



**International Seminar on September 16th, 2024**  
**“Exploring the Frontiers of Interdisciplinary Research (ICEFIR-2024)”**  
**Organized By: Nagpal Charitable Trust, Sri Ganganagar**  
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## **Training and Development Strategies for Sustainable Growth of Small-Scale Industries: A Case Study of Chandrapur District**

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### **Abstract**

SSIs must invest in talent development programs regularly, which improve employee performance and business growth. The paper looks for different strategies of training and development /impact on sustainability in organization in SSIs of Chandrapur District. Data were composed from SSI owners, managers, and employees by means of both structured surveys and qualitative in-depth interviews in a mixed-method approach. The snap-survey reveals major issues like financial constraints, unavailability of qualified trainers or limited access to the training facilities. Through this research, firms engaged in the SSI sector were reached out to create insight into the best practices, such as work-based training, mentorship programs, and skill development aided by CSRs, that lead to the long-term sustainability of firms. The findings allude to the notion that structured training program investment certainly increases workforce productivity as well as innovation in addition to business sustainability. The report ends with suggestions to policymakers and industry leaders for creating a more sustainable ecosystem for training of SSIs in Chandrapur.

**Keywords - Training and Development, Small-Scale Industries, Workforce Productivity, Sustainable Growth, Chandrapur District, Skill Development, Organizational Performance**

### **Introduction**

Small-scale industries (SSIs) are crucial for regional economic growth, employment creation, and entrepreneurship. The role of SSI is crucial in the context of Chandrapur District, wherein the local economy primarily comprises manufacturing, agro-processing, and service-based industries. But their growth is frequently hampered by limited access to skilled labor, inadequate training programs, and financial constraints.

Employee training and advancement systems are critical tools to improve employee efficiency, grow innovation and ensure the continuity of your respective business. Training programs that are well-structured enhance productivity, job satisfaction, and flexibility to changes in the market and contribute to greater organizational success in the long term. But the SSIs in Chandrapur encounter a number of obstacles in providing productive training, including high costs, resistance to change and lack of training infrastructure. This study explores the existing aspect of training in SSIs of Chandrapur, discovers bottlenecks towards workforce development and also examines the sustainable strategies towards training which can accelerate business growth. Therefore, this study will highlight how SSIs can know the effective and economical ways to reduce the overall training cost, and can develop their training programs that provide an effective workforce with all the skills needed to face the competitive nature of the environment.

### **Literature Review**

One of the efficient processes in an organization for improving the capabilities of the workforce that leads to improved process efficiency, and ultimately helps the organization in achieving the sustainable growth, Training, and development become a very important aspect for small scale industries (SSIs). This literature review analyzes previous research on the importance of training and development, challenges in training practice, as well as recommendations for sustainable workforce planning in SSIs.

Some of the researches suggest that training and development is the basic way to improve employee productivity and business productivity (Noe, 2020). Human Capital Theory, as put forward by Becker (1993), posits that organizations with skilled workers will function more



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efficiently and yield higher economic returns. According to Armstrong (2020), SSIs are resource-constricted which signifies that while training innovations related to money, SSIs will need to adopt relatively cost-effective and targeted approach to ensure that they can maximize for their impact.

Research by Salas et al. (2018) also identifies the most effective methods for small businesses as on-the-job training, mentorship programs, and skill-based workshops that allow workers to gain hands-on experience without significant disruption to operations. Training directly contributes towards innovation as it boosts employee retention and job satisfaction as depicted by Khan (2021) in one of his studies on SSIs.

There are a number of best practices identified in the literature to address these challenges. Goldstein & Ford (2018) highlight blended learning methods that include on-the-job training, mentorship, and digital learning environments. The author of this article advises small businesses to leverage and engage with government skill development programmes, local industry associations and training institutions, which will provide them access to subsidised training resources (Armstrong, 2020).

Government-financed training programs for information technology and telecom, in particular, have proven to be highly successful in developing small-scale industries in developing economies (Khan, 2021). As an example, India's "Skill India" initiative has facilitated the integration of vocational training programs in the business models of SSIs (Ministry of Skill Development and Entrepreneurship, 2020).

Amidst digital transformation, automation, and remote working, researchers predict e-learning, virtual training simulations, and AI-driven workforce analytics will transition the future of training in SSIs (Noe, 2020). Research has also underscored the need for entrepreneurial skill development to keep SSIs competitive in a fast-changing business environment (Salas et al., 2018).

The literature affirms that training and development are important for SSIs but at the same time there are many obstacles for its practicing (Bartindale and Wright, 2008). But, investments into cost-effective training methods, partnerships with governments and blended approaches to learning can indeed set small industries in Chandrapur and other sub-regions like it to sustainable growth and workforce development.

### Objectives of the Study

1. To identify the key challenges faced by small-scale industries in implementing workforce training programs.
2. To examine the role of government policies and support in enhancing training and development initiatives.
3. To explore cost-effective and sustainable training strategies for workforce development in small-scale industries.

### Hypothesis

**H<sub>0</sub> (Null Hypothesis):** There is no significant impact of cost-effective and sustainable training strategies on workforce development in small-scale industries.

**H<sub>1</sub> (Alternative Hypothesis):** There is a significant impact of cost-effective and sustainable training strategies on workforce development in small-scale industries.

### Research Methodology

This research follows a quantitative methodology to evaluate cost-effective and sustainable training strategy in workforce development of Chandrapur small-scale industries. Data was composed through a structured questionnaire from employees, managers and business owners of selected small-scale industries. They selected the study group using random sampling method, which guarantees representation from every industry. We summarized the key findings using descriptive statistics and performed inferential statistical tests including One-Way ANOVA and Regression Analysis on the hypotheses. The data of secondary sources such as



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industry reports, government policy, and academic literature were also reviewed to validate the analysis. Data were processed and analyzed via SPSS software for accuracy and reliability.

**Table: Descriptive Statistics on Cost-Effective and Sustainable Training Strategies and Workforce Development**

Variables	Mean	Standard Deviation	Minimum	Maximum	Percentage of Respondents Agreeing (%)
On-the-job training effectiveness	4.15	0.85	2.00	5.00	83%
Government-funded training programs	3.98	0.92	2.00	5.00	79%
Digital learning and e-training adoption	3.85	1.05	1.00	5.00	75%
Availability of skilled trainers	3.92	0.97	1.00	5.00	76%
Cost-effectiveness of training methods	4.10	0.88	2.00	5.00	81%
Impact of training on employee performance	4.25	0.83	2.00	5.00	85%
Sustainability of training programs	3.90	1.00	1.00	5.00	78%

**Analysis**

The means and standard deviations also tell that On-The-Job-Training ( $M = 4.15$ ,  $SD = 0.85$ ) and Impact of Training on Employee Performance ( $M = 4.25$ ,  $SD = 0.83$ ) are the two most agreed aspects of most influence in workforce development. Digital learning ( $M = 3.85$ ,  $SD = 1.05$ ) and government-funded programs ( $M = 3.98$ ,  $SD = 0.92$ ) are perceived as significant but slightly less effective than hands-on training. The findings of this study endorse that ability advancement is significant fundamental with cheap and Tier-1 use coaching methods for small-scale industries to produce larger innovation ideas.

**Table: SPSS Output for Multiple Linear Regression Analysis Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	0.782	0.612	0.598	0.452

**ANOVA Table**

Model	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Regression	32.754	4	8.188	40.12	0.000**
Residual	20.823	102	0.204		
Total	53.577	106			

(p < 0.05 indicates statistical significance)

**Coefficients Table**

Predictor Variables	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig. (p-value)
(Constant)	1.225	-	4.35	0.000**
On-the-Job Training	0.352	0.315	5.12	0.000**





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Predictor Variables	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig. (p-value)
Government-Funded Training Programs	0.268	0.245	4.01	0.001**
Digital Learning & E-Training Adoption	0.198	0.182	3.25	0.002**
Sustainability of Training Programs	0.289	0.272	4.45	0.000**

#### Interpretation:

**Model Fit:** The  $R^2$  value of 0.598 indicates that 59.8% of the variability of workforce development can be explained by our model via our independent variables. **ANOVA Significance:** The model is significant ( $F = 40.12$ ,  $p = 0.000$ ) which means that training strategies have a significant influence on the workforce development.

**Coefficient Analysis:** The highest B ( $B = 0.352$ ,  $p = 0.000$ ) indicates on-the-job training is most impactful to the workforce development. The sustainability of training programs ( $B = 0.289$ ,  $p = 0.000$ ) was also found to be significant. Government-funded ( $B = 0.268$ ,  $p = 0.001$ ) and digital learning ( $B = 0.198$ ,  $p = 0.002$ ) offer statistically significant but slightly lower impact. As all predictor variables have  $p\text{-value} < 0.05$ , we reject null hypothesis ( $H_0$ ) and accept alternative hypothesis ( $H_1$ ): cost-effective and sustainable training strategies have a significant effect on development of workforce in small scale industries of Chandrapur.

#### Conclusion of the Study

The research aimed to survey the consequence of low-cost and sustainable training strategies on man power development in the small-scale industries (SSIs) of Chandrapur District. Analysis from a multiple linear regression showed that training initiatives are essential in increasing employee productivity, skill advancement, and organizational growth.

As key findings revealed, on-the-job training was the most impactful method, significantly benefitting (prompting high quality) skilled workforce productivity. Effective staff retention and sustainable productivity in the long term rely on training programmes that are ongoing (continuous learning) and include mentoring programs. Financial limitations are addressed through government-funded training programs, which enhance the accessibility of training for SSIs. Digital learning & e-training are growing in importance, but slow adoption continues since there are limited infrastructure and digital literacy barriers are in place.

Statistical results suggest that quantitative training approaches lead to valid and instrumental workforce improvements with an adjusted  $R^2$  of 0.598, meaning that almost 60% of the variance in performance can be attributed to this aspect of training. Despite this continued resistance, challenges, including the inadequate income of the trainers, the lack of qualified trainers, and the high resistance to change, still remain a barrier to effective implementation. He goes on to outline how small-scale industries can integrate digital learning, enable government initiatives and develop a mind-set of constant learning for workforce expansion in a sustainable manner.

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