

TOWARDS CONTINUOUS MILITARY EDUCATION IN THE IAF A NEED FOR YESTERDAY

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"There is a reason they are called lessons." the Griffon remarked, "because they lessen from day to day."

—Lewis Carol

INTRODUCING EDUCATION

"To adapt and to learn first," is the foremost human survival trait; this separates us from other animals. To be able to continue doing this for the last few centuries has perhaps kept the Zargons¹ away. This most primitive form of survival instinct is called learning or education. Imagine an Indian tribe which for centuries has sailed its canoes on the river at their doorstep. So long as the rate of technological change in such a community stays slow, so long as no wars, invasions, epidemics or other natural disasters upset the even rhythm of life, it is simple for the tribe to formulate a workable image of its own future, since *tomorrow merely repeats yesterday*. Then, one day, this visualisation was changed by a simple phenomenon of nature, perhaps a flash flood or the river ran dry. The tribe adapted to this change, learning the lesson that *tomorrow may be different, influenced by today*. So sprang out education. Education springs from some lesson from the past or an image of the future. Essentially, if the image of the future held by a cadre is grossly inaccurate, its education system will betray its youth. Education, however, is not just something that happens in the head, it

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1. An imaginary intelligent lizard from "The Star Wars."

involves our muscles, our senses, our hormonal defences, and our total biochemistry. Nor does it occur solely within the individual. Education springs from the interplay between the individual and a changing environment. The movement to heighten future consciousness is education. Since ancient times, survival of the fittest has been the *nom de guerre*. War has been a testing ground for survival.

Experience demonstrates through history that the best prepared and dynamically led armed forces prevail in combat. Whereas war-fighting ability is an acquired skill honed by training, practice and directed by leadership, superior education is the best form of preparation, the foundation for any training.

Superior education, contiguous with training, forms the core of this preparedness and provides the structure for deterring potential enemies or, if necessary, defeating adversaries in battle. It is equally important to note that education, contiguous with training, has also played an integral role in preparing air and now aerospace forces for new and challenging types of military operations in the modern times.

An air force officer's education must emphasise critical thought, enabling sound decision-making, regardless of the situation, while an air force officer's training provides the skills necessary to master the air force's core competencies. A dynamic education and training process spanning an officer's career are essential to the air force's readiness to attain military objectives and contribute to national security. The Indian Air Force (IAF) is an emerging force to reckon with, but its education practice needs to be reviewed if it has to step into the envisioned tomorrow.

AIM

The aim of this paper is to examine the necessity of the correct identity of ME (military education) and its continuity for the officers of the IAF. In doing so, the paper shall allay the concept of one time education and examine new techniques in education. A brief review of the IAF in-service HRP(human resource policy) and suggestions for changes in curricula of the current concept has been incorporated as a value addition.

"Just as all education springs from some image of the future, all education produces some image of the future."

-Alvin Toffler

PROCESS OF EDUCATION

Webster defines *education* as the process of educating or teaching. *Educate* is further defined as "to develop the knowledge, skill, or character of..." Thus, from these definitions, let's assume that the purpose of education is to develop the knowledge, skill, or character of officers. Unfortunately, this definition offers little unless we sub-define words such as *develop*, *knowledge*, and *character*.

What is meant by *knowledge*? Is it a body of information that exists "out there" apart from the human thought processes that developed it? In ancient Greece, Socrates argued that education was about drawing out what was already within the student. Once one gets beyond a dictionary definition, what emerges is that the *meaning* we assign to a word is through a *belief*, not an absolute fact. What are these beliefs? Out of the many examples, let's look at a few to bring out the key features.

*"The central task of education is to **implant a will and facility for learning**; it should produce not learned but learning people. The truly human society is a learning society, where grandparents, parents, and children are students together."*

-Eric Hoffer

*"The only purpose of education is to teach a student how to live his life—by **developing his mind** and equipping him to deal with reality. The training he needs is theoretical, i.e., conceptual. He has to be taught to think, to understand, to integrate, to prove. He has to be taught **the essentials of the knowledge** discovered in the past—and he has to be equipped to acquire further knowledge by his own effort."*

-Ayn Rand

*"The one real object of education is to leave a man in the condition of **continually asking questions**."*

-Bishop Creighton

There is no definition of education that is agreed upon by all, or even most educators. The meanings they attach to the word are complex beliefs, arising from their own values or differential experiences. If it is a complex belief, one also must examine the *purpose* of education and the functions of education.

Purpose is the fundamental goal of the process, an end to be achieved. *Functions* are other outcomes that may occur as a natural result of the process by-products. For example, some teachers believe that the transmission of knowledge is the primary *purpose* of education. The knowledge transfer from the organisation to the real world is something that happens naturally as a consequence of possessing that knowledge, a *function* of education.

Hence, if one was to draw out the major features of the argument, one can surmise that education is:

- Developing knowledge, character and the preparation to absorb a skill.
- It blossoms or leads out the inherent quality of a learner.
- It is a continuous process that in its ideal state should reinforce thought and mind together, leading to development of the brain.
- It is to do more with the preparation to learn and acquire knowledge than to learn by itself.

DIFFERENTIATING TRAINING

Why must we differentiate education from training? While education and training are linked in application, they are distinct in purpose, with each producing markedly different results. In essence, education teaches broad concepts and communicates information upon which to base decisions, whereas training teaches skills necessary to accomplish a task. Military education is essential to the professional development of officers, strengthening their abilities to lead and manage.

Education programmes expand knowledge and increase understanding of the role of armed forces in fulfilling our national security strategy.

Education programmes prepare members to successfully anticipate and meet challenges across the range of military operations.

Education pushes along training.

Training is the process of imparting knowledge and teaching specific skills required to accomplish tasks under defined conditions. While education teaches the individual **'how to think,'** training teaches the individual **'how to do.'** It is very important to understand this fundamental difference as one can **'educate to train'** but one **'cannot train to educate'** Most of the current education programmes in the IAF have notation training attached to them. This must be corrected.

"How do you impart to a 19-year-old the intelligence, the tactical skills, the decision-making ability—both tactical and moral—to know when to fire and when to protect? The clever rifleman knows how to hit the target; the wise rifleman knows which targets to hit."

- General Krulak

MILITARY EDUCATION

What Is Military Education ?

One can safely term all education in the armed forces as ME (military education). Military education is aimed at reinforcing the inherent intelligence on all fronts for an officer to be able to execute his charter efficiently and prepare him to face all eventualities. Last, but not the least, it must create a questioning persona. The essentials are that education must have the characteristics as listed below and any study of ME should be in the light of these characteristics.

Focussed on a clear objective.

A continuum must be maintained over the span of a career.

Invigorating and produce learning.

Stimulating to produce retention.

Produce more desire to learn.

Is there a need here to differentiate military education from the conventional kind? No ,since education is such a vast subject, one would only create more confusion, hence, it is better to extract the essence of the quality and identify the essentials for ME which should form its curricula.

Does ME mean only military studies? Besides just providing knowledge of military studies and the three 'R's,' there are certain other characteristics which

are included in ME. It must also include behavioural aspects and personality development which will effect the character of an officer. Wisdom, ethics, courage, integrity, leadership, the list is endless and diverse. These would be called institutional development qualities (IDQ). Institutional education is required for development of these traits. The earlier it is commenced in a *controlled environment*, the better the output i.e. better leaders with deeper ingrained values and sustained character.

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn."

-Alvin Toffler

Genesis of ME

During this era of complex military transformation, history suggests that success or failure in the endeavour depends critically on *intellectual leaders* as agents of transformation. The chief purpose of advanced military education is to create such intellectual leaders. They provide purpose, direction and motivation to the unconvinced, the ignorant and the uneducated, whether a subordinate, superior or peer. Intellectual leaders lead the unconvinced to seize new ideas, topple the outmoded, as and when necessary. For a change to take place, the organisation

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either requires a transformational thinking led by heretics or revolutionary thinking. The intellectual leader dissents not for the sake of heresy. His main purpose is to overturn the irrational and the irrelevant embedded in the current orthodoxy as it becomes increasingly more dogmatic over time (the primary risk of a doctrine). The intellectual leader may also defend the current orthodoxy when it is under irrational assault.

A student becomes an intellectual leader by first becoming an 'expert learner.' Any

successful system of advanced military education must begin by creating the academic conditions that allow the expert learner to flourish. These conditions include rigour, creativity and motivation. Together, they forge the first links in a chain of learning by recognising the limits of our own knowledge and the extent of our personal ignorance. How did ME start?

Advanced military education was born among the ashes of the Peloponnesian War (431-404 BC).

Advanced military education was born among the ashes of the Peloponnesian War (431-404 BC). For almost 30 long years, an Athenian coalition fought against Sparta and her allies. Increasingly, as the war raged on, Athenian strategy and even democracy itself became dominated by a series of demagogues who appealed to the base instincts of the masses as they tried to sell a flawed plan of war. Socrates was one of the most critical opponents of the demagogues. Plato, one of his students, systematised Socrates' teachings into an extended collection of writings. These writings eventually became part of the Socratic method of instruction, a process where student and teacher engage in a dialogue aimed at finding the truth and essence of the topic at hand. Less than a hundred years later, Aristotle brought Socrates's relentless method of dialectical interrogation into the formal classroom.

Socrates,² for his part, understood perhaps the most essential insights of higher education: learning requires a change in the *emotional state of mind*. Quite simply, the student must be emotionally engaged to take learning to a higher level of understanding. The Socratic method used stimulating dialogue, the emotional level of engagement, and could become quite intense over the heated debate and inquiry into key questions and fundamental issues of vital interest. From a cognitive standpoint, studies show that the greater the emotional investment paid by the student, the longer and more indelibly he retains the Socratic method. By setting up the Peripatetic School in the Lyceum at Athens, Aristotle extended the method further into a general analytical approach for the objective investigation of the natural world. This approach eventually evolved

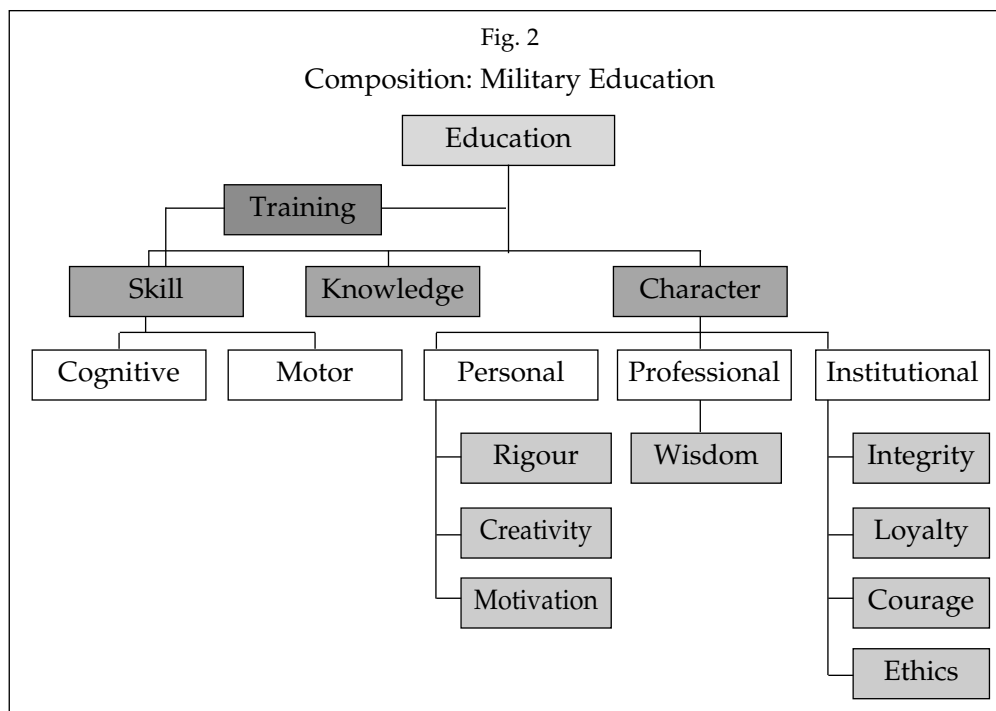
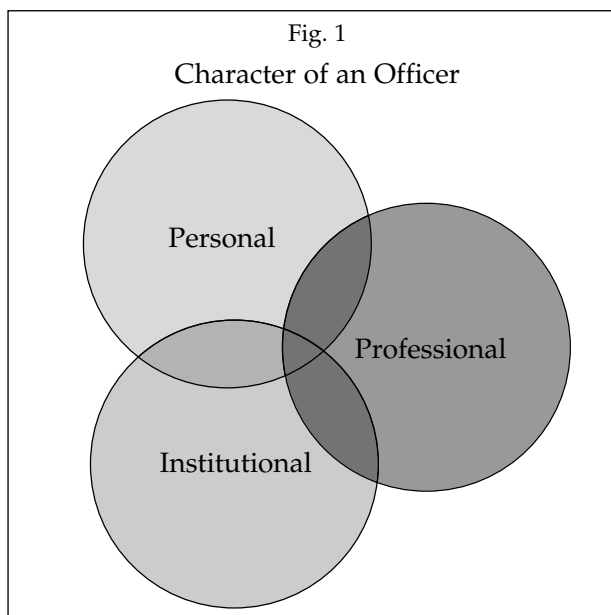
2. James Schneider Jr., *Transforming Advanced Military Education For the 21st Century Army* (January 2005).

into the scientific method. Today, virtually every graduate-level seminar, both military and civilian, is patterned after the Socratic method of dialogue and inquiry after truth. Together, then, the Socratic method with its developing analytical dimension and the drive to victory began to transform the Greeks, their intellectual heirs, the Romans, and eventually the Western world.

The next major event took place in 1806.³ In 1806, after suffering a humiliating disaster at the dual battles of Jena-Auerstadt, Prussia, under Frederick William I, met its own genius of defeat. The king decided that the only way to transform his semi-feudal nation was through education. He totally revamped Prussian education in laying the groundwork for the modern university system. Military education was modernised under the intellectual leadership of Gerhard von Scharnhorst, Augustus von Gneisenau and Carl von Clausewitz. The Prussian method of military education set the standard for military learning well into the 20th century. Early in that same period, the modern general staff emerged as a direct lineal descendant of objective inquiry and critical investigation worked out by Socrates, Plato and Aristotle. The modern general staff system developed three key innovations that helped establish military science as a viable discipline of learning in its own right: **the staff ride, the *kriegspiel* or war-game and the case study**. By the beginning of the 20th century, virtually every modern military force sought to emulate the German style of advanced military education. From here on, the modern ME was born.

The aim of modern ME is to create thinking leaders and expert learners. An expert learner is taught to recognise his own limitations. Based on his professional experience, he is taught to develop a personal theory of war: simply a reliable and meaningful system of beliefs about the way war works; a kind of map that helps him establish the underlying rules of the game. A working theory of war helps the expert learner establish norms and patterns of expectation and anticipation. This further helps him develop situational awareness. He is able to recognise patterns that novices do not see and anomalous events that violate expectation, since these anomalies or subtle differences are too small for the unschooled to notice. Pattern recognition provides the expert learner with the big picture—a holistic, systems view

3. Schneider Jr., Ibid.



of the operational environment – or to appreciate the big picture, **Gestalt** for short .

It is a misnomer to think and interpret that ME is a study of military sciences only. As shown in Fig. 1, the character of an officer is a controlled combination of three main qualities.

These identifiable but intangible qualities, as depicted, are overlapping and depending on the situation, one of these qualities may be predominant. Hence, they should all be part of basic ME curriculum. In this form, it would be called PME (professional military education). As is discernible in the composite picture, the above training is just a small part of this PME. Under skill, knowledge and character, the other sub-heads broadly depict what ME should comprise.

MILITARY EDUCATION

Essential Qualities of Military Education

With time, certain basic tenets identified for ME are as follows:

Flexibility to adapt emerging technologies and their applicability.

Versatility to encompass the full range of military operations in education programmes, including expansion or open-ended for joint applicability.

Balance between academic concept, operational reality, and historical perspective.

Systematic approach involving mentally challenging and setting realistic educational goals.

Synergy through complementary instructional methods, mentoring efforts, and practical exercises.

Persistent education that spans the individual's career.

Contiguous. It should be contiguous with the training i.e. each should complement the other.

Keeping these tenets in mind, ME programmes are demarcated into three basic types of programmes, each comprising some basic tenet. The criterion is mainly what, when and how the ME is executed.

IDQE (Institutional Development Qualities Education)

This is termed as PME (professional military education) in most forums. This is

the most basic form of ME and is primarily based on character development i.e. to produce thinking leaders and intelligent learners. Its aim is to develop critical thinking among the pupils and promote empathy learning. IDQE offers a curriculum of instruction and study that provides individuals with the skills, knowledge, and understanding to function in leadership roles and make sound decisions in progressively more demanding command and staff positions. IDQE has as its primary themes the development of leadership, management, and communication skills; the employment of combat forces; the military, political, economic social and psychological dimensions of national security. Understandably, this education has a vast expanse and mostly has intangible results. Qualities which are essential to leaders i.e. duty, honour, faith, courage, perseverance, confidence, approachability, adaptability, compassion and vision are honed. IDQE must be taught in an environment which offers a complete feedback loop. It is essential to feed what can be digested.

Continuous Education

The second form of ME is entirely information-based and maintains a continuum over the entire career span. It is progressive in nature and analogically like 'drip irrigation' i.e. continuous supply in small packets over long durations of time. It contributes to an unbroken continuum of education by providing educational opportunities that complement the periodic education provided in IDQE and enhances the understanding of officers through courses within a particular functional area. It is here that the contiguity with training is actually tested. It fosters a greater understanding of certain aspects of military missions and operations. This is achieved through a programme of diverse courses designed to increase both the depth and breadth of knowledge within a particular field of interest. It complements the objectives of IDQE by sharpening problem-solving skills, refining the thinking process, and increasing sound professional judgment. It spans the range of military operations and is offered to all members at all levels of responsibility. This system of incremental learning and constant improvement is also called the **Kaizen**.

Voluntary Education

The third and the most important form of education fosters self-motivation, causes voluntary education and self-cognition. Self-cognition is the initial stage of self-development in an officer's military professional training. It is expedient to organise and conduct the work at this stage along three principal lines: self-identification, self-study, and self-evaluation.

Self-identification enables an officer to better realise and understand the set of requirements that are established for him as a military professional, to understand his tasks, and to get a better perspective on his further military professional advancement.

Self-study is designed to objectively identify one's own professionally important qualities and compare them with the requirements that are set for the office. As a rule, self-study is based on the analysis of one's own actions, conduct, and the specific results of professional activity, with close attention being paid to critical comments on the part of an officer's superiors/peers.

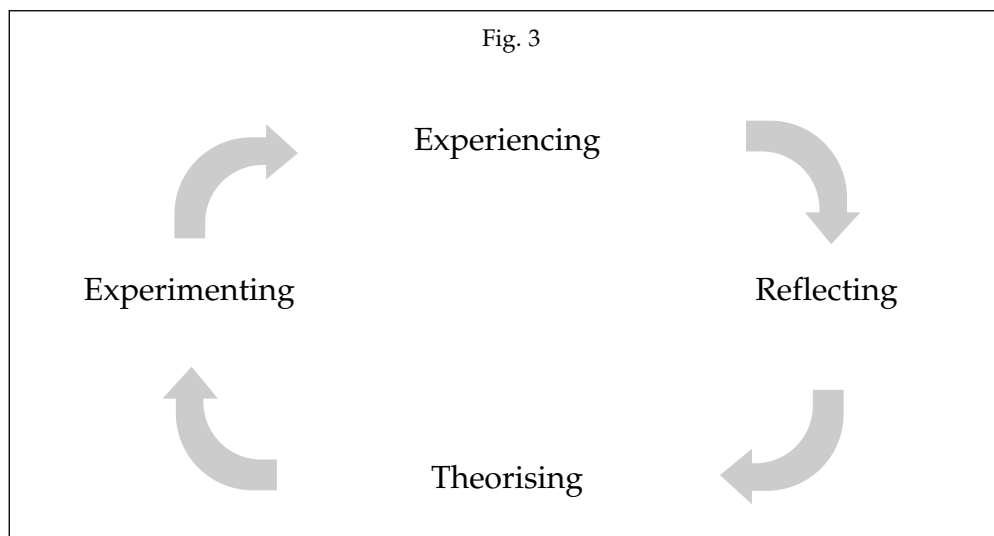
Self-evaluation expresses an officer's opinion about himself as a military professional. Objective self-evaluation plays an important role in both organising the self-development process and in controlling one's behaviour.

Self-study and self-evaluation lead officers to embark on a self-development programme. The main form of this method is either though distant learning programmes or enrolment in education outside the establishment and voluntary education is the result.

Techniques of ME and the Learning Cycle

During earlier research⁴ on the issue of the learning curve and the paradox of stagnation of SE (self-evaluation), it was learnt that the steeper the curve, the lesser is the SE and the greater the chances of stagnation. Hence, it is preferable

4. Paper submitted on technology, motivation.



to have a constant learning cycle than to have a bright star burning out. How does one manage this? Some techniques of education need to be reviewed. To be able to understand this, one must first understand the process of learning or the learning cycle. One of the foremost theories is Kolb's learning cycle.⁵ Fig.3 shows the basic learning cycle.

The process of learning goes through four critical events these are: experiencing, reflecting, theorising and experimenting. Each of these events can be influenced by external events to ease the process of learning

Experiencing. First of all, we have an experience. Most experiences are not worth further movement on the cycle as we are already familiar with them and they need no further interpretation and, hence, no need for learning. If the event creates a new synapse, it proceeds to the next process.

Reflecting. Having experienced something which does not fit well into our current system of understanding, we then have to stop and think harder about what it really means. This reflection is typically a series of attempts to fit the experience to memories and our internal models.

Theorising. When we find that we cannot fit what we have experienced into

5. ChangingMinds.org Kolbe learning cycle.

any of our memories or internal models, then we have to build new models. This theorising gives us a possible answer to our puzzling experiences.

Experimenting. After building a theoretical model, the next step is to prove it in practice, either in 'real time' or by deliberate experimentation in some safe arena. If the model does not work, then we go through the loop again, reflecting on what happened and either adjusting the model or building a new one. The staff ride, the *kriegspiel* or war-game and the case study can now be analysed based on this model.

Based on how we can influence these four events, new techniques of education have emerged. Now we can analyse some techniques.

NEW TECHNIQUES OF EDUCATION

Active Learning

Socrates had brought out that learning is best in an intense environment. **Active learning** is an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners. Students who actively engage with the material are more likely to recall information later; rather than being behaviourally active during learning, learners should be cognitively active. A **class discussion** can be held. These discussions should be held between prepared, knowledgeable participants. A think-pair-share activity takes place when learners take a minute to ponder over the previous lesson, later discuss it with one or more of their peers, finally to share it with the class as part of a formal discussion. It is during this formal discussion that the instructor should clarify misconceptions. A short written exercise that is often used is the "**one minute paper.**" This is a good way to review materials. During my tenure as a instructor and later at the squadron, it was found that this technique creates the most conducive environment for learning. Active learning happens when students are given the opportunity to take a more interactive relationship with the subject matter, encouraging them to generate rather than simply to receive knowledge. In an active learning environment, teachers facilitate rather than dictate the students' learning (**Kolbe cycle experiencing**).

Critical Thinking

It consists of the mental process of analysing and evaluating statements or propositions that have been offered as true. It includes a process of reflecting upon the specific meaning of statements, examining offered evidence and reasoning, in order to form a judgment. Irrespective of the sphere of thought, a critical thinker will raise the following questions (**Kolbe cycle reflecting**).

Critical thinking:

raises vital questions and problems, formulating them clearly and precisely;
gathers and assesses relevant information, using abstract ideas to interpret it effectively;

comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;

thinks open-mindedly within alternative systems of thought, recognising and assessing, as need be, their assumptions, implications, and practical consequences; and

communicates effectively with others in figuring out solutions to complex problems.

Experiential Learning (EL)

EL involves an immersion into structured experiences, combined with meaningful reflection, as a way to maximise learning. The structured experiences run through the gamut of classroom “solution-finding” activities. The experiences are integrated with facilitated reflective processes that help learners explore what happened during the experience, analyse the patterns that emerged, strategise for the next experience and transfer learning to another environment. EL is one of the most effective methods of adult learning for developing tacit knowledge needed by a person or group in order to perform in an organisation. Vis-à-vis traditional learning (where content is delivered through lectures or presentations), experiential learning is participative. It takes place in purposefully constructed “micro-worlds” (or experiential learning laboratories) in which content is delivered and potentials are discovered while the learners are immersed within the context.. The key is to discover and extract the most relevant, appropriate and

therefore, the most meaningful learning. And this is what separates the wheat from the chaff, so to speak (**Kolbe cycle theorising**). The techniques mentioned above should be incorporated in our education programmes.

MILITARY EDUCATION: INDIAN AIR FORCE

It is in order to attend to, and analyse, the education system followed in the IAF, we must evaluate the greater Indian psyche and what fomented this. Let's analyse two thoughts to start with and evaluate the education system by linking them with it.

"Indians believe that there is no country like theirs, no nation like theirsno science like theirs."

-Alberuni

"The Indian educational system, which still bears the imprint of the traditional ritual education, emphasizes the mastery of facts and the memorization of enormous amount of detail."

-Stephen Cohen

Even if one was to ignore the racial overtones and the biased aftertaste, there is an element of truth in both statements. The first one obviously ignores the Socrates *e-ducere*, meaning that the system does not lead out to, or develop, radical thinking. We chose to walk the conventional well trodden path rather than create one ourselves. The second one brings out the obsession with rote, facts and figures rather than create a big picture and develop opinion from a far perspective.

Is this actually the case? A single feature of ancient Indian or Hindu civilisation is that it has been moulded and shaped in the course of its history more by religious than by political, or economic influences. The fundamental principles of social, political, and economic life were welded into a comprehensive theory which is called religion in Hindu thought, the concept being to attain *moksha*, the ultimate state of learning. In modern times, military training is usually given only by the state authorities when recruits join the army. Such was not the case in ancient

6. Har Bilas Sarda, *Hindu Superiority*, pp. 173 - 174.

India. The average citizen and villager was expected to be able to defend his own hearth and home.⁶ The *Arthashastra* expressly lays down that every village ought to be able to defend itself. That such was actually the case in several parts of India would become quite clear from the accounts of Alexander's invasion, as given by the Greek historians. In several places, the Macedonian was opposed not so much by state forces as by the whole population in arms. However, there are several examples based on military training. There can be no doubt that in many of the republican states of the Punjab, the Kathas, the Malavas, the Sibis, etc. every adult used to receive military training of a fairly high but never a comprehensive and universal strategy based on a degree of ME. There were also some cities in the country, famous as centres of military training. Taxila, situated in the northwest, had naturally become a centre of military training.

In the Middle Ages (post-1500), India was governed by a predominantly Mughal ideology with streaks of a particular religious theology. All the rulers with the exception of Akbar, suppressed the prevalent Sanskrit based Indian education system. Hence, though there was rich exchange of Muslim and Hindu theology, all the rulers failed in starting the culture of impartial ME (for selfish reasons). In recent times, under the British rule, the military training was imparted to produce fodder for the trenches in Europe and later, North Africa. No doubt, it changed the education system in general but we were still deprived of an independent military thought. Since the environment was the breeding ground for leaders, the situation was ripe to start with ME but the British kept the concept away, for very obvious reasons.

"We must do our best to form a class who may be interpreters between us and the millions whom we govern, a class of persons Indian in blood and color, but English in taste, in opinions, words and intellect."

-Thomas Macaulay

The circumstantial result was that India generated a bevy of expert administrators and never any leaders. The British were scrupulous enough

7. Charles Grant, *Observations*, 1797.

to keep the knowledge of our heritage away⁷. Though one can say the thought of benefiting from providing ME to Indians did sporadically cross their mind.

As a matter of course, it includes the far-famed Hindoostanee, so often mentioned, but which would be here a branch, and not the whole of the tree. The army in India has, in arduous and trying situations, always vindicated the exalted character of their native country ; and it might be equally wise and just to impart the benefits of scientific knowledge, devoid of which physical and moral energy will remain but comparatively powerful where deep professional thought and the higher order of tactical combinations are indispensably requisite.

— Summcrlandt, May1, 1827

John MacDonald, *Asiatic Journal*, 1827

In the historical backdrop of absence of offensive military campaigns, it is imperative to adopt a critical thinking, a heretical approach to diagnose and fix the defensive mindset on tactics and military education. Can one recall one campaign where the Indian soldier stepped out to invade any other country beyond the Indus in the west or similarly in the east? Historically, India had never invaded another country till 1971. What did that produce? A defensive mindset, weak tactics and underdeveloped ME curriculum. Battles begin in the mind and have to be fought and won there before they transcend to the fields.

India as a nation is emerging as a world leader in knowledge development and is the hub of the economic revolution. It is what one would term the “richest source of potential human resource suitable for use by the West.” There is a knowledge hungry middle class ready to be unleashed. The situation is ripe to breed potential leaders for the transformation from a developing to a developed nation. What we lack is a format of planned military education on character, values, integrity, vision and a uniform culture. An effective military education can provide not only a good knowledge and data base, but also a great testing ground for a larger picture of reforms.

Education in the IAF

The vision and guidelines for ME in the IAF are hidden away in an innocuous AFO called 67/98. It has been comprehensively thought about and covers both officers and men, but is sadly insufficient.

Its aim is to educate the officers and airmen throughout their service. (continuum of education).

It elucidates general education and the contiguity with training.

It lays down responsibility of educational training at Air Headquarters (HQ), Command HQ, and at station level.

It further gives details of education service training and general education.

From here on, the AFO drifts into administrative issues like running of air force schools, etc. Though it is simple to criticise, one must not be dissuaded from doing so. The IAF needs a doctrine, not an order for education. It must start by differentiating education and training. Both terms are liberally used, with cross-purposes. One must start with a commencement point, which must be identified. The education policy/guidelines must have a vision for the future. One can appreciate this by referring to the US Air Force doctrine document 2-4.3 also made in 1998.

Traditionally, the IAF followed an education programme which was based on a concentrated capsule at the beginning of the career. For obvious reasons, we called it *ab-initio* training. This capsule had a wide domain, that is, from essential skill training to financial planning. There was a discontinuity with essential career progression milestones (part B, C, JCC). These milestones were essentially exam-based and the assumption, that if one passed the exam, one had the requisite knowledge and maturity for career progression. There were large gaps in the syllabus and, at times, repetitions. All these have been acknowledged in the HRP 33/2006. Professional skill development went on a parallel programme with no link. There were practically no courses for IDQE. A basic assessment would reveal that the primary causes of the shortfall were:

Failure to distinguish between training and education.

No long-term vision.

Lack of vision.

Lack of coordination.

Predominance of our obsession with testing ,exams and marks.

In 2004, there was a breakthrough, a departure from the standard pattern — the JITT — which was conceived by the Directorate of Training: “**Training can be limited to what is needed and when it is needed,**” a concept of continuum of education. The intention was to allay one-time training, save time and refresh knowledge periodically. It also addressed the shortcomings as listed above.

The concept is still nascent and there is plenty of a slip between the cup and the lip. The least one can say is ,it is a beginning in the right direction. The JITT is applicable to all personnel across the board. The major features are:

The concept recognises that we can provide learning as the need arises and many such training courses over the span of an individuals career is an efficient way of learning.

A regular upgrade of knowledge formally tested would lead to upgrade of position. It recognised the need to identify the gap between HRM of training of manpower and requirement of workforce in the field.

One can observe vicariously and state:

It still did not distinguish between training and education needs.

The premise that men can be used operationally after the basic training needs reevaluation.

Have the non-educational institutions like field units been tasked with what they are not equipped to do? The answer is Yes.

Does the programme address the basic tenets of education?

How is the manpower better utilised by mere availability in an untrained state?

It is obvious that these questions have already been asked and shall shortly be

addressed. Currently, the concept has been implemented for the personnel below officer rank (PBOR) only. However, it is also applicable to officers from inception and has been implemented through the HRP 33/2006.

HRP 33/2006

One can call the HRP a path breaking effort and a landmark in our training policy. One cannot help but appreciate the effort and the thought behind the policy. The HRP identifies certain flaws in the previous programme, namely:⁸

(a) Absence of linkage between the three milestones i.e. OPE (promotion exams, JCC and DSSC).

Frequent and long absence from the units.

Lack of continuity in training and absence of a structured system for recognition of performance during the course.

Removal of superfluous aspects and repetitions.

In addition, it is felt that the following aspects were not considered:

Delineating education from training, in fact, labelling them incorrectly.

The obsession with exams and marking continues.

Distance learning introduced prematurely, when a similar programme had earlier failed in 1994. The presumption that such a curriculum can be taught through distance learning needs revaluation.

The IAF needs to demarcate distance learning from correspondence. Use of e-correspondence is limited. This fact is elaborated later.

Notwithstanding, let us do a unbiased analysis and bring out the merits. The term **in-Service training** is used to describe the policy. In-Service courses are a term introduced to explain the periodic education as per JITT. They are an integral part of Service training and human resource development. With the passage of time, a need was felt to rationalise these courses, and, at the same

8. Starter kit for distance learning programme faculty of DL, IAF.

time, integrate them with the career progression of an officer wherein each course will be instrumental in shaping one's career. With this criterion in consideration, a review of courses was carried out and a new training pattern was started with effect from January 2006. This pattern is called the "In -Service Training". In-Service courses have been divided into three broad categories:

Mandatory Courses.

Desirable Courses.

Job Related Courses

Mandatory Courses. This category consists of four courses, two being common courses for officers of all branches and two are branch specific professional courses. The Basic Air Staff Course (BASCO) and Intermediate Air Staff Course (IASCO) have been designed as common courses for officers of all branches. Branch specific, Basic Professional Knowledge Course (BPKC) and Advance Professional Knowledge Course (APKC), have been designated as professional courses. Successful completion of BASCO and BPKC is a mandatory qualifying requirement for promotion from the rank of flight lieutenant to squadron leader, and successful completion of IASCO and APKC is mandatory for promotion from the rank of squadron leader to wing commander. Each mandatory course has been given a certain weightage.

Desirable Courses. As the name suggests, these are courses whose qualification is considered desirable for the career progression of an officer. The detailment for these courses would be by selection (entrance test and/or merit). Herein, lies the list of our prized courses like FCL, QFIC and clubbed at the bottom is DSSC.

Need-Based Courses. These are generic courses based on the organisational needs. They are part of the overall training that is carried out across all branches and institutes of the IAF and other establishments. They are designed to assist an officer in discharging his duties and, thus, can also be referred as 'job related' courses. They do not carry any separate weightage. If one was to recall the IDQE, they were the same as organisational needs. Leadership courses run by

C-LABS (College of Leadership and Behavioural Sciences) are listed under this label, namely, **need-based courses**. The policy is silent about the future path or the education beyond that.

Before we comment upon the in-Service training, it is in order to examine similar policy in other major air forces. Let us examine the policy of the USAF. The USAF has identified four levels of education. The continuum of education spans an airman's career. It can be viewed broadly as consisting of these levels:

Accession. Building a GSK of the organisations, customs, courtesies, doctrine, and heritage while instilling a sense of service.

Primary. Primary programmes further develop the sense of service identity while developing teamwork, leadership, and fundamental knowledge of air force organisational command, forces, and functions as well as individual skills in an air and space discipline.

Intermediate. Intermediate programmes continue to build upon previous levels by imparting knowledge of aerospace power across the range of air force and military operations, and within joint and multinational operations while preparing individuals for staff and command positions

Senior. Senior programmes further develop the war-fighting and war-winning intellect while also preparing individuals for senior leadership responsibilities in the command and employment of aerospace power.

The USAF PME system is structured on a three-step basis⁹. This can best be represented by the three major PME schools at:

Maxwell Air Force Base-Squadron Officer School (SOS).

Air Command and Staff College (ACSC).

Air War College (AWC).

The key rationale behind the USAF PME system is the desire for the preparation of all career officers for the assumption of command and staff duties.

⁹ Lieutenant Colonel William Bruenner, *A Comparison of Professional Military Educational Systems*.

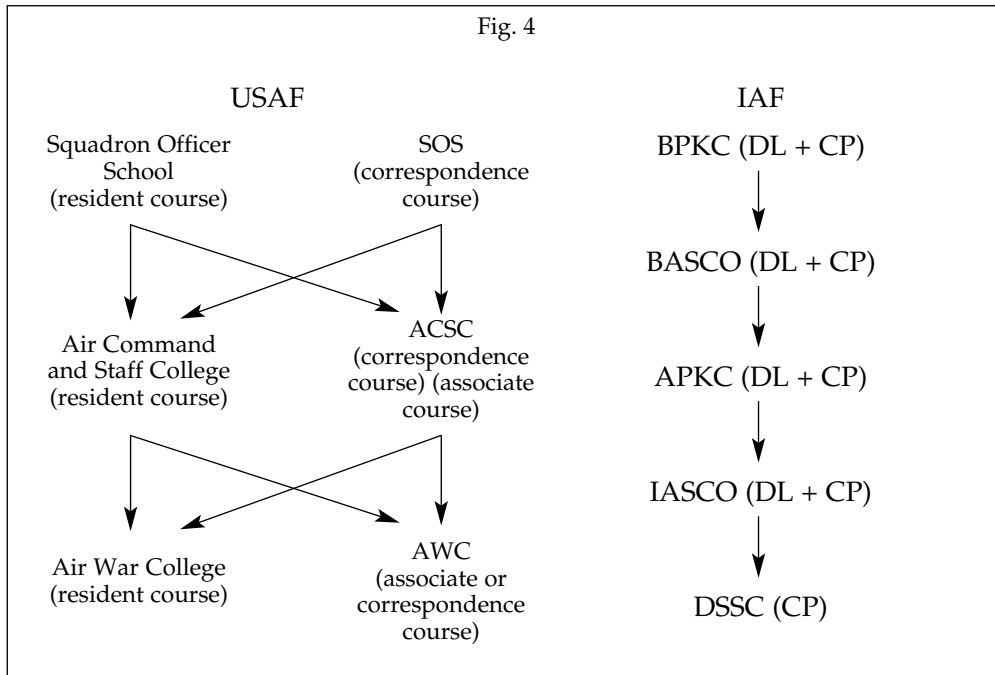
Under ideal conditions, this would be attainable through resident schooling only at the lowest (SOS) level, where students are selected on the basis of quotas to be filled by the major air commands. Even there, in practice, only about 50 per cent of those eligible can attend. At the ACSC level, the percentage drops to 18 per cent. The availability of comprehensive correspondence courses at all three levels through the USAF Extension Course Institute is an important factor in enabling active duty and reserve officers who are not able to attend the resident courses to further their professional military education. However, certain aspects of resident training cannot be provided in a correspondence course. The idea of substituting correspondence for resident training has received special emphasis during the last few years. The basic pedagogical methods employed in these schools are:

The lecture, presented to the entire class (usually supplemented by a question-and-answer period) for conveying basic principles.

The seminar, involving student or faculty led discussions among groups of 12 to 15 students, for expansion of the ideas presented in the lectures and for their practical application.

While textbooks sent through the mail can convey many of the ideas presented in the resident school lectures (provided the books are kept up to date), there is no correspondence course equivalent of the seminar discussions, where the individual experiences of the participants combine to provide the sum of knowledge required to solve the seminar problems. Therefore, the air force formulated the associate programme of the Air War College, whereby groups of participants at various installations not only receive instructional material but also meet periodically and conduct seminars similar to those of the resident course at Maxwell. The USAF is implementing a similar programme at the ACSC level. The officers participating in the correspondence and associate courses receive credit for course completion in their personnel records similar to that of officers who attend the resident courses.

It is advisable not to draw direct parallels as even the mighty USAF



acknowledges flaws in its system. There is one aspect which is appreciable i.e. the utility of the distance learning (DL) is understood, but it has been suitably modified so that a maximum number of officers go through a resident programme (alternate progression). In addition, the utility of critical learning and thinking is fully utilised through the seminars.

Curriculum

The four core areas of study that provide the foundation of an officer's ME are:¹⁰

Profession of Arms.

Military Studies.

International Security Studies, Communication Studies.

Leadership Studies.

¹⁰ Bruenner, Ibid.

These can be suitably demarcated into the CP and DL programmes. This paper shall examine the IASCO (Intermediate Air Staff Course) syllabus in the light of these five sub-sections. The syllabus of IASCO is wide and does not lay down the demarcations regarding what is studied under each programme. There are four sections of study, namely:

Administration, Organisation, Law, Accounts, Security, Intelligence, Logistics, Technical.

Staff Duties, Management, HRM, Education, Medical.

Air Power, Military History, Meteorology.

Regional Studies.

One does not have to draw parallels among the four core areas mentioned earlier and the IASCO, but the absence of a few aspects in the curriculum are conspicuous. Leadership studies is one of them. The major part of the curriculum is repetitive and cannot create a motivation to learn. Basically, the programme does not create the intensity to learn in the DL phase. There should be healthy mix of CP and DL i.e. for certain pre-identified officers, BASCO could be a resident programme and they would go through IASCO with DL. This would maintain the continuum and be a more efficient way of learning. The most important aspect is the study of air power. Here, again, the same monotonous list repeats itself. There is no mention of joint operations at all. Placed at Appendix 'A' is the prescribed reading material for air power by the USAF and the IAF.

Distance Learning. DL varies vastly from education by correspondence. A teaching model for distance learning requires a system (a technology) and process (a way of linking resources) that makes distance learning no different from learning in the traditional classroom. A good teacher is a facilitator and allows students to share ideas and explore. Today, the teacher has another tool in the classroom that allows students to do the same things as in the past. This new tool is hypermedia. A prime example of powerful hypermedia is the worldwide web, or in our case, the air force net. The system can be designed to be interactive/research-based. Interest can be generated by video-conferencing,

gaming, etc. The scope is limited only by bandwidth and imagination.

CONCLUSION

The IAF is beginning to have a global reach and impact. If the nation is speeding along at full throttle, so must its pillars i.e. the armed forces. The impact of not doing this would be a disaster. When all banners scream, "IAF, an aerospace power," then all the personnel, including the air warriors, must be able to decipher the meaning. If we are to progress towards our vision, we must review our ME and give it its desired importance. We must understand the difference/primacy between training and education. This paradigm shift should have been made yesterday. **"No tomorrow will repeat yesterday,"** therefore, education for the future must be envisioned. This paper is the step in the right direction, a beginning has been made.

"Mankind is passing from the primacy of the past to the primacy of expectation of vast future changes."

-Harold D. Lasswell

Appendix 'A'

PRESCRIBED READING MATERIAL FOR USAF

Basic List

Sun Tzu, *The Art of War*.

Phillip Meilinger, *10 Propositions Regarding Air Power*.

James Stokesbury, *A Short History of Air Power*.

Donald Phillips, *Lincoln on Leadership*.

Tom Wolfe, *The Right Stuff*.

James Hudson, *Hostile Skies*.

DeWitt Copp, *A Few Great Captains*.

Geoffrey Perret, *Winged Victory*.

John Sherwood, *Officers in Flight Suits*.
T.R. Fehrenbach, *This Kind of War*.
Jack Broughton, *Thud Ridge*.
Harold Moore, *We Were Soldiers Once...and Young*.
Richard Reynolds, *Heart of the Storm* .

Intermediate List

Peter Paret, *Makers of Modern Strategy*.
Tony Mason, *Air Power: A Centennial Appraisal*.
George C. Kenney, *General Kenney Reports Donald Slayton, Deke!*
Lee Kennett, *The First Air War*.
Thomas Hughes, *Over Lord*.
Robert F. Futrell, *The United States Air Force in Korea*.
Mark Clodfelter, *The Limits of Airpower*.
Richard Hallion, *Storm Over Iraq*.

Advanced List

Carl von Clausewitz, *On War*.
I.B. Holley, *Ideas and Weapons*.
James Belasco and Ralph Stayer, *Flight of the Buffalo*.
Walter McDougall, *...The Heavens and the Earth*.
Raymond H. Fredette, *The Sky on Fire*.
R.A. Overy, *Why the Allies Won*.
Phillip Meilinger, *Hoyt S. Vandenberg: The Life of a General Ulysses Sharp, Strategy for Defeat*.
James Winnefeld and Dana Johnson, *Joint Air Operations*.
Roger A. Beaumont, *Joint Military Operations*.
Michael Gordon & Bernard Trainor, *The Generals' War*.
John Warden, *The Air Campaign*.

PRESCRIBED READING MATERIAL FOR IAF

Campaign Studies

- Battle of Britain.
- German Campaign of Crete, with emphasis on Air Ops.

- Op Market Garden.
- Indo-Pak War 1965.
- The Air War in Vietnam.
- Arab-Israeli War 1967.
- Indo-Pak War 1971.
- Arab-Israeli War 1973.
- Falklands War.
- Bekka Valley Ops 1982.
- Gulf War I.
- Gulf War II.

Disclaimer

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the Indian Air Force.

