A STUDY ON TECHNOLOGY AUTOMATION AND LABOUR SKILL DEVELOPMENT IN TEXTILE INDUSTRY WITH REFERENCE TO NAMAKKAL REGION

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ABSTRACT

The technology automation is the key factor for the success and growth of any industry, because the technological changes are the powerful drivers of economic growth. In the present era the work is not only carried out manually, but also done with automation technology. Many textile industries are keeping themselves updated with modern technologies, according to the current needs of the people. The Study deals with technology automation and labour skill development in Textile industry in Namakkal region. The tools applied in the minor study t-test, f-test and multiple regression. The dimensions were compared with gender, family type and resident. It was found that no significance between gender, family type with technology automation. Place of residence was found to have a significance difference. The study reveals the importance of technology automation and the skill development of labor in Namakkal region. At present, the skill development training programmes are very much essential for the laborers due to the technology automation. It helps to improve not only labourer performance, but also to improve the industrial growth.

Keywords: Technology, automation, textile industry, skill, labor, gender, family type.

INTRODUCTION

Today's world is known as an era of technological advancement, where automated and semi- automated machineries are replacing most of the manual work. The technology automation is the key factor for the success and growth of any industry, because the technological changes are the powerful drivers of economic growth. In the present era the work is not only carried out manually, but also done with automation technology. Many textile industries are keeping themselves updated with modern technologies, according to the current needs of the people. The foremost intention of updating new technologies is to find out the quality improvement for their products, cut short the production time, reduce manpower, increase productivity, increase the education and skill level of workers to compete with the competitors and to sustain in the global market. By these technological advancements, the entire workplace has turned productive. At present, the skill development training programmes are very much essential for the laborers due to the technology automation. It helps to improve not only labourer performance, but also to improve the industrial growth. So, the textile industry is in need of skilled manpower to increase the growth of the industry.

NEED AND IMPORTANCE OF THE STUDY

The textile industry offers employment opportunities for both skilled and semiskilled laborers and this sector provides tremendous scope. At present, the technology has occupied a predominant role in the textile sector of India. The technology automation has now become an essential part in the functioning of the textile sector.

STATEMENT OF THE PROBLEM

The textile industry of India has some economic significance at present, especially in within the framework of the global market. Textile industry is a labor intensive industry and in the recent years there has been technological up gradation and automation in this sector. It is observed that the majority of the laborers working in textile sector does not have enough knowledge about the modern technologies.

OBJECTIVES OF THE STUDY

1. To study the conceptual framework of automated technology in general and in particular to textile machinery automation.
2. To study the impact of automation technology in maximizing the productivity with high quality in textile industry.
3. To identify the skill requirements for the laborers to manage technology automation in textile industries.

STATISTICAL TECHNIQUES USED IN THE STUDY

Based on the purpose of the research, the data was processed and analyzed. The Processing and analysis of the data was done manually by computer computation.
ANOVA,'t'- test, Multi regression.

HYPOTHESIS FOR THE STUDY

H0: There is no significance difference of Gender and Technology Automation in Textile industry H1: There is a significant association between of Family type and labor skill development
H0: There is a no significant association between place of residence and technology automation in textile industry
H1: There is a significant association between place of residence and technology automation and labor skill development in textile industry.

REVIEW OFLITERATURE

According to the International Labour Organization (ILO), Skill development is the key significance in stimulating a sustainable improvement procedure and might make a

contribution to facilitating the transition from an casual to a proper economy. It is It is likewise essential to address the possibilities and demanding situations of assembly the new demands of In the context of globalization, converting economies, and new technologies, capabilities Development can help construct a "virtuous circle" wherein the best and relevance of Education and education for men and women gas innovation, funding, and Technological alternate, organisation development, monetary diversification and Competitiveness is what economies need to boost up the creation of more jobs.

SOCIO-DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Sl. No	**Particulars**		**Frequency**	**Percent**
01	Gender	Male	96	52.2
		Female	88	47.8
02.	Age	25 years to 35 years	48	26.1
		35 Years to 45 years	56	30.4
		45 years to 55 years	48	26.1
		Above 55 years	32	17.4
03.	Residentia l Status	Urban	80	43.5
		Semi – urban	44	23.9
		Rural	60	32.6
04.	Education Qualifications	Degree	39	21.2
		Master Degree	27	14.7
		B.E \Diploma	106	57.6
		Others	12	6.5
05.	Monthly Income	Below Rs.15000	92	50.0
		Rs.20000 to 30000	38	20.7
		30000 to 45000	37	20.1
		Above 45000	17	9.2
06.	Department	Purchase Department	35	19.0
		Production Department	98	53.3
		Finance Department	26	14.1
		Quality department	25	13.6
07.	Marital status	Married	146	79.3
		Unmarried	38	20.7
08.	Members of family	Nuclear	118	64.1
		Joint	66	35.9

09.	Experience	Below 5 years	40	21.7
		5 to 10 years	42	22.8
		10 to 15 years	78	42.4
		Above 15 years	24	13.0
10	Designation	Process engineer	34	18.5
		worker	76	41.3
		Sales Manager	31	16.8
		Quality control supervisor	43	23.4

The Socio – demographic profile of the respondents from the table suggests that almost more than 50% are male respondents. The age category shows a maximum of respondents belong to the category of 35 to 45 years old. Majority of the respondents belong to Urban locality. When educational qualification is taken almost 58 % of the respondents hold a B.E or Diploma degree. But the monthly income 50 % of the respondents earn below Rs. 15000. Majority of the respondents belong to production department and respondents nearly 80% are married. Nearly 65 % of the respondents are from nuclear family type. Regarding work experience mostly the respondents werefound to be having 10 to 15 years of experience. The respondents majority were found to be Process engineer workers.

Mean and Standard Deviation of Technology Automation and Labour Skill Development for Gender

Sl. No	**Particulars**	**Male**		**Female**		**t ratio**
		Mean	**S.D**	**Mean**	**S.D**	
		N=96		**N=88**		
01	Organization Automation of Technology	39.19	5.81	37.54	8.40	1.587 NS
02	Personal Impacts Automation Technology	27.67	5.26	28.54	6.10	.995 NS
Overall		66.87	9.01	66.07	13.02	.519 NS

The mean and Standard deviation was found and T test was applied. It was found that the variable Organization Automation of Technology had No Significant

difference with respect to Gender. The Personal Impacts Automation technology also had No Significant difference to Gender. As Overall the gender did not have a significant difference compared with the two variables Organization Automation and Personal Impact Automation Technology.

Mean and Standard Deviation of Technology Automation and Labour Skill Development for Family Type

Sl. No	Particulars	Nuclear		Joint		t ratio
		Mean	S.D	Mean	S.D	
		N=118		N=66		
01	Organization Automation of Technology	39.02	7.04	37.25	7.48	.435 NS
02	Personal Impacts Automation Technology	28.83	5.64	26.71	5.52	.272 NS
Overall		67.86	10.64	63.9697	11.51	.118 NS

The mean and Standard deviation of Technology Automation and Labour Skill development with family type was taken for analysis. T test was applied. It was found that the variable Organization Automation of Technology had No Significant difference with respect to Family Type. The Personal Impacts Automation technology also had No Significant difference to Family Type. As Overall the Family Type did not have a significant difference compared with the two variables Organization Automation and Personal Impact Automation Technology with Technology Automation and Labour Skill

Multiple Regression Various Dimensions of Technology Automation and Labour Skill Development

Sl. No	Dimensions of Pro-Environmental	Multiple R	R2	ΔR2	r	β	Overall F
	Organization Automation of Technology						
1	Residence						
2	Education	.62	.39	.39	.39	-.62	17.94**
3	Age	.66	.44	.5	.43	-.59	48.25**
4	Residential Status	.68	.47	.3	.46	.17	53.74**
5	Family Type	.69	.48	.1	.47	.25	42.74**
	Personal Impacts	.72	.53	.5	.51	-.28	44.94**
1	**Automation Technology**						
2	Age	.35	.12	.12	.12	.35	26.47**
3	Experience	.46	.21	.09	.20	.29	24.68**
	Residential Status	.48	.23	.02	.22	-.15	18.53**

The Multiple Regression for the various dimensions of technology automation and labor skill development was applied and the F value was arrived at after the analysis. The Organization Automation of Technology was compared with Residence of the respondents showed a Overall F value significant with (17.94). The Education was compared with value (48.25) significant. The Age showed a value of (53.74) significant. The residential status of the respondents showed a significance of (42.74) as F Value and the family Type was significant with value (44.94. The F value of Personal Impacts Automation Technology was compared with Age and it was found to have a significant value (26.47). The work experience was compared and F value was significant (24.68). The Residential Status when compared with dimension was also significant with F value (18.53).

Mean and Standard Deviation of Technology Automation and Labour Skill Development for Residence

Sl. No		Urban		Semi – urban		Rural		F
		Mean	**S.D**	**Mean**	**S.D**	**Mean**	**S.D**	
		N=80		**N=44**		**N=60**		
01	Organization Automation of Technology	43.58	4.95	35.86	6.50	33.31	5.56	**64.61 0.000<0.01 Significant**
02	Personal Impacts Automation Technology	29.63	5.90	26.84	4.64	26.90	5.64	**5.61 0.000<0.01 Significant**
Overall		73.22	9.32	62.70	9.53	60.21	9.31	**37.65 0.000<0.01 Significant**

The mean and Standard deviation of Technology Automation and Labour Skill development with family type was taken for analysis. F test was applied and it was found that the variable Organization Automation of Technology had Significant difference with respect to Resident. The Personal Impacts Automation technology also had Significant difference to Resident. As Overall, the Resident had a significant difference compared with the two variables Organization Automation and Personal Impact Automation Technology with Technology Automation and Labour Skill.

MAJOR FINDINGS AND DISCUSSION FROM THE MINOR STUDY

1. Majority of the respondents belong to Urban locality. When educational qualification is taken almost 58 % of the respondents hold a B.E or Diploma degree. But the monthly income 50 % of the respondents earn below Rs. 15000. Majority of the respondents belong to production department and respondents nearly 80% are married. Nearly 65 % of the respondents are from nuclear family type. Regarding work experience mostly the respondents were found to be having 10 to 15 years of experience. The respondents majority were found to be Process engineer workers.
2. The variable Organization Automation of Technology had No Significant

difference with respect to Gender. The Personal Impacts Automation technology also had No Significant difference to Gender. As Overall the gender did not have a significant difference compared with the two variables Organization Automation and Personal Impact Automation Technology.

3. The variable Organization Automation of Technology had No Significant difference with respect to Family Type. The Personal Impacts Automation technology also had No Significant difference to Family Type. As Overall the Family Type did not have a significant difference compared with the two variables Organization Automation and Personal Impact Automation Technology with Technology Automation and Labour Skill.
4. The Organization Automation of Technology was compared with Residence of the respondents showed a Overall F value significant with (17.94). The Education was compared with value (48.25) significant. The Age showed a value of (53.74) significant. The residential status of the respondents showed a significance of (42.74) as F Value and the family Type was significant with value (44.94). The F value of Personal Impacts Automation Technology was compared with Age and it was found to have a significant value (26.47). The work experience was compared and F value was significant (24.68). The Residential Status when compared with dimension was also significant with F value (18.53).
5. F test was applied and it was found that the variable Organization Automation of Technology had Significant difference with respect to Resident. The Personal Impacts Automation technology also had Significant difference to Resident. As Overall, the Resident had a significant difference compared with the two variables Organization Automation and Personal Impact Automation Technology with Technology Automation and Labour Skill.

SUGGESTIONS FROM THE MINOR STUDY FOR TECHNOLOGY AUTOMATION

The key to achieving the ideal level of tech and automation efficiency is to build a truly customized practice system. Gender focus can be given and training programmes regarding automation can be provided irrespective of gender. Automating things clearly frees up time, so we can do plenty more with less group of workers. As it was found that family type didn't have a significant association frequent awareness regarding the automation sector can be advertised using popular mode in media. Mostly rural people might not be aware of the technological advancement and updation. Therefore Rural area awareness can be created.

CONCLUSION

Automation's basic purpose, regardless of its scope, is to replace human labor with machine labor in order to improve production quality and quantity while lowering unit costs. This ability to boost workers' productive capacity has traditionally allowed humans to transition out of physically tough, mundane, or menial jobs, raising their standard of life in the process. As a result, the combination of labor talent and technological automation may alter how humans live in the world. Technology automation will displace many jobs

over the next ten to few years, but many others jobs will be created and even more will change. Jobs of the future will use different skills and may have higher requirements. Automation is not new. Humans have continuously produced new and superior tools and technologies to achieve greater economic output with less human labor since the dawn of time. The provided suggestions can be incorporated so that some of these breakthroughs can transform the impact across a wide range of industries.

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