Revamping the Military Training System

S.K. Saini*

> *"Victory smiles upon those who anticipate changes in the nature of war."*
>
> Giulio Douhet

Introduction

According to Andrew Marshall, former director of the Office of Net Assessments under the US Secretary of Defence, "a revolution in military affairs (RMA) is a major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in the military doctrine and operational and organisational concepts, fundamentally alters the character and conduct of military operations." RMA has three main constituents, namely, doctrine, technology and tactics.[1]

The foremost global trend transforming the security framework is the dramatic growth in information technology (IT) and the RMA it has created.[2] India has been acknowledged as a major IT base in the world, with a large work force possessing the necessary skills. It also has reasonably well developed civil programmes in satellite, telecommunications, space and nuclear technology.   Besides advanced indigenous technologies being available to the armed forces, a major modernisation programme is underway, wherein state-of-the-art technologies are being acquired

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Colonel S.K. Saini is a Research Fellow at the Institute for Defence and Strategic Analyses (IDSA), New Delhi.

from abroad, especially after the Kargil conflict. Thus technology is not a limiting factor in the Indian context any more.

The other two components of RMA – doctrine and tactics – are within the capabilities of the armed forces for making significant changes as determined. To fully exploit the potential of new systems, operational concepts incorporating and integrating the new technologies must be developed into coherent doctrines. The armed forces should also train extensively to translate doctrine into a war winning capability. While the relevance of RMA in the Indian context has been recognised by the Kargil Review Committee Report and the doctrines of the Services, an integrated plan to harness its potential is still awaited. Similarly, the debate and write-ups on RMA in India have so far been confined to understanding the dynamics of RMA, rather than suggesting ways to take its advantage. One of the fields that holds abundant potential to leverage the emerging RMA is training of the armed forces.

This article assesses the impact of the ongoing RMA and suggests policy changes in the conduct of training in the armed forces.
It is laid out as follows:
(a) RMA and conduct of warfare.
(b) Drivers for change in the training system in the armed forces.
(c) Recommended changes.

RMA and Conduct of Warfare

RMA is already bringing about profound changes in the conduct of warfare. The salient aspects are summarised below:
(a) As the means of observation and surveillance improve, time available for orientation, decision making and action reduces. The battle space, however, has expanded enormously. The use of outer space will have a major effect on the conduct of warfare in the coming years.
(b) The use of new precision weapons and command and control systems has added a force multiplier effect, unknown earlier, to the combat potential. Individual combat platforms are being linked

into a network and will all be equipped with increasing amounts of electronic information equipment.[3] The transportation and logistics systems will also be transformed to be more responsive to the sustainment needs of the forces due to better exploitation of the IT.

(c) In coming years soldiers will still carry conventional rifles and hand grenades, but they will also use small, light-weight, multi-media electronic information equipment.[4] Situational awareness of information-intensified soldiers will improve immensely.

(d) Information Warfare will be the most complex type of warfare in the 21st century, and it will decide who will win and who will lose the wars.[5] Digitisation of the existing equipment by retrofitting or inserting new technology will improve the command, control, communications, computers, and intelligence systems.[6]

(e) Media has already impacted the conduct of military operations worldwide in a profound manner and its intrusive role is likely to increase further. In the coming years the military will be forced to have its own facilities to feed the electronic media channels.

(f) The human factor will be more prominent in high-technology warfare.[7] Making the most of the combat effectiveness of high-technology weapons and application of correct strategy and tactics will depend on the calibre of military personnel. Warfare in general will not only become more of a mental than a physical contest in which the technology content is high, but this will also be the case in limited warfare and even in soldier-to-soldier combat. This means that the education and technical skills of military personnel in the future information society will have to be higher than at present.

(g) The services need to be integrated institutionally, organisationally, intellectually and technically to fight future wars, which will increasingly require the armed forces to fight jointly.

Drivers for Change in Training System

(a) **Strategic Security Environment:** The Indian armed forces will have to be prepared for an enduring requirement for high intensity

war fighting skills in order to deter and, if required, fight and win wars. This was underlined during the Kargil campaign by the need to prepare for a possible limited conventional war. But they should also be ready for a wide spectrum of operations, including the growing requirement for counter insurgency/terrorist operations. However, given the constraints in terms of resources and time, they will need to carefully manage the balance between training for conventional war and other operations in the spectrum of conflict. Individual training must provide the basic skills that can support conventional war and high intensity operations, but needs to be supplemented to meet other scenarios.[8]

(b) **Short Notice Deployment:** Operation PARAKRAM highlighted the requirement for versatile, adaptable and rapidly deployable forces. This generates demanding individual training requirements for the Services.

(c) **Skills for Joint Operations:** Future operations will be increasingly joint and progressively integrated between space, air, maritime and ground elements. The Kargil campaign also reinforced the need for a more integrated approach to war fighting between the Services.[9] They will need to work with other civilian agencies whose contribution may be equally critical to strategic success. The human dimension of command will remain paramount.

(d) **Increased Responsibility of Junior Leaders and Individual Soldiers:** Increased fluidity, intensity of swift engagements, sensor-to-shooter technologies, direct communication interface to lowest level commanders/individual soldiers and reduced time for decision making will place soldiers and commanders alike under increasing pressure. Junior commissioned officers and non-commissioned officers will have key roles to play, particularly in exercising leadership and management. Junior leaders hold the key to warfare in the 21st Century.[10] This will require training in leadership skills and education to develop the required mental agility.

(e) **Technological Challenge:** Future operational success will depend on the ability to exploit and integrate new digital systems. Studies

into future military skill requirements consistently show a growing need for cognitive skills.[11] Information and communications technology also offers exciting opportunities to improve training and is becoming a major learning medium. However, learning via such technology is a mainly individual activity which may impair some inter-personal skills. Many individuals, while confident about working in the Information Age, may be less physically fit and robust. This will need to be addressed appropriately.

(f) **Changed Socio-Economic Values:** Technology has not only affected the armed forces in the last two decades but the entire country as such and raised the living standards immensely. Some potential recruits may find Service life incompatible with their individual expectations, but others may be attracted by the Services' different ethos and values. Training and education will continue to play a major role in helping to instil the core values that provide the moral framework for Service personnel to meet the physical and mental challenges of the future battle space.

(g) **Enhanced Importance of Specialisation and Continuity:** As high end technology is inducted into the Services, need for specialists in various fields, and the requirement to give them continuity in key positions, will increase. More graduates may join the Services as sailors, soldiers and airmen, especially in the technical specialisations. Imperatives of career progression, particularly for officers, are already putting increased pressure on both training and personnel management.

Recommended Changes in the Training System

Appraisal of the Present Training System and Policy Objectives: The operational success in Kargil has shown that by and large the training standards are adequate. But to meet the challenges being thrown up by the emerging RMA, the armed forces need to modernise their training system. Education and individual training consume a significant proportion of the Defence Budget and therefore the armed forces should

get the best value from the large amounts of money being spent on it. Training should also lead to innovation in doctrine, operational concepts and battle drills.

Despite the recent shift towards joint operations, individual training is still mostly conducted on single Service basis; while it is important to generate and maintain single Service identity, emphasis should gradually shift to joint and integrated training. Integrated training between the services will help to develop jointmanship and eliminate unnecessary duplication. Training should, where appropriate, be offered to industry and civil institutions, reflecting the joint approach.

Training needs to be better focussed to meet the operational needs. In some aspects we over-train to the detriment of others, resulting in imbalance between training and operational imperatives. Technical and weapon system/equipment-specific training for sailors, soldiers and airmen, who constitute a major portion of the armed forces, is generally of a high standard, but improvements are required to reflect the changed operational environment and the modus operandi of operating within it. The *training of senior officers at operational and strategic levels* needs greater emphasis.

The training also needs to be able to *rapidly absorb lessons from operations* and to respond to changes in educational priorities to meet the increasing complexity of operations. All personnel should have the necessary skills and confidence to exploit new information and communication technologies.

There is also a requirement of a more comprehensive and consistent *overall approach to education.* To meet the challenge of technology it must be ensured that all personnel have the necessary skills. It could be partly achieved by developing e-learning to provide greater flexibility and shorten training time during courses. This should be balanced against the requirement of personnel deployed in field areas where such facilities may be non-existent.

The armed forces must ensure that the training system is cost-effective, while maintaining or enhancing operational capability. The intent should be to make more imaginative use of common training facilities in the armed forces and eliminate duplication by sharing common resources wherever possible. Commercial training arrangements for the delivery of training, where desirable, like in the field of IT, should be exploited.

Measures to Integrate Training in the Armed Forces

Officers' Training

(a) Recognition of the importance of joint activity must first be introduced at the tactical level, within a predominantly single Service environment. Young officers need to be encouraged to adopt an open-minded approach towards their own and the other Services, and begin to appreciate the wider defence environment, including the increased joint focus. This then needs to be nurtured and progressed throughout an officer's career. Short common modules on defence and joint awareness training should be introduced in the initial training commencing from Young Officers' Course.

(b) The joint phase of the Defence Services Staff Course should be increased appropriately by shortening the single service segment.

(c) The main requirement for joint training for the officers is at the operational and strategic levels. There is generally little formal training for officers of the rank of Brigadier and above. To meet the training requirements for commanders of joint operations, a Joint Operations Wing should be established. It should be charged with the responsibility to train officers of the rank of Brigadier and above of all the three services through a mixture of very short modular courses with interactive war-gaming. Opportunities should also be provided to the senior bureaucrats posted in the Ministry of Defence to attend such courses. The Wing could be located at any of the institutions conducting the Higher Command Course for single Services like the Army War College, Naval

War College or the College of Air Warfare, depending upon the feasibility of developing the infrastructure.

Enlargement of Scope of Joint Exercises and War-games: At present a truly joint exercise is conducted only in terms of the training for the amphibious component. The participation is at a very low level considering our amphibious capability. The scope and level of joint exercises should be enlarged and not restricted to amphibious operations. Similarly, participation in the war games at division level and above should include officers of all the Services. In the case of Air Force the participation should not be restricted to the commander of the Tactical Air Centre who is affiliated permanently to the army formation.

Joint Institutes for Common Training Aspects: It is essential to ensure that training and education is delivered as cost-effectively as possible. Otherwise it puts at risk the sustainability of the capabilities it supports. Each Service has a training base that is too large and unaffordable in the long term. Besides it does not support the concept of integration of the Services. A leaner training base will bring recurring savings in overall support costs, and release land for disposal, thereby making more capital available for modernisation. Areas of joint training could be those that support joint structures, where there is a commonality between subjects and syllabus or the operational/training process is common or converging. This can be achieved by establishing Defence Training Institutes in the fields of communication and information systems, logistics, computer literacy, engineering, aeronautical engineering, and common missile systems/weapons.

Enlarging Role of Integrated Defence Staff: It has been experienced that because training and education is generally provided on a single Service basis, it lacks overall coherence and direction from the MoD perspective. In particular, there is no central focus to provide an overall policy perspective and no overarching strategy to promote best practices. The existing training branch in the Integrated Defence Staff is not

charged with this responsibility and does not issue any policy directives to the Services. To address these deficiencies, the training branch in the Integrated Defence Staff needs to be strengthened and given the mandate to coordinate these aspects. This will maximise the benefits of training rationalisation by implementing the proposals outlined above and ensuring that there is no duplication.

National Defence University

While the proposal to establish a National Defence University (NDU) has been accepted in principle, the project has not progressed in right earnest, wherein even its location is yet to be finalised. In order to take advantage of the RMA, it is imperative that a National Defence University is established at the earliest. At present there is no interaction, coordination and synergy between various training institutions of the Services. There is also no organisation exclusively responsible to conduct meaningful research in defence matters, especially related to military strategy, doctrine and tactics. Therefore the NDU should act as a *centre of national and international excellence,* providing military and civilian personnel with high quality education, primarily at the postgraduate level, and conducting research in fields related to defence. Other institutions like the National Defence College, Defence Services Staff College, and Joint Operations Wing should be affiliated to it, in order to provide the required synergy.

Value of War Games and Exercises

War games and exercises are conducted at present in a stereotype manner which stifles any innovative and new ideas about doctrine, concepts and weapon systems. The value of exercises, particularly when resources are scarce, lies not merely in their conduct, but in their planning and post-action analysis.[12] They must aim at understanding rather than validating already existing plans, concepts and doctrine.

Establishment of a Leadership Academy

The College of Defence Management in its present form does not support the development of new leadership skills required to meet the challenges of the ever-changing demands placed on officers, especially junior leaders. To optimise use of resources, better co-ordination of leadership training and development is required. The armed forces should also make the leadership expertise available as a resource for the country as a whole.

To achieve these aims, a Leadership Academy to design an overarching policy framework and strategies for leadership development needs to be created. It could draw on the expertise already available with the College of Defence Management. The Academy will provide a more focussed and coherent approach to leadership training throughout an individual's career, particularly for junior leaders and those likely to reach the operational and strategic level. It will also undertake research, establish links with relevant organisations, public and private, set standards and provide a reservoir of knowledge on leadership, including training and development opportunities.

Exploiting the Information Age

Exploiting information is central to all military operations so as to manage the increasing use of information and communication technology in the battle space. The daily workspace and administrative processes are also increasingly supported by information and communications technology. The armed forces must develop the essential competences in personnel to exploit new technologies and systems to the full and to ensure that leaders have the right skills to deliver and integrate information projects successfully. To help meet these requirements, there is a need to develop information age skills for everyone joining the armed forces. All sailors, soldiers, and airmen should receive IT awareness training during initial training. This will require improvements in facilities. Efforts should also be made to increase opportunities for personnel already serving

to develop relevant skills and qualifications. Digital skills are highly perishable.[13] As the saying goes, "If you don't use them, you lose them." These must be continuously refreshed with on-the-job usage.

New Methods of Training

(a) Achieving information age skills will also facilitate new methods of training, particularly e-learning. There should be a major shift towards e-learning to reap benefits by providing better support to deployed units, particularly in terms of refresher and more efficient training to enhance operational effectiveness. The aim should be to exploit a combination of CD-ROM, Intranet and Internet delivery to exploit fully the particular advantages of each medium. But it must be recognised that e-learning is not a panacea. Much military training requires human interaction, particularly to develop such qualities as teamwork, leadership, ethos and courage.

(b) The non-formal education system, like distant education based on electronic media, needs to develop faster to cope with the increasing demand for life-long learning in the armed forces to keep its cadres updated and well prepared.

(c) Good progress has been made in simulation over recent years by developing large training systems, such as aircraft and ship simulators. With new technologies, improving computer skills and increasing access to new information and communication systems, it will be possible to exploit virtual training more fully at the individual level of training. This will be of particular benefit, given the ever-growing costs of training on real equipment and the need to avoid unnecessary risks and reduce environmental impact.

(d) Although the Army has created a separate organisation to develop computer war-gaming facility, it is still in the infancy stage at company/battalion level. Integrated computer war-gaming needs to be developed for higher levels as well to include operational and strategic aspects, for all the three Services.

Development of Asymmetric IW Capability and Training: The armed forces must take advantage of the country's strong IT base and develop an asymmetrical IW capability in relation to our adversaries. IW is a vast sphere and the armed forces will have to take the help of civilian specialists and establish joint training institutes. Training in new spheres like the Economic Information Warfare, Cyber Warfare, Command and Control Warfare, Hacker Warfare, Intelligence Based Warfare and Psychological Warfare will have to commence in right earnest.

Evolve a Long Term Digitisation Training Policy: The convergence of computing and digital telecommunication systems makes it possible to link together hitherto separate information or sub-systems into networks. This is the basis of all information and decision support systems being currently developed in the Army and at the strategic level. There is a long learning curve for digitised equipment, and there is need, therefore, for training to acquire the skills to manage the infrastructure that ties together the battlefield functional areas making up the Command Information and Decision Support System.

As the systems are fielded, communication infrastructures in Operations Room/Command Posts will become more complex. In order to exploit the system it will require collective involvement of key leaders, operators, and staff. There is a pressing need to evolve a training policy to ensure the operational effectiveness of formations and units by providing digital-sustainment training. Personnel trained in digital equipment may have to be retained for longer duration in units/formations to overcome the turbulence created due to current posting policy.

Institutionalising Experimentation and Innovation: New ideas in tactics and concepts can evolve only when the actual perception of the full combat elements in a unit/formation is experienced during training and experimentation. Opportunities of conducting large scale exercises on civil land are going to progressively decrease due to concerns over environmental degradation and damage to civil infrastructure.

Consequently the training at unit and formation level will be hampered and restricted.

There is thus an urgent need to create a modern facility where at least the ground and air components can train together. Such facilities could be created next to major field firing ranges for more realistic joint training.

Acquisition Training

The present RMA is already throwing up new technologies and weapon systems. To drive forward an effective long term acquisition process, there is a vital requirement of training for all those connected with acquisitions, including the MoD officials. This training can be imparted by establishing an Acquisition Cell under the Integrated Defence Staff.

Conclusion

Warfare is changing, perhaps more rapidly and fundamentally today than at any point in history. To take advantage of the ongoing RMA, India will need to reform the way it plans, thinks, procures, trains, and fights. Technology alone does not constitute RMA; it requires synergy with organisation and doctrine. This can be achieved by training, innovation and adaptation.

Attaining the full benefits of RMA will remain a challenge in the present environment. RMA will impact profoundly on training requirements of the armed forces. It is imperative that the armed forces commence re-structuring of the training base and methodologies so as to be ready to acquit themselves creditably in the next war. *idsa*

Notes

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3 Chang Mengxiong, "Chinese Views of Future Warfare", New Delhi, Lancer Publishers, 1998, pp. 249-260, Weapons of the 21st Century.
4 Ibid.

5 Ibid.

6 Lieutenant Colonel Robert S Ferrell "Army Transformation and Digitization –Training and Resource Challenges," Strategy Research Project U.S. Army War College, P. 2.

7 Mengxiong, loc cit.

8 Ministry of Defence, UK, "Modernising Defence Training," Report of the Defence Training Review (http://www.mod.uk/issues/training/dtr.htm).

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