

Demonstration of Iceberg Model of Competency for Retired Defence Officers

Abhinav Kumar¹, Dr. Sumati Sidharth², Shobhanam Krishna³

Submitted: 14/05/2024 Revised: 26/06/2024 Accepted: 10/07/2024

Abstract:

Purpose – This paper is aimed at finding the major competencies and then developing a Competency model for the competencies of Defence Officers towards their second career in civilian workforce.

Design/methodology/approach – this paper employee both the quantitative and qualitative tools to arrive at the model. Data is collected by means of well structured questionnaire from the experts in the field. Factor analysis is used to identify and group the competencies of Defence Officers. This data is further analysed using Delphi technique to arrive at a model. Delphi technique used reply from 10 respondents as experts.

Findings – The study arrives at a set of 24 competencies under a group of six headings. These competencies are superimposed on the Iceberg model to arrive at the final model for competencies of Defence Officers. The final model obtained after the application of tools had both the visible and hidden part of competencies demonstrated.

Research limitations/implications – This empirical based research is limited to Defence Officers in Indian Armed Forces, and the research findings in terms of a model for competency clearly reflects the underlying competencies possessed by the military leaders. The model thus proposed would allow the civilian recruiters in better strategizing their recruitment plans and further use these models in better human resource management. this would also be helpful for Defence Officers in better projecting their competencies to civilian recruiters. Also the proposed competency model would provide context and facilitate the academicians in furtherance of this study in competency and competency modelling in different sectors of the industry.

Originality/value – The paper discusses the competencies of Defence Officers which is a very less studied field. The study is original in its content and intended to demonstrate the usefulness of the talented military leaders in the civil workforce.

Paper type- Research Paper

Keywords Competency, Competency Model, Iceberg model, Recruitment, Defence Officers, Military Leaders

Introduction

One organization across the globe which employs and substantially retires its workforce very early, is the Armed Forces. This retired workforce carries with them a plethora of talent and expertise by virtue of their varied experience in military. Military service provides these retired Officers with a wide variety of competencies which if projected

properly would allow them to find a suitable and a lucrative job (Tütlys et al., 2018). However, on transiting to the civilian life, the military Officers face a lot of difficulties in finding a suitable job. Available literature on military veterans talks about their resettlement problem. One of the areas of concern is their physiological transformation and other is their second career settlement. One of the major reasons for veterans finding less opportunity in spite of a lot of expertise and experience is that their competencies is least understood by the civilian employers. There has been little exploration on the core of this problem, which is the mapping of their acquired competency during the service years, which can pay them some dividend during their second career. Competency based approach to a transition or recruitment process is very useful as it allows better prediction

¹Research Scholar, Dept of Technology Management, DIAT(DU), Pune, India
abhinavkumar.mu@gmail.com1, <https://orcid.org/0009-0000-3537-35691>

²Associate Professor & Head, Dept of Technology Management, DIAT(DU), Pune, India
sumatisidharth@gmail.com2, <https://orcid.org/0000-0002-1879-59692>

³Research Scholar at Dept of Organisational Behaviour and HR, IIM, Shillong, India
shobhak.phd22@iimshillong.ac.in3, <https://orcid.org/0000-0003-2570-906X3>

of talent of the probable employees (Bartone et al., 2009). Though many arguments support for skill and trait based approach to recruitment, competency based approach is better suited owing to the diversity of competencies including the specific skill sets which a Defence Officers functionally possesses (Morath et al., 2011). Therefore, specifically for military veterans, competency based approach has found a better resonance in their talent acquisition and resettlement (Young & Dulewicz, 2006).

Literature review of the competency and its features reveals that Competency can be put to use at different level of employee or workforce management applications, each one having an important and comprehensive role. Competencies can be important in the following workforce management application such as performance management, workforce planning, learning management, recruitment management, succession planning and career development (Draganidis & Mentzas, 2006). Competency models act as a tool in better application of competency profiling. Competency models can be used to translate or transform organizational values, goals and strategies into specific behaviours. In today's corporate world, organizations are well aware of the fact that if properly designed and smartly handled, a competency model leads to enhanced performance for both organizations and individual alike, further leading to promotion and integration of all the Human Resource Management practices (Chouhan & Srivastava, 2014). Creating a competency model involves listing the competencies, which are obtained by observance of traits of above average performer or employee working on a particular occupation. Various competency models have been developed by researchers each having a specific input and aimed at solving the managerial problem for a particular sector. The iceberg model of competencies,

Various definition or explanation of competencies and its concepts over the decade is as presented below as per the literature review:

Sl No	Researcher	Year	Understanding of Competency
1	David McClelland	1973	A personal trait or a set of attributes that leads to more superior or effective job performance. These set of attributes translates to an economic value to the individual's performance.

introduced by American psychologist David McClelland contains six competencies which are skill, knowledge, social role, self-image, traits and motives. This model is generic in nature and can be applied across the board. This paper aims at creating a competency model of Defence Officers based on their competency considering the traditional model as proposed by David McClelland and validated over by various researchers. The application of the competency model for Defence Officers helps in furtherance of better management of their requisite competency.

Literature Review

A number of empirical research and literature has suggested that Competency based approach is best suited in Human resource Management. Competency has been described in a number ways over the period. Earlier works focused more on skill based approach for talent management. It was only in 1973 when David C. McClelland, a Professor of Psychology at Harvard University, wrote and published a research study titled 'Testing for Competence Rather Than for Intelligence' and this further encouraged wide acceptance and application of Competency and competency based studies (Vichita Vathanophas, 2007). His subsequent argument was that the usual practice of aptitude test and intelligence, the ingredients of university grading system are less precise in measuring a workers job performance or other human resource indicators. He argued that a few of the individual traits or 'Competency' what he called, are better predictors of a superior performance and success. In 1982, Boyatzis further extended McClelland's (1973) proposition on Competency and advanced it to 'Job Competence Assessment (JCA) Technique' to identify the various factors that distinguish average performing employee from the top performers in the United States at various managerial position (Richard E. Boyatzis, 1982).

2	Richard E Boyatzis	1982	Competency as adopted from McClelland's definition as a "fundamental characteristic of a person that is informally related to a better performance in a job". He identified a total of nineteen generic competencies that a superior performing manager is supposed to have. He clubbed those nineteen management based competencies into five distinct groups as leadership, goal and action management, human resource management, focus on others and directing the subordinates.
3	Hornby and Thomas	1989	Competency is the ability or the capacity to perform the management functions as directed, with the team in a given situation and condition.
4	Jacobs	1989	Competency is defined as skill or a trait which can be observed and is aimed at successfully completing an assigned task.
5	Hogg B	1989	Competencies are the traits of a manager that result in a better performance within an occupational area owing to a perfect demonstration of abilities and skills by an individual. These skills and abilities are transferable from one area to other.
6	Spencer and Spencer	1993	Competencies are the performance which one demonstrates by virtue of his training and experience which is developed by working in the same field. Competencies are "traits, motives, self-concepts, values or attitudes, knowledge or behavioural or cognitive skills any characteristic based in an individual that can be tangibly measured and which can clearly differentiate an average or a non effective performer from a superior and an effective performer.
7	Page and Wilson	1994	Competencies include the skills and individual characteristics which has the ability to distinguish between two levels of performers. This definition includes both the measurable competencies like the skills and knowledge and the non measurable competencies like the individual characteristics which are more latent.
8	Dubois	1998	Competencies are those characteristics like the thought patterns, mindsets, skills and knowledge, and other traits which when used together result in an improved performance of an individual.
9	Woodall and Winstanley	1998	Competency is the characteristics which ensures a better performance by managers in a particular role or situation and comprises of a set of attributes, attitudes and behaviour apart from the knowledge and skills.
10	Lucian Cernusca and Cristina Dima	2007	Competency is a set of traits which are used for better human resource management and career development. Competency and competency mapping can be used as an extremely effective tool in better allotment of job profile to a competent individual, ultimately resulting in an efficient output.
11	Gaspar	2012	Competency based recruitment and selection process benefits the organization in better mapping of the talent. Competency mapping helps in better strategizing the HR applications including the training, appraisal, performance and career profiling of an individual.

Different competency based model has been drawn by different researchers. A group of seven to nine competencies are a prerequisite for a job profile and shown in a competency model, based on the task at hand and the organizational environment (Shippmann et al., 2000). Competency model is used to organize the individual competencies which facilitate the professionals or organizations to better understand, comprehend and apply these competencies towards the performance of workforce (Chouhan & Srivastava, 2014). The inherent conceptual heterogeneity of competency, coupled with issues of transferability and comparability between various fields and sectors, entail using a competence based codification to establish a logical model (Le Deist & Winterton, 2005).

David McClelland in 1973 put forward the iceberg model, which demonstrates a total of six competencies, of which two are portrayed above and other four are shown below the waterline. This

model is represented in the Figure 1 below. The competencies, depicted above the waterline include knowledge and skills. The part below the waterline includes competencies like social roles or values, self-concept, personality, and motivation. The part above dominates an individual's characteristics while the part below has a recessive feature. A total of six levels are depicted in the iceberg model. It becomes difficult exploring and perceiving the competencies in depths from top to bottom in the model. The deeper it goes, the ability of it to get perceived or seen reduces (Wang, 2021). Owing to various perspectives the reintegration of Defence Officers or Military Personnel in civilian labour market is as important as well as a complex issue. The competencies of these Defence Officers are less understood by their civilian recruiters as few of their traits are latent or hidden traits (Tütlys et al., 2018). Thus, the McClelland's model is aptly used to represent the layers of competencies as possessed by the Defence Officers.

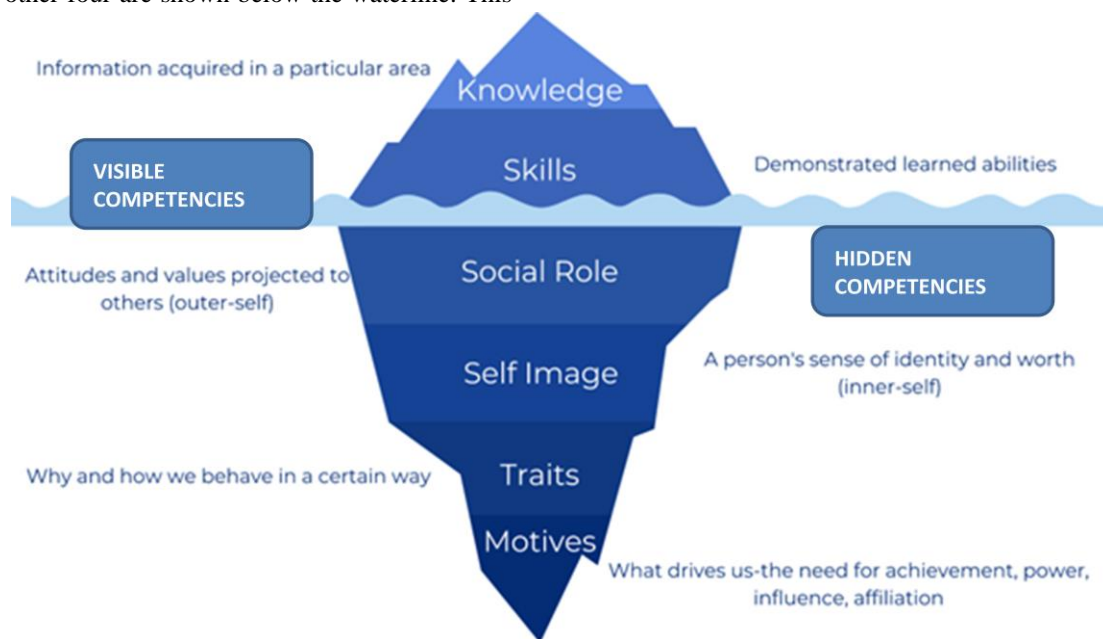


Fig 1 David McClelland (1973) Iceberg model

Research Methodology

The current paper uses both the quantitative and qualitative tools to arrive at the proposed model for competencies. The first part of the research utilized the questionnaire to collect the data from a set of 72 retired Defence Officers with more than 10 years of military experience. This questionnaire was

formulated towards gathering the requisite competencies of the retired Officers which are valued in civil labour market. This questionnaire was initially validated through a pilot study. The data was collected via on-line mode using a Google Form survey. A total of 28 competencies were gathered through both the open ended and closed

ended questions. These competencies thus obtained were factor analysed using IBM's SPSS 21 software. Factor analysis is, as the name suggests a statistical tool which reduces a set of variables or factors by extracting all their commonalities into a much smaller group of factors.

The reduced factors thus obtained were applied with a qualitative technique in the second part of the research. Experts from the civilian labour market in recruitment were asked to deliberate on the author's proposed model using Delphi Technique. A total of 10 experts in the field of recruitment with more than 20 years of experience employed in civilian labour market at managerial and higher level, were presented with two rounds of questionnaire and given a month time to reply back. Delphi Method is a well structured and an iterative approach used to gather opinions and insights from a panel of experts to reach an agreement on a specific topic. McClelland's Iceberg model was used as the base model to arrive at the final framework.

Results

The first part of the research involved the use of quantitative technique to arrive at the results. Initial

survey through the questionnaire gathered a total of 28 competencies. The relevance of each of the competencies was obtained through a five point likert scale. The 5 point Likert scale is a system of rating that allows the survey respondents to indicate a wide range of opinions with five response options. This comprises response from a strong agreement to strong disagreement, including a neutral option. This enables a layered feedback for researchers. The reply thus obtained, were factor analysed using SPSS 21.

Before undertaking the factor analysis of the instruments obtained, the complete data's reliability analysis was done. Reliability Analysis is a procedure that calculates a number of recurrently used measures of scale reliability. It also provides information about the relation between individual items across the five point scale. The Cronbach's alpha is tested for the data and it ranges from 0 to 1. Closer is the result to a value of one, it reflects higher level of internal consistency. For this set of data the Cronbach's alpha value obtained was 0.918, which denotes good internal consistency and reliability of the constructs. This value is reflected in Table 1.

Table: 1 Reliability Analysis of the 28 Questionnaire constructs

Reliability Statistics	
Cronbach's Alpha	N of Items
.918	28

To establish the sampling adequacy of the data, further Barlett's" test of sphericity was conducted over the data. Befoe performing the factor analysis, a Kaiser-Meyer-Olkin (KMO) and Barlett's" test of sphericity is conducted to check the significance level of correlation. A "KMO value above 0.5 and simultaneously a Bartlett's test significance level

less than 0.05" gives a confirmation for the application of factor analysis. For the current set of data, the KMO value obtained was 0.865 while the Bartlett's test significance level is 0.00 which is less than 0.05. These two values indicate that the collected data is adequate to perform further test. These values are indicated in Table 2.

Table: 2 KMO and Bartlett's Test values

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of	Approx. Chi-Square	2062.202

Sphericity	df	378
	Sig.	.000

Subsequently, Factor analysis as a tool using principal extraction component was conducted on the data. The test results would indicate whether certain factors or constructs, can be clubbed together to show the same level of confidence or not. In this data, the 28 competencies were put to factor analysis which helped in extracting all their commonalities into a smaller group of factors. Thus, above the eigen values of one, a total of six factors were finally obtained. Varimax with Kaiser

Normalization rotation was undertaken which after nine iterations, gave a total of six factors. The rotated component matrix is reflected in Table 3 below. These six factors or competencies thus obtained had a cluster of other factors under it. A total of four competencies didn't find any significant correlation with other factors and were thus omitted from the results. This reduced the significant factors to 24.

Table: 3 Rotated Component Matrix

		Rotated Component Matrix^a					
		Component					
		1	2	3	4	5	6
1	2	.795					
2	3	.697					
	1	.649					
	1	.751					
	1	.585					
	5	.589					
	3	.707					
	3	.538					
	3		.620				
	1		.803				
	3		.614				
	2		.723				
	3			.597			
	1			.655			
	5			.720			
	3			.650			
	4				.682		
	2				.637		
	3					.570	
	4					.576	

3					.650	
3						.748
3						.638
2						.567
1						
3						
5						
4						
Extraction Method: Principal Component Analysis.						
Rotation Method: Varimax with Kaiser Normalization.						
a. Rotation converged in 9 iterations.						

The second part of this paper used qualitative tools to validate the model. The quantitative results of the final 24 factors (4 omitted due to no significant relations) reduced to six competency clusters were prepared in a questionnaire for further application of Deplhi techniques. This data was discussed and deliberated by subject experts through two exhaustive rounds. A total of 10 experts deliberated

and re-arranged the sub factors as per their knowledge and experience in the first round. These results were further sent to these experts for a second round of deliberation. In the second round of iterations, a final model superimposed on the Iceberg model was obtained. The proposed model is represented in the Figure 2 below.

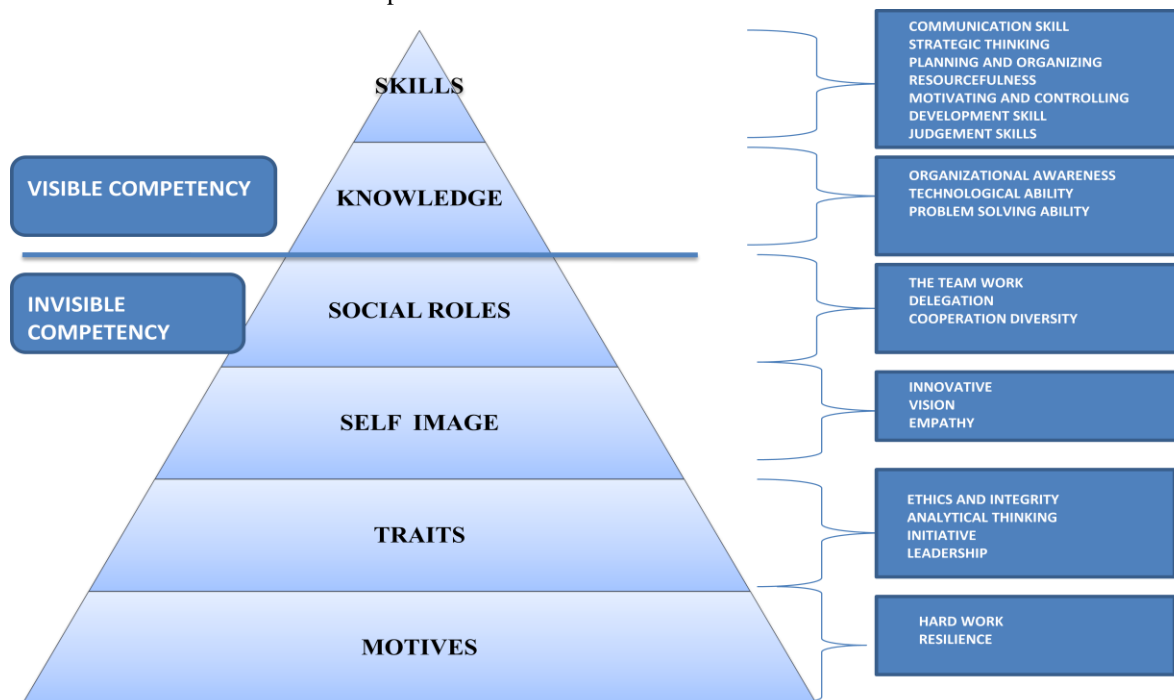


Fig 2 Proposed Competency Model for Defence Officers

Discussion

From the final model as proposed in the Figure 2 above, it is evident that all the six competencies as represented, encompass multiple sub competencies.

With respect to the Defence Officer’s competencies, the iceberg model as proposed by McClelland finds a resonance. Each of the competencies in the hierarchy of the model either

falls above the waterline which are very much visible or are below which are hidden and hard to decipher.

Skills are the ability or the expertise to perform a particular job. For the Defence Officers, multiple skill sets are required to meet the military demands. With the recent technological advancements, skill sets required to operate both men and machine is a pre requisite. Few competencies which were validated through the survey like communication skills, strategic thinking skills, planning and organizing skills, resourcefulness, discipline, motivating and controlling skills, developing skills and judgement skills form a part of military leaders traits. Communication and planning and organizing skills are the hallmarks for any managerial job. Similarly, resourcefulness or being able to judiciously utilize the available resource is a skill most sought after in civil labour market. Developing skills is an important part of leadership which aims at uplifting the team member's expertise to meet the organizational goals. Strategic planning and judgement making skills differentiates a good manager from the rest.

Knowledge is the information or understanding one has of a particular job or task at hand. For a Defence Officers, organizational awareness, technological ability and problem solving ability falls in this bracket. Organizational awareness encompasses the organizational goals and the mission. Knowledge of the system or the machine one is operating on, also form part of the competency. Further, the problem solving ability which itself is a result of the knowledge in a particular field defines knowledge.

Skill and knowledge as discussed above, are the visible and are the surface characteristics of one's competency. They can be easily measured and if found lacking, one can be trained for the same. Whereas the social roles, self concept, traits and motives are the hidden part of the iceberg model. They are deeper and form a part of an individual's personality. Deciphering them is not an easy task and it is variable across the group. Still, with the common military training and a closed environment, these competencies can be predicted for Defence Officers. They further comprise of the sub competencies. These competencies are engrained and are difficult to change.

Social roles comprises of the team work, delegation, cooperation and diversity. Team work

is the ability of an individual to complete an assigned task leading a team. It goes beyond individual competence and considers the balanced approach for each team members and their contribution to the final work. Delegation is one of the traits of a social centric person, where a work is broken down into segments and delegated to the subordinates. This is an important part of Defence Officers competencies where a proper delegation of duties is followed. Again cooperation in any job stems of out of the camaraderie for which military services are known for. Also, the armed force as a service takes volunteers from diverse background of ethnicity and sex. These competencies thus are the basic feature for any Defence Officers moving to civil labour workforce.

Self Concept is a perspective one has of self. With a common military training, Defence Officers have a common vision, empathy for their subordinates and an innovative mind in times of need. The vision of military or any other role is engrained in the military leaders. This concept developed in Defence Officers allows them to stick to their roles. Similarly, military leaders or Officers lead the men in field where empathy for their men enhances their camaraderie. Also, an innovative mind suggests a solution to both the seen and unforeseen situation generated in military line of duty.

Traits are individual centric competencies which are a part of hidden concept of the iceberg model. These are individual characteristics like ethics and integrity, analytical thinking, initiative and leadership. These competencies again find a commonality among Defence Officers, by virtue of their long term association with military. Integrity is a common trait which a Defence Officer has, apart from initiative. Also leadership is an important trait of military leaders and very much tested in lines of war. Further, owing to the regimental structure of the armed forces, the Defence Officers also apply the analytical thinking for any immediate tactical problems in field. These traits are commonly expected out of a team leader in the civil labour market.

Finally motives are the recurrent thoughts that drive one's behaviour. For the Defence Officers in particular, these consist of the hard work and resilience they put into their duty. Hard work, which a trait of continuously and dedicatedly working towards a goal is a common feature of Defence Officers. While, Resilience is defined as

the process of successfully adjusting to a challenging or a difficult life experience, especially through emotional, behavioural and mental adjustment. It is about being flexible to internal and external demands. All these competencies go a long way in ensuring a successful completion of task, whether it is military or the civil organization.

Research Implication

This study results in from of a model would have implication both for the employee and employer. It would provide the businesses and organization with a common terminology for gauging the military veterans in their recruitment process. The iceberg model is unique in its approach which caters to the competencies which are both visible and hidden. This means that the competencies of employees of a little known sector like the military, which are hidden, are also reflected in this model. Thus, the study is able to fulfil the aim of the paper which was to find out the complete set of competencies of Defence Officers. The transferability and applicability of competencies acquired in Defence services, their analysis and subsequently the strategies incorporated to design and develop a civilian career can all be met by a careful study of the competency model developed in this paper.

These competencies, gathered would help the recruiters in making strategic changes to their recruitment process. This model with its common terminology would allow better evaluation of the military recruits. Also the talent management and training needs of the recruits can be well gauged from this model. Training can be planned based on the requisite gap in competencies and modelled to meet the organizational needs.

Conclusion and directions for future research

This research has tried to reveal various visible and hidden competencies of the Defence Officers. Quantitative tools were used to arrive at asset of 24 competencies which were put to qualitative methods. The six clusters obtained through factor analysis were refined using the Delphi technique to arrive at the proposed model. The visible competencies like the skills and knowledge is easy to comprehend and can be measured using various instruments. Most of the recruitment methods, utilize the measurement of these visible competencies to select the probable recruits. Any gap found in these two particular competencies can be addressed to by formulating a training module

towards it. These competencies are also easier to change and adapt.

The hidden competencies have rarely been discussed earlier. This paper in the iceberg model represents four clusters of hidden competencies. These include the Defence Officers' social roles, self concept, traits and motives. sThese are common for the military leaders and consist of sub competencies. Once these competencies are identified and mapped, organizations can very well do a succession planning of their employees. These competencies are difficult to comprehend and further have little tolerance to change.

Also, the study in itself provides a framework which can be utilized by the academician in studying the competencies of other sector. Also the applicability and the gap in employing the Defence Officers at various roles could also be a future scope of work.

References:

- [1] Bartone, P. T., Eid, J., Helge Johnsen, B., Christian Laberg, J., & Snook, S. A. (2009). Big five personality factors, hardiness, and social judgment as predictors of leader performance. *Leadership & Organization Development Journal*, 30(6), 498–521. <https://doi.org/10.1108/01437730910981908>
- [2] Chouhan, V. S., & Srivastava, S. (2014). Understanding Competencies and Competency Modeling — A Literature Survey. *IOSR Journal of Business and Management*, 16(1), 14–22. <https://doi.org/10.9790/487x-16111422>
- [3] Draganidis, F., & Mentzas, G. (2006). Competency based management: A review of systems and approaches. *Information Management and Computer Security*, 14(1), 51–64. <https://doi.org/10.1108/09685220610648373>
- [4] Le Deist, F. D., & Winterton, J. (2005). What Is Competence? *Human Resource Development International*, 8(1), 27–46. <https://doi.org/10.1080/1367886042000338227>
- [5] Morath, R. A., Leonard, A. L., & Zaccaro, S. J. (2011). Military Leadership: An Overview and Introduction to the Special Issue. *Military Psychology*, 23(5), 453–461. <https://doi.org/10.1080/08995605.2011.600133>
- [6] Richard E. Boyatzis. (1982). *The Competent Manager. A Model For Effective Performance.*
- [7] Shippmann, J. S., ASH, R. A., BATJTSTA, M., CARR, L., EYDE, L. D., HESKETH, B.,

- KEHOE, J., PEARLMAN, K., PRIEN, E. P., & SANCHEZ, J. I. (2000). THE PRACTICE OF COMPETENCY MODELING. *Personnel Psychology*, 53(3), 703–740. <https://doi.org/10.1111/j.1744-6570.2000.tb00220.x>
- [8] Tütlys, V., Winterton, J., & Liesionienė, O. (2018). Integrating retired military officers into the civilian labour market. *European Journal of Training and Development*, 42(5/6), 319–341. <https://doi.org/10.1108/EJTD-12-2017-0105>
- [9] Vichita Vathanophas, J. T. (2007). Competency Requirements for Effective Job Performance in The Thai Public Sector. *Contemporary Management Research*, Vol.3(No.1), Pages 45-70.
- [10] Wang, C. (2021). Competency Requirements for Supranational Organization Employees: the Iceberg Model Implementation. *State and Municipal Management Scholar Notes*, 4(4), 253–259. <https://doi.org/10.22394/2079-1690-2021-1-4-253-259>
- [11] Young, M., & Dulewicz, V. (2006). Leadership Styles, Change Context and Leader Performance in the Royal Navy. *Journal of Change Management*, 6(4), 383–396. <https://doi.org/10.1080/14697010601081860>