

Institute for Defence Studies & Analysis

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Journal of Defence Studies

Publication details, including instructions for authors and subscription information:
<http://www.idsa.in/journalofdefencestudies>

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To cite this article: Mrinal Suman (2012): Defence Acquisition Institute: A Viewpoint, Journal of Defence Studies, Vol-6, Issue-2. pp-01-12

URL: http://www.idsa.in/jds/6_2_2012_DefenceAcquisitionInstitute_MrinalSuman

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Defence Acquisition Institute: A Viewpoint

*Mrinal Suman**

While delivering the keynote address at the International Seminar on Defence Acquisitions on July 12, 2011, Defence Minister A.K. Antony accepted the need to impart training to the defence acquisition functionaries. Further, he agreed that a dedicated institute needs to be set up for the purpose. It is the first time that the training of acquisition staff has received the attention that it deserves as reforms in India's defence acquisition regime have so far been limited to procedures only. Overlooking the fact that any mechanism is as good as the people who operate it, professional competence of the personnel implementing the procedures was given little importance. The lack of a core of well-qualified and adequately-trained acquisition staff became the weakest link of the acquisition chain and this deficiency was first highlighted in an article that appeared in 2005 in Indian Defence Review.¹

Subsequently, even the Comptroller and Auditor General (CAG) noted the fact that system of acquisitions being handled by unspecialised personnel posted for three year tenures was simply not adequate. It emphasised that "defence acquisition is a cross-disciplinary activity requiring expertise in technology, military, finance, quality assurance, market research, contract management, project management, administration and policy making".² However, this aspect continues to remain totally neglected to date. It has generally been accepted the world over that an efficient acquisition workforce cannot only expedite procurements but also affect a saving of up to 15 per cent of the capital expenditure in initial purchase price and associated life cycle costs.³ Therefore, the Defence Minister's recognition of the need to impart required skills to defence functionaries is a long awaited and welcome development.

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A Look at Select Nations

All developed countries recognise the fact that acquisition of defence equipment is a highly specialised and complex activity needing extraordinary professional skills and unique attributes. They not only select personnel for acquisition functions after due diligence but also equip them with necessary skills through regular training in various disciplines. Three leading nations are discussed hereunder.

The United States of America

As per the provisions of the Defence Acquisition Workforce Improvement Act (DAWIA), all members of the defence acquisition workforce have to be certified for the position they hold. A Defence Acquisition University (DAU) has been established for conducting training courses in 13 career disciplines with three certification levels (entry, intermediate and senior). The mission of DAU is to “provide a global learning environment to support a mission-ready Defence Acquisition Workforce that develops, delivers and sustains effective and affordable war-fighting capabilities”.⁴ The DAU is a corporate university responsible for the training and career development of more than 126,000 acquisition employees.

The breadth of DAU’s curriculum can be gauged from the multiplicity and variety of the fields its training programmes cover. They include information resource management; acquisition management; logistics; auditing; programme management; business, cost estimating and financial management; production, quality and manufacturing; contracting; requirements management; software acquisition management; facilities engineering; science and technology management; systems planning; research, development and engineering; and test and evaluation.

The United Kingdom

The importance of imparting required skills to the acquisition workforce has been repeatedly stressed by all review committees and commissions. As per the Gray Report, significantly greater skills are required in programme and project management; finance; cost estimating; engineering and contracting; and management information systems at all levels of the British acquisition organisation.⁵

According to the “Defence Acquisition High Level Blueprint”, the success of the acquisition system depends on the skills and professionalism of people within the acquisition community.⁶ Similarly, Defence Acquisition Reform Programme (DARP) also suggested raising skill levels across the complete acquisition regime.

The Defence Acquisition Change Programme also stressed the need to concentrate on developing key skills necessary to deliver defence acquisition business, especially in cost–time estimation and project management. A Written Ministerial Statement of Defence Secretary Bob Ainsworth of October 15, 2009, on independent review of defence acquisition, also vowed to accelerate the improvement of the above-mentioned key skills of cost forecasting and programme management.

Consequently, the Defence Acquisition Management Education Programme is providing comprehensive training and development opportunities across all disciplines. Skills planning is in place across the whole acquisition community for all major disciplines. There is also a fellowship scheme to recognise and retain world-class specialists with scarce skills. Joint training is carried out with industry to help share and develop best practices. The Defence Academy in Shrivenham is the nodal centre for imparting acquisition training to the acquisition workforce and members of industry.

France

Recognising the importance of technical skills, France is highly exacting in the selection of its defence acquisition staff. It recruits mainly engineers and technical officials. Candidates must hold a degree in engineering, a master’s degree in science/economics or a degree from a business school of repute. In addition, Direction Générale de l’Armement (DGA), the overarching authority, engages, on contract, engineers and technical managers with high level of expertise. Initially, the contract is for a fixed term of three years. It can be renewed once and the employee can be made permanent thereafter, if found suitable.

The DGA is of the view that the acquisition taskforce must have technical orientation as defence equipment incorporates cutting-edge technologies.⁷ It is often said that the French acquisition functionaries are as technologically accomplished as the producers of military equipment. The importance that France assigns to the training of the acquisition personnel is apparent from the fact that DGA has

a number of engineering schools under its direct control: École Polytechnique; Ecole Nationale Supérieure de Techniques Avancées (ENSTA); Institut Supérieur de l'Aéronautique et de l'Espace (SUPAERO); École Nationale Supérieure de Techniques Avancées de Bretagne (ENSTA Bretagne); and Institut Supérieur de l'Aéronautique et de l'Espace (ENSICA).⁸ The DGA's armament engineers are graduates from École polytechnique. Subsequent training is imparted at ENSTA Bretagne or SUPAERO.

Need for a Skilled Acquisition Workforce for India

As just seen, acquisition of defence equipment is a highly specialised and complex activity needing extraordinary professional skills and technical competence. India needs to take the following three steps to upgrade India's acquisition workforce:

- All critical appointments in the acquisition process (manned by civil and military personnel) should be identified and duly notified as Acquisition Staff Appointments (ASA)—to include the Ministry of Defence (MoD), Headquarters Integrated Defence Staff (HQ IDS) and the Service Headquarters (SHQ). As every appointment requires unique attributes and professional skills, essential qualifications should be evolved for each appointment—some appointments may need specific engineering or financial expertise.
- Only personnel meeting the laid down criteria should be posted to ASA after due selection and not as a part of routine turnover. Due cognisance should be taken of their educational qualification, experience, demonstrated competence, displayed flair and unimpeachable integrity. Once posted, their tenure should be extendable to 4–5 years, with appropriate protection of their career interests.
- All ASA appointees should be imparted general orientation guidance on joining, acquainting them with the procurement structures, defence procurement procedures and the functioning of the system. Subsequently, they should be imparted appointment-specific training to equip them to discharge their duties efficiently. There is thus a need for a dedicated institute for training the defence acquisition workforce.

Proposed Institute

It is proposed that a National Defence Acquisition Institute (NDAI) be established under MoD. To start with, it could be an adjunct to the Institute for Defence Studies and Analysis (IDSA) at New Delhi or the College of Defence Management (CDM) at Secunderabad. It can utilise their existing infrastructure and facilities till its own campus comes up. Co-locating it with IDSA has the advantage of being in the national capital. On the other hand, CDM will provide the benefit of a highly qualified faculty that can be made use of in the interim.

The charter of NDAI should include the following:

- Conduct of activity-focused and appointment-oriented courses.
- Emerge as a centre of excellence, provide necessary impetus to domain knowledge and be a repository of field experience gained.
- Act as a think tank for emerging issues; carry out case studies to identify positives and negatives of the system; and provide advice to MoD, HQ IDS and SHQ on policy-related reforms/issues, whenever asked for.
- Create a data bank of institutional memory.

The institute should have the knowledge and wherewithal to cover the following disciplines as they pertain to defence acquisitions:

- Mission definition, execution strategy, systems planning and support planning.
- Determination of performance goals and performance assessment.
- Business modelling—basic probability concepts, subjective probability assessment and basic simulation concepts.
- Cost risk analysis—to include risk quantification, evaluation and reduction process.

- Sensitivity analysis and risk management.
- Proposal adequacy verification systems and configuration management.
- Fixation of major milestones with delegated authority.
- Fundamentals of test and evaluation (T&E), including computer simulations and modelling.
- Business modelling and facilities engineering.
- Applied cost analysis to include cost of development, materials and technology.
- Earned value management system.
- Programme management—concept, methodology and skills.
- Management of developmental projects—production, manufacturing, quality control and oversight.
- Operating and support cost analysis.
- Estimating techniques—parametric, analogies and improvement curves.
- Defence acquisition financial management.
- Business negotiating techniques and contract drafting.
- Legal aspects of defence contracts—to include liabilities of both sides, exit options and arbitration laws.
- System sustainment to include management, reliability, availability and maintainability.

- Performance-based logistics, life cycle product support and enterprise life cycle logistics management.
- Internal financial controls and auditing norms.
- Probity, ethics and redressal mechanism.

Additional disciplines can be added for study and the curriculum can be further refined with the emergence of newer challenges.

Structuring of the proposed NDAI can be carried out in two ways. In the first option, faculties can be organised on the basis of the above-mentioned disciplines, thereby facilitating development of in-depth knowledge of the subjects, albeit at academic level. The second option is to organise faculties on the basis of acquisition activities. This is considered a better option. As the complete gamut of acquisition functions are performed by different functionaries in sequential activities, training courses can be structured for them accordingly. Such an arrangement will provide focused domain knowledge to the acquisition staff and enable them to discharge their functions more professionally.

It is recommended that NDAI should have six faculties as follows:

1. Faculty of Capability Management. It should cover the following aspects:

- Based on the defence planning guidelines, evolution of 15 years defence capability plan.
- Identification of capability gaps duly prioritised.
- Preparation of 15 years long-term integrated perspective plan and five years services capital acquisition plan.
- Translation of needed capability into parameters and management of requirements.
- Categorisation of proposals to decide the route to be adopted.

- Formulation of Services Qualitative Requirements (SQR).
- Drafting of Request for Proposals (RFP).

2. Faculty of Technical Evaluation. Its syllabus should include the following:

- Evolution of T&E philosophy.
- Preparation of T&E plan and methodology, to include computer simulations and modelling.
- Finalisation of trial activities, modalities and sequence.
- Drafting of trial directive.
- Selection of trial locations and equipping of trial units.
- Evaluation of technical proposals.
- Preparation of trial reports.
- Finalisation of staff report.

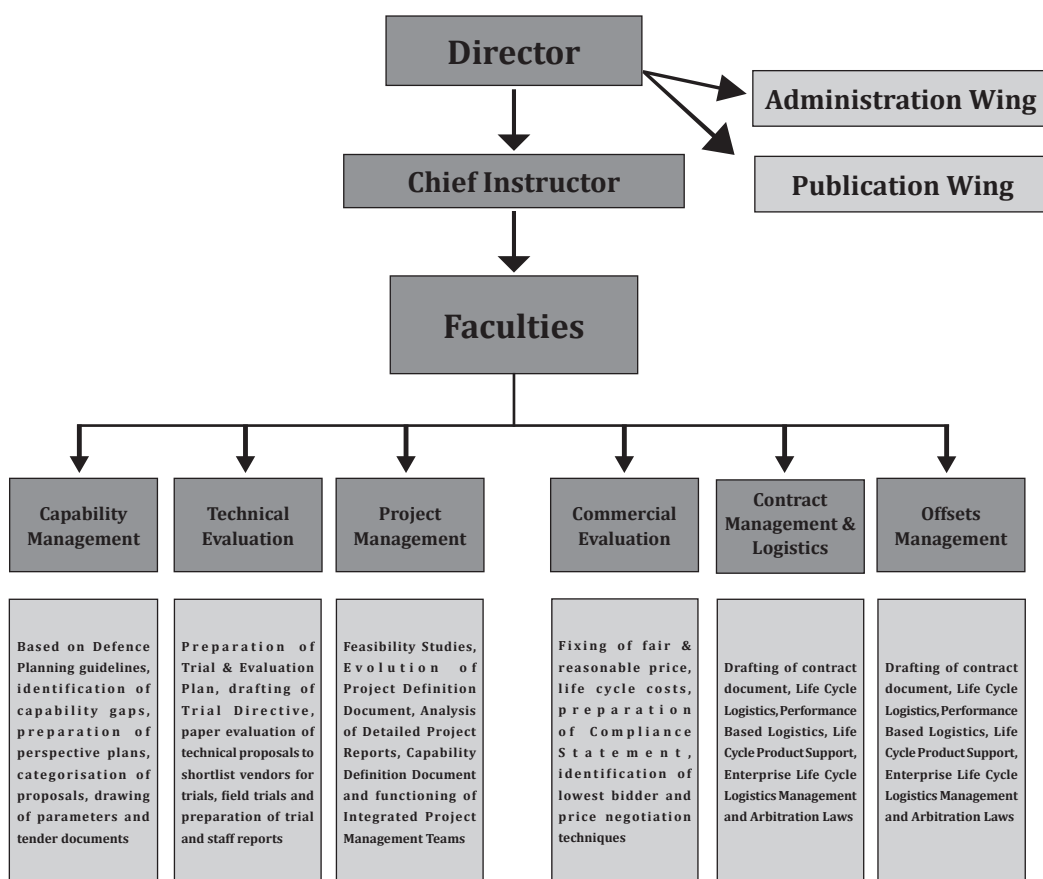
3. Faculty of Project Management. As this faculty would generally be dealing with developmental projects under “Make” and “Buy and Make (Indian)” categorisations, it should preferably be headed by a Defence Research and Development Organisation (DRDO) scientist and cover the following subjects:

- Preparation of project feasibility studies for “Make” cases.
- Evolution of project definition document, defining system requirements in detail.
- Study and analysis of detailed project reports of the industry, especially with respect to transfer and absorption of foreign technology.

- For “Buy and Make (Indian)”, preparation of Capability Definition Document (CDD) outlining requirement in operational terms, long-term quantities, time schedule, immediate fund availability and critical technologies to be absorbed.
 - Appraisal of roadmap for development/production and firming up of technical requirements.
 - Constitution and functioning of integrated project management teams.
4. Faculty of Commercial Evaluation. It should preferably be headed by an officer from the Department of Defence Finance. Its syllabus should cover the complete gamut of commercial evaluation activities to include the following:
- Constitution of a well-qualified and professionally competent Commercial Negotiation Committee.
 - Determination of fair and reasonable price.
 - Preparation of compliance statement as regards the terms offered in RFP, including advances, stage payments, delivery schedule, performance warranty, guarantee terms and acceptance criteria.
 - Preparation of “Comparative Statement of Tenders” to evaluate technically acceptable offers and determine lowest acceptable bidder.
 - Application of discounted cash flow method and life-cycle cost concept to identify the most cost-effective choice.
 - Price negotiation methodology and techniques.
5. Faculty of Contract Management and Logistics. It should be headed by an officer qualified in contract/corporate laws with intimate knowledge of arbitration proceedings, life cycle logistics, performance-based logistics, life cycle product support and enterprise life cycle logistics management.

6. Faculty of Offsets Management. As offsets have become an integral part of the Indian procurement system, their importance and complexities are bound to increase. All aspects related to evaluation of offset proposals and implementation of offset programmes should be covered. Oversight, monitoring and measurement of offset credits need special emphasis. Figure 1 shows the recommended outline structure of the proposed institute.

Figure 1 : Recommended Outline Structure of the Proposed Institute



Source: Author.

Conclusion

Needless to say, value of the proposed institute will depend entirely on the quality of the faculty members. They should be selected purely on merit, without any parochial service considerations.⁹ It is not necessary to confine the search to

retired civil and military officers. The net must be cast wide to recruit best brains available in the country—even from academia and industry. Their tenure should be long enough for the consolidation of gains made through initial gestation and subsequent growth.

A word of caution will be in order here. Unfortunately, many senior functionaries (both military and civil) do not feel any necessity to improve their knowledge or hone their skills in the mistaken belief that their basic intellect, initial training and subsequent experience equip them to shoulder any responsibility. They are going to resist training at the proposed institute. The MoD will have to make it compulsory.

Finally, reforms in defence acquisition structures and procedures do make a difference, albeit to a limited extent. No reforms can yield results unless acquisition functionaries are trained and equipped to translate progressive policies into tangible actions on ground. It is absolutely imperative that India equips and trains its defence acquisition workforce suitably. It is only then that the stated aim of providing effective, affordable and timely weapon systems to the armed forces can be achieved.



Notes:

1. Mrinal Suman, "Quality of Acquisition Staff: A Key Factor in Defence Procurements", *Indian Defence Review*, Vol. 20, No. 1, January 2005, pp. 26–29.
2. See <http://business-standard.com/india/news/cagdefence-buys-tehelka-syndrome/285130/>, accessed on March 12, 2012.
3. Ibid.
4. The DAU is a unique concept wherein even members of industry can learn functioning of all facets of the US acquisition system. Available at <http://www.dau.mil/aboutDAU/Pages/mission.aspx>.
5. Bernard Gray, "Review of Acquisition for the Secretary of State for Defence: An Independent Report by Bernard Gray", October 2009, available at <http://www.mod.uk/NR/rdonlyres/78821960-14A0-429E-A90A-FA2A8C292C84/0/ReviewAcquisitionGrayreport.pdf>, accessed on June 10, 2011.
6. "Defence Acquisition—High Level Blueprint", Defence Acquisition Change Programme, October 2008, available at <http://www.mod.uk/DefenceInternet/AboutDefence/WhatWeDo/FinanceandProcurement/DACP/>, accessed on June 10, 2011.
7. See Directorate General of Armaments, available at <http://www.defense.gouv.fr/dga/>.
8. General Directorate for Armament, available at http://en.wikipedia.org/wiki/General_Directorate_for_Armament.
9. For example, a trainer in life cycle logistics must know planning, developing, implementing and managing an effective systems support strategy. He should also possess knowledge of performance-based logistics, logistics contracting, life cycle costs and supportability analysis.