

Competency Mapping: Skill Gap Analysis for the Employees in a Logistics Company in Tamil Nadu, India

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Abstract:

For a specific job or work, there is a requirement of different competencies to make a job simple and valuable. This study focus on finding the knowledge gap between existing and required level of employee competencies in logistics industry and provide required training for the Employees. The main objective is to develop a competency framework for the company. Each of the workers from different departments in the organization were considered for the assessment process. Data was gathered through a questionnaire method and 360-degree feedback model is used to get ratings from the Employees. The main factors selected for estimating competencies are Functional, managerial, technical and personnel. From the research, it is found that all four competencies have a major impact on organization effectiveness. In TLX tech all employees have good functional knowledge. The skill gap is present in technical and personnel competencies. Most of the employees are lack in team transparency and integrity. The implications are, Skill mapping must be done for every six months in order to examine the competency level of the employees. This will help the employees to improve their performance level and also it can help the employers to adjust the existing or new resources based on the job requirements.

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INTRODUCTION

Competency Mapping is a way of identifying the key skill sets which are necessary for an organization to achieve its objectives and goals. For a specific job or work, there is a requirement of different competencies to make a job simple and valuable. Competency varies based on the nature of a job and also it relies upon many elements. The elements consist of business scope and nature, business management, internal and external factors, roles and responsibilities, organization and employee relationship, Employee engagement, employee productivity. Thus identifying the key competencies is

necessary for an organization that will help the human resources to come up with different strategies and ideas to achieve the organization's goals. Full employment is essential nowadays. An organization with full employment means, human resources are being used most effectively. One way to achieve full employment is to make the existing employees more competent. Training and development is the key to making employees competent. Training means educating and instructing the employees on the skills related to their job. The development indicates enhancing the existing skills of the employee.

Training and development involve various processes and stages. The process includes analysing the existing knowledge level of employees and to decide whether there is a need for individual-level training or group level training.

These needs can be identified by performance appraisal sheets, self-assessment, peer feedback, supervisor assessment and so on. Next, the organization has to decide the timeline and place for the training. Once the timeline is set the next stage is to identify the trainers and the training program will continue as per the timeline. The performance level of the employees must improve after the training otherwise it is considered as a severe problem. Competency mapping is an effective way of identifying training needs. It is the analysis of a knowledge gap in existing and required skill sets. Competency is defined as an ability or skills which are required to complete the given tasks successfully.

The skill matrix or competency matrix is a visual tool that is used to map the existing and required competency levels. It is a table that displays employees' proficiency in specified skills. From this one can identify the employee skill level and their area of interest in working.

By analysing the data in the skill matrix one can able to understand the existing skills and experience within the team and by Finding skill gaps, the company can able to take necessary steps to minimize the gaps. It further helpful in

- Recruiting new employees
- Downsizing existing employees
- Offering a promotion for eligible employees
- Employee training need analysis
- Employee performance history

- Employee self –development and Retention activities.

This study aims to measure the competency levels of employees in a Logistics company by analysing the various skill sets that are essential for the logistics industry.

PURPOSE OF THE STUDY

The primary objective of this study is to analyse the gap in the existing and required knowledge level of the employees in the logistics company. This study also intends to find out the appropriate training methods for the employees to minimize the knowledge gaps.

- Analysing the important skill sets required for the employees in logistics company
- Designing competency framework
- Asses the employees on their skill levels
- Identifying the knowledge Gap from the assessment.
- Provide required training for the employees.
- Improve productivity and effectiveness.

LITERATURE REVIEW

The study conducted by Jaideep Kaur & Vikas Kumar^[1] explains the importance of competency mapping in order to meet the competitive effectiveness. And also, these study asses the Human resource strategies have to carry out by the organization when there is a change in global business competitiveness that moves from productivity to creativity. This study finds that the Management have to focus on strategic human resource utilization. The suggestions emphasise that, HRM is becoming more essential for organizational

sustainability. The analysis was done to know, in what degree competence mapping would aid in the analysing the gap in required skills and which could be worked on to improve the level of skill.

Research done by Reshmi Manna & Ankit Singh^[2] emphasizes the training need analysis for the employees of the manufacturing industry. The purpose of this study is to establish a competency system for the automotive parts manufacturing company's operations department. The competencies were mapped to accomplish a specific job in the industry. Weightage are calculated to assess 4 major competencies of 37-line employees: The competencies are interpersonal, administrative, functional, and Personnel. The finding revealed a wide gap in managerial skills and small differences in staff competency. Immediate training for the employees helps company to gain its competitiveness in faultless manufacturing and increasing quality of service.

R. Sugumari and S. Rupa (Alias Andal's^[3] Empirical Study on Competency Mapping focus on the human resource management. This study suggests the HRM to conduct proper competency mapping to assess the knowledge requirements of each individual at different level to perform effectively in the assigned job and to provide opportunities for developing these competencies in concern of preparing the employees for the future roles in the organization. Thus, analyse is made to link the competency mapping and human practice in the organization. Additional analysis has also been made to find the impact of competency mapping on individual employees and in team level and to know

the impact on training provided to the Employees. This paper suggests that, through proper competency mapping high skilled and knowledge based jobs can e increase.

A thesis on competency mapping of employees in pharmaceutical industry by Dr. Chaitali Riddhish Shah^[4] explores the formalization of competency mapping in Indian organizations. Eight competencies - technical, personal, Client orientation, time management, Interpersonal, team player and presentation were considered to perform competency mapping for the employees. Competency mapping was achieved by defining the difference between the level of skill needed and the level of actual competency. 8 competencies have been considered for factor analysis in SPSS. The study deployed 350 employees on the quantitative research framework. From competency mapping it was found that, the Sales staff capabilities have a significant impact on the success of the company. Of the eight skill groups defined by factor analysis, the group of technical skills emerged as the most significant group followed by the group of personal competencies. The study concludes with broad results that may be used for further analysis.

A study on employee competency mapping strategies by Dr. Y. Nagaraju and V. Sathyanarayana Gowda^[5] states that the competencies as human capital. The methodologies used in this analysis are both Analytical & Survey. The entire research program is to map the employee competencies to business strategies and also to map the results in terms of performance of individual employees and performance of organizations. The main

results are, i) Competency has been found to be a key for employee's activity within sample organizations that allows the organizations as a whole to achieve superior performance. ii) Two-thirds of the sample organizations gained competitive edge by improving and retaining employee skills in addition to innovation capabilities.

Nagesh, P et al., in their article regarding employee competency mapping focused on studying and analysing the employee competency of Training and Development of a manufacturing company. They analysed the expected and actual skills and identified the gap to suggest necessary measure to improve the competence of the employees thereby reducing the gaps. They collected data through formal questionnaire among 12 employees of various designations including manager, Training coordinators, IT coordinator, faculty and supervisors. Once the data has been collected they were coded and competency maps were drawn to know the skill gap. On the basis of the results obtained they suggested various training programs at each designation level. Overall, the actual values were higher than the expected values and concluded that the efficiency and competency of the T&D department is pretty high.

RESEARCH METHODOLOGY

Each of the 40 workers from different departments in the organization were considered for the assessment process. An all-around characterized survey was set up with 5 points Likert scale and dispersed among the workers. Primary data was gathered through a questionnaire and secondary data was gathered from various journals and books. EXCEL tool is used for evaluating employee gaps based on predefined skills/competencies rated 1-5.

The main factors selected for estimating competencies are Functional, managerial, technical and personnel. Their sub-factors were exposed to validity to find the lacking factor among all four factors. 360-degree feedback model is used to get ratings from peers, managers, as well as a self-evaluation by the employee themselves is gathered to summarize the competencies as

- Strengths
- Areas of improvement
- Hidden strengths
- Blind spots

ANALYSIS AND RESULTS

There were a total of 40 employees working in the logistics company chosen for the study. A brief profile of the respondents (Role wise and Team wise) is shown in the following Table1

Table 1 Profile of the Respondents

Particulars	Job Profile	No. of Employees
Teams	Business Analytics	4
	CM	2
	Data Analytics	3
	Data Management	12
	Information Technology	19
	Total	40
Role	Executive	3
	Manager	4

	Team Lead	6
	Team Member	19
	Trainee	8
	Total	40

To create skill matrices H.R and managers were mentioned to delineate the required skills and competencies needed for a project. These skills are then tabulated (Table 2& Table 3) in the skill matrix for an assessment process. Skills considered for the assessment were carrying 5 points

each. To evaluate an employee's current skill levels 360-degree feedback survey on various competencies was conducted and the average ratings for each competency were calculated to analyse the individual level and group level gaps.

Table 2 Competency Skill Matrix related to Job

Functional Competency	Skills	Trainee	Team Member	Team Lead	Manager	Executive
1	Written & Verbal Communication	4	5	5	5	NA
2	Knowledge About Business	3	4	5	5	NA
3	Data Management	2	3	5	5	NA
4	Analytical skills	4	5	5	5	NA
Managerial Competency	Skills	Trainee	Team Member	Team Lead	Manager	Executive
5	Project Management	1	2	5	5	4
6	Client Service	2	3	4	4	5
7	Meeting Effectiveness	3	5	5	5	5
8	Cross Functional Prespective	3	4	5	4	3
9	Business Process Design	1	2	5	4	5
Technical Competency	Skills	Trainee	Team Member	Team Lead	Manager	Executive
10	Microsoft Office Suite	4	5	5	4	4
11	SQL Studio	4	5	5	5	4
12	Visual Studio	2	4	4	4	4
13	TMS	3	4	5	5	5
14	Web page development Tools & Methods	2	3	5	4	3
15	Programming Language	3	4	4	5	4

Proficiency Levels:

1 – Having no knowledge

- 2 - Should have basic knowledge
- 3 - Should do with support
- 4- Should have knowledge & do independently

- 5 - Should be good in theory and practical and can train

Table 3 Personal Competency Skill Matrix

Personnel Competency	Skills	Trainee	Team Member	Team Lead	Manager	Executive
16	Target Achieved	2	3	3	5	5
17	Time Management	2	3	4	4	4
18	Leave	5	3	2	3	2
19	Team Working & Interpersonal Effectiveness	3	4	5	4	5
20	Transparency & Integrity	5	4	3	5	5

Proficiency Levels:

- 1 - No need to meet expectation level
- 2 - Need to Meet expectations sometime
- 3 - Must Meet expectations
- 4 - Exceed expectation most of the time
- 5 - Always exceed expectations

The skill gap is identified by find the difference between weightage of skills in the skill matrix and the average rating of

the individual employee. The final score is clustered on the following basis.

- 1. 1 - No knowledge gap
- 2. 2 to 5 Small to high knowledge gap (5 being the highest)
- 3. -2 to -5 Knows more than they need to know

The expected and actual competency score for each role is given in Table 4 and Table 5 respectively.

Table 4 Expected Competency Score

S.No	Competencies	Trainee	Team Member	Team Lead	Manager	Executive
1	Functional Competency	3.250	4.250	5.000	5.000	NA
2	Managerial Competency	2.000	3.200	4.800	4.400	4.400
3	Technical Competency	3.000	4.167	4.667	4.500	4.000
4	Personal Competency	3.400	3.400	3.400	4.200	4.200

Table 5 Actual Competency Score

S.No	Competencies	Trainee	Team Member	Team Lead	Manager	Executive
1	Functional Competency	1.938	3.658	4.208	4.438	NA
2	Managerial Competency	1.175	3.316	4.033	4.250	5.000
3	Technical Competency	1.458	2.895	3.361	4.583	4.667
4	Personal Competency	1.575	2.979	3.033	3.350	4.200

Based on the expected and actual value obtained from the study, the skill gap in each role and each competency is identified by subtracting the actual score

from the expected score of the skill values. The below table (Table 6) depicts the final score of the skill gap.

Table 6 Skill Gap Matrix

S.No	Competencies	Trainee	Team Member	Team Lead	Manager	Executive
1	Functional Competency	1.313	0.592	0.792	0.563	NA
2	Managerial Competency	0.825	-0.116	0.767	0.150	-0.600
3	Technical Competency	1.542	1.272	1.306	-0.083	-0.667
4	Personal Competency	1.825	0.421	0.367	0.850	0.000

The skill gap range has been calculated as below:

- Less than or Equal to 0 – No Skill Gap
- From 0.100 to 0.330 – Low Skill Gap
- From 0.340 to 1.330 – Medium Skill Gap
- Above 1.330 – High Skill Gap

With the above calculations, when we replace the values with Low / Medium /

High / No Skill Gap, the Table 7 is formed. From this table, we can infer that Trainees need definite training related to Technical and Personal Competencies. Employees who play the job role of Team member and Team Lead, require minimal training in all the competencies. Managers require minimal training in Functional and Personal Competencies and Executives require no training.

Table 7 Skill Gap Matrix with Indications

S.No	Competencies	Trainee	Team Member	Team Lead	Manager	Executive
1	Functional Competency	Medium	Medium	Medium	Medium	NA
2	Managerial Competency	Low	None	Medium	Low	None
3	Technical Competency	High	Medium	Medium	None	None
4	Personal Competency	High	Medium	Medium	Medium	None

FINDINGS

On the basis of results obtained from skill gap analysis, we can find that the company need to focus on managerial and

technical competencies. Summary for number of employees require training is shown in Table 8 below

Table 8 Summary of Competency Mapping Result

Competencies	Functional Competency	Managerial Competency	Technical Competency	Personal Competency
No. of employees with High Knowledge Gap	5	11	16	7
No. of employees with Low Knowledge Gap	7	8	3	4
No. of employees with Medium Knowledge Gap	9	10	6	26
No. of employees with No Knowledge Gap	19	11	15	3
No. of employees Require Training	14	21	30	7

From the above table, we can say that 7 employees need training in personnel competency. Employees lack in team transparency & integrity and also in achieving the targets but meet the expectation level in availing for leave and managing the time in given tasks. Out of all four competencies, the number of employees with a medium knowledge gap is high in personnel competency. 14 employees are in need of training in functional competency. Most employees

are lack in data management and analytical skills. 19 out of 40 employees acquire high knowledge in the functional area.

The company needs to focus on managerial competency since 11 employees from different designations are lack managerial skills. Out of 40, only 8 employees gathered knowledge in managerial skills. Technical competency becomes a big issue since more than half the number of employees are lacking technical skills and only three employees

have met the standards which is a negative sign.

All the departments must conduct training program to enhance the cross functional skills since some employees seeks for more functional skills to gain additional knowledge and by this, employees can able to improve their interpersonal skills. Career development plan is essential for employees to developing themselves in both personally and professionally. These plan assist employees to meet the career goals. Personal counselling sessions have to conduct to advise the employee on work related activities like discussing about the skills required for the job, time management and other factors which are important to meet the organization effectiveness.

This session helps employers to know about employee's needs and wants and also enhances the relationship between the employer and employee. The major role of HR department is to motivate employees and encourage them to do better than their existing level of performance. Analysing the training needs and giving adequate training will help the employees to perform well.

CONCLUSION

The purpose of this study is to analyse the skills required by the employees in the logistics company and to identify the knowledge gap. From the research, it is known that the most significant competencies for the logistics company are managerial, technical, functional and personnel competencies. All four competencies have a major impact on organization effectiveness. From the study, it is understood that all employees have

good functional knowledge. The skill gap is present in technical and personnel competencies. Competency mapping is an efficient tool to understand the Training Needs and to evaluate the performances accordingly. This study concludes that skill matrix and skill mapping analysis would be useful for the human resource department in designing the Training Need Analysis. This is suitable for both micro and large organizations.

LIMITATIONS OF THE STUDY AND FUTURE SCOPE

Since the study has been carried out in a particular logistic company who are the working for overseas clients, the study may vary for other logistics companies working across various regions. The competency analysis requires a greater number of employees but this study was restricted to 40 employees. Since competency mapping is carried out for the first time in this company, there is a chance for missing skill sets.

The future scope of the study can be opened up by exploring skill sets for companies of various sectors working with domestic and foreign clients. Some behavioural aspects of the employees can also be included in the future study.

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