

DETERMINANTS OF COMPETENCIES ON PERFORMANCE OUTCOMES: ANALYZING INSTITUTES LISTED IN THE DIRECTORY OF RESEARCH & DEVELOPMENT, INDIA

RAJINI. G ¹ AND VAISHNAVI S ²

¹Principal Investigator-DST Project , Director of Industry Collaborations and MOUs , Professor/HOD MBA, Vels Institute of Science, Technology & Advanced Studies, Pallavaram, Chennai - 6000117, India.

Email: rajini.sms@velsuniv.ac.in, dr.rajini.g@gmail.com

² Research Scholar and Project Assistant -DST, Vels Institute of Science, Technology & Advanced Studies, Pallavaram, Chennai, India

Email: Vaishnavi290988@gmail.com

Abstract: Employee competency is an essential criterion of Human resources, particularly in Research and Development (R&D) based organizations. The capability of an individual is replicated in such critical places, resulting in performance outcomes that can be measured from financial, structural, business, human capital, and relationship perspective.

The competencies are grouped under five significant heads called core, professional, management, operational, and expert competencies. A structured questionnaire was developed and formally mailed to the Institutes listed in the Directory of R&D, India, chosen by stratified simple random sampling method. The structural equation model showcases the implications of acquisition, selection process, reliability of selection tests, and H.R. Policies as the determinants leading to some significant performance outcomes. AMOS 21 is used for the structural equation model.

The employee hiring strategy, selection procedure, predictive ability of selection tests, organizational Human Resource (H.R.) policy, and employee competencies contribute to the performance outcomes of the research and development institutions of India.

The competencies measured during the selection process should be exhibited by the R & D professions in the organization. The efficiency of R&D Institutes is boosted by adopting the competency-based selection process. The managers can develop a competency dictionary for the firm, which leads to attaining the institution's objectives and results in outreached performance.

Keywords: Competency, Hiring and Selection Process, H.R. Policy, Selection tests, Research and Development Institutes

TABLE OF CONTENTS

- 1. Introduction
 - 1.1 Performance Outcomes of the Research and Development Institutions
 - 1.2 Research Questions
 - 1.3 Objectives of the Study
- 2. Review of the Literature
- 3. Sample Profile and Research Instrument
 - 3.1 Research Design
 - 3.2 Sampling Technique
 - 3.3 Survey Tool
 - 3.4 Ethical Considerations
 - 3.5 Data Collection methods
 - 3.6 Tools for Data Analysis
- 4. Data Analysis and Interpretation
 - 4.1 Path Analysis for the Performance Outcomes



- 5. Findings and Discussions
- 6. Managerial Implications
- 7. Conclusion

1. INTRODUCTION

Competency is a crucial phenomenon of human resources, which is essential for an organization to identify an individual's requisite skills, knowledge, and ability. Those competencies have a role in individual performance as well as organizational performance. Research and development inculcate the activities such as innovation and introducing new commodities and services. It is in the initial development process. Research and development aim to market new products and services. Being in the Government, research, and development sector has the goal of developing the nation and helping to boost the economic activity of the country. Research and development allow the organization to exist in the competitive market (Will Kenton, 2022). Innovation and invention are the primary activity of research and development. Innovation and invention can be done by human resources, the human mind, and artificial intelligence today. The human resources' knowledge, ability, and skill are crucial in the performance.

1.1 PERFROMANCE OUTCOMES OF THE RESEARCH AND DEVELOPMENT INSTITUTIONS

The performance of the research and development is measured under different perspectives such as business, financial, relationship, human capital, and structural aspects. The number of projects and the representation of those projects, expansion of business activities, publications, and patents are the performance measures of the research and development institutions. These performance outcomes depend on factors such as organizational environment, resources, human capacity, etc. Human capability is measured through selection tests and interview methods. The organization must frame the best recruitment strategy, selection procedure, and organizational human resource policy, which facilitate the work outcomes of the organization. The predictive capability of the selection tests, which predicts the employee capability, also helps the human resource manager to identify the competent personality which fits in the organization to work. Thus, it implies that factors such as employee hiring strategy, selection procedure, predictive ability, organizational human resource policy, and employee competencies contribute to the organization's performance outcomes.

1.2 RESEARCH QUESTIONS

Whether the organizational hiring strategy, employee selection methods, predictive ability of selection tests, corporate H.R. policy, and employee competencies influence the performance result of the organization.

1.3 OBJECTIVES OF THE STUDY

To analyze the employee hiring strategy, selection methods, predictive ability, organizational H.R. policy, and employee competencies influencing performance outcomes.

2. REVIEW OF LITERATURE

In his book, Robert Edenborough (2005) stated that the collection of procedures that results in selecting one or more candidates above others for one or more roles or occupations could be referred to as selection. Assessment is the use of organized procedures to comprehend how well people or organizations are performing, either now or in the foreseeable. According to him, performance is "a systematic and integrated approach to generating constant success for firms by optimizing the performance of their employees and strengthening the competencies of both teams and individual contributors."

Further, he stated that Different techniques could be used to describe competencies. Sometimes they result in stringent regulations that may only apply to a specific job or class. As a result, guidelines

like "must be able to plan suitable guidelines for the consideration of directors of ancillary firms" can be found. Other times, their roots in behaviour are more prominent.

Even though evaluating competencies might be challenging, hiring managers should be trained to do so to make good hiring decisions. One of the most important truths to take away from this is that past conduct is the strongest predictor of future performance. The goal of competency-based interview questions is to elicit a response from the applicant; they are open-ended and invite a description of a real challenge the applicant has undergone and how they overcame it. An experienced hiring manager can easily distinguish between a rehearsed response and an honest one.

Sunil Subhash Patil (2010) in his article he stated that competency is an immense criterion of every industry that has boosted the work performance of the individual and will contribute to the organizational work outcomes. If an individual is to be considered competent, they must also possess the mechanisms of the work that are necessary for them to accomplish it efficiently.

Neeraj Kumari (2012) suggested that the company's H.R. policy on hiring and selection strategy influences the selection of the right candidate for a suitable position. The selection procedure that the organization follows has a vital role in identifying the applicant's ability, knowledge, and skill, which are essential for the job. Acquiring a talented employee is the critical factor determining the organization's work performance and helps it evaluate its outcomes. Further in her study, she argued that the identification of the best candidate is in the hand of the human resource department. Thus, her study concludes that the hiring strategy and the selection procedure influence performance of the organization.

Vijay Anand V et.al. (2018) in their studies found that the recruitment policy and selection procedure have a vital role on determining the firm's outcomes. Adapting the latest selection methods will help the organization find the talented candidate who fits into the appropriate position to enhance the performance outcomes. Adopting the best hiring strategy and selection procedure will help the organization find a competent person to work in company like Tata Consultancy Services .

In her article, Shruti Verma (2018) suggested that the secret of crafting by examining competency approach questions is to appropriately analyze the responses and align them with the role's requirements. Questions that stimulate reflection and probing are frequently employed to understand a candidate and evaluate whether they are a good fit. Further, she stated that identifying competencies through selection tests and processes helps the organization find the person who will fit into the organization, enhancing the organization's outcomes.

In their study, Abdullah Karimi et. al., (2018) found that the outcomes demonstrated that focusing on competency is the most crucial factor in the competency approach to hiring. The ability to recognize an applicant's skills and abilities, the ability to forecast an applicant's work which leads to the accomplishment of goals, the presence of precise job analysis, and other characteristics are all examples of competencies in banking. This result shows how the company of competencies significantly impacts the recruitment of competent workers and their entry into a business. Given that the primary activity of the banking and financial sectors is service, this element is particularly significant for them. Therefore, if the banks want to compete in Iran eventually, they must first recruit the most incredible talent and endeavour to enhance their human management practices.

It is advised that precise standards be established that are appropriate for each position and that each applicant be judged following those standards. Paying attention to capabilities is crucial in the hiring process. Competencies are the Centre of the company's activities, including personnel management workings; therefore, ignoring them during recruitment will make it harder for the business to achieve its goals, including succession planning. The primary purpose of this study was to create a framework for competency-based employee recruiting and assess its contribution to succession

management setup. Paying attention to ethics when hiring new personnel is another crucial consideration.

The crucial components in this criterion include coordination between recruitment and selection strategies and other workforce strategies paying attention to how individual and organizational ideals align, the integrity of recruitment criteria, provision of a platform for employee growth and promotion, and others. The outcomes showed that integrity is the second crucial factor. The findings show that upholding organizational justice is essential for all exceptionally talented employees. Recruitment criteria that are appropriate and capable of allaying employees' worries, especially the talented ones, can significantly increase employee performance.

It is advised to banks that they promote meritocracy and observe justice to motivate their staff members. They will feel more valued, which will increase their motivation at work. As a result of the findings, it is asserted that Bank Saderat Iran requires proper guidelines for realizing elements connected to the competency hiring approach. This bank must consider its abilities, prospects, honesty, fairness, and adaptability. Finally, it is noted that more research needs to be done in Iran on competency-based hiring practices, with earlier studies focusing on recruitment techniques. Figure 1 is the conceptual framework for determinants of performance outcomes

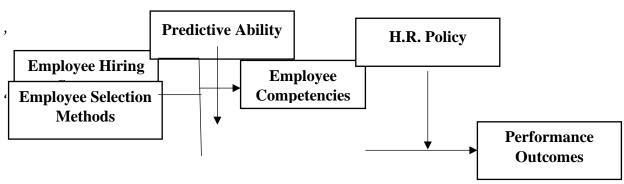


Figure 1 CONCEPTUAL FRAMEWORK

3. SAMPLE PROFILE AND RESEARCH INSTRUMENT

3.1 RESEARCH DESIGN

The researcher used a descriptive research approach to conduct this study, outlining the variables that affect the organization's performance outcomes. The influence on other variables explains the variables used in this study.

3.2 SAMPLING TECHNIQUE

The samples are collected from the finite population of 7888 research and development institutions of India, Directory of research and development institutions of India. The stratified sampling method is adopted randomly from this limited population, and the samples are collected from about 413. This sample includes central, state, higher education, and private sectors of research and development institutions in India. These research and development institutions are stratified based on the form. Among them, the mentioned samples were selected, and the data was collected.

3.3 SURVEY TOOL

The questionnaire is used as a survey tool for data gathering. The closed-ended questionnaire is used to gather the information as primary data collection. The questionnaire comprises six constructs. Employee hiring strategy, employee selection procedure, the predictive ability of selection tests,

organizational H.R. policy, employee competencies with sub-constructs of core, professional, management, operational, and expert competencies, and performance outcomes include five sub-constructs such as financial, structural, business, human capital and relationship perspective of performance outcomes.

3.4 ETHICAL CONSIDERATIONS

The proposal was presented before the Institutional Ethical Committee of Vels Institute of Science Technology and Advanced Studies, Pallavaram, Chennai. The committee reviewed the instrument and gave the ethical clearance certificate to carry out the study further. The clearance certificate number is VISTAS - SPS/IEC/I/2022/08.

3.5 DATA COLLECTION METHODS

For this study, both fundamental and secondary data are gathered. The elementary data was collected by circulating the questionnaires, and the secondary data came from publications, journals, and online resources. The questionnaire was posted through Google forms to the respective emails, and online mode of data was collected. Some data was collected offline by circulating the questionnaire through a direct visit to the organizations.

3.6 TOOLS FOR DATA ANALYSES

The gathered information is analyzed in AMOS version 22, and the results are interpreted by the structural equation modelling method.

4. DATA ANALYSIS AND INTERPRETATION

4.1 PATH ANALYSIS FOR THE PERFORMANCE OUTCOMES

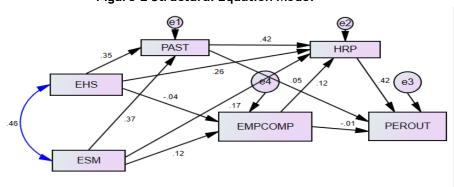


Figure 2 Structural Equation Model

Figure 2 depicts the SEM model describes the sample mean's accuracy as an estimate of the actual population means.

Table 1 Model Fit Indices for Performance Outcomes

INDICES	VALUES
Chi-square/df	3.359
P Value	0.018
GFI	0.992
AGFI	0.944
NFI	0.986
CFI	0.990
RMSEA	0.076

The above table 1 inferred that the variables influencing the performance outcomes indicate that the model is fit enough for further analysis. The output indicates that the chi-square/df is 3.359 < 5 (Mclver & Carmines, 1981), and Anwar (2018), the significant p-value is .018, which is lesser than .05 and the other indices such as GFI is 0.992, which is greater than 0.9, AGFI is 0.944 > 0.9, NFI is 0.986 > 0.9, CFI is 0.990 > 0.9 and RMSEA is 0.076 which is less than 0.08 are met the basic level of values. This indicates that the factors influencing the performance outcomes of the research and development institutions are fit enough to evaluate and proceed for further analysis. Finally, these variables significantly affect the performance outcomes of the research and development institutions.

Table 2 Estimates

Description		Estimate	S.E.	C.R.	Р	Label	
Predictive Ability	<	Employee Hiring Strategy	0.359	0.045	7.958	.000	Significant
Predictive Ability	<	Employee Selection Methods	0.403	0.047	8.503	.000	Significant
Employee Competencies	<	Employee Hiring Strategy	-0.076	0.097	-0.790	.430	Not Significant
Employee Competencies	<	Employee Selection Methods	0.220	0.102	2.162	.031	Significant
H.R. Policy	<	Predictive Ability	0.761	0.080	9.560	.000	Significant
H.R. Policy	<	Employee Hiring Strategy	0.490	0.078	6.251	.000	Significant
H.R. Policy	<	Employee Selection Methods	0.331	0.083	3.973	.000	Significant
H.R. Policy	<	Employee Competencies	0.131	0.037	3.531	.000	Significant
Performance Outcomes	<	Predictive Ability	0.060	0.070	0.862	.389	Not Significant
Performance Outcomes	<	Employee Competencies	-0.008	0.032	-0.260	.795	Not Significant
Performance Outcomes	<	H.R. Policy	0.275	0.039	7.102	.000	Significant

Table 2 interprets that the estimates of variables show significant influence on variables resulting here. The impact of employee hiring strategy on predictive ability, employee competencies, and organizational H.R. policy is .000, 0.430, 0.000, and 0.198. Which employee hiring strategy significantly influences predictive ability and corporate H.R. policy as their p values are less than the threshold value of 0.05. At the same time, employee hiring strategy does not significantly contribute to employee competencies as its p values are higher than 0.05.

The employee selection procedure influences predictive ability, employee competencies, and organizational H.R. policy as their values are .000, 0.031, and 0.000, which indicates that the influence of employee selection procedure is significant on predictive ability, employee competencies, and organizational H.R. policy shows their p values is less than 0.05.

The predictive ability of selection tests influences organizational H.R. policy as its significant value is .000, and performance outcomes show their considerable value as .389, more significant than .05, which is not substantial.

The employee competencies' influence on organizational H.R. policy is significant as its value is .000, which indicates that it is significantly less than .05. Performance outcomes do not show signs as its p-value is 0.795, more significant than 0.05. The organizational H.R. policy greatly influences performance outcomes as its p-value is .000, less than 0.05.

5. FINDINGS & DISCUSSIONS

The path analysis shows that the employee hiring strategy, selection procedure, predictive ability of selection tests, organizational H.R. policy, and employee competencies contribute to the performance outcomes of India's research and development institutions. Employee hiring strategy, the predictive ability of selection tests, employee selection procedure, and organizational H.R. policy have significantly influenced the institutions' performance outcomes. The employee competencies act as an intermediate role identified through various selection tests and interview methods, which are assessed to enhance individual and organizational performance.

The estimated values of employee hiring strategy and selection procedure significantly influence the predictive ability and organizational H.R. policy. The corporate H.R. policy significantly impacts the organization's performance outcomes as it implies that the administrative H.R. policy has a vital role in developing the hiring policy and selection policy of the organization as well as the remuneration and other policies which influences the performance of the organization.

The competencies may segregate under different heads as per the requirement of the organization and the industry. The competencies are a collection of other capabilities and skills grouped as core, professional, management, operational, and expert competencies and constitute employee competencies that have a vital role in performance. As research and development institutions have different sectors and domains of research needs, the typical employee competencies listed in the five heads may help the organization to increase its performance.

As stated by Abdoullah Karimi et.al (2018), the recruitment policy noted in the strategy and the selection procedure is highly important for the organization to select the competent person to fit the job positions. The organizational H.R. policy has a significant role in performance outcomes as these are the key factors that make the employee engage in work and increase performance. Clearly and precisely stated, H.R. policy in an organization will improvise the recruitment strategy and the selection procedure adding value to the performance outcome of the organization.

6. MANAGERIAL IMPLICATIONS

The predictors of performance outcomes are significant and indicate that the proper framework of hiring strategy, selection methods, organizational H.R. policy, and advantages of selection tools and competencies will lead to better research outcomes about meeting the performance standards. The selection team and the human resource professionals engaging in hiring and selection must develop and follow the best hiring and selection techniques to find the competent personality to work in their organization.

The employment tests and interview techniques adopted by the research and development institutions should help them pick the best talent for their firm and be the best selection tool for good performance.

The organizational H.R. policy should state that the requisite benefits, promotions, bonuses, rewards, and recognition will motivate the employee to exhibit their full potential in their job role leading to organizational success.

The organization's top management and selection committee can develop the competency dictionary based on their firm's needs to help them find the best candidate during selection and promotion. The competency dictionary helps the employee to develop themselves and work potentially.

7. CONCLUSION

Enterprises are developed on the 'human mind,' and human capital is one of the most valuable assets in any enterprise. (Vathanophas & Thaingam, 2007). Previous studies (e.g., Boyatzis, 1982; Spencer & Spencer, 1993) suggested that occupational performance has a causal relationship with attributes of employee competencies. Concerning the above context, it is strongly advised that competency enhancement and evaluation be employed as viable tools to control and increase human assets to build and sustain organizational competitiveness and overall performance. Because of the ever-changing corporate work environment and contexts, enhancing and checking the defined abilities for a particular job, a specific role where an organization needs to oversee personnel's overall performance is critical. Boyatzis (1982) and De Vos et al. (2015) are examples. Organizations can more strategically participate in training and development to strengthen the skills of individuals by using the generated competencies as guidelines or standards. Additionally, people may become more conscious of their strengths and weaknesses, which can help them manage their current career path or consider other possibilities. Since employment has changed, recommendations for a competency-based approach have been made because it is more different challenging to identify intangibles crucial to success at work than to define complex abilities (Rothwell & Kazanas, 2008).

The findings could indicate that employee competencies are significant for all management levels. The study's results can be successfully incorporated into H.R. strategies for raising employee productivity and balancing organizational-wide competencies and employee competencies. Finally, this research provided documentation of a procedure from data collection through validation that might be used as a template by other companies interested in creating their manual for effective performance.

COMPETING INTERESTS

The authors have declared that no competing interests exist.

ETHICAL CONSIDERATIONS

In compliance with Vels Institute of Science Technology and Advanced Studies VISTAS, Pallavaram, ethical clearance process, participation was voluntary, and no participants were persuaded or paid to participate (VISTAS - SPS/IEC/I/2022/08). This was achieved by providing the prospective participants with an informed consent document, which they had to complete and sign before participating in the interview.

The informed consent document stated the research overview, expectations from the participants, and the handling and use of the data collected. Participants were allowed to withdraw from the study at any given stage during the interview should they wish so. The researcher adhered to the statements in the informed consent document at all stages of the study.

FUNDING ACKNOWLEDGEMENT

Authors Acknowledge Department of Science and Technology, Government of India for financial support to the project titled, "Development and Evaluation of Gamification as a strategic Selection Tool for India's S&T based Sectors" Vide Reference No. DST/NSTMIS/05/297/2017-18 under National Science and Technology Management Information system (NSTMIS)



DISCLAIMER

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

REFERENCES

- [1] Abdoullah Karimi, Hadi Teimouri, Arash Shahin and Ali Shaemi Barzoki (2018), "Competency-based recruitment and managerial succession", Human Systems Management" 37, pp 411-423.
- [2] Anand Bhardwaj, Punia B.K. (2013). "Managerial Competencies and Their Influence on Managerial Performance: A Literature Review" International Journal of Advanced Research in Management and Social Sciences Vol. 2, No. 5, pp 70 84
- [3] Anna Sutton and Sara Watson (2013). "Can competencies at selection predict performance and development needs?" Journal of Management Development Vol. 32 No. 9, 2013 pp. 1023-1035
- [4] Choi Sang Longa and Wan Khairuzzaman Wan Ismail (2011). "An analysis of the relationship between H.R. professionals' competencies and firms' performance in Malaysia", The International Journal of Human Resource Management, Vol. 22, No. 5, March 2011, 1054-1068
- [5] Emmy van Esch, Li Qun Wei, and Flora F. T. Chiang (2018). "High-performance human resource practices and firm performance: the mediating role of employees' competencies and the moderating role of climate for creativity", The International Journal of Human Resource Management, 2018 VOL. 29, NO. 10, 1683-1708.
- [6] Fatin Fadhilah Hasib, Anis Eliyana, Desynta Rahmawati Gunawan, Muhammad Firdaus, Ayu Masuda (2020). "Boosting Employee Performance through Competency Development" Sys Rev Pharm 2020;11(11):1727-1738
- [7] Frank Nana Kweku Otoo (2018), "Human resource management (HRM) practices and organizational performance: The mediating role of employee competencies Employee Relations", The International Journal, Vol. 41 No. 5, 2019 pp. 949-
- [8] Frank Nana Kweku Otoo, Mridula Mishra (2018). "Influence of human resource development (HRD) practices on hotel industry's performance The role of employee competencies" European Journal of Training and Development Vol. 42 No. 7/8, 2018 pp. 435-454.
- [9] Hadi Arifin A, Hendra Raza, Jumadil Saputra, Anwar Puteh (2020), "The Influence of Recruitment and Career Development Towards Employee Performance: A Mediating Role of Competence" Talent Development & Excellence, Vol.12, No.1, 2020, 1040-1055
- [10]Halil Zaim Mehmet Fatih Yaşar Ömer Faruk Ünal (2013), Analyzing the Effects of Individual Competencies on Performance: A Field Study in Services Industries" Turkey Journal of Global Strategic Management, V. 7 N. 2, pp 67-77
- [11]Heffernan, Margaret M; Flood, Patrick C (2000), "An exploration of the relationships between the adoption of managerial competencies, organizational characteristics, human resource sophistication and performance in Irish organizations", Journal of European Industrial Training; Bradford Vol. 24, Iss. 2/3/4, 128-136.
- [12]Ida Ayu Oka Martini, I Ketut Rahyuda, Desak Ketut Sintaasih, Putu Saroyeni Piartrini (2018), "The Influence of Competency on Employee Performance through Organizational Commitment Dimension the International Organization of Scientific Research", Journal of Business and Management (IOSR-JBM) Volume 20, Issue 2, PP 29-37.
- [13]Kim, J.; Jung, H.S. (2022), "The Effect of Employee Competency and Organizational Culture on Employees' Perceived Stress for Better Workplace", Int. J. Environ. Res. Public Health 2022, Volume 19, 4428
- [14]Neeraj Kumari (2012), "A Study of the Recruitment and Selection process": SMC Global Industrial Engineering Letters Vol 2, No.1, 2012, pp 34 43

- [15]Nidhi Vashishth (2018), "Employable Competencies: A Research on Behavioral Competencies Which Impact Hiring Decision and Enable Performance at Workplace" AAYAM Journal of Management, Vol. 8 No. 1 Page 41-47.
- [16]Pamela J. Clay (2017), "The Role of Competencies in the OPM Hiring Process: Supporting Mission Outcomes", Armed Forces Comptroller is the property of American Society of Military. pp 18 21.
- [17]Reenu Mohan (2013), "Using Competency Models for Performance Management", International Monthly Refereed Journal of Research in Management & Technology, Volume II, pp 90 99
- [18]Riccardo Leoni (2012), "Workplace Design, Complementarities Among Work Practices, and the Formation of Key Competencies: Evidence", Fromitalian Employees Industrial and Labor Relations Review 65(2), 316 349
- [19]Rick T. Borst, Peter M. Kruyen, Christiaan J. Lako, and Michiel S. de Vries (2020), "The Attitudinal, Behavioral, and Performance Outcomes of Work Engagement: A Comparative Meta-Analysis Across the Public, Semi-public, and Private Sector", Review of Public Personnel Administration 2020, Vol. 40(4) 613-640
- [20]Robert Edenborough (2005), "Assessment Methods in Recruitment, Selection & Performance: A manager's guide to psychometric testing, interviews and assessment centres", Great Britain by Creative Print and Design (Wales), Ebbw Vale.
- [21]Satyendra (2020), https://www.ispatguru.com/role-of-employee-competency-on performance/#:~:text=Competencies%20enable%20the%20employees%20of,order%20to%20achieve%20or ganizational%20results.
- [22]Shruti Verma (2018), "How to Integrate Competency-Based Hiring in Recruitment: A guide to help Recruiters and Managers Hire Better Candidates Using Competency-Based Hiring Models."
- [23]Sulistiani Syafitri1, Nurwati, Sri Wiyati Mahrani (2021), "The Effect of Competence on Employee Performance through Organizational Citizenship Behavior as an Intervening Variable at P.T. PLN UPDK Kendari, International Journal of Management and Education in Human Development 2021, Issue 02 Volume 01, Pages: 94-101.
- [24]Sunil Subhash Patil (2010), "A Research Paper on A Competency Based Recruitment And Selection Model For Employees In Hospitality Sector"
- [25]Vijay Anand V, Shanthanlakshmi M, Uppili Srinivasan G, Arunkumar V, Icewarya G, Nandhu S, Monisa Kamatchi S (2018), "A Study on Effectiveness of Recruitment Organizational Support In IteS", International Journal of Pure and Applied Mathematics, Volume 119 No. 7 2018, 2755-2764.
- [26]Wahyu Purwo Jatmiko, Lalu Suparman, Hermanto (2021), "Organizational Commitment As A Moderating Variable (Study At The Office Of Education) and Culture of West Nusa Tenggara)", IJISET International Journal of Innovative Science, Engineering & Technology, Vol. 8 Issue 9, 2348 7968
- [27]Wong, S.C (2020), "Competency Definitions, Development and Assessment: A Brief Review", International Journal of Academic Research in Progressive Education and Development, 9(3), 95-114. [28]https://www.investopedia.com/terms/r/randd.asp