able and proficient in his trade and rank, it takes minimum 1-2 years. Frequent posting thus hampers making the soldiers professional. Necessary provision must be made so that individual soldier must remain in the unit for minimum one year from the date he joins the unit.

e. **Weakness of the JCOs and NCOs.** JCOs and NCOs are one of the most important part of the command channel. They form almost 30-35% in the whole Army. But it is often found that they can't perform their work for what they are assigned to. The reasons might be command channel is not putting ample of trust on them or they don't want to use their efficiency in the right way. This is a real challenge to command a battalion. COs should find out individual weaknesses of such groups and take measures accordingly. They should be given enough flexibility and responsibility so that they can prove their worth. COs should also ensure that his 30-35% personnel doesn't remain idle within the unit. Their skill and knowledge has to be utilized to the maximum.

f. **Weakness of the Troops in their Own Trade**. It is often found that the soldiers are not expert in their own trades. One of the reasons could be they are employed in some other activities apart from their own trade/job and another reason is that they don't take interest to learn by themselves. Improvement of trade knowledge is one of Army's important focuses. Units must take adequate measures to improve trade knowledge. They should be given with adequate scope to show / improve their skills and implement those on ground.

g. **Over Employment of CO.** It is often noticed that COs are employed as the president of various court of inquiry, supervisory board, etc. As a whole, out of approximately 250 days, he can remain present in the unit for not more than

120-130 days. This really hampers interaction time for vision implementation. Engagement of CO in multifarious task may divert his attention from his unit. Thus unit affairs will obviously hamper.

IMPLEMENTING STRATEGIES, CHALLENGES AND WAYS FORWARD

In the previous sections typical visions of Cos are highlighted. A CO must be thorough as to how these to be implemented. Though implementation will largely be an individual style, yet the vision of a CO can be implemented through following strategies:

Serial	Item	Objectives	Ways & Means	End State
1.	Basic Soldiering	Improvement of Basic Soldiering	1. Conduct of Motivation classes. 2. Attendance in recreation room and observance of mess customs. 3. Strict compliance of rules/regulations/policies 4. Instill pride in soldering as a profession.	No discipline related observations at individual level &strengthening of Espiritde Corps at unit level

Table -2: Basic Soldiering

Basic soldiering is one of the prime concerns of any Army. With a view to improving basic soldiering, strict compliance of existing rules/regulation/policies must be enforced, motivation classes must be arranged regularly regarding the importance and implementation of basic soldiering, attendance in recreation room must be ensured, sainik mess customs should be followed strictly and pride should be instilled among the soldiers to get the benefit of basic soldering.

Serial	Item	Objectives	Ways & Means	End State
2.	Physical Fitness	100% IPFT Pass 0% Over Weight case	1. Improvement of physical fitness by ensuring attendance in regular PT and games. 2. COs time to be utilized for those who are overweight / weak in IPFT. 3. Positive observance of Reward/ Punishment system for IPFT performance.	100 % IPFT Pass Nil Overweight

Table -3: Physical Fitness

One of the important criteria of being a good soldier is being physically fit. Physically unfit soldiers can't cope up with the battle field. For being physically fit, one soldier should pass in IPFT regularly and shouldn't be obese. To make 100% soldiers pass in IPFT and 0% obese in the unit, CO should ensure the regular attendance of all soldiers in morning PT and evening games, CO's time should be utilized for the IPFT failed, weak and overweight case, reward should be given as recognition of hard work. Punishment should be given to those who fail even after giving successive chance to improve in IPFT and reduce extra weight.

Serial	Item	Objectives	Ways & Means	End State
3.	Range Efficiency	90 % Pass	1. Conduct practical training on aiming & checking, Musketry, stripping and assembling 2. Arrangement of removal of gun shyness, instill confidence and positive motivation based on individual weakness.	90 % Pass

Table -4: Range Efficiency

Another important criterion for being a good soldier is being good at range efficiency. COs should emphasize on making 90% pass in range efficiency. For doing so, he should conduct practical training on aiming, checking, musketry, stripping and assembling and gun shyness should be removed with a view to achieving success in range efficiency and the individuals should be motivated positively so that he gets interest to improve his range efficiency.

Serial	Item	Objectives	Ways & Means	End State
4.	Accountability	Held Command echelon accountable	1. Arrangement of Regular morning brief 2. Arrangement of Fall in as per sub unit for closer interaction. 3. Entrusting with responsibility and and giving flexibility to accomplish task 5. Feedback both top down and bottom up	100% appointment holders are accountable for their responsibilities

Table -5: Accountability

Each and every member of a unit has some responsibility. Everyone should be held responsible. To make everyone responsible, COs should arrange regular

morning brief to distribute responsibility and get the feedback, soldiers should get fall in according to sub unit, junior leaders should be given responsibility with flexibility and feedback should be got from top down and bottom up.

Serial	Item	Objectives	Ways & Means	End State
5.	Troops Welfare	Improvement of basic living &messing condition	1. Improvement of sainik mess /line and infrastructure 2. Improvement of food 3. Creating a healthy atmosphere to work freely	Food &Accommodation Improved and thus the devotion towards the organization and unit will be more.

Table -6: Troops Welfare

Welfare of the troops should be given enough emphasis. In order to improve the basic living standard and messing condition, COs should improve the infrastructure and sainik mess/line. Within the fresh issued by Station Supply Depot, COs should try to improve the menu and can make varieties of food. COs should try to create a healthy atmosphere to work without hesitation and fear; thus it will help to expose the qualities of the troops.

Serial	Item	Objectives	Ways & Means	End State
6.	Professionalism	Making the soldiers fully professional	1. Imparting required training 2. Observance of rules/regulations/policies strictly 3. Abolishing nepotism and favouritism 4. Professional attitude to accomplish any task	Professionalism improved

Table -7: Professionalism

The main aim of the COs should be making the troops professional. In order to do this, COs should plan to impart relevant training to the troops according to their rank and experience. COs should not deviate from the existing rules/regulations/policies. They should avoid nepotism and favoritism with a view to maintaining justice. All dealings to accomplish any task should be done in a professional way which will ultimately help the troops in the long run to be professional under all circumstances.

INPUT MEANS/WAYS OUTPUT

Welfare
1. Improvement of Food
2. Improvement of Living Standard
3. Healthy Working Environment Training

Professional Soldier

Training
1. Personal Training
2. Collective Training
3. Inculcating Military related Training

Basic Soldiering
1. Ensuring Personal Discipline
2. Ensuring Passing in IPFT
3. Ensuring Passing in RET
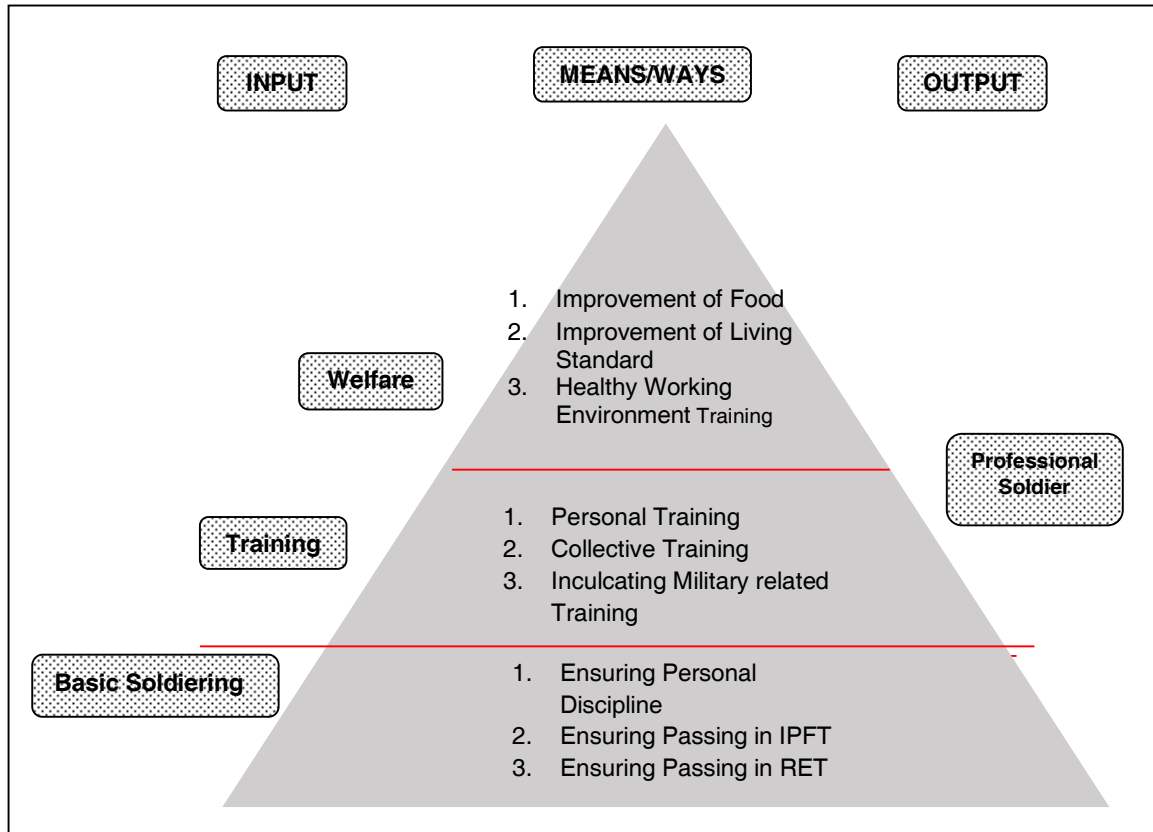
Diagram: Pyramid of Command Philosophy

Ways to Overcome Grey Areas/Challenges

The perceived challenges/grey areas appended before can be eliminated as follows:

a. **Minimum Six Months of Unit Service.** Once a soldier is posted to the unit from Extra Regiment Employment, at least six months of unit service for him should be ensured. By this time his regimentation will be done. A proper regimentation ensures grooming up of a soldier and a well groomed up soldier will not face any difficulty when he is posted to any other organization. Mainly services units need to spare soldiers for extra regimental employments (ERE) suffer a lot for this. Six months of unit service renew the basic foundation of the soldier. Thus it facilitates to shape up his professional career.

b. **Careful Employment of CO.** COs may be dedicatedly spared for unit affairs rather than making them engaged in multifarious issues as mentioned before. Time spent by COs in unit is truly an investment. He must be allowed to be with

troops. By personal interaction in many cases difficult problems can be solved. He must be given with enough time so that he can implement his vision carefully and meticulously.

c. **Strength, Weakness, Opportunity and Threat (SWOT) Analysis.** On assuming Command COs must make a SWOT analysis. He must identify what are the strength and weaknesses of the soldiers and must emphasize on continuing the strength and rectifying the weaknesses. This will work as baseline for formulating his command philosophy. Ultimately this will guide him throughout his tenure in the unit.

d. **Documentation of Vision and Command Philosophy**. Vision and command philosophy should be officially documented. Thus their implementation can be measured. Once documented, these can be referred to the next CO. Thus a congenial progressive professional environment can be ensured. Once every unit follows the system, Bangladesh will get a more pragmatic and professionally sound army.

Some Tips for the COs

While implementation is an individual art, there are same common tips which can help the COs to achieve their vision.

a. **Set Personal Example.** Setting personal example is one of the best ways to make the command effective. This should be practiced in every command channel. The leaders must lead by example. For these COs presence in different activities is a must. Once troops see the commander doing things himself nothing better can motivate him. General Colin Powell said" The most important thing I learned is that soldiers watch what their leaders do. You can give those classes and lecture them forever, but it is your personal example they will follow."[11]

b. **Entrusting with Responsibility.** One must trust under commands with greater responsibilities. JCOs and NCOs are to be given with responsibilities. At the same time, they should be given with flexibility to accomplish the task. General George Patton said" Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity".[12]They need to be prepared to take the command in absence of officers at any time. If these three layers of the command channel become efficient, the job of commanding a battalion will be very easy.

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[11]https://www.themilitaryleader.com/priceless-colin-powell/
[12]http://www.curatedquotes.com/leadership-quotes/military/

c. **Promote the Best People.** Every action of the under commands should be taken into cognizance. Only the best will be promoted. Fewer will get the opportunity to command. So if everybody's actions are recorded, it will be very easy to find out the best people to give promotion. To keep track of the performances, a battalion can keep the record of the good job done/mistakes of each and every soldier. A register named "Performance Register" can be made with a view to keeping the good/bad record of all individual. This will surely justify ones actions and it will also make things easier.

d. **Communicate.** One key to effectiveness is frequent and open communication. There should have a communication bridge between the subordinates and the leaders. The leaders must know their men and their problems. If one does not know his men, he will not be able to solve their problems, weakness and at the same time their strong points.For easy and open communication, morning brief can be arranged at battalion level where all the key appointment holders will be called and they will be able to communicate their problems to the COs.

e. **Recognize Outstanding Effort.** Outstanding efforts should be well recognized. This will boost up the under commands morale and at the same time it will create a congenial environment. Initiative and outstanding performance should be awarded in the monthly darbar. But commanders should not allow working solely for recognition. It will hamper the fellow feelings and bonding among soldiers. COs should also encourage healthy competition with a view to extracting maximum out of each soldier.

f. **Make JCOs and NCOs Responsible.** JCOs and NCOs are to be given with appropriate responsibilities. Commanders also have to keep faith in them. Sometimes they can be given with some responsibilities beyond their capability but with proper monitoring and guidance. Commanders should observe how they accomplish. This is how Commanders can make the JCOs and NCOs efficient and professional. Without making them responsible, one third of whole Army may remain idle which should never happen.

g. **Know the Art of Overlooking.** CO should master the art of overlooking. He should tactfully monitor the implementation of his orders. He should be flexible enough to forgive the unintentional faults. He should be patient and perseverant in executing his command philosophy. He should balance his presence in activities involving soldiers.

h**. Currency Training/ Trade Training.** To make the under commands efficient in their trade/job, currency training for the weak driver/store

man/tradesmen can be introduced .Various currency training related to trade like currency training for cook, carpenter, Tailor, weak driver must be arranged for short duration. In those currency training, specific classes like preparation of improved food menu, tent preparation and repair, driving light vehicles regularly must be kept to improve their trade knowledge.

j.   **Proper Guidance and Enhancement of Reward and Punishment.** While CO knows the art of overlooking, JCOs and NCOs should avoid the tendency to overlook the mistakes of their under commands. They should always look to rectify the under commands. Soldiers should always remain under proper guidance and care. Their mistakes should never be overlooked, rather those must be rectified. Most importantly, to improve the discipline standard of the troops reward and punishment should be practiced at all level. Logical punishment for the offence shows the justice to the soldier who doesn't commit offence.

Recommendations

Every CO should have a clear vision and implementable command philosophy which may be deposited to formation headquarters on assumption of his command. There could be an evaluation after his tenure of command as to how much could he achieve. This will enhance the quality of the army command. Formation headquarters in this regards may organize yearly evaluation system. However this may not be the yard stick to measure COs performance.

A bi-annual leadership workshop may be organized at formation level so that command vision and philosophy etc. could be shared.All COs should join the workshop where senior officers may be called to share their experience on commanding a unit and how they implemented their command philosophy.

SWOT analysis should be done by all COs before assuming the command of their units. COs should know the strength and weakness of his under command otherwise he may go wrong. If he knows it, he will be able to utilize their capacity to the fullest.

The COs should as far as possible be made free from all commitments except his battalion affairs. He should be allowed to give 100% focus on his unit affairs so that he can give enough time to achieve his vision.

Conclusion

It must be kept in mind that a CO is accountable continually for not only his own actions but those of the people he supervises. COs enjoy a lot of authority over his under commands. This authority must be taken as an opportunity to groom them up. Many ideas and instructions are not written. Yet COs are to be prudent to work at own initiative to do their best in a given situation. Limitations are inbuilt in any system. With good use of sense one should overcome these limitations. Troops must be given adequate authority to act at their own initiative. This will grow professionalism. Zero Error Syndrome must be eliminated from all tiers of command. CO's vision must be at the forefront while he takes any decision at any time during his command. He should be courageous enough to execute matters related to discipline. If corrective actions are necessary, he should have the moral courage to take charge and fix what needs to be fixed. Command Philosophy must be well articulated and circulated to one step up and two steps down. This will instil confidence at all levels. Last but not the least one should be honoured and feel proud of serving with his battalion. Nation looks at Army during the crisis. All members of Army must prepare accordingly.

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MASTERING THE ART OF NEGOTIATION: A MUST HAVE ATTRIBUTE FOR PRESENT DAY'S BANGLADESH ARMY

Lt Col Md Imrul Mabud, afwc, psc, Arty

Let us never negotiate out of fear. But, let us never fear to negotiate.
- John F Kennedy, Inaugural Address, 20 January 1961

Introduction

Captain Ethan (pseudonym) was on a patrol at Gbanga, Liberia in a beautiful morning of October 2004. He suddenly came across a group of armed rebels near a village demanding withdrawal of United Nations peacekeepers from Liberia. He, without proper understanding of the situation, approached to the group and started negotiating about their surrender. The process ended in dire consequences causing one miscreant's death from shoot-outs. Luckily for him, his patrol members were unharmed and still breathing. He lost control of a small demonstration that threatened to escalate into a full-scale riot[1] whereas peacekeepers' primary task is to manage conflict so that it does not escalate into violence (Draft United Nations Contingent Commander's Handbook 2015). A lesson learnt from here is that our young officers should proceed for any negotiation with right set of skills and knowledge. Life-and-death outcomes may hinge on how our officers negotiate in such situations.

Speaking philosophically, everything is a negotiation and everyone knows how to negotiate. We can't go through our lives without it since everyone deals with some kinds of conflicts in every facet of their lives. Sometimes, we even negotiate with ourselves when we need to get up early on a friday morning after a tough week. Thus, everyone at least has some inborn knowledge of negotiation even they haven't studied it. We know that negotiation is a process where people try to reduce their differences between them and the other parties with whom they are interacting. In a classic mental model of military interactions, one receives orders from seniors, gives orders to juniors and applies unique expertise of military profession for negotiation tasks. This is pretty straightforward and may fit for combat but in a chaotic world of 21st century, we may find that the 'Art' part is missing.

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[1] United Nations Mission in Liberia authority discussed the negotiation skills of the peacekeepers for the incident. Cornerstone of this discussion is that peacekeepers should be more prone to peaceful settlement of conflict resolution rather than resorting to arms.

Defining the Problem

It may appear that warfare and negotiation are polar opposites and why not. The objective of war is to defeat enemy and in negotiation, goal is to find a solution that satisfies all parties. Consequently, little cross-learning and exchange has occurred across the two domains. Goodman (2005) also said that military negotiation has been a subject of limited research and analysis, and has not been part of traditional military doctrines. Limited negotiation training is likely to encourage soldiers to rely on familiar tactical considerations and actions in responding to conflict situations (Nobel et al. 2006). However, rise of both traditional and non-traditional security threats all over the world have amplified the importance of negotiation between parties and warring factions. As such, Armies around the globe have concluded that training the officers about how to negotiate is as important as traditional soldiering skills designed to kill the enemy.

Military missions assigned to Bangladesh Army have grown into density in recent past. It involves a mix of peace time tasks and war time responsibilities. We now conduct a diverse range of operations from peacekeeping to counter insurgency and from disaster management to crisis management (Operation Thunderbolt in 2016, Operation Twilight in 2017 etcetera). Officers of Bangladesh Army have now been involved in negotiating traditional and non-traditional security threats. However, until now, Bangladesh Army has taken barely any step to train its officers in mastering the art of negotiation. It's a very vast and complex subject with dimensions of mammoth proportion. Owing to that fact, this paper limits its scope only within core areas of military negotiation and training imparted to officers. This paper examines the need of negotiation training for our officers and develops a conceptual framework that can guide the design of negotiation training for officers of Bangladesh Army.

Negotiations Defined

Negotiation is defined[2] as "An effort to resolve a perceived conflict of interest by means of conversation" (Pruitt 1981). It represents a unique form of interaction or decision making that involves more than one party, where the parties hold potentially conflicting interests; yet enough interdependence and mutual interests to motivate

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[2] A quick internet search provides no less than ten definitions for negotiation. The first definition on the list is, not surprisingly, from the business field. There are definitions beside military usage from financial world, health sciences, etcetera.

them to remain in the relationship and complete the exchange (Bazerman and Lewicki, 1983). Military negotiation is a problem-solving process in which two or more parties discuss and seek to satisfy military interests on various issues through joint decisions (ADRP 6-22, 2012). Another definition says that Military negotiation is a process where a conflict at some level exits between at least two parties and at least one of them is motivated to resolve the conflict (DD 1-1, 2011).[3]

Significance of Military Negotiation from Theoretical Standpoint

"The smartest strategy in war is the one that allows you to achieve your objectives without having to fight" (Sun Tzu [600 BC] 1963). Sun Tzu believed that to win a battle by actually fighting is not the most desirable method. Achieving objectives without having to go for a war is clearly a superior strategy.[4] To achieve one's own objectives in a conflict situation, one has to communicate with the opponent. Communication may take different forms; it may involve show of force, deception, other parties or negotiations with the opponent. Goal of such negotiations is to present the opponent with alternatives that the opponent would accept. Clausewitz also said, "War is a continuation of politics by other means" (Clausewitz [1832] 1976). He meant that war is a form of coercive diplomacy but there are similarities between war and other approaches. As such, we may find out more peaceful and desirable ways to resolve conflicts. Clearly war is the ultimate, and most often the worst approach to conflict resolution but it should be avoided by negotiation if possible (Tse and Kesten, 1997).

Why do Army Officers Need to Negotiate?

Army officers worldwide generally don't like negotiating and at times even find the process intimidating. They are used to operate in a controlled environment where the common answer to questions involve a terse, 'Yes, Sir' or 'No, Sir'. The environment itself at times is a barrier to problem solving whereas every problem solving process involves some aspects of negotiation. Again, army officers are generally tempted to see negotiations in binary terms, i.e., win or lose. They forget that good opportunities are missed when people are unprepared. It is hard to get what

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[3] United States Army Doctrinal Reference Publications (ADRP 6-22) 2012 and United States Air Force *Leadership and Force Development* (DD 1-1) 2011.

[4] In China around 200 BC, the first Emperor Qin Shihuang studied "The Art of War" thoroughly. He applied the principles in Sun Tzu's way of planning, preparation and evaluation of his opponents and brought them into negotiation. Adhering to Sun Tzu's principles, Emperor Qin Shihuang could unite all of China for the first time in history.

you want if you do not know what it is. Someone may argue to bring in an outside expert to handle the negotiation. These outside negotiators might be better groomed but often there may not be enough time to bring them in or they may not be allowed in the scene.

Army officers around the globe confront negotiation challenges every day. Starting from patrolling in the rebel infested hot spots at mission areas to inducing terrorist leaders to share valuable information. From signing of agreements or Memorandum of Understandings to holding defence dialogues in country's favour, all involves some kind of negotiation. The goal of such negotiations is to present the opponent with alternatives that the opponent would accept. Changing somebody's mind is difficult and exhausting. Mastering the art of negotiation can bring many benefits, including the ability to work more efficiently with opponents and the knowledge to create strategies for overcoming such challenging situations.
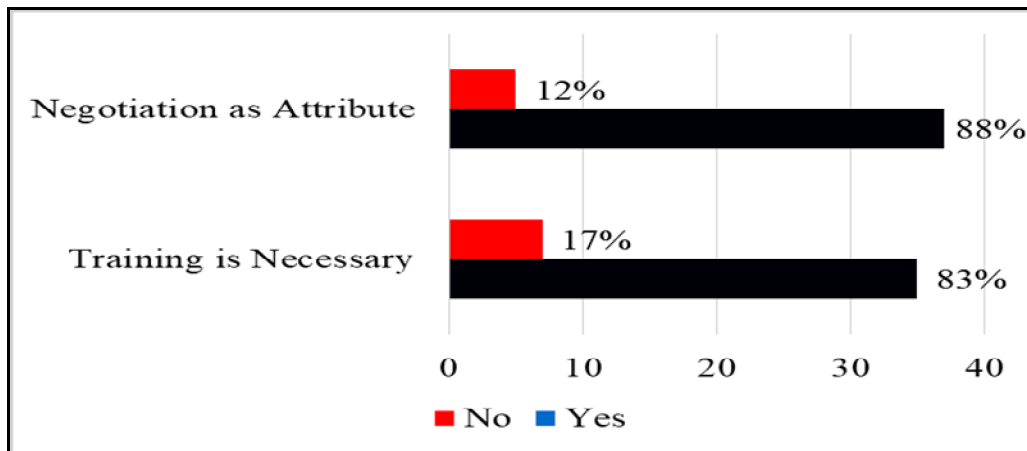
Importance of Negotiation Training in Bangladesh Army

Military leaders do not operate in isolation and thus, negotiation skills are unparalleled to their professional development. Officers of Bangladesh Army constantly interact with other stakeholders in many contexts because of their professional duties and social natures. Often the purpose of interaction is to solve a problem; getting people or a group of people to decide on a particular course of action. Our officers are now engaged in multi-faceted operations both home and abroad. The range varies from counter insurgency operations in Chittagong Hill Tracts and nation building activities from the home country to United Nations peace support operations at different parts of the globe. Facing non-traditional security threats are also becoming quite frequent for Bangladesh Army. These have certainly increased the need of having negotiation skills as a fundamental competency of military leadership.

Bangladesh Army is navigating through an ever increasing operational environment which includes, inter alia, military diplomacy, military to military engagements and peacekeeping. This signifies the importance of military negotiation and skills thereof for the officers of Bangladesh Army. There is no denying the fact that our training syllabus is not optimized for the operational environment that we will encounter. The environment requires our army leaders to possess and utilize negotiation skills though overlooked in officers' professional development. Training is vital to any task accomplishment and negotiation tasks require no less. Survey also

indicates that Bangladesh Army needs negotiation as a military attribute and to address the inadequacy of its negotiation training.

Figure 1.1 Negotiation as an Attribute and its Training Necessity (*n*=42)

Source: Developed by Author

Present Milieu of Negotiation Training in Bangladesh Army

Formal military negotiation training available in Bangladesh Army is not sufficient, if not scarce. Bangladesh Institute of Peace Support Operations Training conducts a pre-deployment training where they impart some negotiation training just before deployment of peacekeepers. However, the package is limited and holds for a very short duration. Devoting too little time for negotiation training achieves the ineffective 'just-in-time' training effect. This also imposes minimal demand on the time available to officers. National Defence College offers some insights on negotiation to the course members of National Defence Course and Armed Forces War Course. However, the package consists of two to four periods and attendance is also limited. In this regard, relying on so short exposures is hard to accept. Thus, negotiation training remains as a subject of limited focus in Bangladesh Army.

Our present approach to negotiation training does not provide a solution to current negotiation training deficiencies. This encourages our officers to rely on accustomed tactics and well-rehearsed actions in interpreting and responding to conflict resolutions. There are barriers like variances in personal traits, information gap among counterparts, limited knowledge on common grounds, etcetera. Time remains a constraint for our negotiation process as we aspire things to happen overnight. Research shows that one cause of failure in a negotiation is the speed of

the process (Brooks, 2015). Our current training doctrine also does not provide an adequate framework to fill up this training void. As such, our professional development is not optimized for the probable operational environment that our officers are likely to encounter.

Negotiation Training Adopted by Contemporary Armies

Negotiation skills imbue an army officer with competitive edge necessary to face a host of threats in the chaotic world of 21st century. Now army officers need to work and communicate across services, joint services, interagency and multinational environments. As such, in many of the contemporary armies, negotiation skills have been identified as a core leadership competency. Additionally, their army doctrines[5] and training programmes are also consistent in advocating for improved negotiation skills as a core leadership competency. Many of the accomplishments of the contemporary armies have evolved from institutionalized negotiation training. Say it the tactical success of Indian Army in Counter Insurgency Operations in north-eastern India or the operational success of United States Army in Afghanistan, skillful negotiation played its part.

United States Military Academy (West Point) prepares their cadets to negotiate with 'Leader Negotiation Education' as part of their officers' foundation training. In 2006, West Point introduced a course for junior officers called 'Negotiation for Leaders' and in 2009, established West Point Negotiation Project (Hollenbeck, 2013). Negotiation has appeared in the curriculum of United States Army Command and General Staff College and Army War College.[6] Royal Military Academy (Sandhurst) of United Kingdom also has lectures on military negotiation, particularly crisis negotiation (Goodwin, 2005). Indian Army officers also take focused training to have a negotiation edge over enemy. They are being trained[7] on management and negotiation from Management Development Institute at Gurgaon, India (Armed to Lead, 2016). All these examples vividly identify that Bangladesh Army also need a formal and institutionalized negotiation training to fill the void.

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[5] United States Army Doctrine Document 1-1 *Leadership and Force Development* (2011) under 'People/Team Competencies' and Policy Directive 36-26 (2008), under 'Fostering Collaborative Relationships' highlight the competencies of 'Negotiating'.

[6] Formal negotiation training has been included in the curriculum of both United States Army Command and General Staff College and United States Army War College. The war course has number of negotiation exercises including 'International Strategic Crisis Negotiation Exercise'.

[7] Indian military selects mid and senior-mid level officers from tri-services between the ranks of major/equivalent and colonel/equivalent and sends them to Management Development Institute at Gurgaon, India. They undergo a six months' management training package at the institute and one of the core courses in that is negotiation.

Roadmap of Negotiation Training in Bangladesh Army

Training is vital to any task accomplishment and negotiation tasks require no less (McConnell, 2000). An army officer is likely to negotiate in a situation where mission success requires the agreement, support, or approval of stakeholders. Our current approach to negotiation training is reasonable but there are apparent disadvantages like very short duration and just for selected officers. This suggests adopting an approach that will train our officers throughout their career. In addition to knowledge and skills of military negotiation, Bangladesh Army may also develop a clear set of doctrines, guiding policies and rules affecting military negotiations.

Levels of Negotiation Training. Courses and books on negotiation training incorporate wide-ranging levels of leadership and practice from different fields such as business, legal, etcetera. But, military negotiation training should focus on specific contexts at right strata of leadership. Taking lead from John Paul Lederach's leadership model (Freeman, 1997) in negotiation training, it is essential firstly to distinguish between different levels of leadership in a military context.

Figure 1.2 John Paul Lederach's Levels of Leadership Model
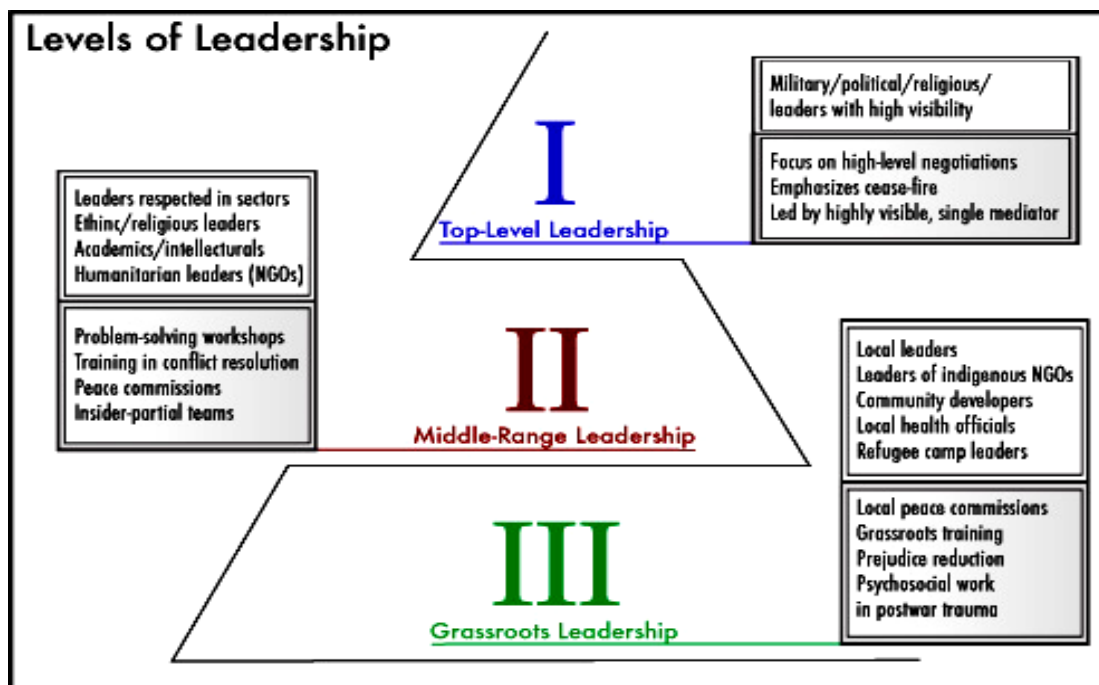
Source : Adapted from United States Institute of Peace[8]

Strategic Level. It will comprise of the very top level of military leaders and their designate. As Lederach notes, strategic leaders are drawn from the highest representative leaders of military with direct access to the head of government. They will focus their effort at the highest level of negotiation: defence or military strategic dialogues, cease-fires, peace talks and agreements, and settlements in the form of signing agreements or Memorandum of Understandings. The signing of the 'Molotov-Ribbentrop Pact' during World War II is a classic example.

Operational level. It will comprise of military leaders who are not officially connected with the government but hold positions of very high respect within military. They will focus on building relationships through military to military engagements, staff talks, military trading, reconciliation, and peacekeeping mission level, facilitating and supporting peace process. Negotiation attempts among the warring factions of Iraq and Coalition Forces is an example.

Tactical Level. These leaders will be at the 'Grassroots Level' of leadership working in the field. They will often use negotiation as an alternative to violence. They will focus on immediate needs to help building the big picture. These leaders will play a very important role as they will work in zones of conflict every day.

Scope of Negotiation Training. Bangladesh Army may resolve this training deficiency using a two-pronged approach. Firstly, formulation of negotiation doctrine which may provide direction for training requirement and clear policy guidelines as to what is negotiable. Secondly, a training syllabus which should include training of the entire officer corps. We may address the deficiency by incorporating negotiation training in various officers' professional development programmes e.g., different courses, study periods, seminars and symposiums, workshops, situational training exercises, etcetera. In addition, Bangladesh Institute of Peace Support Operations and Training may include a concrete negotiation training package in their pre-deployment training. This will prepare our officers for difficult and challenging environments. But, to have greatest impact, negotiation education and training should be embedded at all levels of our officers' development systems so that our young leaders' understanding and abilities can grow as they grow.

Training Challenges and Development Foci. Negotiation is not capitulation, as some people, especially soldiers associate 'negotiation' with capitulation (Draft United Nations Contingent Commander's Handbook, 2015). If so, internalization of

conflict resolution skills by army officers may become challenging. Successful negotiation depends on one's understanding of own role, capabilities, cultural and historical background, and interest of other party in the operational environment. This is likely to vary from case to case. As such, it may be intriguing to standardize a negotiation training curriculum for Bangladesh Army. Again, understanding the context in which an army officer may negotiate and putting it into right perspective is another challenge. They may have to integrate both war-fighting and negotiation skills to ensure their mission success. So, feasible options for negotiation training must lie somewhere in between.

Army officers who engage in negotiations are likely to encounter a wide variety of challenges. This may include, among others, negotiation between competing groups, making ethical judgment, and balancing the threat of use of force with negotiation strategies. Training programmes aimed to prepare officers for negotiation should identify these challenges and provide them the knowledge and tools to address such challenges. There is a wide variance in negotiation training methods and application styles at different sectors. Our course curriculum may take their best practices with theoretical literatures covering military negotiation. Practical literatures like case studies on military negotiations may be offered for discussion. Negotiation is an interpersonal process too, which demands applied practice. So, course designers may introduce topics that may develop communication techniques and interaction skills of officers. Few thoughts on probable negotiation challenges and their training focus are appended below:

Table 1.1 Negotiation Challenges for Training and Development Foci

Serial	Negotiation Challenges	Training and Development Foci
1.	Negotiation disputes and impartial agreements	Learn about the characteristics of negotiation processes and develop effective negotiation skills
2.	Developing agreements with individuals who value personal gains, power and nepotism	Provide clear organizational policies and direction concerning the extent to which officers may deviate, if at all
3.	Managing meetings with people who adopts a relaxed approach to time	Increase cross-cultural awareness regarding differences in approach to time
4.	Differences between Bangladesh Army and Counterparts as to what is negotiable.	Provide clear organizational guidelines what may become subject for negotiation

Serial	Negotiation Challenges	Training and Development Foci
5.	Controlling the inclination to employ military power and threat of force	Learn about the impact of power disparity in negotiations
6.	Balancing the use of threat with care and respect	Include negotiation training focusing on the use of verbal and nonverbal communication to project power while expressing politeness and respect
7.	Identifying who is trustworthy	Share negotiation research regarding different forms of interpersonal trust
8.	Determining what to exchange and what concessions to make	Share the findings of negotiation research and teach concession strategies
9.	Negotiating while experiencing feelings of loss, anger and grief	Inform trainees on the impact of negative emotions on negotiation and teach self-management and emotional regulation techniques
10.	Employing behavioral adaptability and responding appropriately to competing demands	Encourage the use of individual self-reflection to learn from on-job experiences

Source: Modified by Author (adapted from United States Army Research Institute for the Behavioural and Social Sciences, Winning the War and the Relationships: Preparing Military Officers for Negotiations, pp.16-17)

Recommendations

Mastering the art of negotiation can bring many benefits for the officers of Bangladesh Army. It will enrich their knowledge to create strategies for overcoming challenging situations. It will also improve their ability to work more competently with people and give them a superior understanding of how to underpin a success. In light of above discussion, following are recommended:

a. A Board of Officers may be formed at Army Headquarters to determine policy guidelines for negotiation training and matching training packages for the officers' of Bangladesh Army by 2017.

b. A military negotiation training package may be included in the training curriculum of cadets at Bangladesh Military Academy with immediate effect.

Conclusion

Negotiation is an instrument to align conflicting interests and to create an outcome that preferably proves beneficial for all parties. To the common observer, negotiation may appear to be an activity limited to the corporate or business world. In reality, military negotiation is part of how armies of today's world are communicating in and out of the traditional battlefield. Conventional military leadership doctrines were primarily focused on achieving battlefield tactical proficiency. Military thinkers now believe that military negotiations are also critical to ensure effective completion of assigned missions. Military operations around the globe have grown into complexity in more recent years. It swings from counter insurgency to peace support missions and from nation building tasks to hostage rescue operations. Clearly, contemporary armies are finding it easier to attain more equitable and beneficial results through negotiation. Accordingly, the idea of military negotiation has been unified in their doctrines and leadership development programmes. Therefore, conclusion can be drawn from here is that negotiation skills has emerged as an essential competency of present-day's military leadership.

Leadership training for the officers of Bangladesh Army primarily aims to deliver purpose, direction and motivation necessary for successful mission accomplishment. Current operations of Bangladesh Army covers, among others, counter insurgency operations, peacekeeping missions and nation building tasks. In the recent days, more non-traditional security threats are posing serious challenges and contesting with our traditional training paradigm. These challenges have increased the importance of negotiation skills as a must-have attribute for our officers. Our senior leadership is now making important decisions about force structure and training as we posture for the future. Now, at the backdrop of more non-traditional security threats of 21st century, Bangladesh Army may need to correct its officers' professional development programmes. Negotiation education and training should be embedded at all levels of our officers' development system. We may recall that military victory alone does not constitute a solution as one of the lessons learnt from history is that the victim will always come back.

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FUTURE WARFARE TRENDS: PREFERRED TECHNOLOGICAL OUTLOOK FOR BANGLADSEH ARMY

Lt Col Mohammad Baker, afwc, psc, Sigs

Introduction

Future war is likely to be short and intense and thoroughly dependent on technology. As such, technological advancement is likely to play a critical role to dictate the situations of the war. With the initiation of Information and Communication Technology (ICT) new conceptual dimension to warfare popularly termed as Network Centric Warfare (NCW), Cyber Warfare, etc. are introduced. In order to achieve dominance, today's fragmented command, control, decision making actions and all activities related to warfare should be more focused, efficient and effective to ascertain the common goal. Most of the modern armies in present world are increasingly becoming dependent on technological advancement. The trend in modern warfare is towards the increased use of smart weapons and the integration of Command, Control, Computers, Communications and Intelligence (C4I) system with Surveillance and Reconnaissance (known as C4ISR) to maximize combat effectiveness[1].

For achieving technological superiority integrated C4ISR is required which will offer a commander to make and communicate decision faster to a wide array of forces[2]. Therefore, transforming towards ICT based C4ISR system will facilitate to fulfill the operational need of the future war. It connects the strategic level with tactical level in real time. Modern armies have digitalized their command and control (C2) infrastructure by exploiting the technological advancements to a greater extend. To remain vigilant and effective for any unforeseen transforming to C4ISR is a non-negotiable urgency. Bangladesh Army also needs to plan and incorporate such technological advancements to fulfill requirement of future warfare.

The essay begins with an overview of the future warfare trends and preparation of Bangladesh Army. Subsequently technological advancement adopted by the modern armies and preferred technological advancement for Bangladesh Army were

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[1] Tolk, Andreas Tolk, Andreas, 2002, "Using the C4ISR Architecture Framework as a Tool to Facilitate Systems within the Military Application" at page 09.
[2] Mandeles D. Mark 2007, The Future of War, Organizations as Weapons, at page 31.

highlighted. Probable C4ISR structure including challenges of implementation was discussed under preferred technological outlook.

TRENDS OF FUTURE WARFARE

General.   In future the typical linear battlefield is likely to be replaced by a combat situation with a 360 degree threat, potential for new high-tech weapons and non-traditional forces. It is observed that advancements in technology have led to faster airplanes, laser-guided weapons, unmanned bomb-carrying vehicles and all are under same network[3].

Modern War Fighting Trends.   According to *Carl von Clausewitz* "War is like a chameleon, always changing as per its environment". Over the centuries rapid development of technology has made an enduring impact on war-fighting concepts. Technology has always been the major determinant of warfare and always shaped its concept. Today's soldiers will have to perform as a soldier, a technocrat, a cyber-warrior and many other roles. The concepts of modern day war fighting are changing and will undergo more dramatic changes in future.

Dimension of Future Warfare.   *Martin Van Creveld*[4], in his 'On Future War' stated "in the future, war will not be waged by armies but by groups whom we today call terrorists, guerrilla, bandits and robbers". As the information age matures, a determined adversary will be able to sabotage, disrupt or contaminate the information highway. General Gordon R Sulivan and Colonel James of Dubik of United States in a research suggested five trends of future warfare where 'increased integration of technologies' is one[5]. In future conflicts, even soldiers at the lowest echelons of command will have smart devices that connect them to Brigade level network[6].

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[3] Eric Beidel, Sandra Erwin and Stew Magnuson, November 2011, "Technologies That Transformed Warfare", available at.http://www.livescience.com/41321-military-war-technologies.html, accessed on 14 Oct 2016.

[4] *Martin* Levi *van Creveld* is an Israeli military historian and theorist. He was a teacher at the Hebrew University of Jerusalem. He is the author of seventeen books on military history and strategy

[5] Ali, Mohammad Abu Sayeed, 2010, December 2010, "Trends of Future Warfare and Options Available," Bangladesh Army Journal, Volume 2010 Number 48,Other trends are; Increased lethality and dispersion, Increased volume and precision fires, Achievement of greater mass and effect and Reinforcements in invisibility and delectability.

[6] Eric Beidel, Sandra Erwin and Stew Magnuson, Op Cit, pp 9.

Effect of ICT on Future Warfare. The rapid development in technology has made a permanent impact on war-fighting concepts. ICT based military platform will definitely ensure a paradigm shift in planning, weaponry, accuracy and lethality in terms of achieving synergic effect in battle space. The likely effects are discussed below:

a. **War Fighting Concepts.** The concept of modern day war fighting is now hinge around countering both the conventional and unconventional threat. Warfare today is based on information dominance. Satellites provide a steady flow of real time information that makes the battle space virtually transparent[7].

b. **Networked Battle Space.** Information warfare and its concept of NCW have reshaped warfare. A networked battle space integrates all elements together and synergizes their firepower and information flow. Battle space Management System (BMS) comprises of computer integrated together to link each soldier, fire and supporting elements, logistics and other elements. ICT enhanced logistic system will ensure getting the right supplies to the right place at the right moment

c. **Information Warfare (IW).** In the ICT based IW will deny, exploit, corrupt or destroy an adversary's information, information systems and computer-based networks while protecting one's own. Such actions are predominant by ICT based systems and designed to achieve advantages over military adversaries.

d. **Cyber War.** The increased dependency on information spectrum forces across the world are gearing up for the battle of fifth dimension i.e. cyber space. Cyber war is waged insidiously and covertly years and month before the actual conflict to corrupt and disable enemy networks. It would cause ten times destructive effect without firing a shot.

Influence of ICT over C2 Environment. The influence of ICT aims to pursue for information superiority. Information advantage is to be transformed into decision superiority for command as described in the OODA loop[8]. The C2 influenced the tenants of army operations in respect to initiative, tenacity, non-linear engagement and battlefield imperatives with connections to many principles of war.

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[7] Singh, Ajay 2013, "A Spectrum of Modern Warfare" page 89.
[8] The phrase **OODA loop** refers to the decision cycle of observe, orient, decide, and act, developed by military strategist and United States Air Force Colonel John Boyd.

PREPARATION OF BANGLADESH ARMY ON FUTURE WARFARE

General.   The development of Bangladesh Army has been ongoing since independence. It is undergoing major modernization and upgradation of existing systems. Over the last few years Bangladesh Army has taken many initiatives to modernize its ICT sector.

Increasing Fighting Capabilities.   At present Bangladesh Army is a well-equipped force with modern war fighting gadgets. It has adopted a Forces Goal-2030 to transform into a modern, efficient and time-befitting force. Accordingly, mobility of infantry and fire power of Armoured and Artillery including Air Defence has been increased. Infantry soldiers are equipping with ultra-modern equipment like Night Vision Goggles (NVG), Ballistic helmet, protective eye gear, bulletproof vest, hand to hand communicator, palmtop GPS device. Army Aviation has been modernized with new helicopters. Infantry Reconnaissance Vehicle (IRV), Unmanned Aerial Vehicle (UAV) to increase the surveillance capability. A remarkable technological advancement took place by the establishment of Electronic Warfare element, Army IT Support Organization (AITSO) and a tier-III[9] Army Data Center, Army War Game Centre, etc.

Development in ICT Sector.   Vision of IT policy of Bangladesh Army is to expand and diversify the use of ICT in all walks of military life by creating a functional and secure IT platform. The Wide Area Network of Bangladesh Army is connecting all the formations and garrisons with AHQ. As per the plan all members of Bangladesh Army will be an IT literate. Basic IT training will be provided to qualify as IT capable in an e-military environment[10].

TECHNOLOGICAL ADVANCEMENT OF MODERN ARMIES

General. Maximum modern armies are increasingly becoming dependent on technological advancement as the key to victory in future wars. National Defence of USA identifies few key technologies that U.S. forces will need to fight future wars, where maximum emphasis was on information based technology. According to their opinion, success in future conflict will require technologies that can perform persistent surveillance and reconnaissance[11].

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[9] The Uptime Institute, USA categorizes the data centers by **four levels: Tier I, II, III and IV**. These levels correspond to a certain number of guarantees on the type of hardware deployed in the data center to ensure **redundancy**. A **Tier III** data center offers 99.98% availability. With this configuration, it is possible to manage maintenance periods without affecting the continuity of service on the servers.
[10] As per the Structured IT Training Plan of IT Dte, AHQ.
[11] Eric Beidel, Sandra Erwin and Stew Magnuson, Op Cit, pp 1.

Establishing C4I Structure. The concept of integrated C4ISR is capable of integrating war fighting entities, efficient and effective complete system to manage decision making. Therefore, Countries like USA, UK, Germany, China, India, etc. have established C4ISR structure. USA has established C4ISR architecture at every tiers of command in static and mobile form. Individual command, services and agencies in department of defense of USA traditionally developed their C4ISR architectures using techniques and presentation schemes that suited their unique needs and purposes[12]. China terms it as C4KISR (Command, Control, Communication, Computer, Killing, Intelligence, Surveillance and Reconnaissance). The digitized C4KISR system is capable of assisting the commander to command troops and control its weapons by means of supporting efficient seamless communication network[13]. India terms it as C4I2 (Command, Control, Communication, Computer, Information and Intelligence). Indian Army has launched an ambitious programme for transforming C4I2 into the NCW paradigm. Indian Army has evolved doctrine for integrating various components of C4I2 together with an IW doctrine[14]. Modern armies are also using Soldier's C4ISR system may comprises portable equipment which can be dismounted and assembled fast.

Benefits of C4ISR at Various Decision Making Tires. *The benefits of C4ISR at various decision making tires are discussed below*[15]*:*

a. **Greater Integration.** The integration in C4ISR will occur over time, space, function and echelon. It will benefit at various levels and decision making tires i.e. data, information, knowledge, better integrated approach, etc. C4ISR process will be transformed, which will have massive implications in concept, doctrine, organization and training. By connecting UAV to the system, it will provide more precise location and guide a stand-off weapon to the target.

b. **Rapid and Effective Decision Making Process.** As C4ISR system collects, collates and process data simultaneously within very short time, decision making will be swift, effective and rapid. In future the computational power and better network will be dominant factor for initial planning, comfortable battle space awareness, more rapid and effective decision making process.

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[12] AHQ, GS Branch, Signal Directorate.

[13] Ibid.

[14] Kumar, Davinder, 2014, "An Indian C4ISR System by 2020" available at http://defencesecurityindia.com/indian-c4isr-system-2020-strategic- imperative/

[15] 86 Independent Signal Brigade, Presentation of Study Period on C4I, Dhaka, April 2013.

c. **Self-reporting by Major Platforms.** Key platforms through their own system architecture can also provide with self-reporting. This will primarily assist battle space management by linking current operations to logistics and sustainment functions.

d. **Information Sharing or Distribution.** C4ISR system will allow 'Push Service Based' information sharing depending on various command echelons by means of integrated network. For example a GSM based mobile network can update enemy situation regularly through text messages.

PREFERRED TECHNOLOGICAL OUTLOOK FOR BANGLADESH ARMY

General. Apprehending the future war's demand, most of the contemporary armies have already incorporated technological advancement process and established C4I system. From the study it can be assumed that integration of C4ISR system would be the appropriate option for Bangladesh Army to meet the demand of future warfare.

Preferred Outlook for Bangladesh Army. To remain vigilant and effective for any unforeseen, transforming to C4ISR system is a non-negotiable urgency. The future warfare will depend largely on digital data and voice and video communication. Table 1 shows rate of data transfer during various wars[16].

Table 1: Rate of Data Transfer

Name of War	Year	Rate of Data Transfer (word/minute)	Means
US Civil War	1865	30	Telegraph
World War -I	1915	30	Telegraph
World War -II	1945	56	Teletype
Gulf War	1991	192000	Computer
Future War	-	1.5 Trillion	Computer

Source: https://www.idsa-india.org

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[16] Vinod Anand, "Impact of Technology on Conduct of Warfare" available at https://www.idsa-india.org

From the above table it can be envisaged that in future war huge data transfer will take place and that can be performed by a strong C4ISR structure. It is also essential for Bangladesh Army to adopt technologies which will focus on key battle winning aspects like, maneuver, surveillance, concentrated fire power, focused logistics and situational awareness. All these will be possible by digitizing the battlefield i.e. by establishing integrated C4ISR structure.

Probable C4ISR Structure of Bangladesh Army

Prerequisite of C4ISR System. An effective C4ISR system demands a strong and reliable communication network, an accurate data processing system, digitalization of equipment and a superior C2 system. C4ISR system will require data warehouse and Army Data Center may be used for that.

Integration of Various Elements. Various gadgets may be integrated with digital maps and symbols which can work as input source for the network. Armoured and Infantry to be integrated with required equipment. Modern Artillery acts as eyes and ear, same way performs the task of shooters. Therefore, both Field and AD Artillery are to be integrated with C4ISR system. Own EW capability will be enhanced by integrating with C4ISR system. Incorporating and integrating a well-defined logistic support with networked vehicle tracking will ease up in speedy decision making.

Communication Infrastructure for C4ISR System. For C4ISR system Tactical Communication System (TCS) of Bangladesh Army has to be modernized first. Seamless communication system to be introduced to support military operations[17]. For C4ISR system interfaces are to be designed to integrate both terrestrial and satellite communication backbones to enable connectivity from the highest HQ down to frontline troops. National fiber augmented by microwave backbone will be used as core backbone for field communication. Redundancy of backbone will be created by Radio Relay, radio with higher data capacity and VSAT as emergency or alternative communication backbone.

Probable C4ISR Outfits. C4ISR centers will be both fixed and mobile type having option for deployed to the field in case of requirement. Various command posts will be positioned in this center as per the requirements of respective HQs. Communication backbone like, national fiber optic and Short Range (SR) High

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[17] Discussion with SM Farhad, Brigadier General, Director, Signals Directorate, AHQ, on 05 July, 2016.

Capacity Line of Sight Radio (HCLOS), Long Range (LR) HCLOS and VSAT will be established. C4ISR system of higher HQ will be connected to C4ISR system of lower HQ. Each soldier will be connected to respective C4ISR system through Integrated Digital Soldier System (IDSS)[18].

Likely Challenges of Implementation and Measures

Considering all requirements likely challenges for implementation of C4ISR system in Bangladesh Army and apposite measures are discussed as under:

a. **Mind Setup**. Transformation from analogical environment to digital world is a huge challenge. Due to the techno phobia soldiers may not take this change positively. Conduct of training and awareness program for all ranks on C4ISR and motivation may solve this problem.

b. **Dependency on Network and Hardware/Software**. C4ISR system will be software based network with combination of resources of Army and nationwide backbone. It requires integrating multi standard equipment and platforms. As such, the system will totally depend on network and hardware/software, which will be a great constrain. However, with proper integration and awareness, the problem can be overcome.

c. **Standardization of Training**. Understanding of C4ISR and use of modernized ICT platforms and equipment will require expert handling. The officers and men of Bangladesh Army are not adequately trained on those gadgets. This can be overcome by planned training, proper understanding of operating procedure and other related issues.

d. **Budgetary Constrain**. Budgetary constraint would be the major barrier for an effective C4ISR structure. Most of the equipment and platforms need to be procured from foreign countries, which involve huge amount of budget. A phase wise switching to a standard platform vis-à-vis developing the core network will integrate through a time plan.

e. **Organizational Set Up.** At present there is no dedicated organization in Bangladesh Army for C4ISR system. But for smooth functioning of the system an organizational structure of C4ISR is required.

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[18] **IDSS** developed by Cobham Defence Communications (CDC) provides a fully integrated Combat Management System (CMS). The system is provided in three basic configurations – a commander system, a soldier system and a tracking system. It has soldier data terminal (SDT) which provides target identification, reporting and messaging.

f. **Security Issues**. For communication with C4ISR center additional layered of security arrangement to be ensured. Another important aspect is that all soldiers will have the access to real time information. Data communication shall maintain confidentiality in respect of all information provided by the subscriber.

g. **Challenges Faced by User Countries**. Modern countries like USA, UK, etc. sometimes suffer heavy casualties in the battle field, despite having C4ISR system. Bangladesh Army also likely to face the same difficulties. Therefore, before implementing such a vast project, detail study and analysis of C4ISR system of contemporary armies are essential.

Recommendations

Basing on the discussions following are recommended:

a. AHQ, GS Branch may formulate a board of officers to study C4ISR system of other counties and propose a suitable system for Bangladesh Army. IT Directorate or Signal Directorate may take lead role.

b. A separate organization for C4ISR may be incorporated under AHQ, GS Branch. There may be C4ISR cell in all the formations of Bangladesh Army.

c. AHQ, IT directorate may organize an effective and interactive training module by AITSO to train the men on handling of modern equipment and platforms.

Conclusion

The rapid development of technology has made a permanent impact on war-fighting concepts. Battle space is likely to be characterized by highly mechanized forces and increased use of strategic reconnaissance and surveillance. ICT based future warfare will have dominating manoeuvre over adversaries in terms of finding out accurate positioning of forces. Bangladesh Army has started its preparation since long to conform to the future war fighting trends and acquired quite significant technological advancement in the field of ICT.

C4ISR is an automated and systematic C2 system which provides real time situation awareness, battle space information to the commanders. Large scale integration is required for its implementation of C4ISR system, where some of the portion will be military owned and some are nationwide communication backbone. C4ISR system is used by advanced countries for long time including India. C4ISR is

a network and hardware based system and customized software has to be developed with appropriate security measures.

*Probable C4ISR Architecture of Bangladesh Army demands integration of various elements to the system. As such, integration of Armoured/I*nfantry, field and AD artillery, EW capability, logistic system *to be done with C4ISR system.* Nationwide ICT will be used as core backbone to support adequate bandwidth in the field for integrated voice, data and video. Implementation process of C4ISR will take long time, modern equipment and huge amount of budget. Therefore, many challenges are likely to be faced during implementation phase. Challenges faced by user countries are also to be taken into consideration. For smooth implementation of the system all those hurdles are to be addressed appropriately.

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PRECEPTS AND PRACTICES OF TRANSFORMATIONAL LEADERSHIP: BANGLADESH ARMY PERSPECTIVE

Lt Col Mohammed Zaber Hossain, AEC

Abstract

Rapid environmental changes coupled with changes in training and weaponry is causing fundamental shifts that have a dramatic impact on organizations and present new challenges for leaders in Bangladesh Army. These shifts represent a transition from a traditional to a new paradigm. This transition is defined as the new reality for leadership where different models of leadership styles can be categorized as either leader-centered or follower centered. The traditional or leader-centered leadership style is more of task-oriented, that is, transactional which appeals to followers' self-interest. Whereas, transformational leadership style is follower-centered, that is, people-oriented which appeals to the values and emotions of the followers. The lower level of Bangladesh Army is a fertile place to practise transformational leadership as evident in all armies in the world. In this regard, a content analysis has been made to conceive and explore transformational leadership as exist in Bangladesh Army.

Keywords: Leaders, Followers, Transformational Leadership, Transactional Leadership, Bangladesh Army

Introduction

"Mission accomplishment" is a term that most appropriately goes with the army. It has direct correlation with leadership, and in particular, transformational leadership. It is because transformational leadership takes place in an environment where leader and follower relation is determined by a vision in common. It is believed that the armed forces provide opportunities for leadership earlier and more continuously than any other organization does. People in business and even in public sector tend to be rewarded for their individual achievement. Conversely, individual people in military are integrated with the goals of the larger organization on a simple alignment theory, that is, mission accomplishment, a sense that is shared equally by all members belong to the team. Examples of outstanding leadership are frequently drawn from the military in civilian leadership development programmes. Yet

leadership, particularly, leaders in almost all armies often come under criticism on the basis of being conservative.

Bangladesh Army bears a long tradition dated back to British Army. It has a historical background unique in nature. Predecessors of the present Bangladesh Army fought for the people of the then East Pakistan now Bangladesh to liberate them from the subjugation of the West Pakistan. So, the birth of Bangladesh Army is attached with the birth of Bangladesh from unconventional war to conventional war as marked by the day 21st November 1971.

Today, in the world scenario, the role of military has become much more varied. The end of Cold War has shifted the emphasis on conventional warfare to anti-terrorist combat and peacekeeping operations in a wide variety of situations. Leadership of all tiers of Bangladesh Army has proved their worth in serving the interest of the national and the global in the case of UN forces.

Leadership development is given much importance in Bangladesh Army. Some leadership theories like Trait Theory or Great Man Theory are taught in Bangladesh Military Academy (BMA) and in some other army training institutions like, NCOs Academy, School of Infantry and Tactics (SI&T), Defence Services Command and Staff College (DSCSC)and so on. Though Trait or Great Man theories are old-fashioned theories, nevertheless, senior leadership in Bangladesh Army creates an environment for the transformational leadership at all levels to grow. This could also be made possible because of in-service trainings and exercises, attending courses and seminars home and abroad and also initiatives and interactions of the senior officers of Bangladesh Army.

To understand leadership as it is viewed and practised today, it is important to recognize that the concept of leadership has changed over time. Leadership typically reflects the larger society, and theories have evolved as norms, attitudes, and understandings as the larger world have changed. Some historians and other scholars believe our world is undergoing a transformation more profound and far-reaching than any experienced since the dawn of the modern age and the Industrial Revolution some 500 years ago. As a modern army, Bangladesh Army has been experiencing a phenomenal change in form and content since its inception in 1971. So has changed the understanding of leadership and its styles.

At this backdrop, having a close look into transformational leadership and its precepts and practices in the context of Bangladesh Army will obviously take us to a new height to face the new challenges as we are heading towards rapid modernization. For a better understanding of the transformational leadership, the study unfolds some deliberation in regards to Literature Review, Management and Leadership, Leadership as a Process and Transformational Leadership and its Implication in Bangladesh Army. Finally, the paper winds up its discussion with some Recommendations.

Objectives

Firstly, to conceive leadership styles as appears to be over a long period of time in Bangladesh Army. Secondly, to explore transformational leadership practices in Bangladesh Army. This has been done mainly through a content analysis followed by a literature review.

Literature Review

Leadership has gained the attention of researchers worldwide. A review of the scholarly studies on leadership shows that there is a wide variety of different theoretical approaches to explain the complexities of the leadership process (Northouse, 2012). Most of this difference stems from the fact that leadership is a complex phenomenon involving the leader, the followers, and the situation. Some leadership researchers have focused on the personality, physical traits, or behaviours of the leader, others have studied the relationships between leaders and followers, still others have studied how aspects of the situation affect how leaders act (Hughes, Ginnett, Curphy, 2012). Throughout the 20th century, leadership concepts and approaches have experienced major changes. Many of these concepts and theories are still applicable to influential leadership studies.

The Great Man Theory. The Great Man theory is the pioneer of leadership concepts. In the early 20th century, leadership traits were studied to determine what made certain people great leaders. The basics of this theory of leadership adopted the belief that leaders were born with certain innate leadership traits and attributes. Everywhere, be it an institution, a military outfit, governments, and a social movement, leadership is seen and conceptualized as a single "Great Man" who put everything together and influenced others to follow along based on the strength of inherited traits, qualities, and abilities (Daft, 2015).

Behaviour Theory. Behaviour theory of leadership has focused on behavioral aspects of a leader rather than looking at an individual's personal traits. This behaviour or style approach gives emphasis on what leaders do rather than who leaders are. The behaviour approach originated from three different lines of research. Those are: the Ohio State Studies, the University of Michigan Studies, and the work of Blake and Mouton on the Managerial Grid of Texas University. Each study identified two leadership styles which, in turn, were grouped in two primary types of behaviour, that is, task behaviours and relationship behaviours as illustrated in the following table (Daft: 2015, P-46).

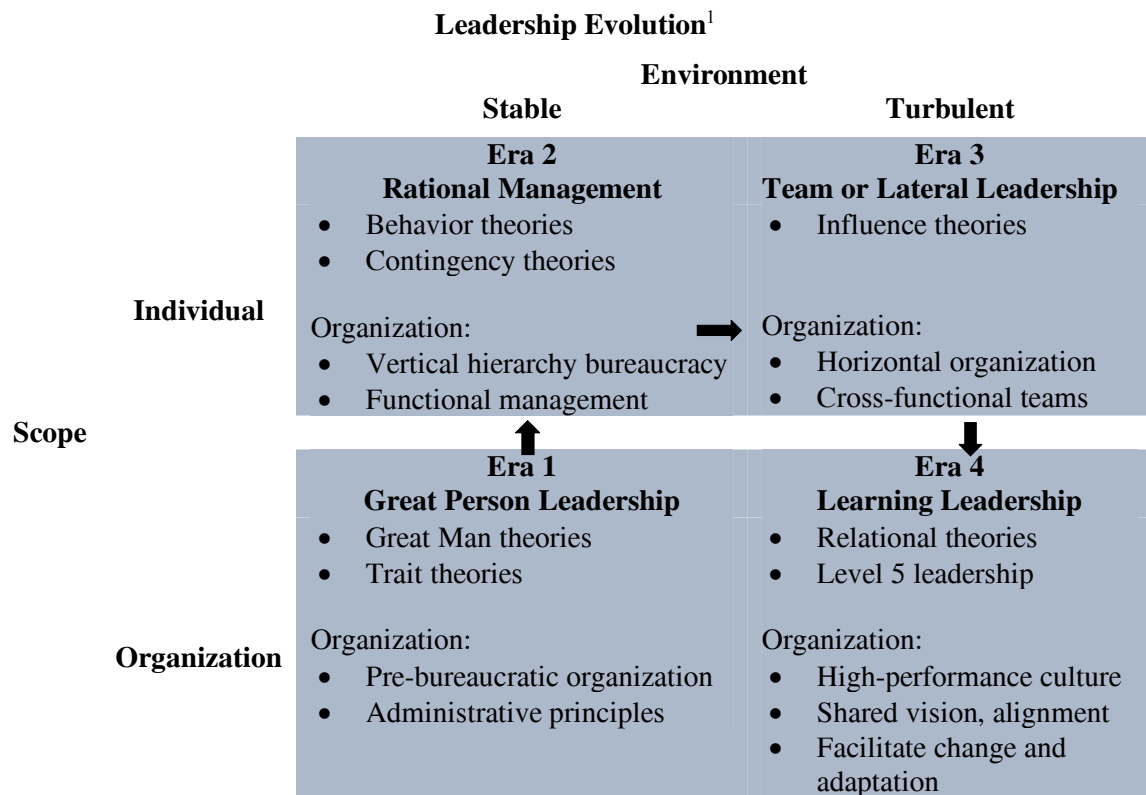| Research	People-Oriented	Task-Oriented
Ohio State University	Consideration	Initiating Structure
University of Michigan	Employee-Centered	Job-Centered
University of Texas	Concern for People	Concern for Production

Contingency Theory. Contingency means that one thing depends on other things. For a leader to be effective there must be an appropriate fit between the leader`s behaviour and style and the conditions in the situation. A leadership style that works in one situation might not work in another situation. Contingency theory tries to match leaders to appropriate situations. Within the framework of contingency theory, leadership styles are described as task motivated or relationship motivated. Task- motivated leaders are concerned primarily with reaching a goal, whereas relationship-motivated leaders are concerned with developing close interpersonal relationships (Northouse, 2012). To measure leader styles, Fiedler developed the Least Preferred Coworker (LPC) scale. Leaders who score high on this scale are described as relationship motivated, and those who score low on the scale are identified as task motivated.

Influence Theory. Influence theory studies leadership through influence processes between leaders and followers. There are three types of influential leadership that rely on a leader's personal characteristics and relationships. They refer to leadership influence based not on position or formal authority but, rather, on the qualities and charismatic personality of the leader. Charismatic leadership and transformational leadership are intimately related. Some leadership scholars treat them as essentially the same. The current interest in charismatic leaders provides

another perspective on traits of the leader and the behaviours they engage in. These scholars view charisma as a trait quality to transformational leaders.

   Relational Theory. Relational theory is the most modern amongst all. Since the late 1970s, many ideas of leadership have focused on the relational aspect, that is, how leaders and followers interact and influence one another. Rather than being seen as something a leader does to a follower, leadership is viewed as a relational process that meaningfully engages all participants and enables each person to contribute to achieving the vision. Two significant relational theories are transformational leadership and servant leadership. A model of leadership evolution will provide a framework for examining the evolution of leadership from the early Great Man theories to today's relational theories. Each cell in the model summarizes an era of leadership thinking that was dominant in its time but may appropriate for today's world:

Leadership Evolution[1]

Environment

	Stable	**Turbulent**
Individual	**Era 2** **Rational Management** • Behavior theories • Contingency theories Organization: • Vertical hierarchy bureaucracy • Functional management	**Era 3** **Team or Lateral Leadership** • Influence theories Organization: • Horizontal organization • Cross-functional teams
Organization	**Era 1** **Great Person Leadership** • Great Man theories • Trait theories Organization: • Pre-bureaucratic organization • Administrative principles	**Era 4** **Learning Leadership** • Relational theories • Level 5 leadership Organization: • High-performance culture • Shared vision, alignment • Facilitate change and adaptation

Scope (left axis label)

[1]Richard L. Daft, *Leadership,* Fifth Edition, 2011, South-Western, a part of Cengage Learning, p.21.

Methodology

To attain the objectives of this study, a qualitative method in the form of content analysis coupled with information and observation gleaned from personal and shared experiences have been blended. Data have been collected from some secondary sources like articles, books, newspaper, pamphlets, etc. This study will further enhance and expedite academic insight into transformational leadership as practice in Bangladesh Army.

Comparing Management and Leadership

In a world of corporate culture, we are in a prone to confuse leadership with management. One thing is important to note that all leaders are commanders, but, all commanders are not leaders. Likewise, all managers are not leaders. It is a two way traffic. But, we should not be deviated from the basics that management is about path following; leadership is path finding. General Sir William Slim, the inspiring Second World War Leader in a speech in Adelaide as Governor-General of Australia in 1957 said:

> ...we do not in the Army talk of management but of leadership. This is significant. There is a difference between leaders and management. [Leadership represents] one of the oldest, most natural and most effective of all human relationships. [Management is] a later product, with neither so romantic nor so inspiring a history. Leadership is of the spirit, compounded of personality and vision; its practice is an art. Management is of the mind, more a matter of accurate calculation of statistics, of methods, time tables, and routine; its practice is a science. Managers are necessary; leaders are essential.[2]

For clarity of goals and direction, managers need leaders. For reaching goals, leaders need managers. Management and leadership may be compared in five areas crucial to organizational performance–providing direction, aligning followers, building relationships, developing personal qualities, and creating leader outcomes.

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[2] Cited, Roger Gill, *Theory and Practice of Leadership*, Second Edition, 2011, Sage.

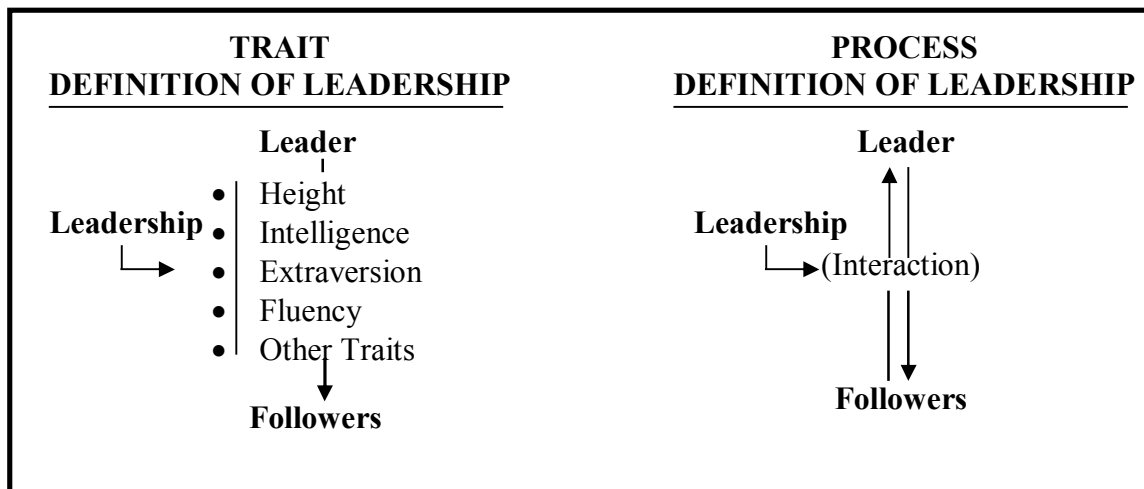| Comparing Management and Leadership[3]		
	Management	**Leadership**
Direction:	Planning and budgeting keeping eye on bottom line	Creating vision and strategy keeping eye on horizon
Alignment:	Organizing and staffing Directing and controlling Creating boundaries	Creating shared culture and values Helping others grow Reducing boundaries
Relationships:	Focusing on objects-producing/ selling goods and services Based on position power Acting as boss	Focusing on people-inspiring and motivating followers Based on personal power Acting as coach, facilitator, servant
Personal Qualities:	Emotional distance Expert mind Talking Conformity Insight into organization	Emotional connections (Heart) Open mind (Mindfulness) Listening (Communication) Nonconformity (Courage) Insight into self (Character)
Outcomes:	Maintains stability; creates culture of efficiency	Creates change and a culture of Integrity

Leadership is a Process, not a Trait

When it is said that leadership is a process, it denotes that it is not an inborn quality of a leader. It is rather a mutual phenomenon that takes place between the leader and the followers. A two way communication engages both the leader and the followers. On the contrary, the trait viewpoint conceptualizes leadership as a natural and inborn quality that resides in selected people.

As a process, it refutes the maxim that leaders are born, not made. It also emphasizes that leadership can be learned and it is an event that is mostly found in leader's behaviour. A comparative view of trait and process leadership is presented in the following diagram (Cited Northouse, 2012):

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[3] Based on John P. Kotter, *A Force for Change: How Leadership Differs from Management,* New York: The Free Press, 1990, Cited, Richard L. Daft, 2011.

The Different Views of Leadership[4]

<table>
<tr>
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TRAIT
DEFINITION OF LEADERSHIP

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PROCESS
DEFINITION OF LEADERSHIP

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</table>

Leader

Leadership

- Height
- Intelligence
- Extraversion
- Fluency
- Other Traits

Followers

Leader

Leadership

→(Interaction)

Followers

Transformational Leadership and its Implication in Bangladesh Army

Leadership theories and practices have come a long way for the last hundred years. So has the Bangladesh Army, particularly, in regards to theory which is evident in literature related to command, leadership and management. In an ideal situation as to be quoted from Draft GSTP, *Command, Leadership and Management: an Integrated Approach,* Vol-1, "the team level of leadership is about the direct relationship between leaders and subordinates. It involves the leader, the team and the context focused on an enduring need for results (2012, p.5-7).

But this natural process of growing junior leadership within the team is being hampered in the field of practical implication. When there is an event, a competition, commanders, at all levels, take it as a prestige of personal or unit affair. As such, commanders from their respective position influence the team which is preparing themselves for the competition. Thereby, leadership in the team does not grow. Hundreds of cases may be drawn where commanders' over-reactive attitude or zero error syndrome curve flourish team leadership which ultimately results in curving junior leadership.

There seemed to be more transformational leaders in the lower levels of the military (Hughes, Ginnet, Curphy, 2012, P.592). Transformational leaders develop and articulate a vision of the future, tighten the emotions of followers, empower followers to act on their vision, make personal sacrifices or champion new

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[4] Adapted from *A force for Change: How Leadership Differs From Management* (pp. 3-8), by J.P. Kotter, 1990, New York: Free Press.

possibilities, consider the ethical or moral consequences of decisions, set challenging standards, treat followers as individuals, and help followers understand the problem they face. All these transformational leadership qualities are very much evident in almost all levels of Bangladesh Army. Every organization of Bangladesh Army sets a goal, a clear vision. Where there is a vision, there is every possibility of transformational leadership to exist.

When leadership is a science and when it takes the form of rational approach, it becomes managerial and transactional. When it is an art and takes the form of emotional approach, it becomes transformational. During war of liberation in 1971, in counter-insurgency operations in Chittagong Hill Tracts, in disaster management activities, members of Bangladesh Army, time and again, proved their transformational leadership capabilities. As an emotional nation, we stand together during crisis. And Bangladesh Army is a melting pot to be practised transformational leadership.

Recommendations

Following recommendations have been drawn from this write-up:

> a. Difference between theory and practice should be made more available to commanders at lower level by arranging more study period at different formation level.

> b. Zero error syndrome attitudes should be discouraged. Assessment of unit performance should be more dimensional so that commanders at unit level allow team level of leadership to take initiatives and learn from mistakes.

> c. Transformational leadership qualities should be practised during peacetime environment. Practical training programmes consist of one to five days training sessions in which participants will learn about the theory of transformational and transactional leadership and then will go through a series of skill-building exercises and activities to improve their leadership effectiveness.

Conclusion

Leaders, on one end, employ more directive and influencing roles, contrary to more stimulating and supportive roles of empowering followers in the organization on the other end. These different roles and perspectives are greatly reflected by the terms transactional and transformational leadership. Transformational leadership is distinct from transactional leadership in the process in which leaders motivate followers or appeal to followers' values and emotions. Transactional leadership motivates followers by appealing to their self-interest. It is based on a-give-and-take' relationship. On the other hand, transformational leadership is directed towards stimulation of self-worth and self-esteem of followers. Transformational leadership

does not depart from the assumption that leaders and followers have different needs and interests, but that, both have the same visions and objectives they try to achieve. Transformational leadership, thus, as argues, bonds the leaders and followers within a collaborative change process that contributes to the performance of the organization as it is envisaged in Bangladesh Army.

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USE OF ELECTRONIC GADGET AND SOCIAL MEDIA: DICHOTOMOUS EFFECT ON PROFESSIONAL AND SOCIAL LIFE

*Major A K M Sadekul Islam, psc, G, Arty*

Introduction

Advancement in technology is, no doubt, a blessing for the mankind. In particular, development in information technology has patronized introduction of numerous gadgets, plethora dimensions of use of internet and several other systems. Among the electronic gadgets, cellular phone, tab, iPad, computer/ laptop etcetera are very important part of our life. In addition, in this era, running without internet is almost unthinkable for many. Among variety of applications of internet, social media is one of the widely used and popular ones. Billions of people around the world are subscribers and users of different social media. When it is the matter with use of internet and social media, electronic devices automatically come in. Moreover, the electronic devices are also widely used for offline applications and offline games. Thus use of social media and these devices are interwoven with all the spheres of life. Both of them are the gifts of science and technology. Use of such things has made day to day life very easy. This is true for personal life, family life, education, entertainment, social life and professional life - everywhere. Blessings of computer and internet are being utilized in all sectors of the society for development and modernization. Obviously, nowadays, efficiency in use of computer and internet is considered to be a basic prerequisite for most of the professions. Thus, learning how to use electronic devices and internet is a necessity in present context. In a recent survey 100 percent respondent so pined that not only learning how to use, but also using these devices and internet is essential.[1]

Electronic devices and internet are indispensable part of life for many people. They are no more luxury. In reality, this has gone much beyond necessity now. To some people it is the only thing in life. The users include not only the grownups, but also youths, teenagers, toddlers and even infants. Electronic devices are normally given to the little ones as toys by parents to avoid their children disturbing, screaming or running loose, may it be at the residence or in as hopping

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[1]Survey conducted among the officers, Junior Commissioned Officers and Non Commissioned Officers with considerable length of service and who have school/college going children.

mall. [2] Sometimes parents do it to achieve disturbance-free screen time. Such undesirable behaviour is observed among the "Facebook Moms", who on account of Facebook, neglect other important responsibilities, commitments, household jobs or even their children. [3] Some dads also show similar behaviour. Study reflects that addiction to social media and electronic gadgets are common now among the members of Bangladesh Army and their spouses. [4]
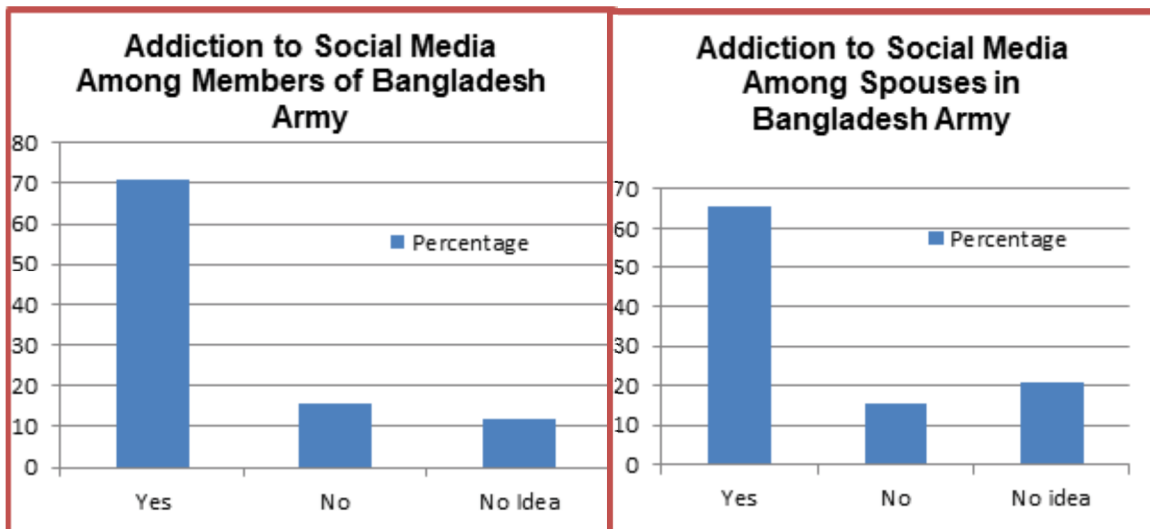
Source: Survey conducted by the author

But the problem is that, for some kids, playing with electronic gadgets becomes everything in life. In fact, gradually they grow addiction to these gadgets. It is confirmed from reports of different child psychologists that the number of cases of 'electronic addiction' is increasing among adolescents. Petrucci describes these young addicts to include, "3-year-olds who scream when they can't have their tablets, middle-schoolers whose grades nosedive because they can't quit texting or posting on Facebook, and high-schoolers who compulsively play online games. And scariest of all, they include children who threaten to shoot their parents or kill themselves when their moms or dads try to cut down on screen time." [5] Now doctors

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[2]Petrucci, K. (2014). *Is Your Child Addicted to Electronics?* Retrieved June 18, 2017, from Huffpost: http://www.huffingtonpost.com/kellyann-petrucci/is-your-child-addicted-to_b_6075516.html.

[3]Young, K. S. (n.d). *Social Media Addiction*. Retrieved August 2, 2017, from Net Addiction: http://netaddiction.com/ebay-addiction.

[4] Survey

[5]Petrucci, Loc Cit

suggest clinical and psychological treatment for such addictions because these also cause damage to physical and mental health. Hence, this is growing as a serious problem.

Electronic gadgets and social media may also bring disaster for someone due to misuse, ignorance and improper use. Though these were developed for the betterment of mankind, there is deviance as usual. Electronic gadgets and social media have given good platforms for technology based and online crimes.[6] As a consequence offences related to misuse of electronic devices and internet, especially relating to social media is increasing alarmingly among the members of Bangladesh Army in present days.[7]The results of such actions or incidents can ruin someone's career, properties, family and social life. Studies reveal that use of modern gadgets, indoor recreational facilities and social media negatively affectthe interpersonal relationship in the society. These cause decline in mutual trust and respect affecting family and social relationship.[8]

With this backdrop, many are in dilemma about the use of electronic gadgets and internet. Question arises, should one use social media? Should a child be allowed to play video games or to have an account in Facebook? The dichotomy between utility and noxiousness of the electronic gadgets and social media resists the answer to be given with simple 'yes' or 'no'. This paper makes an endeavour to analyze both the sides of the dichotomy and to suggest a way out.

USE OF ELECTRONIC GADGETS AND SOCIAL MEDIA IN PROFESSIONAL LIFE

Possible and Expected Proper Uses

Technology and its innovations are normally aimed at serving the mankind. The result depends on how it is being used. The proper use of electronic devices and social media can be something extremely influential on the objective issues. Therefore, it must be used and utilized to benefit professional affairs. But, to avoid danger of abuse, the application must be focused and controlled. The user must be focused to the purpose.

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[6]Marcum(Ed.), C. D., &Higgins(Ed.), G. E. (2014). Social Networking as a Criminal Enterprise. Boca Raton: CRC Press, Taylor & Francis Group. See Preface

[7] Discussion with staff officer in Personnel Services Directorate, Army Headquarters(PS Dte)

[8]Huq, M. M. (2016, February). Effects of socio cultural changes on military way of life. Dhaka

Communication with Colleagues. The primary use of cell phones and social media is communication with others. Cell phones social media are good for communication with many at a time. Keeping contact with colleagues is necessary both for personal and professional reasons. Good communication is essential for cohesion and esprit de corps. This, many a times, makes jobs easy. For example, during any urgency if one knows the colleague whom he/she has to contact with, things might get easier.

Remain Abreast of Current Issues Related to Organization. Communication with the colleagues allows one to be updated with the current developments, contributions, achievements, losses, problems and activities of the organization. But, in doing so, there remains a risk of disclosing unwanted or classified information which everybody must be careful about. This helps a member to grow mature, confident, professional and knowledgeable.

Enriching Knowledge. Internet is probably the largest source of knowledge. It is expected that members of Bangladesh Army will utilize these facilities to enrich knowledge. These could be directly or indirectly related to the profession or otherwise. It must be realized that more one becomes knowledgeable, more the organization is benefitted. With the advancement of the civilization, weapons and equipment of higher technology is being introduced in the world. Proper knowledge is a must for selection of proper equipment to introduce in the Army. This is just one aspect of numerous facets of such a big organization. It is possible to acquire information on almost any of the subjects needed.

Availability of Information. The internet hosts a gigantic collection of information, resources and services. Internet may be used for the purpose of training, administration and operations for the members of Bangladesh Army.

Risk of Misuse and Negative Effects

The practical application of internet depends on the purpose of the user. Internet is versatile in its content, use and applications. As such, there are scopes of abuse of its content and applications by the users. Some may also fall prey to the misuse.

Wasting Time and Energy. Excessive use of electronic devices and social media unnecessarily takes time. Internet, especially social media provides different types of information and entertainment that sometimes it becomes difficult for the

users to limit the use. Thereby, the users gradually grow screen addiction and then the time spent becomes significant. It causes loss of considerable amount of energy too, when someone works with too much concentration.

Diversion of Concentration off the Work. Once someone passes too much time with mobile phone or computer, it draws the user's concentration to the contents of these devices. It may be any application, online or offline games, some useful or useless websites, social media or sort of entertainment, etcetera. But whatever it may be the user's concentration goes off the work in hand, especially if it is during working hours.

Disclosure of Private or Official Classified Information. Once someone loses concentration, he/she is prone to make mistakes. In such careless moments one may post or share any classified document or information including photographs which may harm the interest of the Army. This sort of act is punishable offence, may it be intentional or unintentional. It must be remembered that these information may be used by online criminal groups for fraudulent acts.

Victim of/ Involvement with Fraudulent Acts. Sometimes members of the Army either intentionally or unintentionally get involved with fraudulent activities through social media or cell phones. In most cases, they fall victim of such crimes. The ultimate result in such cases turn out to be losing money/properties, punishment being awarded or even losing the job.

Growing Self Centered. Nowadays, many military personnel spend too much time with electronic gadgets which make them self-centered and more privacy conscious. Thereby, they do not like to spend time with peers or compatriots.[9]

Slack Interpersonal Relationship with Under Commands. Due to involvement with electronic devices and social media many of the junior leaders neglect the importance of mixing with under command. This causes deterioration in interpersonal relationship between leaders and led. Recent surveys and studies support the finding.[10]

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[9]Huq, Op Cit, p 1-8
[10] Ibid

Negative Effect of Electronic Gadgets for Members of Armed Forces in Professional Life
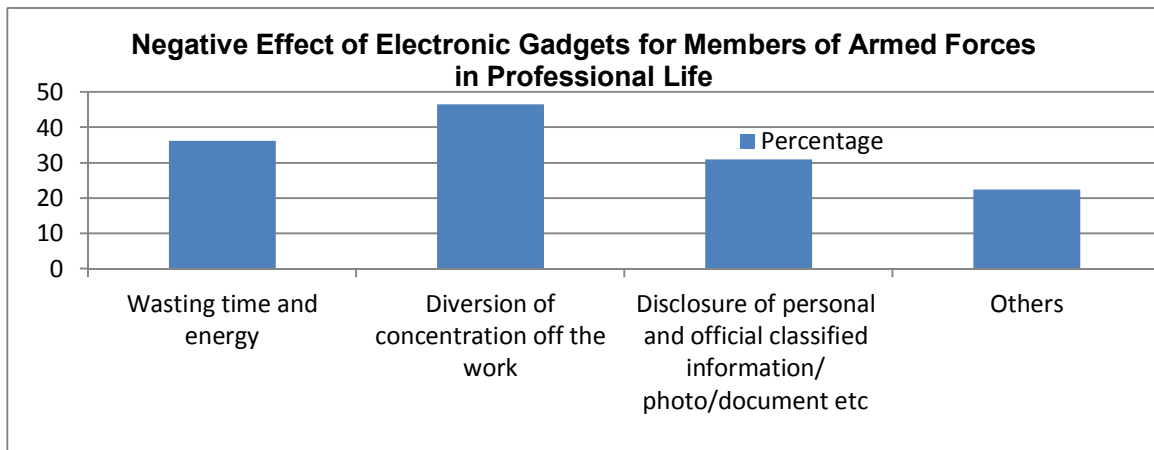
Source: Survey conducted by the author

USE OF ELECTRONIC GADGETS AND SOCIAL MEDIA IN FAMILY AND SOCIAL LIFE
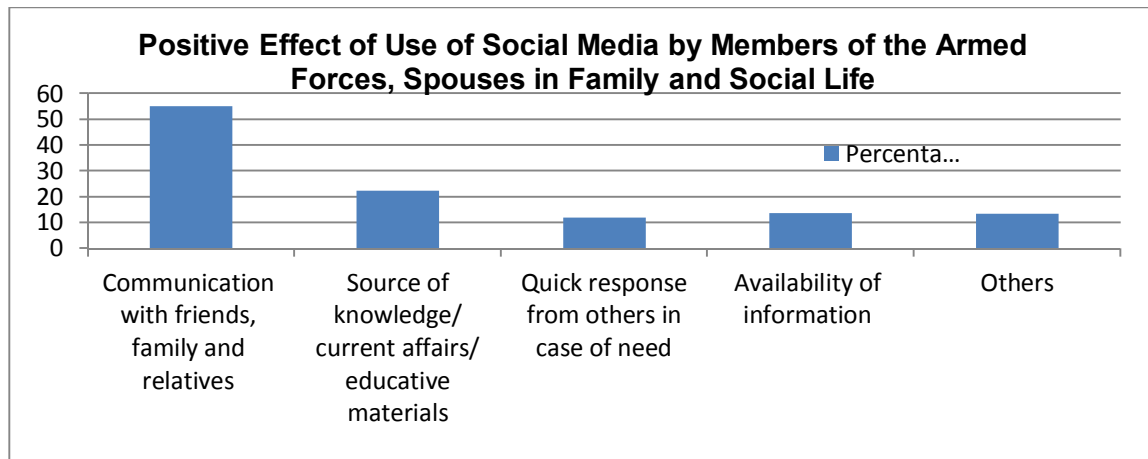
Expected and Possible Proper Uses

Most of the uses are common as for the professional life like communication with friends, family and relatives, use as a source of information and knowledge, etcetera. There are few more which deserve a mention here.

Entertainment. Electronic gadgets and internet make available plethora types and numbers of media, games and other sorts of entertaining resources. Limited use of these materials for amusement may be good for refreshment of mind and body. Selection of the material is important to achieve maximum benefit and avoid negative effects. The best option could be choosing one of the games or competitions which enrich knowledge or develop mathematical skills, etcetera. These sort of educative entertainments are available in abundance.

Educative Materials. Internet may be considered as the biggest library. It is the best archive for study materials for any level which includes the children also. It is also very helpful for research works.

Quick Response from Others. Since social media provide scopes to reach numerous friends or contacts with a single post, it may be very helpful to find and reach the right person quickly either directly or may be via other friends. This may be critical in case of emergency.

Positive Effect of Use of Social Media by Members of the Armed Forces, Spouses in Family and Social Life

Source: Survey conducted by the author

Risk of Misuse and Negative Effects

Disclosure of private information, losing concentration on the work in hand and falling victim of or involvement with fraudulent acts has the same effects in this case. 'Waste of time' and 'growing self-centered attitude' also have similar effects but the affected groups are different here.

Wasting Time and Energy. When someone grows screen addiction, he/she ultimately deprive others. The primary sufferers are the family members. They are deprived of the company. The children are deprived of the company of the parents and care they need for their upbringing; especially the bond between the members of the family is slackened. It grows distance among them which ultimately contribute silently in making friends and relations elsewhere.

Growing Illicit Relation/ Extramarital Affairs. As distance grows between husband and wife and between parents and children, sense of deprivation and loneliness may inspire them to be close with some other friends or acquaintances. Communication through social media and phone gradually turn them into relations. Thus, parents may get involved into extramarital affairs and children may grow either premature relations or even illicit relations. In addition, immoral use of social media, electronic gadgets and influence of satellite TV programmes act as catalyst in increasing cyber centric obscenity and illicit relationship.[11]Number of such cases is

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[11] Ibid, p 1-9

also increasing in Bangladesh Army.[12]These issues lead to punishments or even termination of service and fuel serious family problems.

Increased Family Problem and Disharmony. Increased illicit and extramarital relations are the main causes for fights and arguments occurring at the family, a lot more often happens between spouses due to lack of trust, communication and understanding. The situation is more critical when they have children at their residence.[13] These ultimately result in broken family and divorce.[14]Study shows that lack of ethical and moral teaching are also contributing factors for disharmony in conjugal life.

Chances of Involvement with Undesirable Sites/ Pornography. Due to availability of adult materials in abundance, it is possible for internet users to surf the pornography sites containing adult photograph, video and conversations. Adult dating sites also allure people for such immoral act. Children are more vulnerable to these sites due to their curiosity. Sometimes unintentional clicks on some unknown links may also take one to adult sites. In most dangerous cases clicks on the unknown links or links on the adult sites may install malicious software or lead to a phishing site for stealing personal information and data of the victim.[15]

Threat to Privacy. Identity thieves use stolen information to take over the victim's account or to create new account to primarily cause financial loss to the victim by accessing bank account, credit card accounts and other services, etcetera. The victim may be targeted to ruin his reputation or destroy him/ her personally. Privacy could always be invaded through the internet. Intimate conversation, picture or video with mate may be posted on the internet or sent to other people. Occurrence of numerous scandals involving videotaped sex is the good example of this sort of danger. This may be done by using stolen files or by the intimate friend/mate himself/herself. In many cases pictures and videos are recorded beyond the

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[12] PS Dte, Loc Cit

[13]Lee, S. (n.d). 5 Ways "Tech Addiction" Is Changing Human Behaviour. Retrieved June 26, 2017, from hongkiat: http://www.hongkiat.com/blog/tech-addiction/

[14]Huq, Loc Cit

[15]Navarro, J. N., & Jasinski, J. L. (2014). Identity Theft and Social Networks. In C. D. Marcum(Ed.), & G. E. Higgins(Ed.), *Social Networking as a Criminal Enterprise* (pp. pp 69-89). Boca Raton: CRC Press, Taylor & Francis Group

knowledge of the victims.[16] Illicit relation gives scope for actions of this sort. Disturbed conjugal life and lack of moral and religious teaching are the major causes for such involvement.

Chances of Involvement with Extremist Groups/ Controversial Issues. Knowledge on religion is always desirable and welcomed for people of any age. Internet provides scope for wide learning on all religious matters. But, everyone must be careful of visiting the sites/pages of religious fanatics and extremists on the internet. Once the hosts of such sites/pages find someone repeatedly visiting the site or giving 'like' on the Facebook page, they contact him and try to gradually motivate or brainwash in their ideology. It must be noted that children who are deprived of parental care, lonely and disturbed, especially from broken or separated family, are primary targets of these groups. Besides, there are few sites involved in political and subversive activities also. It must be realized that the family will have to pay high cost if any member is involved with any such group.

Financial Impact. Electronic gadgets and internet are not free. Rather, these could be very costly basing on the brand and model. Now electronic gadget is not only a necessity, but also a part of fashion in life. The companies market new models of electronic gadgets with 'cooler' look within couple of months in the name of up gradation. They attract the users with sugar coated advertisement and convince them to step into their traps. Thus, many users buy number of gadgets, sometimes without necessity. This causes extra expenditure. Study suggests that spending for expensive electronic devices may threaten quality of life in near future.[17]Many neglect the fact that buying numerous electronic devices not only cause waste of money but also increase hazards to environment.

Techno-trash or E-waste. Huge numbers of electronic devices are discarded worldwide every year amounting 20 to 50 million tons of e-waste or techno-trash making up to 5% of total solid waste. The worst part is that every year the amount increases and most of the e-waste is not recycled. Only 11% and 24.9% were recycled in 2010 and 2011 respectively.[18] Waste of cell phones and other electronic

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[16] Isbell, Loc Cit

[17]Mangan, H. (2010, January 12). How Addiction to Electronics Affects the Environment & Our Lives. Retrieved July 18, 2017, from Money Crashers: http://www.moneycrashers.com/are-we-addicted-to-consumer-electronics/

[18]Soltan, L. (n.d). Sad Facts on Technotrash or E-waste. Retrieved July 11, 2017, from Digital Responsibility: http://www.digitalresponsibility.org/sad-facts-on-technotrash

devices are highly toxic because of presence of heavy metals like mercury, lead and cadmium and toxic chemicals called hexavalent chromium which pose a threat to the environment.[19]This also may cause severe threat to health.[20]

Health Risk. Doctors now claim internet addiction to be a clinical disorder. To be more specific, addictive internet use has been defined as an impulse-control disorder which needs clinical treatment.[21]

a. **Sleep Deficiency**. Adequate sleep is a must for maintaining healthy life style. When someone grows screen addiction, he/she spends more than enough time with the electronic devices which causes sleep deficiency. This may affect energy level, weight, mental and bodily functions.[22] Study dictates that overuse of internet can aggravate attention problems.[23]

b. **Anxiety**. Expectation of text replies, like or comment on the Facebook post etcetera may cause anxiety. The anxiety could be short term or long term basing on its effect.

c. **Text Neck**. Headaches, neck and upper back pain caused by improper posture while using electronic devices are sometimes called "text neck". These are additional health risks.[24]

d. **Radiation Hazard**. Cell phones and other devices emit electromagnetic waves which causes silent health problems when received by the body.[25] While talking by the phone, the body tissues closest to the phone absorb this energy. Absorption of these rays increases risk of getting cancer and other health problems.[26] The hazards may lead to even fatalities.

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[19] Isbell, Loc Cit

[20]Reddy, R. (2015, February 17). 5 Bad Effects of Technology in Environment. Retrieved June 18, 2017, from For Mind Peace: http://www.mindcontroversy.com/effects-of-technology-in-environment/

[21] Isbell, Loc Cit

[22]Warren, J. (2010, August 26). Addiction to electronic devices can affect health of teens. Indianapolis Recorder

[23]Sugimoto, G. (2015, June). When Electronic Devices Become a Problem. Retrieved July 12, 2017, from Kaiser Permanente: https://www.ghc.org/html/public/health-wellness/sugimoto/devices

[24]Sugimoto, Loc Cit

[25]Reddy Loc Cit

[26] Isbell, Loc Cit

Danger of Road Accident. A study by the Fatality Analysis Reporting System (FARS) shows that fatalities from distracted driving increased in US from 4572 fatalities to 5870 in 2008 with an increase of 28%.[27]Driving needs full concentration of the driver. Electronic gadgets like radio, TV, especially mobile phones are very dangerous since these items draw attention of the driver off the driving. While driving fraction of a second is enough to cause a fatal accident. Similar things may happen with the pedestrian busy with electronic device while walking along or crossing a road. Research and statistics show that texting and talking over phones are the primary causes for such tragedies.

USE OF ELECTRONIC GADGETS AND SOCIAL MEDIA
BY THE CHILDREN

It is very important for the children to learn the uses of modern gadgets to cope up with the current world. It must also be remembered that these uses must be controlled and supervised by parents to rip best out of it and to avoid the negative consequences.

Expected and Possible Proper Uses

Use of electronic devices for children must be limited to the minimum. The contents selected should be educative in nature to help cognitive development of the young minds. It must be realized that whatever contents the young children watch, listen to and spend time with, will have long lasting effect in their lives.

Source of Knowledge/ Educative Materials. The best use of electronic devices for the children should be for their education. School and college going students may and should use the internet, the largest source of knowledge, for development in education. Internet instantly provides study materials, reference materials, data, information, etcetera. E-learning or distant learning has opened a new horizon for students. Many educational institutions are offering online courses and educational programmes. This has facilitated many opportunities for all.

Opportunities for Better Future. Internet has made the world 'easy reach' for all. Information on opportunities for studies in good and reputed institutions, scholarships, skill development and so on helps the students to shape their future in better ways. Good communication with friends, relatives and well-wishers may also help in this regard.

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[27] Isbell, Loc Cit

Communication with Friends, Family and Relatives.   For the children, communication with peers should be in person as far as possible. Cell phone and social media are not really good idea for the young. Out of five broad categories, interactive vlogging sites and multipurpose social networking sites, for example, Facebook, Instagram, etcetera allow opening accounts by teenagers but other types of social media sites, especially adult sites, are restricted for anybody below 18 years.[28] Though, in reality many children have their accounts with fake date of birth or even absolutely fake accounts which they primarily use for amusement.

Entertainment.   For the entertainment of children the principle should be, 'Education through entertainment'. There are unlimited numbers of media content for kids which are uploaded in the internet for educational purposes. Experts opine that most of them are not truly useful. Only very few are of good quality to serve the purpose. Parents and guardians should carefully select the media file basing on the contents and the age of the children. Otherwise, there are the possibilities of detrimental effects.

Risk of Misuse and Negative Effects

Due to curiosity, immaturity, lack of responsibility and knowledge, children are more likely to misuse electronic devices like phones, iPods, televisions and internet. Therefore, it is expected that, if it is not supervised, the children will use them for wrong purposes or beyond limit which will cause poor academic performance, health hazards and other forms of self-harm.[29] The possible negative effects for adults as discussed before holding good for children also. The additional facts and findings are narrated in the subsequent paragraphs.

Incorrect Language. Internet makes life easy providing instant information; on the other hand, it discourages children to learn things by heart. Moreover, present day texting and messaging trends encourage short messages which are sometimes grammatically incorrect. Peculiar abbreviations are being used extensively. These altogether contribute to the degradation in the spelling of youth writing and corruption of language.[30] Thereby texting has generated strong negative impression among teachers, parents and language experts. The matter is so serious that it has
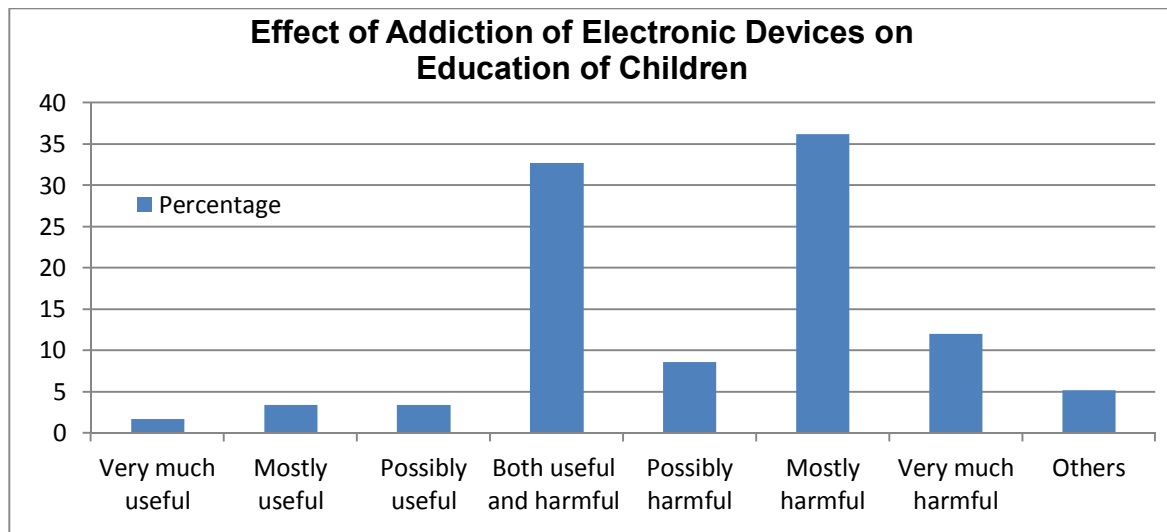
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[28]Halder & Jaishankar, Op Cit, p 128

[29] Isbell, Loc Cit

[30] Isbell, Loc Cit

been expressed as the "continuing assault of technology on formal written English".[31] The Parents are afraid of not only the language but also the overall academic performance of their children.

Harming Academic Career. Excessive use of electronic devices can cause great damage to studies. Spending time in texting, talking over phone, playing video games, surfing internet, watching TV, etcetera take away much of the time and energy. These devices and their contents also act as distraction from education. Thereby, children sometimes go to school or even sit for examinations unprepared. This causes bad academic results and leads them to stress.[32] Children also face difficulty in school and studies due to sleep deficiency caused by the use of devices and internet at late night to avoid parents' notice.

Effect of Addiction of Electronic Devices on Education of Children

Category	Percentage
Very much useful	~1.5
Mostly useful	~3
Possibly useful	~3
Both useful and harmful	~33
Possibly harmful	~8.5
Mostly harmful	~36
Very much harmful	~12
Others	~5

Source: Survey conducted by the author

Chances of Involvement with Undesirable Sites/Pornography. Unless overseen by parents or guardians and effective moral and religious teaching is imparted, adolescents are more likely to visit pornography and other adult sites due to curiosity. Sometimes friends also inspire or introduce them with such links. This may ultimately arouse physical needs among the young children and inspire them to involve in illicit relations.

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[31]Lee, S. (n.d). 5 Ways "Tech Addiction" Is Changing Human Behaviour. Retrieved June 26, 2017, from hongkiat: http://www.hongkiat.com/blog/tech-addiction/
[32] Isbell, Loc Cit

Growing Premature/Illicit Relation. Teenagers normally make friendship with many primarily in the educational institution and sometimes through some of these virtual friends. Social media increase these numbers many times. Moreover, social media and cell phones facilitate easy and intimate communications with friends. This allows teens grow premature relationships through digital communication. Sometimes, they grow illicit relations when not supervised by parents. It is common in disturbed family where parents are always fighting or separated or divorced. There are other cases where parents are busy with themselves, may it be with professional commitments, own society or even social media, and they do not have time for their children. So, the children look for company from others. They make friends and affairs to avoid loneliness. Sometimes, they grow relations over phone or Facebook with somebody they do not know and have never seen. At the end, it might be very disappointing or even very dangerous.

Chances of Involvement with Bad Company. Friendship or relation with unknown persons may lead to serious problems. These persons may be unhealthy as company, criminal or drug addict. The children may be, in some cases, introduced to drugs, blackmailed or even physically harmed by these friends or their company. In other cases, they may encounter sexual victimization and cyber bullying.

Victim of Cyber bullying. The world noticed the consequence of cyber bullying when Amanda Todd, a 15 year old girl committed suicide on October 10, 2012 as a victim of cyberbullying which made international headlines.[33] The trend of cyberbullying is increasing which includes abuse or harassment through mobile phone, social media, group chat, individual chat, blogging etc by teasing or insulting the victim about race, colour, intellect, body shape, family background, language, name etc. The bullying may include very harsh words or even sexual contents.[34]

Sexual Victimization. Since teens are now extensively using the electronic devices and social media, they are likely to abuse them for posting and sharing inappropriate messages, pictures and videos, or for sexting [35] etcetera without understanding the consequences. One may think that he or she is sharing them with

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[33]Kowalski, R. M., & Giumetti, G. W. (2014). Wall Posts and Tweets and Blogs, Oh My!A Look at Cyberbullying via Social Media. In C. D. Marcum, & G. E. Higgins, *Social Networking as a Criminal Enterprise* (pp. 91-109). Boca Raton: CRC Press, Taylor & Francis Group
[34]Halder & Jaishankar, Op Cit, p. 136
[35]a phone or email message containing sexually explicit material

his/ her friends only who will not share them with others, which is not true.[36] These pictures or videos may be used for sexual crimes against children like, pedophilia[37], in some adult sites, interactive vlogging sites or other social media. Sometimes perpetrators use their fake or even original accounts to trap and groom children to turn them into contributor to, as well as consumer of pedophilic materials. When the perpetrator is also a child, 'revenge porn' is a common crime committed against classmate, schoolmate or someone for broken relationship or refusal of a love proposal.[38] Thus privacy can always be invaded through the internet by criminals. There could be some other types of ill motivated perpetrators also.

Involvement with Extremist Groups/Controversial Issues. Children from disturbed family, who are introvert and feel abandoned and neglected by the family members, especially parents, are lucrative targets for extremist groups. 'Holey Artisan Bakery' attack in Gulshan, Dhaka in 2016 is a good example of such involvement of few young students. Communication through mobile and social media has made the teens vulnerable to the activities of this sort of dangerous groups.

Health Risk. All the health risks described for adults also apply to the children; rather the children are more vulnerable since their body and brain are in developing stage. Children receive greater proportional exposure to the field of radiofrequency radiation emitted by cell phones, due to comparatively smaller size of heads than those of adults. Moreover, children have the exposure for more years than adults do.[39] Researchers found that adolescents who use electronic devices in the day and at bedtime are likely to sleep less, take a longer time to fall to sleep, and suffer sleep deficiency.

Screen addiction to put children at risk of metabolic syndrome which is the first step towards diabetes. They are also more likely to gain weight and feel depressed or anxious.[40]Studies show that decreasing screen time help in reduction of adolescent obesity.[41]

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[36] Isbell, Loc Cit

[37]A sexual attraction to children

[38]Halder & Jaishankar, Op Cit, pp. 129-133

[39]Cell Phones and Cancer Risk. (n.d). Retrieved August 2, 2017, from National Cancer Institute: https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet

[40]Petrucci, Loc Cit

[41]Sugimoto,Loc Cit

The worst effect of screen addiction is caused by rapid-paced games and media which make the children's brain crave for constant stimulation. Thus, gradually children lose interest to comparatively slow-paced events like reading. These seem very dull to them. So, they love to remain confined in virtual life rather than the real one.

MINIMIZING NEGATIVE IMPACTS OF USE OF ELECTRONIC GADGETS AND SOCIAL MEDIA

Electronic devices and social media have made our life much easier. Most of these have many good uses but at the same time they have some ill consequences also, if not used properly. Therefore, to get best out of them, it is necessary to take appropriate measures to guard against possible abuse.

Setting Healthy Limits

Infants and toddlers get attracted to electronic devices due to curiosity, their 'cool' look and sometimes for contents they provide for their entertainment. They get used to these devices as most of the parents give their mobile phone to distract their toddlers from tantrum, without considering the hazardous consequences. Though, most parents claim that it is often used as a last resort. But many child psychologists opine that an electronic gadget handed over to a tantrum-wielding child may hinder their emotional development. Research conducted at the Boston University School of Medicine confirms that masking a child's emotions with technology may have damaging effects socially and emotionally.[42]

Basing on the findings of research and studies, The American Academy of Pediatrics recommends no screen time for infants and children under age of 18 months which includes the Internet, television, computer, and video games. Dr. Young recommends the same up to age 3; that includes infant and toddlers. For older children and teens, the Academy recommends no more than one to two hours per day of entertainment media with "high quality content" only.[43]

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[42]Chander, C. (2016, June 20). How to unplug your child from their addiction to technology. Retrieved July 29, 2017, from news.com.au: http://www.news.com.au/lifestyle/parenting/how-to-unplug-your-child-from-their-addiction-to-technology/news-story/4ac891bd33db85f7d13af7267a44d2ba
[43]Sugimoto, Loc Cit

There are no clear guidelines for other adults for maximum screen time but if it interferes with activities needed for a healthy personal and family life, it is probably best to set limits. Making rules to limit family members' use of devices will allow adequate studies, rest and quality family time.

Being a Good Role Model

There is a theory in social science, "Monkey see, monkey do". Children learn things from their parents and other adults. As such, to set example parents should also respect the screen time restrictions.

Outdoor and physical activities would be helpful for committed and healthy life and will act as alternative to spending time with electronic devices.[44] Social and religious values will help family members to refrain from any indecent and immoral act.

Supervision of the activities of children by the parents is a necessity to guide them in proper usage. But for this the parents also have to be techno-friendly. The parents must be friends with the children both in social media and in real life.

Counseling

There is no consensus on the criteria for diagnosing Internet addiction. Therefore, treatment approaches vary with the expert. Many recommend Cognitive Behavioural Therapy (CBT) and Harm Reduction Therapy (HRT) from a professional counselor.

Recommendations

Definite and decisive actions are needed to avoid detrimental effects of screen addiction which would help controlled use of electronic gadgets and social media. The suggested actions for institutional purpose and family members are enumerated below.

Institutional Measures. Following actions should be taken by the authority:

    a. Enforcement of already circulated policies and guidelines.

    b. Revision of these instructions when necessary.

    c. Regular motivation should be emphasized at all level.

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[44]Sugimoto, Loc Cit

d. Crimes occurred and punishments awarded must be circulated to all.

Measures for Family. Following measures would be helpful to avoid detrimental effects of electronic devices and social media:

a. Setting 'zero hour' screen time for children up to 3 years old, maximum one hour for above 3 years and maximum two hours for adults (including parents) which include TV, cell phone, etcetera.

b. Restriction on screen time during home work, lunch/ dinner and one hour before bedtime.

c. Parental controls to limit child's cell phone, TV, and computer.

d. Spending quality time with family.

e. Real world events for children to get a healthy hit of dopamine and serotonin like, hanging out with friends, physical activities, going shopping, horseback riding, hill climbing, rides in amusement parks etcetera.

f. Compulsory playing games outside for children every day at least an hour.

g. Imparting social, moral and religious values to family members.

h. Watching over activities of children.

j. In case of addiction, 'digital detoxing' or complete detachment from digital devices and counseling with experts.

Conclusion

It is univocally accepted by all that electronic devices and internet have eased up communication and plethora other tasks. Proper use of the power of internet might change one's life. But, it may become a double edged weapon also. It has some unavoidable negative effects, especially when used excessively. Thus, it needs control. In addition, cyber based crime is increasing quite fast. These perpetrators use the power of technology to serve their ill intentions. These have increased risk in this sector.

Though numbers of instructions and guidelines have been circulated in Bangladesh Army, similar effects are being noticed among its members. There are cases of misuse or abuse by members of the Army, as well as, in many cases they are being victimized due to ignorance, carelessness or greedy steps into other criminals

trap. As such, number of crimes related to electronic devices and internet is growing fast.

The negative effects of screen addiction on family members could be devastating. As such proper care must be taken, especially by parents for the children. Proper handling of electronic gadgets is also necessary for the adolescents.

Though use of electronic devices and social media could cause numerous kinds of problems but those are mostly controllable and avoidable. It must be remembered that due to risk of detrimental effects, the enormous beneficial power of internet and electronic devices must not be evaded. Rather, steps should be taken for risk management and ripping maximum benefit out of it.

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