

# A Study of Frequent Changes in the Trade Training Pattern of Airmen: An Indian Air Force Perspective

Gulab & Dr. Sandhya Mehta

<sup>1</sup>Research Scholar, IKG Punjab Technical University  
Mb: 9205239160

E Mail: [touchhumanity3011@gmail.com](mailto:touchhumanity3011@gmail.com)

<sup>2</sup>Deputy Director, Guru Nanak Institute of Management & Technology,  
Ludhiana, Punjab-141002

Phone: 0161-254896

Mb: 8872827777

E Mail: [mehta\\_sandhya@yahoo.com](mailto:mehta_sandhya@yahoo.com)

**Abstract** – The research is aimed to explore the factors responsible for the frequent changes in the training pattern of Airmen in Indian Air Force (IAF). Structured questionnaire was used to collect primary data from 150 Airmen. Exploratory Factor Analysis (EFA) highlights high annual attrition rate, technological requirements, skill enhancement, operating environment, fleet wise requirements, maintaining rank ratio and routine policy review as the factors of frequent change in trade training pattern of Airmen in Indian Air Force. Confirmatory Factor Analysis (CFA) was carried out and high annual attrition rate, technological requirements, skill enhancement and operating environment were the prominent factors which contributes for the frequent change in trade training pattern of Airmen in IAF. The study find out that present pattern of trade training i.e. Integrated pattern of training (IPT)

on the lines of All through training (ATT) is optimum for the present needs of IAF.

**Key words:** Trade training pattern, Integrated pattern of training (MPT), All through training (ATT), high annual attrition rate, technological requirements, skill enhancement, operating environment.

## 1. Introduction

Armed forces of any country recruit the human resource in large numbers to fulfill the critical requirements to safeguard the length and breadth of their country. Countries like China, India, Russia, Brazil, United states and many more have military personals in lakhs. To find a suitable the suitable talent, the recruitment process is designed based on the vision and objectives of the organizations. This process is done in closed rooms by highly experienced and skill personals. Next comes the selection part and in the last the most herculean task

of training. Herculean word is used for training because it is the transformation of an individual from a civilian to a disciplined military warrior. It is the training which does this transformation keeping in mind the goals and objectives of organization. There is a direct interaction of the trainers and the trainees on daily basis which make this transformation further difficult. Broadly, Training can be formal or informal, On/ Off the field, Theoretical/ on job training or virtual training (Simulators) and of other types. The social, organizational (Froehlich et al., 2017) & (Federica Polo, Sara Cervai, Jussi Kantol, 2018), economic, political and work environment (Bartlett, 2001; Huerta et al., 2006; Kraiger, 2014) of the native place and organization affects training. Today, training is more on organizational context (Salas and Cannon-Bowers, 2001) and routine work of an organization dominates (Berk and Kase, 2010) training which makes the system of training reluctant to adopt the new method or technique of training if not on organizational context. Training Culture which is an outcome of organizational culture or as a subset of the main organizational culture (Kissack and Callahan, 2010) plays a vital role in the training pattern of an organization.

## 2. Literature Review

A trainee is drawn from the society where academic knowledge is given importance and survival and

focused professional approach remain in the backburner. As the trainee reaches to training institute, He/ She is told to inculcate militarism in their blood. It shows that the internal culture and practices are the key elements of training needs. Initially, the general academics of the individuals is enhanced in the basic phase of training and channelized towards the specialized requirements of armed forces in the initial trade phase of training (Vogel-Walcutt et al., 2010; Williams, Ericsson, Ward, & Eccles, 2008) which differs from instructions given in classroom classes to improve the efficiency (Vogel-Walcutt et al., 2010 ; Laurence & Mathews, 2012). Military training is imparted by dividing the trainees into units/ groups (Salas, Bowers, & Cannon-Bowers , 1995; Salas et al., 2008) for better evaluation during collective task assignments. The interpersonal communication (Salas, Cook, & Rosen, 2008) remains the core in these type of tasks. The “hard skills” which are technical or administrative procedures related to an organization’s business (Maniscalco, 2010) and soft skills refers to the personal qualities, habits, attitudes and social graces that make someone a good employee and a compatible co-worker (Lorenz, 2009) are generated in the training. To achieve these milestones, IAF conducts Basic phase and Trade phase training for a new entrant and comprehensive

continuous training programme for the trained airwarriors till they stay in service. To study in detail about the existing training pattern of IAF, literature survey of concerned secondary data was carried out from the primary sources of IAF and the policies on airmen training starting from 1978 to the present day were referred. During this study, it was observed that a policy is enacted to incorporate the probable visualized changes which can come in the next ten years. This routine followed till 1998 but training policies were frequently changed in IAF from 1998 to till date (changed in 1998, 2004, 2006, 2012 and in 2015) either in part or in totality. The frequent change in the training pattern highlighted the requirement of this research to highlight the factors responsible for this change. This paper is fulfilling this gap of knowledge.

### 3. Need of the study

Recruitment is the first step towards identification and selection of suitable human resource available in the society and training is the most critical process for the suitable and timely availability of required manpower for any organization. Defense forces are not the exceptions but require specialized basic and trade training for its work force. Technological advancements in the military warfare weaponry also necessitate the course correction to stay tuned to achieve the warfare targets/ techniques. IAF which is

highly technically specialized fighting force requires its training pattern compatible with the outside world and wants its airwarriors to remain competent to tackle any situation at a very short notice. For this to achieve, trade training remains the key component. Frequent changes in the trade training of Airmen were observed in IAF from 1998 to till date. To highlight the critical factors responsible for this change, a research in this field was inevitable.

### 4. Scope of the study

Scope of this study was limited to IAF only to highlight the critical factors responsible for the frequent change in the trade training policies of Airmen.

### 5. Research Objectives

➤ To identify the factors responsible for the frequent change in trade training pattern in IAF.

### 6. Methodology of the study:-

- (i) Research Design used in this research was Single Cross-sectional Descriptive type research design.
- (ii) Indian Air Force was the sampling unit of this research and sampling population was its personal (Airmen, SNCOs & Warranted Ranks) posted in the field and peace units.
- (iii) 150 airwarriors (Airmen, SNCOs & Warranted Ranks) from field and peace units were selected for this research. Selection was based on three aspects i.e. their Trade (i.e. Technical & Non-Technical), Rank (i.e. Airmen, SNCOs & Warranted Ranks) and place of work

(Wing/ Station or Lodger units). On the basis of trade, 75 Technical and 75 Non-Technical Trades air warriors were selected, on the basis of rank, 75 Airmen and 50 SNCOs and 25 Warranted Ranks were selected and on the basis of place of work, 80 from wind/ station, 50 from lodger units, 20 from Command/ AHQ were selected.

(iv) Primary data was collected with the help of structured questionnaire. Secondary data was collected from books written by IAF leaders, Air Force Net (AF Net), Military Magazines, Published material from Journals, internet and other related literature.

(v) IBM SPSS version 23.0 was the Statistical tool used for analyzing and interpretation of the collected data.

## 7. Hypothesis of the study:

- (i) H01 There is no factor responsible for the frequent change in trade training pattern of Airmen in Indian Air Force.
- (ii) HA1 There is many factors responsible for the frequent change in trade training pattern of Airmen in Indian Air Force.

## 8. Results and discussion

The collected data was purified and reduced with the help factor analysis. 27 variables to study the reasons for frequent change in trade training were considered which were reduced to 19 when factor analysis with varimax rotation was carried out. These 19 refined variables were later condensed to

4 independent factors during data analysis with SPSS. Variables with eigen value equal to or above 1 were retained. Kaiser–Meyer–Olkin (KMO) which is measure of sampling adequacy and the values ranging from .50 to 1.0 are considered as an indicator of appropriateness of data in factor analysis. KMO value of .890 was considered for this research during factor analysis. Bartlett's Test of Sphericity was significant. Anti image matrix was checked and value above .5 were considered for each variable in this research. To check the internal consistency of the data Cronbach's alpha (coefficient alpha), which is the average of all possible split half coefficients, was calculated. The value of alpha was .940 which shown that the factors were reliable. Four factors i.e. High annual attrition rate, technological requirements, skill enhancement and operating environment were highlighted during this analysis. The further details are as mentioned:-

### High attrition rate

High attrition rate with mean value of 8.34, Standard deviation of .722 (Table 1) shows the most critical factor for frequent change in training pattern of airmen.

### Technological requirements

Technological requirements with mean value of 6.17 and standard deviation of 1.172 (Table 1)

remain the second most critical factor for the frequent change in training pattern of Airmen.

### **Skill enhancement**

Skill enhancement with mean value of 5.19 and standard deviation of 1.243 (Table 1) remain the third most critical factor for frequent change in training pattern of Airmen.

### **Operating environment**

Operating environment with the mean value of 3.44 and standard deviation of .681 (Table 1) remain the least critical among these four factors for frequent change in training pattern of Airmen.

## **8. CONCLUSION**

During the High annual attrition rate, technological requirements, skill enhancement and operating environment were the prominent factors which contribute for the frequent change in trade training pattern for Airmen in Indian Air Force. The study find out that present pattern of trade training i.e. Integrated Pattern of Training (IPT) on the lines of All Through Training (ATT) is optimum for the present needs of IAF.

## **9. Acknowledgment**

The researcher would like to extend heartfelt gratitude to all the participants of Indian Air Force for participating in this study and extending their valuable input.

## **10. References**

- [1] Bartlett, K. R. (2001). The relationship between training and organizational commitment: A study in the health care field. *Human resource development quarterly*, 12(4), 335-352
- [2] Berk, A., & Kase, R. (2010). Establishing the value of flexibility created by training: Applying real options methodology to a single HR practice. *Organization Science*, 21(3), 765-780
- [3] Duarte Rodriguesa, John Erkoyuncua, Andrew Starra, Steve Wildingb, Alan Dibbleb, Martin Laityb, Richard Owenc, (2015) "A conceptual framework to assess the impact of training on equipment cost and availability in the military context", *Procedia CIRP*, 38, Pg 112 – 117
- [4] Federica Polo, Sara Cervai, Jussi Kantola, "Training culture: a new conceptualization to capture values and meanings of training in organizations.", *Journal of Workplace Learning*, <https://doi.org/10.1108/JWL-01-2018-0024>
- [5] Froehlich, D. E., Beausaert, S., & Segers, M. (2017). Development and validation of a scale measuring approaches to work-related informal learning. *International Journal of Training and Development*, 21(2), 130-144
- [6] Huerta, M. E., Audet, X. L., & Peregort, O. P. (2006). In-company training in Catalonia: organizational structure, funding, evaluation and economic impact. *International Journal of Training*

- and Development, 10(2), 140-163
- [7] Jennifer J. Vogel-Walcutt, Logan Fiorella, Naomi Malone, (2013) “Instructional strategies framework for military training systems”, *Computers in Human Behavior*, 29, Pg 1490–1498
- [8] Kissack, H. C., & Callahan, J. L. (2010). The reciprocal influence of organizational culture and training and development programs: Building the case for a culture analysis within program planning. *Journal of European Industrial Training*, 34(4), 365-380
- [9] Kraiger, K. (2014). Looking back and looking forward: Trends in training and development research. *Human Resource Development Quarterly*, 25(4), 401-408
- [10] Louis S. Csoka, Fred E. Fiedler, (1972), The effect of military leadership training: A test of the contingency model, *Organizational Behavior and Human Performance*, Volume 8, Issue 3, December 1972, Pages 395-407
- [11] Laurence, J. H., & Mathews, M. D. (Eds.). (2012). *The Oxford handbook of military psychology*. New York: Oxford University Press
- [12] Lorenz, K. (2009), “Top 10 soft skills for job hunters”, <http://jobs.aol.com> (accessed 2012)
- [13] Maniscalco, R.S. (2010), “La competenza interlinguistica e interculturale per la cittadinanza globale”, *Label Lingue Europeo: Dialogare Premia*, I quaderni LLP, Agenzia Nazionale Scuola, Vol. 5, pp.9-13
- [14] Pareek, U., Purohit S. (2009) (Training Instruments in HRD and OD), Tata McGraw hill, Bombay
- [15] Rick Zentelisa, David Lindenmayerb, J. Dale
- [16] Robertsd, Stephen Doversa, (2017) “Principles for integrated environmental management of military training areas” *Land use policy*, Pg 186-195
- [17] Rosli Ibrahim, Ali Boerhannoeddin, Kazeem a. Kayode Bakare, (2017) "The effect of soft skills and training methodology on employee performance", *European Journal of Training and Development*, Vol. 41 Issue: 4, pp.388-406, <https://doi.org/10.1108/EJTD-08-2016-0066>
- [18] Salas, E., Bowers, C. A., & Cannon-Bowers, J. A. (1995). Military team research: 10 years of progress. *Military Psychology*, 7(2), 55–75
- [19] Salas, E., & Cannon-Bowers, J. A. (2001). The science of training: A decade of progress. *Annual review of psychology*, 52(1), 471-499
- [20] Salas, E., Cook, N. J., & Rosen, M. A. (2008). On teams, teamwork, and team performance. Discoveries and developments. *Human Factors*, 50(3), 540–547
- [21] Vogel-Walcutt, J. J., Marino Carper, T., Bowers, C., & Nicholson, D. (2010). Increasing efficiency in

military learning: Theoretical considerations and practical applications. *Military Psychology*, 22(3), 311–339

[22] Williams, A.M., Ericsson, K.A., Ward, P., & Eccles, D.W. (2008). Research on expertise in sport: Implications for the military. *Military Psychology*, 20,

**Table 1**  
**Descriptive Statistics: Factors affecting trade training**

Critical Factors	Mean	Std. Deviation	N
High Attrition rate in IAF	8.34	.722	150
Technological requirements	6.17	1.172	150
Skill enhancement	5.19	1.243	150
Operating environment	3.44	.681	150

1-Very Very Dissatisfied, 2-Very Dissatisfied, 3-Dissatisfied, 4-Fairly Dissatisfied, 5-Somewhat Dissatisfied, 6-Neither Satisfied Neither Dissatisfied, 7-Somewhat Satisfied, 8-Fairly Satisfied, 9-Satisfied, 10-Very Satisfied, 11 Very Very Satisfied