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Competency based Training Need Assessment – Approach in Indian companies

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Training is a usual formula for organisations through which employees are introduced to learning, but the challenge lies in identifying the appropriate training needs of employees. The success of a training program depends primarily on the need assessment. The paper discusses the process of competency mapping and focuses on how competency mapping can be used for conducting training need assessment. The paper is an empirical research based on both public and private manufacturing units in India. Primary and secondary data was collected using number of techniques. Gap analysis has been performed for employees and it has also been aimed to verify the changes in competency gaps on applying need based training. On providing need based training, significant difference was measured in the level of competencies of employees. The paper shares a practical insight on the implementation of competency mapping for training need analysis. The research is focused on manufacturing units only, whereas there is a huge scope for it to be implemented in service industries also. The paper is an original piece of research where a model has been designed to resolve training issues of manufacturing industries.

Keywords: Competency, Competency Mapping, Training, Training Need Assessment, Manufacturing

1 Introduction

The state of economy of India during the yester years of independence reveals that India has always been an agrarian country. It had weak industrial background, low level of savings, investments and near absence of infrastructure facilities. With the fast growing world, the growth of manufacturing organisations has become indispensable for India to keep up with the pace of the rest of the world. Growing population has led the organisations to experience the pleasant task and tension of a four-fold increase in the demand for their products and services. Consequently, the emphasis has shifted to the ultimate and inevitable goal of growth and performance; which can exist only if the employees are focused to the goals of the organisation.

Haygroup, (2004) pointed out that an organisation's best source of competitive advantage lies with its employees. Vathanophas & Thai-ngam, (2007) have mentioned in their earlier work that the demand for effective and competent employees is continuously increasing in both public and private organisations. The employee competence and commitment largely determines the objectives that an organisation

can set for itself. It also determines the success in achieving the set objectives. Training is an appropriate tool which enhances employee competence ensuring achievement of organisational goals and objectives.

A number of Indian organisations have attempted to use competency modelling as a part of human resource management function in the last three decades. Many organisations were successful in implementing competency based system yet, others were unable to relate it to the existing operations and scenario for training and development. Several researches highlights the problems in developing competency models as identified by Esque and Gilbert, (1995); Marrelli, (1998); Thomas, (2000); Langdon and Marrelli, (2002) have questioned the applicability of competency models as these models are based on behaviours, not accomplishments. There is often disagreement between the process and the terms used to define competencies. Practitioners have referred competencies being broadly defined, ambiguous and subjective. In spite of criticisms researchers like Byham, (2002) expressed that the first and most important step in designing the management development programmes is 'determining the competency model of managers'. This acts as a base for the paper in identifying

the employee competencies required for achieving the performance goals of the organisation. Competency based training and development is one such means to initiate a performance driven focus.

The objectives of the paper are:

1. To elaborate the existing training scenario of organisations in India
2. To describe how a tool of competency mapping is applied for training purposes.
3. To conduct gap analysis for identifying training needs.

The study is an attempt to design a model based on competency mapping for identifying training needs. The explorative research design of the study involves both primary and secondary data.

2 Training in Manufacturing Organisations in India

In India, many smaller organisations are unable to focus on the defining the job competencies. Even on attempting the usage of job competences, some organisations are unable to relate it with the training needs of employees. The inability of relating it to the individual development needs may cause training, performance consulting, career development, and other activities to fall considerably short of what could have been achieved. Many organisations neither have job analysis nor are competencies have ever been defined. The employers typically feel that the job descriptions are not essential for training activity. The typical job description does not contain a list of job competencies, though some specification might contain a list of basic skills, knowledge, or job activities. In most cases the job specifications emphasize on the type of experience or education needed for the job. In a few organisations basic skills or traits are also defined and used in conducting interviews. In many surveyed organisations observations reveal that there is no emphasis on the importance of defined job competencies. The training function at large number of organisations with an existing need assessment procedure was nothing more than holding conversations with managers to find out the requirement of training. Though, these organisa-

tions in India have worked and implemented many techniques which are highly performance driven, yet, the acceptance of the newer techniques by small manufacturing organisations is quite low. Many remain unaware to the various efficient HR practice in today's world. There are organisations which still follows traditional systems and do not wish to invest time and money in training their employees. In many cases it was observed that the training departments and other HR functions at times have separate ways in analysing jobs and determining what is important. Most departments including line operating departments have their own set of standards and their measuring techniques vary for different departments. Such situations are very common in many manufacturing organisations in India resulting in separate, independent efforts leading to shattered organizational goals. Differing activities leads to perplexities in all dimensions of HRD. In order to understand the process competency mapping, there is a need for understanding the relation between performance and competency.

3 Need for Competencies in Organizations

An article published in Times of India, (2007), expresses the Christmas wishes of HR professionals. Mr. Surendra Jeet Raj, Sr. VP, HR, Newgen Software expressed, "I wished I could make a concoction using a fine blend of 10 granules of 'Customer Focus, 2 table spoon of Syrup 'Attention to details', 3mg powder of 'Ontime service delivery', 5 cubes of 'After sales service'." It is not only specific competencies that are required but a desired level of competencies is also what the organizations are focusing on for its employees. Competencies are highly organization as well as role specific, i.e. they may not be of any use in other sectors or companies or job roles. The biggest advantage of competencies is that they help creating job awareness not only for the employer but also for the employee too.

'Competency-based' approach to human resource management has become integral during the last thirty years, with 'Competency' concept involving knowledge, skills, attitude, traits and behaviours that allow an individual to perform a task within a specific function or job (Boyatzis, 1982). In the

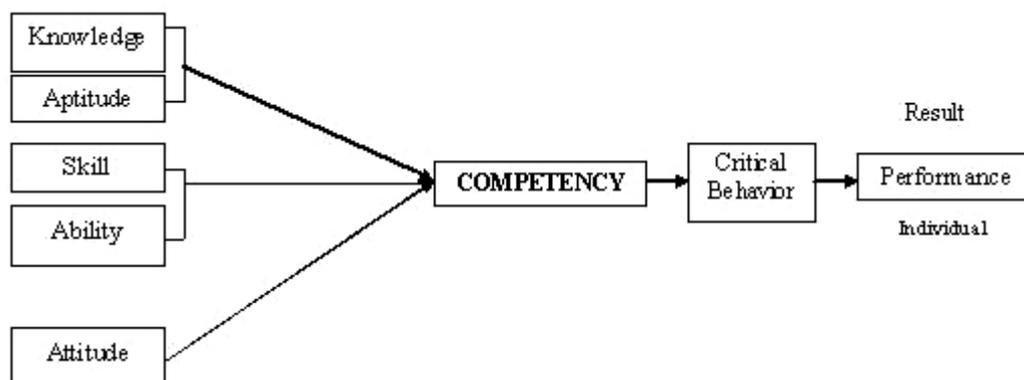


Figure 1. - Concept of competency

present scenario where job availability is at a very crucial state with elevated need for effective low cost employees, organizations are unsuccessful in finding capable employees. As the level of competency in a person affects ones behaviour which leads to incongruity of performance, the organizations desire a certain level of required competency in its employees for specified job posts.

The resultant of a critical behaviour is higher performance. The level of performance (low, moderate or high) is always determined by the level of knowledge, skill and attitude. (Figure 1).

The term 'Competency map' has gained a wide recognition in the business field (Brožová & Šubrt, 2008). Garrett, (2007) has explained competency map as a tool which defines the job demands. A competency map is a list of an individual's competencies that represent the factors most critical to success in given jobs, departments, organizations or industries that are part of the individual's current career plan (DACEE, 2008). Competency mapping is a process an individual uses to identify and describe competencies that are critical to success in a work situation or work role.

4 Literature Review

Managers prescribe 'training programs' as a drug to all employee related problems in organizations. Goldstein, (1993) defined training as the systematic acquisition of skills, rules, concepts, or attitudes that result in improved performance in another environment. Therefore, training programs are planned to churn more responsible supervisors, competent technicians or influential managers and leaders in complex organizations. However, the question that arises is, how relevant is mere conducting training programs for the employees, without a systematic need assessment aligned to achievement of organizational goals?

It is vital to understand the fact that the credit of a successful training program half lies with a systematic and operationally useful training need assessment. Even though the terminologies have changed over the years, the three-level framework followed today remains the same as conceptualised by (McGehee and Thayer 1961). They emphasized on three levels of analysis: organization analysis, operations analysis, and man analysis. The key of a need assessment lies in identifying the right techniques and methods of data collection. The formal needs assessment methods often used to identify group needs are including critical incident techniques, gap analysis, knowledge and skills tests, observation, revalidation, self assessment, video assessment and peer review (Grant, 2002). As emphasised by several researchers like Kochhar et al. (1991), Khan and Hafiz, (1999) on the gap analysis as a technique has been used in this research too as it is a widely used tool to assess 'What is' in reality and 'What is intended to be'. Tao (2006) has elaborated that a gap analysis is usually administered via a survey type questionnaire to the employee, manager and other personnel. This has been considered as the base for the data collection for the research.

A few researches have been conducted on identifying the competency based training needs. Yeh (2000) developed a comprehensive needs assessment process for competency-

based training. The framework adopted for the research is the three staged competency-based training assessment as proposed by Yeh, (2000). The framework contains three processes with specific output items signifying each stage of competency identification, gap identification and training curriculum preparation. Palan, (2003) has explained the various types of competencies through the Roman Pavilion framework. He has also explained that the framework is a term given to the complete collection of clusters and competencies with performance indicators. Corral, and O'Brien (2011) investigated broad range of competency requirements using pragmatic mixed-methods approach, including a mainly quantitative questionnaire, administered online to 64 legal information professionals, followed by eight semi-structured interviews and a focus group with four participants.

A competency model is a behavioral job description that must be defined by each occupational function and each job (Fogg, 1999). Depending on the work and organizational environment, a group of 7 to 9 total competencies are usually required of a particular job and depicted in a competency model (Shippman, et. al., 2000).

The competency models can be used for assessing the training needs and is useful in many ways like:

- Assess individual needs without any biased external decisions
- Measures individual needs on the grounds of the organizational goals and not on the basis of the superiors decisions to depute the individuals for training
- Training needs identified on the individual's current performance.
- Reduces cost for the smaller organizations where yearly compliance for training requires every individual to be trained. Competency model ensures need based trainings for individuals.

The competency definition and model presented as a part of the paper reflects a consensus of what the leading companies and consultants in the field are talking about when they use the term 'competency modelling'. The various models that have been referred for working on the research were the MACH (Miner, Alperin, Cioffi, and Hunt) model, OCSC (Office of Civil Service Commission) model and Lancaster model. Miner, K. et al, (2005) mentioned that the competencies can be used to fulfil both the infrastructure and the workforce needs in MACH's model. Burgoyne and Stuart, (1976) have explained that the Lancaster Model of managerial competencies is a universal management competency framework. Vathanophas and Thai-ngam, (2007) worked on OCSC model an identified an extensive list of 23 competencies in Thai public sector, Thailand Office of Civil Service Commission. The WACOM project focused on the identification competence models and competences for professionals in the water sector, enhancing the improvement of professional training and workplace training (Stracke, 2011).

Defining competency models is the initiation of competency based training and competency modelling helps in elaborating and defining training objectives. Emad and Roth, (2008) highlighted the contradictions in the education and training system that do not allow the targeted objectives to

be fulfilled. The research elaborates that how the competency assessment system has changed the objectives of the education and training practices from learning skills and knowledge required on-board ships to passing competency examinations.

Competency based training and development is no more related to more and more paper work. More technology and web based processes are used to make the competency based training more effective with increased reach. Thanopoulos, Protonotarios, and Stoitsis (2012) worked on presenting Information and Communication Technology (ICT) tools such as web portals, learning portals and course management platforms that have been developed and used in order to support EU-funded research and training projects in the area of organic agriculture. The paper discusses the case of the CerOrganic company which is used for providing access to

resources related to competence based vocational education and training in the context of organic agriculture. Pollit, (2011) has discussed the case of Eurostar, the high-speed passenger-train service that connects the UK to France and Belgium introducing robust, online competency-assessment system and how it increased training and coaching opportunities for key personnel among its 1,200 employees. The article concluded that ongoing training opportunities increased by automating and speeding up elements of the assessment process.

5 Research Methodology: The Model

Designing the competency mapping based model has always been a challenging task as there are numerous options available in choosing the techniques involved in the process. There

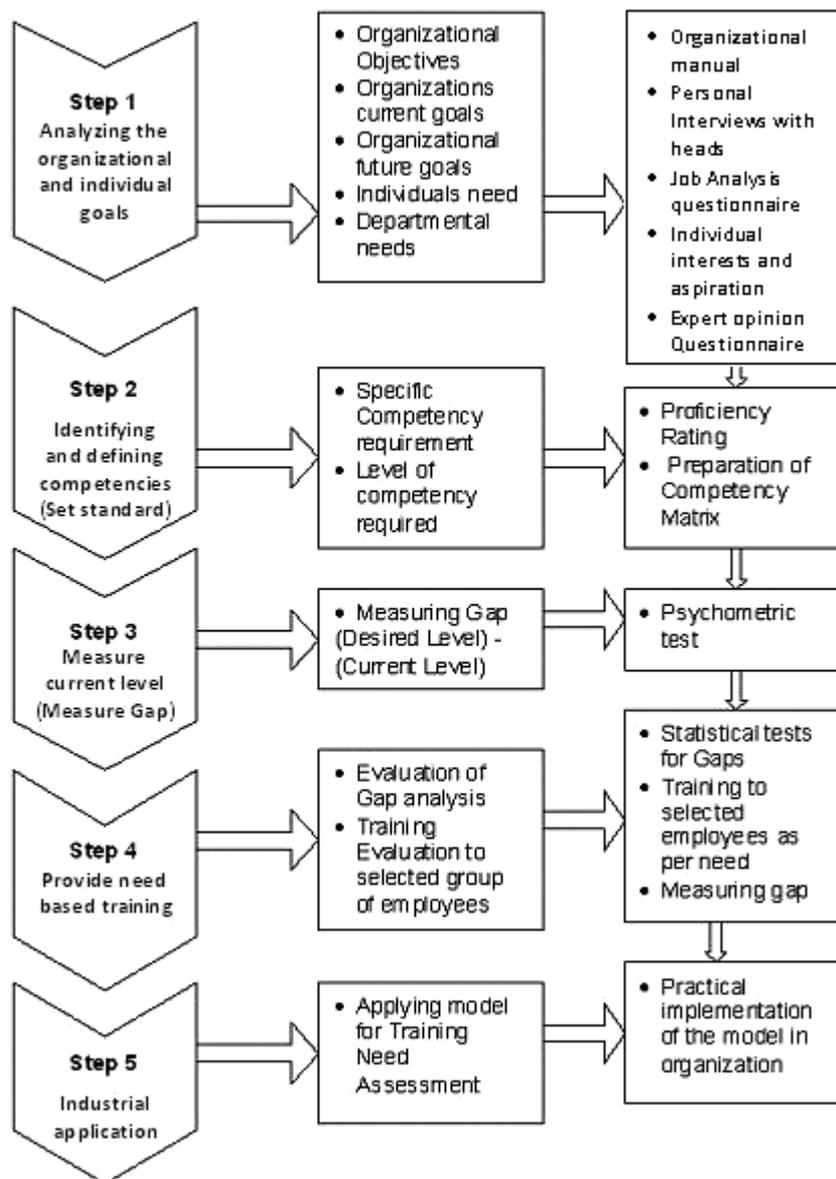


Figure 1. Process of Competency

are various models developed for performing competency mapping in an organization. There is no one specific form of conducting competency mapping. Thus, the success or the failure of the model lies with the fact of choice of technique and the application of the techniques based on the nature of the organization. Most manufacturing organisations have a continuous work process and every individual employee has a leading role in the process. As a result, the organizations do not appreciate a technique which is expensive, time consuming and is not accurate. The process involved in the research for data collection is as given in Figure 1.

Referring to the previous work of Harzallah & Berio, (2004), competencies for individuals in organizations has only been focused. Group and core competence as described by (Hamel & Prahalad, 1994), has not been approached as it is a complete process by itself for structuring organizational strategy. On having a close observation and on initial interactions with various HR officials from the surveyed organisations, few hidden facts were revealed. Out of the 17 surveyed organizations, 12 did not have any defined process for conducting training need assessment. The initial interaction with the employees revealed that for the employees 'Training' seemed to be a celebratory experience considering it as an official rest day. Some organizations also organize out bound training for their employees. Such out bound programs are presumed to be an excursion. Challenge for companies lies in engaging employees in the trainings conducted. Definitely, lack of interest is one such reason at the employee's end. The flaw at times lies with the employers, as the trainings conducted are not effective due to various other procedural issues. The ROI on trainings conducted is not met. This lowers the organizations interest in conducting training for its employees. This is not only the case of surveyed organizations but with many such other smaller organisations.

The process involves interview of the head officials of the surveyed organizations to understand the current and future goals of the organization. The organizational goals have been thoroughly assessed before identifying the competency needs of employees. It is also attempted to understand the difficulties and challenges of the existing training and development practices of the organisations. The individual tasks with special reference to specific jobs have also been studied.

Most of the technical competencies can be enhanced in employees with an emphasis on behavioural competencies. An employee, who is required a technical competence of operating a CNC machine should have behavioural competencies like learning ability, self management, quality consciousness etc. Thus, as a part of this research, initially the technical competencies have been identified and based on which the behavioural competencies were established for a particular job post. It has been ensured that the behavioural competencies are not restricted to the technical competencies and also completely encircles the purpose of the job post. Proficiency rating was prepared for the identified set of competencies. The proficiency rating supports in defining the level of competencies. Frequency charts have been prepared to show the distribution of gap levels of the individual competencies for each employee.

An 80 item psychometric test was designed on the grounds of the competencies identified which was pre-administered and tested for reliability and validity. Each competency was measured by 5 items out of which 3:2 ratio has been maintained for positive: negative questions. The questionnaire leads to identify the current state of an individual. The gap of an individual was measured based on 'required level' and 'current level'. The required level of competencies was identified on the grounds of the initial mapping exercise. The current level was measured on the scores of psychometric test.

The gap level can also be utilised for recruitment and selection of new individuals, performance appraisal, promotion, in-house hiring etc. These gap levels have been utilized for designing need based training programs. The research focused on providing training based on the gap identified. The research has been conducted based on a survey of 111 employees (supervisor and above level) of seventeen different manufacturing organisations in India. Convenient sampling was used to choose the sample organizations. Manufacturing organisations in India do not easily permit externals to conduct research. Public organizations are traditional and have loads of paper work. They are rigid in sharing information. There are numerous manufacturing organisations in India yet the sample size was only 17 based on the convenience and permission received from different organizations. The names of the companies have not been disclosed as the companies were reluctant to disclose their current HR practices. Eighteen different jobs were analysed. Besides using direct observation and interview with the employees as a technique, a questionnaire was incorporated to the head of the organization to define the performance standards and the competencies that are expected from a superior performer for specific job post. Job analysis questionnaire was incorporated to understand the various job profiles in depth also to identify the required competencies. Based on which the job description and specification has been prepared. The existing job description used by the company was also compared with the newly prepared one so as to ensure that the description contained every small task.

The research identified a primary set of 16 competencies which are as Initiableness, Innovableness, Effective Communication, Stress Management, Conflict Management, Openness to Change, decision Making, Effective planning, Creativity, Self Management, Proactive, Learning Ability, Quality Consciousness, Resource Orientation, Positive thinking and Team Building. The secondary set of competencies being Presentation skills, Negotiation, Effective networking, Customer Service Orientation, Leadership, Problem solving ability, Building sustaining team, handling employees, Financial analysis, Supervision, Goal Setting, Risk taking, Organizational development, Handling stress, Process improvement, Group facilitation, Adaptability, Performance development.

The various tools used in the research to collect data from sample organizations and others have been tabulated in Table 1. The model designed for the research is as given in Figure 2.

The psychometric test was initially applied on 21 people who have direct interaction with researcher for more than 15 years e.g. Parents, husband and cousins. Initial marks were assigned by the researcher based on the observation made

Table 1- Tools and Statistics Used in the Research

Tools Used	Sample Size	Description of the Sample	Objectives of using the tool	Statistical Tests
Job Analysis Questionnaire	111	Employees from surveyed organisations	For a better understanding of the profile. To identify the required competencies for the jobs studied.	Nil
Psychometric Test Questionnaire	111	Employees from surveyed organisations	To measure the current level of competencies among individual employees. To signify the difference in identified competencies	Reliability Test- (Time Sampling)- Test-retest method (Content Sampling)- Split-Half method and Cronbach's Alpha Validity Test- Content Validity Discriminate Validity ANOVA- (F value)
Direct Observation	111	Employees from surveyed organisations	For a better understanding of the job for identifying the level of competencies.	Correlation Coefficient (between ratings of expert and direct observation rating by the researcher)
Checklist Method	111	Employees from surveyed organisations	To identify the required competencies. Identify the required level of competencies among individual employees at particular job posts.	Nil
Questionnaire for Expert Opinion	17	Experts from the organizations	To identify the required competencies. Define the required level of competencies among individual employees at particular job posts.	Correlation Coefficient (between ratings of expert and direct observation rating by the researcher)
Psychometric Test Questionnaire	21	People with direct interaction with researcher for more than 15 years	To check whether the test measures the level of competencies of an individual as observed by the researcher.	Correlation Coefficient (between psychometric scores of the individuals and direct observation rating by the researcher) Reliability Test- (Time Sampling)- Test-retest Method
Direct Observation rating	21	People with direct interaction with researcher for more than 15 years	To have a thorough understanding of the individuals and their behaviour	Correlation Coefficient (between psychometric scores of the individuals and direct observation rating by the researcher)
Psychometric Test Questionnaire	11	Employees provided need based training	To measure the difference in gap level of competencies among individual employees after training.	Sign test (Non Parametric Test)
Training Feedback Questionnaire	11	Employees provided need based training	Receive an opinion on the training imparted.	Descriptive statistics

over the years and experiences; with the individual's ability in handling situations. The psychometric test was administered on the individuals and then tested for reliability and validity. Based on the initial test reliability and validity result, the test was modified and retested for reliability and validity. The modified test was administered on employees of the surveyed

organisations. The various tools used for data collection are as mentioned in the Table 1. Secondary data was collected from company manuals, previous training lists of the organization, existing job description of employees, books, published papers, articles, websites and online databases.

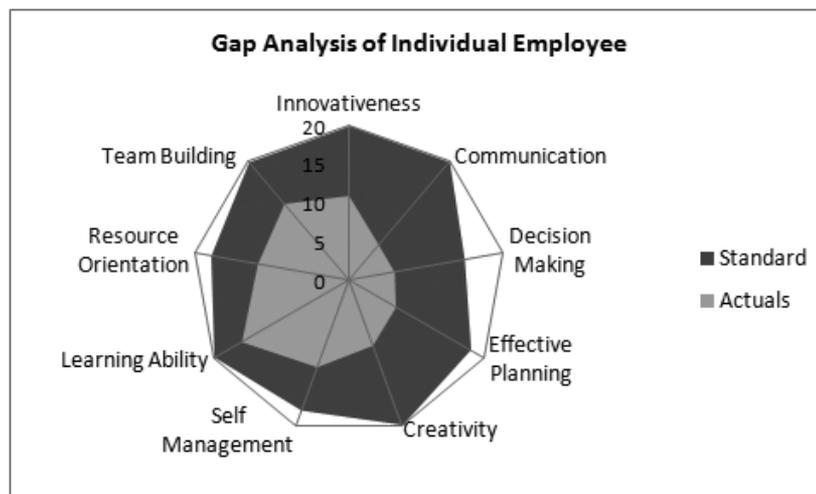


Figure 2: Gap analysis of an individual employee for the Job post (Manager - Training and Development).

A gap analysis chart has been shown in the figure 2. which clearly indicates the competency gaps of an employee.

Figure 2 elucidates the gap for (Manager - Training and Development). The required competencies have been indicated for the employee's job. It clearly shows that there is high gap for competency - 'Communication', 'Effective planning' and 'Decision Making' whereas a low gap exists for 'Learning ability'. Thus, training is must for the individual in the areas identified and the training content will differ as it will be based on the gap that exists. Similarly gap analyses have been done for all 111 employees. Such diagrammatic representation with report has been provided for each job. This gives an easy interpretation for managers to understand the need for development. The organization on conducting such individual training need assessment can form various groups of employees who has same gap levels of individual competencies and can be trained together.

Hypothesis I

- Null Hypothesis $\rightarrow (H_0)$ Competency mapping model is not able to identify training needs of individual employees with significant difference
- Alternative Hypothesis $\rightarrow (H_1)$ Competency mapping model is able to identify training needs of individual employees with significant difference

Hypothesis II

- Null Hypothesis $\rightarrow (H_0)$ There is no significant difference in the median of gap level of competencies after a need based training
- Alternative Hypothesis $\rightarrow (H_1)$ There is significant difference in the median of gap level of competencies after a need based training

Practical Difficulties Confronted

- The organizations do not disclose information to external. A number of organizations do not disclose information of one department to another.

- The HR managers believed that any external measuring the employees may have negative impact on the employees. This was even observed while incorporating questionnaires where the employees themselves came up with questions like, "Is our scores to be disclosed to our departmental head?" and "What kind of action will be taken if we have low scores?"
- The HR officers in many cases believe that whatever measures are followed is satisfactory and do not intend to attempt any new methodology.
- A number of HR managers face resistance from employees in introducing a new technique.
- Few organizations that do not have any systematized training need assessment do not maintain records for the trainings conducted.

Limitations of the Research

- Though the psychometric test is validated and reliability tested yet it is based on psychology of the person at the particular time when he has been approached to answer the questionnaire designed.
- A limited number of tools have been used to identify the competencies and level of competencies identified.
- Only a single type of industrial sector (Manufacturing) has been taken into consideration for the research.

The objective to measure the competency gap of the individual employees in different organizations is met as it distinguishes various competencies for different job requirements for different organizations. It is concluded that training needs of individual employees were identified with significant difference. This was concluded by hypothesis testing with Anova, (F-value) as a tool. (Table 3.)

It was observed that the gap level reduced on providing a need based training. This was concluded by the hypothesis testing through Sign test (a non-parametric test), Table 4. The concept was adopted from Aczel & Sounderpandian, (2002). Significant difference in the median of gap level of employees was observed on providing need based training to employees.

Table 2. Reliability Test

	Time Sampling	Content Sampling	Time Sampling	Content Sampling	Time Sampling	Time Sampling
	Test Retest-C	Alfa =	Test Retest-C	Split Half method	Test Retest-C	Test Retest-R
N	88	111	21	111	111	21
				0.90	0.94	0.875
Initiativeness	0.84	0.89	0.93			
Innovativeness	0.86	0.83	0.92			
Effective Communication	0.76	0.69	0.79			
Stress Management	0.82	0.86	0.77			
Conflict Management	0.78	0.78	0.65			
Change management	0.86	0.75	0.62			
Decision Making	0.65	0.93	0.78			
Effective Planning	0.79	0.71	0.85			
Creativity	0.79	0.82	0.85			
Self Management	0.73	0.71	0.75			
Proactive	0.66	0.75	0.9			
Learning Ability	0.8	0.72	0.82			
Quality Consciousness	0.82	0.85	0.87			
Resource Orientation	0.76	0.67	0.79			
Positive Thinking	0.84	0.74	0.86			
Team Building	0.74	0.82	0.85			

Table 3. Summary of Analysis of Variance

S No.	Competencies	F
1	Initiativeness	2.63*
2	Innovativeness	1.47
3	Effective Communication	1.59
4	Stress Management	3.16*
5	Conflict Management	9.63*
6	Change Management	5.20*
7	Decision Making	0.99
8	Effective Planning	2.09
9	Creativity	0.79
10	Self Management	1.55
11	Proactive	3.33*
12	Learning Ability	6.46*
13	Quality Consciousness	2.30*
14	Resource Orientation	4.14*

15	Positivity	2.52*
16	Team Building	1.92

*- denotes significant at 0.05 level

6 Discussion

For testing Hypothesis I, Analysis of Variance was worked to establish the F- value. This was done to identify the variation in gap of individuals in different organization. This was also done to signify that the test measures the gap of an individual in varied post and in different organization as per the need of the organization. This shows that the competencies measured relates a notable difference in the gap measured for different individuals in different organizations. In the case of the competencies; Initiativness, Quality Consciousness, Positivity Stress Management, Conflict Management, Change Management, Proactive, Learning Ability and Resource Orientation the F value is significant at 0.05 level. Competencies like Innovativeness, Communication, Decision Making, Effective Planning, Creativity, Self Management, Team Building failed to be significant at 0.05 level. (Table 3.)

Table 4. Sign Test for Two Medians (Paired Observation)

S No.	Median - Sign test	Median of (Gap before training) GB	Median of (Gap after training) GA	GB- GA	Sign	Interpretation
1	Initiativeness	1	-1	2	+	Gap reduced
2	Innovativeness	-12	-14	2	+	Gap reduced
3	Communication	7	1	6	+	Gap reduced
4	Stress Management	-13	-13	0	0	No change
5	Conflict Management	-10	-13	3	+	Gap reduced
6	Change Management	-11	-13	2	+	Gap reduced
7	Decision Making	-9	-10	1	+	Gap reduced
8	Effective Planning	0	-1	1	+	Gap reduced
9	Creativity	-13	-13	0	0	No change
10	Self Management	-10	-12	2	+	Gap reduced
11	Proactive	4	3	1	+	Gap reduced
12	Learning Ability	-13	-14	1	+	Gap reduced
13	Quality Consciousness	2	1	1	+	Gap reduced
14	Resource Orientation	1	-1	2	+	Gap reduced
15	Positivity	-11	-11	0	0	No change
16	Team Building	-12	-15	3	+	Gap reduced

Out of 16 identified competencies, 9 competencies were able to identify the training needs of individual employees with significant difference. As maximum numbers of competencies are able to identify training needs of individual employees with significant difference, thus under hypothesis I, the null hypothesis (H_0) gets rejected proving that the competency mapping model identifies training needs of individual employees with significant difference. The model identifies these competencies to be crucial and is more often suggested for maximum number of job post in the sample organizations. This is as the sample organizations are from the same sector.

Out of 111 employees only 11 employees of one organization was allowed to be trained. For testing Hypothesis II, training was provided based on the training needs identified. The training objectives were set and the content was solely prepared based on need assessment model used as a part of the research. The content was delivered by reputed trainers from the industries. $n = 11$, $T = 8$ (Number of + ve sign), $C = 0$ (Number of - ve sign), $p = 0.50$, Since 8 is more than 5.5 ($= np = 11 * 0.5$), the tail area is to the right of 11. On carrying out the statistical hypothesis test, the binomial table is used. It is found that for $p = 0.5$, $n = 11$ that the point corresponds to a tail probability of 0.004. The tail area is binomial probability $P(T \geq 8)$ with $n = 11$, $p = 0.5$. From the binomial template, this probability is 0.004. The p- value is twice the tail area and therefore equal to $(2 * 0.004) = 0.008$. Since this p value is very small, we reject the null hypothesis (Hypothesis II). After a close observation of Table 4, it can be concluded that there

is a significant difference between the median of gap level of employees on providing need based training.

7 Conclusion

All organizations must focus on conducting training need assessment before deputing any employee for training. Though most of the organizations are aware of the fact of conducting a need assessment for training their employees; yet most of the organizations fail to practice it. In a large number of the smaller organizations, attending training is merely a luck factor where individuals are nominated for trainings only by the seniors. The individuals suffer from biased decision making. Thus the training of an employee fails to achieve the desired result. The described technique has been a solution to the sample organizations. As out of the seventeen sample organizations, only nine were following a systematic form of training need assessment whereas others were fully concentrating on training as a tool for motivation and fulfilling the industrial norms of 48 hours training for each employee.

Further Scope of Research

- The model designed here in this research can further be researched on various other sectors.
- A cost benefit analysis can also be done for the model developed. This may help to confirm whether applying the model reduces cost in traditional training system in organizations or not.

Employees can be a part of the organization only if they are ensured growth and growth lies in the 'Performance' of an individual in an organization. Human resources management adds value to the organization when it helps employees and organizations to do better than their present level of performance. Identifying the training needs and providing adequate training to employees leads to performance which ensures growth to the employee. The competency method described in the research focuses on identifying those measurable and developable human characteristics that lead to (good job - person matches) predict superior job performance and satisfaction - without race, age, gender, culture, or credential biases. The competency approach is fairer, freer, and more effective. The tool of competency mapping is convincing but is a lengthy procedure in identifying the required competencies. This technique is successful only if it is implemented properly. The contributions of McClelland, Boyatzis, Spencer & Spencer and many others have supported organizations to administer the technique. Competency mapping is a gem of techniques as it not only focuses on the needs of the organization but it also provides a base to many other HR approaches and functions of the organization.

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