iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 13 **Issue:** VII **Month of publication:** July 2025

DOI: https://doi.org/10.22214/ijraset.2025.73176

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 13 Issue VII July 2025- Available at www.ijraset.com

Employee Skill Intensity Impact on Skill Development in Catchers Overseas

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Abstract: ***In today's dynamic and competitive industrial landscape, organizations are constantly seeking ways to enhance productivity, improve workforce capabilities, and maintain a competitive edge. One critical aspect that has gained attention in this regard is the relationship between skill intensity and skill development. In the context of the jute industry, understanding how varying levels of skill intensity influence skill development is particularly significant. Despite the growing body of research exploring workforce development, there remains a notable gap in understanding the specific impact of skill intensity on skill acquisition and enhancement in the jute sector. This study investigates the relationship between skill intensity and skill development, aiming to explore how different levels of job skill requirements influence the overall growth and advancement of employees' competencies. By examining the nature of tasks, the complexity of job roles, and the level of expertise required, this research seeks to provide insights into whether higher skill intensity fosters greater skill development or, conversely, creates challenges in skill acquisition.***

Keywords: Skill intensity, Skill Development, Jute industry, Workforce Training, Employee Competency, Mentorship, Self-Learning.

I. INTRODUCTION

This study investigates the relationship between skill intensity and skill development, aiming to explore how different levels of job skill requirements influence the overall growth and advancement of employees' competencies.

Furthermore, the study will examine the potential consequences of low skill intensity on employee growth and organizational outcomes. In industries where tasks are predominantly low- skilled, organizations may face challenges in upskilling their workforce, limiting opportunities for career progression and reducing overall productivity. On the other hand, in environments with high skill intensity, employees may experience greater learning opportunities, leading to enhanced expertise and career growth. The findings of this research will offer valuable insights for industry stakeholders, policymakers, and human resource professionals in the jute industry. By identifying the relationship between skill intensity and skill development, the study will contribute to the development of targeted training programs and policies that foster continuous learning and workforce growth. Through a combination of qualitative and quantitative analysis, this research will expand the existing body of knowledge on workforce development and provide actionable recommendations to optimize skill enhancement in the jute sector. By analysing employee experiences, job role complexities, and organizational training practices, the study will seek to determine whether skill intensity serves as a catalyst for skill development or if alternative factors play a more significant role.

II. STATEMENT OF THE PROBLEM

This study revolves the connection between skill intensity and skill development in the jute industry. While the sector relies heavily on manual labour and is undergoing modernization, there is a lack of clarity regarding how different levels of skill intensity affect workers' ability to develop new competencies. The absence of structured training programs and skill-building initiatives results in inefficiencies, reduced productivity, and limited career advancement opportunities for workers.

By examining these concerns, the study aims to generate valuable insights that can enhance workforce skill development and contribute to the long-term sustainability of the jute industry.

1) Which elements of skill intensity have the greatest impact on skill development in the jute industry?
2) How significantly does skill intensity affect skill development among workers in the jute sector?

III. OBJECTIVE OF THE STUDY

1) To assess how skill intensity influences the rate of skill development among employees in the Jute industry.
2) To understand how skill intensity influences the self-learning capacity of employees
3) To investigate whether employees with high skill intensity demonstrate high skill upgrades.

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IV. SCOPE OF THE STUDY

This study explores the influence of skill intensity on skill development among the workforce of Jute industry, a company operating in the jute industry. It aims to understand how different levels of skill intensity impact employee's capacity to acquire new skills, adapt to training programs, and improve their job performance. The research will examine the relationship between skill intensity and factors such as self-learning ability, skill enhancement, and the speed at which employees gain new competencies. Furthermore, the study will investigate the role of skill intensity in driving organizational productivity through effective skill development initiatives. It will also identify critical elements contributing to skill development, including training sessions, organizational support, and employee motivation. Based on these findings, the study will offer recommendations to optimize skill development strategies according to employees' skill intensity levels, ultimately assisting Jute industry in reducing skill gaps, improving workforce efficiency, and enhancing overall organizational performance.

V. LIMITATIONS

1) The study is done within the company, so it may not be applicable for other organizations.
2) This study covers only 250 respondents.

VI. RESEARCH METHODOLOGY

Research Methodology is a systematic process that aids in scientifically addressing and resolving a research problem. The methodology is structured to investigate whether variations in the intensity of job-related skills among employees correlate with differences in their overall skill development, and to identify underlying patterns and factors influencing this relationship.

A. Tools for data collection

- Primary Data: This was obtained through a carefully designed questionnaire, which was distributed to the company's employees to collect firsthand information.
- Secondary Data: This information was compiled from a range of sources, including publications, research reports, books, journals, and articles.

VII. TOOLS

Some of the statistical tools that are used with the help of SPSS as technique:

- Simple percentage analysis
- Rank analysis
- Correlation
- RegressionXZ
- Chi-square
- ANOVA

VIII. REVIEW OF LITERATURE

Kapoor & Malhotra (2025), studied the relationship between skill intensity and wage disparities in the jute sector. The findings indicate that specialized skills led to significant income differences. The study highlights the importance of skill-based pay structures to promote workforce equity.

Banerjee (2025), explored the impact of intergenerational skill transfer in jute weaving. The study found that experienced workers played a crucial role in preserving traditional techniques. The research emphasizes the need for structured mentorship programs to ensure skill continuity.

Nair & Menon (2025), assessed how automation influenced skill requirements in the jute industry. The study concluded that skilled workers were better equipped to transition into automated systems. The findings suggest integrating automation training into traditional skill development frameworks.

Nandi & Basu (2025), studied the role of industry-academia partnerships in advancing skill development for jute workers. The study found that collaborations between educational institutions and jute manufacturers resulted in the creation of tailored skill development programs that addressed both traditional and modern jute processing techniques.

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Patel (2024), examined the correlation between skill intensity and job satisfaction in the jute sector. The findings indicated that workers who received regular skill upgrades reported higher job satisfaction and motivation, leading to lower attrition rates. The study recommended indus try-wide collaborations to improve training infrastructure.

IX. ANALYSIS AND INTERPRETATION

A. Rank Analysis

Rank analysis is a statistical method used to compare and evaluate data by ranking values instead of using their absolute numbers. It helps in decision making process.

TYPE OF INCENTIVES MOTIVATING EMPLOYEES

STATEMENT	I	II	III	IV	V	VI	VII	VIII	IX	X	TOTAL	RANK
Monetary rewards	28	23	23	30	21	22	30	22	27	24	1381	5
Non-monetary rewards	34	27	25	17	18	33	21	32	22	21	1420	3
Career advancement opportunities	26	27	30	22	34	27	16	22	23	23	1435	2
Additional training or learning opportunities	20	27	34	21	23	31	19	23	24	28	1376	6
Peer Recognition Programs	28	21	26	25	21	17	35	21	27	29	1349	9
Access to Exclusive Resources	35	22	15	23	33	21	23	24	23	31	1373	7
Mentorship Opportunities	28	32	26	30	22	25	19	14	27	27	1442	1
Job Rotation or Cross-Training	21	19	25	26	37	19	30	30	24	19	1357	8
Personal Development Support	26	27	24	27	26	26	24	23	20	27	1402	4
Workplace Privileges	23	22	28	19	29	22	25	37	21	24	1346	10

Source: Primary Data

Interpretation: The table shows that the majority of the respondents have chosen Mentorship Opportunities as 1st rank, Career advancement opportunities have been chosen as 2nd rank, non-monetary rewards have been chosen as 3rd rank, Personal Development Support have been Chosen as 4th rank, Monetary rewards have been chosen as 5th rank, Additional training or learning opportunities have been chosen as 6th rank, Access to Exclusive resources have been chosen as 7th rank, Job Rotation or Cross-Training have been chosen as 8th rank, Peer Recognition Programs have been chosen as 9th rank, Workplace Privileges have been chosen as 10th rank. The majority of the respondents have chosen mentorship opportunities as 1st rank.

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B. Chi- Square Test

A chi- square test, also written as x^2 test is any test statistical hypothesis test where the sampling distribution of the test statistic is squared distribution when the null hypothesis is true, without other qualification, chi- square test is often used as short for Pearson's chi-square test. The chi- square test is used to determine whether is a significant relationship between the expected frequencies and the observed frequencies is one or more categories.

Comparison Between Skill Intensity And Training Type Received

H_0 = There is no association between skill intensity and training type received

H_1 = There is an association between skill intensity and training type received

		What motivates your best performance?				Total
		Technical	safety	leadership	Communication	
Skill intensity	Low	1+9	17	30	22	88
	Moderate	24	23	10	19	76
	High	18	8	16	15	57
	Very high	13	8	8	10	29
Total		64	56	64	66	250

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.740[a]	9	0.038
Likelihood Ratio	19.178	9	0.024
Linear by linear association	0.229	1	0.632
N of valid cases	250		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.			

Source: Primary Data

Interpretation: In the above table, with the degrees of freedom 9, sig.value (0.38) which is greater than significant value (0.05), Hence, there is no significant association between skill intensity and the type of training received.

C. Anova

Analysis of Variance (ANOVA) is a statistical formula used to compare variances across the means (or average) of different groups. A range of scenarios use it to determine if there is any difference between the means of different groups.

Anova Between Skill Intensity And Education

H_0 = There is no statistical difference between skill intensity and education

H_1= There is a statistical difference between skill intensity and education

	Sum of Squares	Df	Mean Square	F	Sig.	Sig.
Between Groups	4757	3	1.586	1.504	0.205	.643
Within Groups	253.327	246	1.030			
Total	258.084	249				

Source: Primary Data

Interpretation: In the above table, with the agree of freedom 3 and f-value 1.504, sig.=0.205 which is greater than 0.05, so we conclude that there is no significant difference in skill intensity based on education.

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D. Correlation

Correlation is a statistical measure that expresses the extent to which two variables are linearly related (meaning them together a constant rate). It's a common tool for describing simple relationships without making a statement about cause and effect.

Correlation Between Skill Intensity And Kpi Improvement

H_0= There is no relationship between Skill intensity and KPI improvement

H_1= There is a relationship between Skill intensity and KPI improvement

		Skill intensity	KPI improvement
Skill intensity	Pearson Correlation	1	.010
	Sig. (2-tailed)		0.879
	N	250	250
KPI improvement	Pearson Correlation	0.010	1
	Sig. (2-tailed)	0.879	
	N	250	250

Source: Primary Data

Interpretation: In the above table, the Sig value (0.879) which is greater than the significant value (0.05), Since the p-value is much greater than 0.05, we fail to reject H_0, meaning there's no significant correlation between skill intensity and KPI improvement.

E. Regression

Regression is a statistical method used to model a relationship between a dependent variable and one or more independent variables. It helps in predicting outcomes and identifying trends in data. It is widely used in fields like finance and economics for data analysis and forecasting.

Regression Between Monthly Income And Job Role Do Not Significantly Impact Self-Learning Motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.059[a]	.033	-.005	1.154

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.130	2	.565	0.424	.655[b]
	Residual	328.970	247	1.332		
	Total	330.100	249			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.395	.235		10.185	.000
	Job role	-.003	.067	-.003	-.042	.967
	Monthly income	.58	.063	.059	-.920	.359

Source: Primary Data

Interpretation: Both p-values are much greater than 0.05, so we fail to reject H_0, indicating that monthly income and job role do not significantly impact self-learning motivation.

X. FINDINGS

1) Rank Analysis: The majority of the respondents have chosen mentorship opportunities as 1st rank.
2) Chi- Square Test: There is no significant association between skill intensity and the type of training received.
3) Anova: There is no significant difference in skill intensity based on education.
4) Correlation: There's no significant correlation between skill intensity and KPI improvement.
5) Regression: Monthly income and job role do not significantly impact self-learning motivation.

XI. SUGGESTIONS

Introduce a structured mentoring program where experienced employees guide less-experienced workers. Pair skilled senior workers with junior employees for hands-on learning in jute production techniques, machine handling, and quality control. Develop an incentive system where employees who actively share their expertise receive bonuses, promotions, or other rewards. Encourages experienced workers to actively participate in training and mentoring. Enhances multi-skilling, making employees more adaptable to various tasks. Increases workforce flexibility, reducing dependence on specialized workers. Conduct surveys and focus group discussions with employees to understand their training needs.

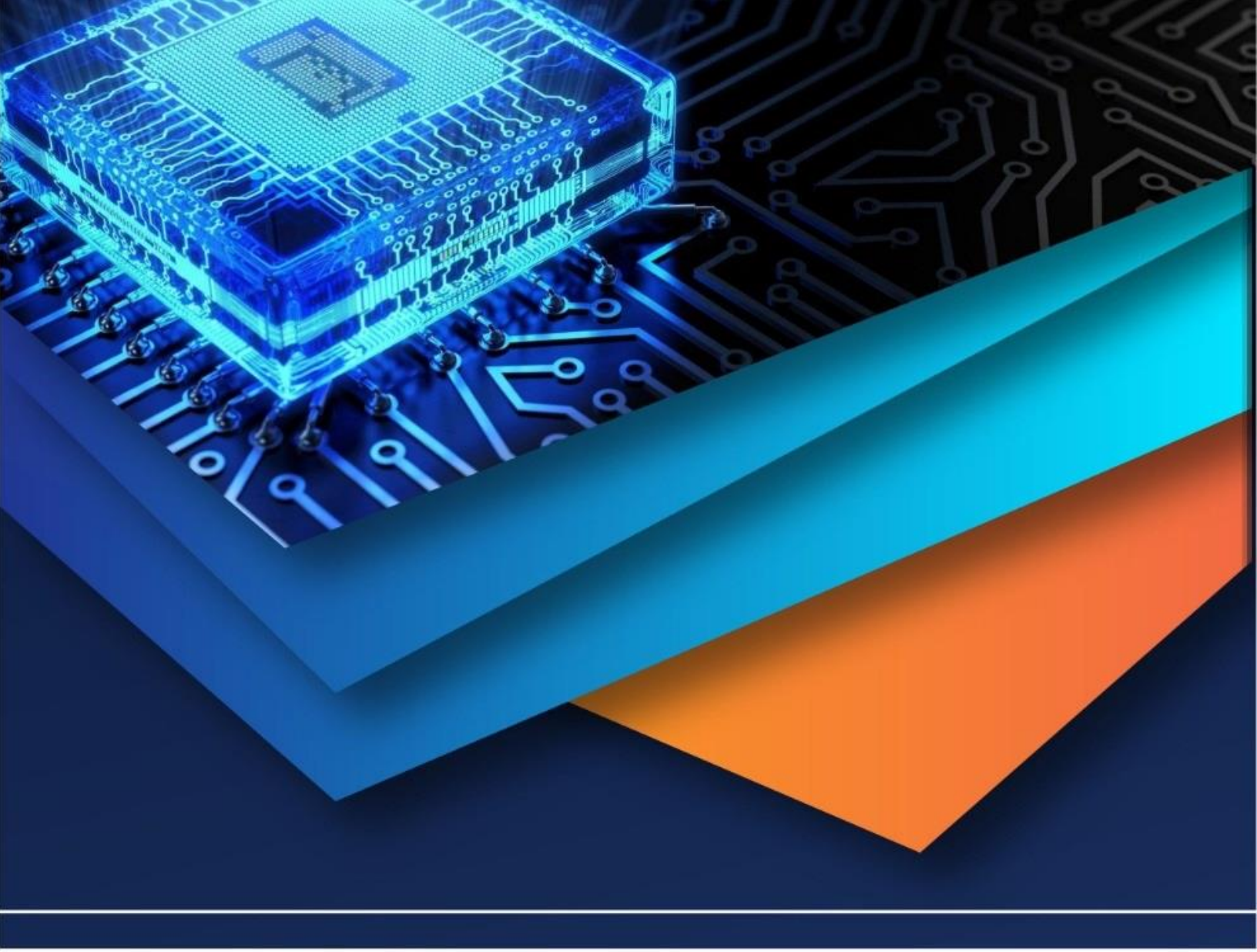
XII. CONCLUSION

The study concludes that employees' skill intensity plays a crucial role in shaping skill development in the jute industry. A workforce with high skill intensity accelerates learning, enhances efficiency, and drives overall industry growth. Effective utilization of existing skills through mentoring, job rotation, and structured training programs fosters a culture of continuous improvement. Addressing skill gaps and training challenges can significantly enhance workforce adaptability and productivity. By implementing well-designed skill development initiatives, organizations can optimize employee potential and operational efficiency. Companies should prioritize upskilling programs to align with industry demands and technological advancements. Encouraging skill-sharing and employee participation in training programs strengthens knowledge transfer and job satisfaction. A proactive approach to workforce development ensures long-term sustainability and competitiveness in the jute sector. Continuous investment in skill enhancement strategies will contribute to both individual career growth and industry-wide progress.

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