

Aviation Education – Not Everybody’s Cup of Tea

“Aviation is the branch of engineering that is least forgiving of the mistakes”

- Freeman Dyson

Aviation is a different field altogether if we talk about avocations. Mainly because of its unique nature, functioning, objectives and way of working. Basically, we are a service industry having more than 25 arches with the main focus towards passenger facilitation who are our customers. The manpower required for the aviation industry is not available in the market like in any other profession. The experience in aviation field is a very important factor because we cannot make use of the people unless they are able to perform the job with perfection. The jobs are designed according to the requirement and the disciplines are identified. First & foremost, we create the foundation of competencies. The job specification is made keeping in view the requirements given by the line managers and accordingly the basic qualifications are decided. The job description is another important area for making the foundation so that right from the stage of selection they are well aware about job requirements. The foundation of competencies is the strength as far as manpower planning is concerned. The second stage is generating expertise from among the competencies available with us. And finally, the roles are decided.

Historical perspective

We are going to talk about education in aviation. Its important to go back to the history which is not very old as far as civil aviation is concerned. The air journey right from its start as a solo flying by JRD Tata was meant for elite group of the society. A very expensive job, not everybody’s cup of tea. In the Indian context the journey by ship was the common mode of transport even for going to England and other countries. The pilot and aircraft maintenance engineers were the key players for which technical diplomas were considered sufficient with hands on experience of rectifying small mechanical and electrical faults of the aircraft. Since the job of a pilot was more concerned about physical fitness, mental alertness and decision making, a mere matriculation was considered enough for the job of a pilot once a person qualifies for pilot aptitude and battery test commonly known as PABT.

We have come a long way ahead as far as growth, modernization and advancement in technical knowhow is concerned. All over the world, air connectivity has been given great importance and in today’s scenario slowly its becoming a common mode of transport like road and railways. The ICAO with its 19 annex has come as a strong regulatory authority for the entire civil aviation sector in the world

covering each and every area of operation, and a number of certifications, norms which are essential in nature have not only been prescribed but are also mandatory.

Aviation jobs are demanding:

Coming to the core issue of education related to this sector, we must admit that enough justice has not been done. Say for example, for the important job of an air traffic controller, we had been taking a simple graduate with maths and physics because the job requirement demands mental alertness, accuracy, time management, precision, aptitude and physical fitness. But the job is not so simple to handle – radar, they have to communicate with the pilot to ensure separation of aircrafts and work in a very systematic manner right from reporting, area control, approach, and radar at the tower for safe landing and take-off. A science graduate having passed the selection norms with the element of voice test, is imparted rigorous training - theoretical as well as practical with simulators and again on the job training once the candidate qualifies theory and practical test. It's a long period of 2 to 3 years on the job at different levels after acquiring proficiency in English language with the minimum level 4, candidate becomes a traffic controller to be assigned independent position roughly after 5 years.

Now we come to another important position that is AME. Not enough attention has been paid in our country because 90% MRO activities are outside India. We don't undertake major repairs and maintenance jobs for Boeing, Airbus or other aircrafts. Very few institutes were available to give certificates and diplomas, because to acquire this qualification the candidate needs to have access to the aircrafts when it is in the hangar for learning repairs and maintenance jobs.

Now comes the engineers - civil, electrical, electronics and automobile. They are available in the market and we make use of them for maintenance of terminals, flexible pavements, runway lighting, maintenance and repair of radars and other communication equipment. A person with the basic qualifications acquires proficiency quite easily. Last but not the least, ground handling staff, terminal managers, housekeeping, ministerial and administrative staff, also play important role and they are also available from the market to be taken in the aviation industry. Short time on the job training is enough for them.

There is a mushrooming of educational institutes providing bachelor and master degree in aviation management, pilot training academies, air hostess training institutes are there. But the question remains whether aviation industry is being able to use this manpower in an efficient manner or they still require to train them for a couple of years before giving individual responsible positions. You can't have the availability of airport for any educational institution where they can provide actual required skills to the people. Moreover, there is no discussion between aviation industry and these educational institutions for deciding the syllabus because they are making a product and they must know what the requirements of the user are. They only come to the aviation industry for placement.

The authors to this article have devoted decades in aviation industry in HR domain responsible for manpower planning and a great amount of thinking process took place for coming to the conclusion that education pattern needs zero based study

for aviation sector. Why there are thousands of unemployed pilots in spite of spending 30-40 lakhs for acquiring CPL, somebody goes to Australia, Florida or to Canada with great ambition, passion and aptitude to become pilot. They acquire all kinds of ratings to be a commercial pilot and most of them quit their line with PPL. Very few pilots qualify their standards to be taken by airlines for commercial flying. Therefore, the answer why they are unemployed is simple that they are not suitable. Like in any other profession, a large number of people want to become doctors or bureaucrats or lawyers but they don't become for lack of required skills.

B. Tech ATM is requirement of the day:

The author as head of HR directorate with Air Navigation services advocated and presented a paper for starting B.Tech in Air Traffic Management. Because in today's scenario, though the requirement is only graduate in science but 98% engineers apply for the job of traffic controller. The training in air traffic control is a lengthy and costly process. It creates a great vacuum once air traffic controller leaves the job. 20-30% attrition is still there. Once we start B.Tech in air traffic management, the four year degree can have the syllabus what we are having today in terms of training at civil aviation training centers in Allahabad, Gondia and Hyderabad. Then again at various ATC towers, in the form of on the job training.

The ratings acquired for approach, area control, reporting and fundamental radars can be part of curriculum. In any case, the first two years in the B.Tech program for any engineering discipline are common which says maths, physics, basic engineering, etc. Here also we can have aviation subjects common for all aviation personnel in the initial 2 years and in the 4 years B.Tech program we can cover all aspects what we are doing otherwise for making an air traffic controller.

For CNS discipline (communication, navigation surveillance) we are taking electronics engineers. The introduction of B tech CNS will have focus towards aviation besides required electronics subjects. We can give a secured future to the young student after class 12 once he joins this B. Tech degree in aviation on the pattern of special class railway apprentice SCRA of railways. The students who have the right kind of aptitude to serve in aviation will come.

Now again coming to the pilots and air hostesses, like it is said earlier that there needs to be a match between availability and requirement. The airlines must have a Memorandum of Understanding (MOU) with the recognized institutions so that there is no unemployment for pilots. The air hostess is another area where hardly 10% girls are taken by the aviation industry, rest 90% lands with the job of ground hostess or front office staff in the hotel industry. And they feel demoralised for not being able to join aviation industry.

Airports cannot be compared to five-star hotels:

Let us talk about another important area - terminal management. The authors have got different views than what is being practised today by the new players in the field of airport operators because they feel that MBA degree can make a good manager. The air terminal is mistaken as a five-star hotel. As a matter of fact, its very

important to have perfect knowledge of airside management to be an effective air terminal manager. The terminal manager needs to know about runways, parking bays, AOCC airport operation control center, so that he can satisfy the queries of a visitor who has come to receive a passenger asking why it is taking time for passenger to come out of the airport when the flight has landed. The entire geography of the airport should be in the mind of a terminal manager. The toilets of a five-star hotel can't be compared with the airport toilets because there is vast gap in the number of people using the toilet and the category. Now you can easily make out in what way a terminal manager is different from a manager of the hotel. The objective is different, the requirement is different, the wants and wishes of the customer are different.

We must give importance to the people associated with the commercial aspect of the airport. The MBA degree in marketing management from a reputed institute will not work in the aviation industry. Because we may have shops, we may have hoardings, we may have other non-traffic revenue generating resources but these are different from any other shopping mall, the items are different, customers are different, needs are different. The passenger who has just arrived will always be in a hurry to come out rather than purchasing any item except for emergency to take a gift pack if he is going to meet somebody as a courtesy call; it could be a flower bouquet or liquor bottles for his own consumption. Whereas a passenger in the departure area has got enough time even in the security hold waiting for the aircraft to board and he may purchase lot many things but again the item wise things will be different as compared to shopping malls. We had been calling Travel Requisite (TR) shops at the airports so that one shop may cater to all the needs by keeping items of different nature.

Marketing Skills for Commercial Revenue :

Now again the question comes as to how the qualification wise people are to be prepared. Let us call it as aviation marketing which is not confined to commonly known non-traffic revenue. But it comes for more aircrafts to come giving aeronautical revenue like Frankfurt and Amsterdam airports which are hubs. Delhi and Bombay airports are already saturated. How you market different airlines to come to India, long flying aircrafts, why they should not have stopover in India (create MRO for them), what kind of marketing tactics to be applied to make more airlines to come. Japan airline used to have large number of flights to India in 70s; same was the case with Qantas and Cathay Pacific. Today their movements are less, somewhere we have to study the rise of Emirates in short span as compared to other airlines. The route sharing is already there at the international level.

In a nutshell, the final words on education in aviation will come when we say that the education is closely related to the actual field of working and the syllabus needs to be designed according to the requirement of stakeholders. The air cargo may be 5% in terms of cargo movement in the world but in terms of revenue, its big money. A great amount of specialization in marketing is required. ICMS (integrated cargo management system) and digitization has come a big way. Today we are talking dwell time 8 hours from air to truck which was earlier 24 hours. Likewise, so many things are coming for which right kind of education is required. Knowledge management, innovation and artificial intelligence are some of the areas where the young people

need to acquire not only knowledge and skills but expertise too. This is high time the education institutions think about aviation as a separate core field.

Aviation to Follow IT Philosophy :

Recently authors had detailed discussion with the dean of IIM Ahmedabad for introduction of aviation as one of the core area in the management education there as representative of JAA TO, Amsterdam, a paper has been presented for their consideration. The author has been associated as HR in aviation where she was responsible for entire manpower planning, and hiring candidates for training as air hostesses, ground handling staff and others. It is observed that great amount of time and money is being spent on training the people before placing them on the job which can be reduced if the educational curriculum was designed in such a way that the student is in a position to deliver the goods soon after joining the aviation industry. It is like following IT sector where Infosys, IBM, etc have reduced their training cost by having MOU with engineering colleges to include required area of specialization in their syllabus. Finally, they get students with required skills and knowledge to place them on the job right from day one. We need same practices to be followed in aviation industry.