A Study on Competency Analysis of Employees in Information Technology Sector

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Abstract

Competency is the ability of an individual to do a job effectively. Competency analysis serves as a pivotal tool for identifying, assessing, and developing the skills, knowledge, and abilities essential for effective job performance. Competency analysis helps in identifying the gaps, if any, between job demands and individual competencies. Organizations can then intervene through effective training solutions for improving organizational performance. The study aims to identify the competencies required of employees in organization and identify gaps. Competency analysis is a multifaceted approach utilized within organizations not only for performance management and conflict resolution but also for tailoring training programs for each employee. It involves identifying specific competencies that influence employee performance and collecting primary data based on these factors to inform decision-making. Its applications extend to recruitment, training, development, and overall performance enhancement, making it an essential tool for both individuals and organizations aiming to optimize performance and attain their objectives.

Keywords: Competency, Competency Gap, Competency Framework, Competency Analysis, Competency Models, Employee Performance

Introduction

Competency analysis is a crucial process for organizations and employees to evaluate their skills, knowledge, and abilities in order to perform the specific role or job and that helps to identify the critical competencies required for the successful performance in a particular role and assesses the employee's proficiency in those competencies which identifies the areas for improvement or development of an employees as well as the organizational performance.

Competency analysis is used in various contexts, such as recruitment, performance management, career development, and training and development. In recruitment, competency analysis is used to identify the key competencies required for a job and assess candidates' suitability for the role. In performance management, competency analysis helps to evaluate an employee's performance based on the required competencies, set performance objectives, and identifies areas for improvement. In career development, competency analysis helps employees to identify their strengths and weaknesses and create development plans to improve their competency levels. In training and development, competency analysis helps to diagnose

the skills and knowledge essential to perform a job effectively and create training programs to develop those competencies.

Objective

1. To identify the key competencies required for job success and to evaluate how well employees are meeting those competencies.
2. To identify the communication skill competencies required for the job role
3. To assess employees' performance against those problem – solving skill competencies
4. To develop Technical skill competencies that is in needs for the role of job
5. To bring the diverse group of people together towards common goal

Methodology

Research Methodology is a way to solve the research problem in a systematic way. This is used for the study of competency analysis as an effective tool for HR and includes the procedure and techniques used to perform the research as well as various terminology and explanation of how these methods will be applied effectively for the enhancement of the employees.

This is a descriptive and quantitative research. Data was collected using structured questionnaires. The study was conducted in Chennai of Tamil Nadu over a period of three months. The constructs taken for study include various major competencies like communication, Problem-solving, Leadership, Technical and Teamwork skills. The censuses for this study are frontline employees in well-organized organizations. Stratified Random sampling was used. The questionnaire was distributed to total of 100 front- line employees in these companies, out of which 88 valid responses were received.

This study adopts a research method in view of the objectives and the focus of the study. It is a descriptive type of research. This research design deals with describing the characteristics of a particular individual or of groups.

Developing the Questionnaire

Surveys have been conducted to collect quantitative data from customers of banks that use telemarketing as a sales strategy. The surveys have been conducted online using google forms. The chosen mode of data collection should be appropriate for the research question and provide reliable and valid data. It is also important to ensure that the chosen mode of data collection does not introduce bias or influence the responses of the participants.

Data Analysis

Analyzing data using statistical software (SPSS) to calculate frequencies, percentages, and correlations.

Integration and Reporting

- Integrating findings from analysis to draw comprehensive conclusions.
- Discussing implications and proposing recommendations for future research or action.

Literature Review

Dubois, David D (1993) in his book focuses on actual practitioner's experiences, summaries a systematic approach for organization change to improving individual worker's performance as part of an overall strategy. Outlines are given to conceptualize and implement exemplary training practices. A model for creating competency based performance improvement in organizations was developed in the book.

Needs analysis, assessment, and planning in a competency-based format and the concepts and methods for developing competency models are also well explained. The writer creates a competency based curriculum plan; designing and developing competency-based learning interventions; tracking the performance of the subsystems; competency-based training for Tektronix, Inc., The managers-of managers program, competency-based leadership development at the Defense Mapping Intervention and competency based management development for superiors at the New England Telephone Company. Twenty-six figures are also included. Bernard Marr, Giovanni Schiuma, and Andy neely (2004) highlighted the importance of visual representations in order to understand how organizational resources are intangible assets and intellectual capital is used to create value.

The paper provides a classification of organizational value drivers. It also highlighted the shortcomings in the strategy map method which is based on balanced scorecard. The paper introduced the value creation map which utilized both direct and indirect dependences to measure value creation. This approach suggested the strategy map method by covering its view of value creation from both direct and indirect dependencies. The paper also presented a case study on value creation map that was applied to comprehend the new product development process in a leading furniture manufacturing firm. The Romans practiced competency profiling to detail the qualities of a "good Roman Soldier". David McClelland (1973) introduced competency mapping into the Human resource area to support the United States Information Agency to improve its selection criteria. In the research he found that competencies such as interpersonal sensitivity, cross cultural differences and management skills distinguished superiors from average information officers.

Talent Management is a business process that systematically ends the gap between the talent an organization processes and the talent it requires to effectively respond to current and emerging business challenges. (Wellins Richard. S, et.al. 2006) Mily Velayudhan, T. K. (2011) explains that competency mapping in any industry is not complicated as it may appear to be. The essence of achievement in any endeavor is competency—skills and attributes that lead to high performance. In India's software industry, employees who excel and demonstrate superior competencies remain highly sought after, advancing in their careers. As organizations strive to remain competitive, they invest in developing their workforce's competencies. This study has gathered data from 195 software employees to analyze and understand the competencies that drive success in this sector.

Where in 145 employees where from Cognizant Technology Solutions (CTS) and the rest 150 respondents were form Hindustan Technology Limited (HCL) and their competencies where studied in depth to bridge the gap of the missing competency which help the employees to outshine in the organization to achieve the goal. Lucian Cernusca, Cristina Dima (2008 explains how competency is linked to performance and an individual's career development. They also looked into some models of competency mapping and tools for appraisal in performance management. A business may possess extremely talented human resources, but they may not work on the positions that suit them. This is where competency mapping and appraisal tools help experts in the field of HR. Vukica Jovanovic, Mileta Tomovic (2008) says that due to new challenges in the global working environment the product design and realization process are changing constantly. Highly effecient employees are required by companies who are competitive.

Data Interpretation

One Way ANOVA

One Way ANOVA for Variables Age And Problem – Solving Skills Towards Competency Analysis

Null Hypothesis

Ho: There is no significant relationship between age and problem – solving skills competency

Alternative Hypothesis

H1: There is significant relationship between age and problem – solving skills competency

Table 4.2.2 shows the relationship between Age and Problem – solving skill competency

Anova					
Problem – Solving Skills					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	121.993	2	60.997	4.919	.010
Within Groups	1053.962	85	12.400		
Total	1175.955	87			

Interpretation

From the above One way ANOVA test, it is inferred that the calculated P-value is lesser than the significant value i.e. 0.606 > 0.051. Thus, the null hypothesis (H0) is rejected at 5% significance level. Hence, there is no significant relationship between age and Problem – solving skill competency

One Way ANOVA for Variables Martial Status and Leadership Skills Towards Competency Analysis

Null Hypothesis

Ho: There is no significant relationship between qualification and Leadership skills competency

Alternative Hypothesis

H1: There is significant relationship between qualification and leadership skills competency

Table 4.2.2 shows the relationship between qualification and Leadership skill competency

Anova					
Leadership skill					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7.721	1	7.721	.521	.472
Within Groups	1273.733	86	14.811		
Total	1281.455	87			

Interpretation

From the above One way ANOVA test, it is inferred that the calculated P-value is lesser than the significant value i.e. 0.606 > 0.051. Thus, the null hypothesis (H0) is accepted at 5% significance level. Hence, there is no significant relationship between qualification and Leadership skill competency

One Way ANOVA for Variables Qualification and Teamwork Skills Towards Competency Analysis

Null Hypothesis

Ho: There is no significant relationship between Qualification and Teamwork skills competency

Alternative Hypothesis

H1: There is significant relationship between Qualification and Teamwork skills competency

Table 4.2.2 shows the relationship between Qualification and Teamwork skill competency

Anova					
Teamwork					
	Sum Of Squares	Df	Mean Square	F	Sig.
Between Groups	136.558	3	45.519	3.284	.025
Within Groups	1164.340	84	13.861		
Total	1300.898	87			

Interpretation

From the above One way ANOVA test, it is inferred that the calculated P-value is lesser than the significant value i.e. 0.606 > 0.051. Thus, the null hypothesis (H0) is rejected at 5% significance level. Hence, there is no significant relationship between Qualification and Teamwork skill competency

One Way ANOVA for Variables Experience and Techincal Skills Towards Competency Analysis

Null Hypothesis

Ho: There is no significant relationship between experience and Technical skills competency

Alternative Hypothesis

H1: There is significant relationship between experience and Technical skills competency

Table 4.2.2 shows the relationship between experience and Technical skill competency

Anova					
Teamwork					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	131.867	4	32.967	2.443	.053
Within Groups	1120.213	83	13.497		
Total	1252.080	87			

Interpretation

From the above One way ANOVA test, it is inferred that the calculated P-value is lesser than the significant value i.e. 0.606 > 0.051. Thus, the null hypothesis (H0) is accepted at 5% significance level. Hence, there is no significant relationship between experience and Technical skill competenc

Correlation

Correlations						
		Communication	Leadership	Problem Solving	Technical	Teamwork
Communication	Pearson Correlation	1	.697**	.772**	.650**	.786**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	--	88	88	88	88
Leadership	Pearson Correlation	--	1	.790**	.671**	.795**
	Sig. (2-tailed)	--		.000	.000	.000
	N	--	-	88	88	88

Problem - solving	Pearson Correlation	--	-	1	.712**	.809**
	Sig. (2-tailed)	--	-		.000	.000
	N	--	-	--	88	88
Technical	Pearson Correlation	--	-	--	1	.707**
	Sig. (2-tailed)	--	-	--		.000
	N	--	-	--	-	88
Teamwork	Pearson Correlation	--	-	--	-	1
	Sig. (2-tailed)	--	-	--	-	
	N	--	-	--	-	-
**. Correlation is significant at the 0.01 level (2-tailed).						

Interpretation

Here the Linear Pearson Correlation tool has been used for the variables communication, problem – solving, leadership, Technical, and Teamwork .The above Table Represents the Pearson coefficient correlation between the independent and dependent variables.

Among discussed above variables, correlation between the communication and Teamwork skills has been observed that the coefficient of correlation for communication and Teamwork is 786 which is very high positively correlated.

Following this, the correlation between the communication and Technical skills has been observed that the coefficient of correlation for communication and Technical skills is 650 which is very low positively correlated.

Among discussed above variables, correlation between the leadership and Teamwork skills has been observed that the coefficient of correlation for communication and Teamwork is 795 which is very high positively correlated.

Following this, the correlation between the leadership and Technical skills has been observed that the coefficient of correlation for communication and Technical skills is 671 which is very low positively correlated.

Among discussed above variables, correlation between the problem - solving and Teamwork skills has been observed that the coefficient of correlation for communication and Teamwork is 809 which is very high positively correlated.

Following this, the correlation between the problem – solving and Technical skills has been observed that the coefficient of correlation for communication and Technical skills is 712 which is very low positively correlated.

Findings

Competency is a bunch of related learning, abilities, and states of mind that influences a noteworthy an aspect of one's responsibilities (a part of duty), that connected with execution at work, that can be estimated against all around acknowledged measures, and that can be enhanced by means of preparing and advancement. The perception towards Competency analysis of employees' working in Information Technology at Chennai was done, taking 5 dimensions namely, commination, Problem Solving, Leadership Quality, technical and Teamwork.

- Competency-based assessments can identify skill gaps: Competency-based assessments can help identify skill gaps among employees and inform training and development initiatives. These assessments can also help organizations identify high- potential employees and create career development plans to support their growth and advancement.
- Competency-based assessments are designed to evaluate an employee's proficiency in specific skills and competencies required for their job. By conducting these assessments, organizations can identify areas where employees are lacking in skills and competencies and then create training and development initiatives to address these gaps. This approach allows organizations to provide targeted training to employees, which can improve their job performance and productivity.
- Additionally, competency-based assessments can also help identify high-potential employees who may be capable of taking on more challenging roles within the organization. By identifying these employees, organizations can create career development plans and provide opportunities for these employees to grow and advance within the organization. This can lead to higher employee engagement and retention, as employees are more likely to stay with an organization that supports their career development and provides opportunities for growth.

Suggestions

- It is suggested that the demographics of the employee have significant influence, which have similarities in the present study and the referred studies with regards to the level of performances that needed to be addressed immediately by the management by way of improving Adaptability, Problem solving and Productivity.
- The competency analysis should be aligned with the organization's overall strategic goals and objectives. This will ensure that the competencies being evaluated are directly relevant to the organization's success.
- Conducting a job analysis to determine the essential competencies for each role within an organization involves investigating the tasks and responsibilities associated with a job. This process typically includes examining job descriptions, observing the actual performance of job duties, and soliciting feedback from both employees and their managers.
- Following the job analysis, the collected information should be used to create a competency framework. This framework should list the competencies needed for each job role, ensuring they are defined in a clear, quantifiable manner and are aligned with the company's strategic goals and mission. Such a framework aids in consistent performance evaluation and helps in guiding training and development efforts.
- Use competency assessments to evaluate employees' proficiency in the key competencies identified in the framework. This can involve a combination of methods, such as self-assessments, supervisor assessments, and performance evaluations.
- Analyse the results of the competency assessments to identify skill gaps and high- potential employees. This information can be used to inform training and development initiatives and create career development plans for employees.
- Competencies required for success in a job role may change over time due to changes in the organization, the industry, or technology. Therefore, it is important to continuously review and update the competency framework to ensure that it remains relevant and aligned with the organization's goals and objectives.
- Overall, conducting a competency analysis of employees requires a structured approach that is aligned with the organization's goals and objectives. By using this approach, organizations can identify skill gaps, support employee development, and improve their overall organizational effectiveness.

Conclusion

The success of every organization depends on its employees. Therefore the most important thing is their satisfaction and this can be achieved only if there exists a proper quality of HRD. The researcher had undertaken the study the perception of the employees towards competency mapping. This study will provide information about the views and thoughts that the employees possess about competency mapping and helps in giving special attention to those areas were the needs have not been fulfilled which in turn will help in the overall development of the organization. The study analysed taking the all categories of employees, their needs and job roles has been found challenging every day. In order to improve their level of competence their leadership quality towards planning to achieve the productivity to maintain the required competence levels has been tested to find out the area needed to be strengthened with all the factors such as Adaptability, Initiative, Judgement, Problem Solving, Planning and Organization, Leadership Quality, Productivity and Use of Technology. Initiative, Judgement, Planning and Organization and Problem Solving ability based on the perception of the respondents have influenced significantly. All these aspects are analysed and the survey discovers the weak areas such as Adaptability, Problem solving and Productivity that needs to be strengthened according to the situation existing in The study

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