



“Navigating tomorrow’s workforce: Exploring youth perceptions of Automation in Career Pathways”

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ABSTRACT :

This research paper investigates the perceptions of youth regarding the implications of automation on career opportunities. With rapid advancements in technology reshaping the job market, understanding how young individuals perceive automation's impact on their career prospects is essential for informed decision-making and policy formulation. Through qualitative and quantitative analysis of survey data, this study sheds light on the attitudes, concerns, and expectations of youth towards automation-driven changes in the workforce. The findings provide valuable insights for educators, policymakers, and stakeholders aiming to prepare the younger generation for the evolving landscape of employment opportunities.

Key words: Automation, opportunities, Youth perceptions, Technological change, Artificial intelligence.

INTRODUCTION :

The integration of automation and artificial intelligence (AI) technologies in various industries is revolutionizing the global economy and transforming the nature of work. While automation offers potential benefits such as increased efficiency and productivity, it also raises concerns about job displacement and the need for reskilling and upskilling. Understanding how young individuals perceive these changes is crucial for addressing their aspirations, anxieties, and preparedness for future careers. This paper aims to explore youth perceptions towards automation in career opportunities, examining factors influencing their attitudes and expectations.

The world is experiencing an unprecedented acceleration in technology advancement, the list of new technologies grows every day these technologies are broad based in their scope and significant in their ability to transform existing business and personal lives. They have the potential to ease people’s lives and improve their personal and business dealing . In the near future, this position may be eliminated entirely. At the same time , other jobs are experiencing a rapid increase in demand , and some occupation are revising ,and artificial intelligence can replace human and improve accuracy , productivity , and efficiency of operations.

Automation refers to the technique , method or system of operating or controlling a process by highly automatic means, as by electronic devices , reducing human intervention to a minimum or else it is a mechanical device ,operated electronically, that functions automatically ,without continuous input from an operator

Artificial intelligence is already transforming the world of work, but the future is hard to predict . Some see most jobs at risk of automation, while others argue robots will only take on a narrow range of tasks in the coming decade . Nevertheless, we need a broad debate to prepare the appropriate economic policy response to the new industrial revolution there are also concern for the future of human work and employment. if indeed machines continue to improve their performance beyond human levels, a natural question to ask is whether machine will put humans job at risk and reduce employment level among the youth The discussion surrounding this topic are often popularized, with one side expressing excitement for the opportunity to improve product quality and living standards, and opponents voicing grave concern regarding the massive dislocation of jobs. However, a proper grasp of this topic requires a sector specific understanding, as not all sectors are impacted equally by these advances in technology.

LITERATURE REVIEW :

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11. Article was written by Kristina,-Do technological innovation effect unemployment some empirical evidence from European countries
12. Article written by Jenny , A deep drive into technological unemployment :

NEED OF THE STUDY :

Exploring youth perceptions of Automation in Career Pathways is essential to understand how automation is perceived by young individuals as they navigate the evolving job market. This research addresses the need to:

- Identify how education systems can better prepare youth for careers in an increasingly automated world.
- Explore youth perceptions regarding job security, skills acquisition, and the impact of automation on future employment opportunities.
- Provide insights to help youth make informed choices about their education, training, and career paths in light of automation trends.
- Examine how automation may affect different demographic groups and identify strategies to ensure equitable access to employment opportunities.
- Inform policymakers about the concerns and aspirations of young people regarding automation, aiding in the development of policies that promote economic resilience and inclusivity.

OBJECTIVE OF THE STUDY :

The main objective of the study is to analyse present prospect of youth perception towards automation in carrier opportunity in order to meet the main objective the following specific objective have been framed

1. To explore how youth perceive the role of education and training in preparing them for careers in an increasingly automated workforce.
2. To investigate the factors influencing youth decision-making regarding education, training, and career pathways in the context of automation.
3. To assess the level of awareness among youth about the potential implications of automation on different industries and job sectors.
4. To understand how demographic factors such as gender, socio-economic background, and geographic location may influence youth perspectives on automation and career opportunities.
5. To provide insights that can inform policymakers, educators, and stakeholders in developing strategies to support youth in navigating the challenges and opportunities presented by automation in the job market.

SCOPE OF THE STUDY :

- Investigating youth perceptions of automation's impact on future career prospects.
- Examining attitudes, concerns, and aspirations regarding automation-driven changes in the job market.
- Assessing the influence of demographic factors on youth perspectives.
- Exploring the role of education and training in preparing youth for careers in an automated workforce.
- Providing insights for policymakers and educators to support youth in navigating automation-related challenges and opportunities.

This attempt would be used by the researcher , post graduated students and other reader to explore and exploit further modified research opportunity in this field

METHODOLOGY OF THE STUDY :

Sources of data

Basically this paper depends upon primary data which was systematically collected through a structured questionnaire 100 youth perception towards automation in carrier opportunity. The questionnaire is personally administered. Personal contact is preferred due to the versatility of the individual interview and for conceptual frame work secondary sources of information were referred from journals, magazines, and internet was taken to collect data regarding the topic.

Sample is the number of units that are considered for the study. The youth of St Agnes College and St Aloysius College which are well known in education sector with remarkable achievement in Karnataka state also the view of the youth who are working in the organisation were selected for survey sampling pattern for this study. Keeping in view the total population, size, time factor, budget and other resources a sample size of 100 respondents has been selected. The questionnaire designed for the survey is framed well by choosing relevant questions

Tools of analysis:

Here an attempt was found to identify the real inside picture of technology development will put human jobs easier or reduce employment among the youth in the reputed city. Final interpretation and suggestion have been drawn as result of the study after using the critical statistics .Techniques used for analysing the collected data effectively and efficiently and to draw sound conclusion, statistical techniques like the frequency tables and charts are used.

LIMITATIONS OF THE STUDY :

- Sampling bias due to the representativeness of the sample .
- The study is restricted to the sample size of 100 respondents due to the constraints of time and budget hence a detailed study could not be conducted.

RESULTS OF THE STUDY :

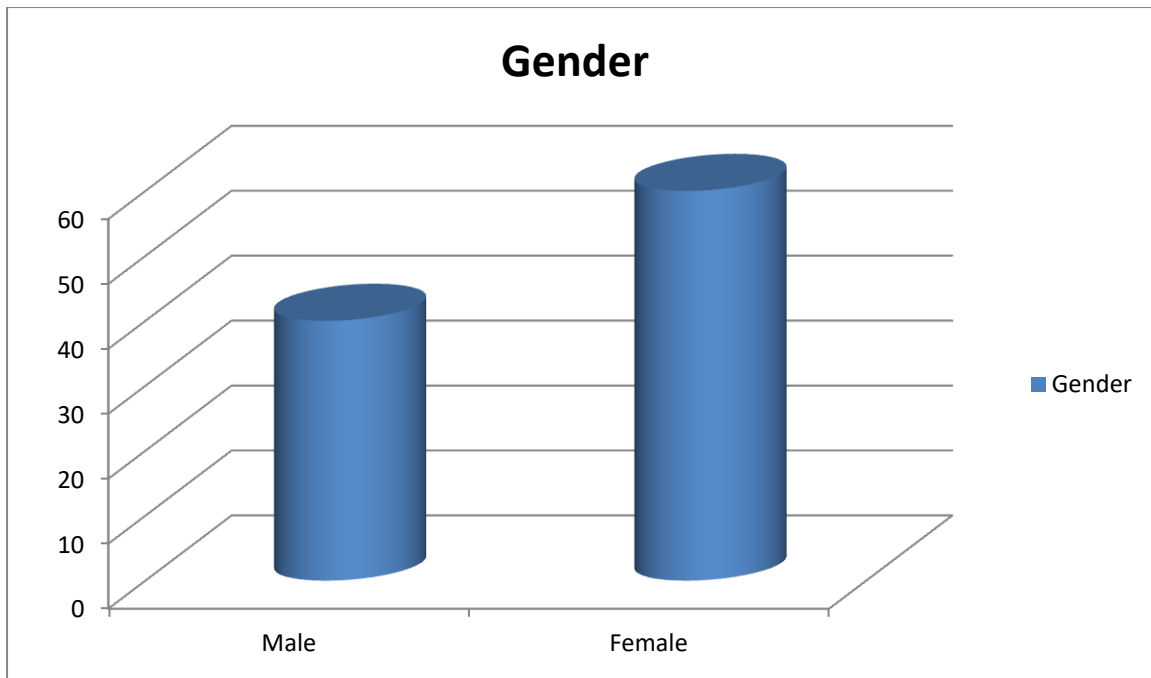
The data collected was analysed on the basis of the objectives of the study. The analysis techniques used were frequency tables and charts. The analysis of the data was précised to take out the relevant information regarding the factors affecting the consumer buying behaviour and preference towards malls.

1.Demographic Information :

The statistics, bar charts and analysis of the survey conducted are given below

a) Gender

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------|-----------|---------|---------------|--------------------|
| Valid | Male | 40 | 40.0 | 40.0 | 40.0 |
| | Female | 60 | 60.0 | 60.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |

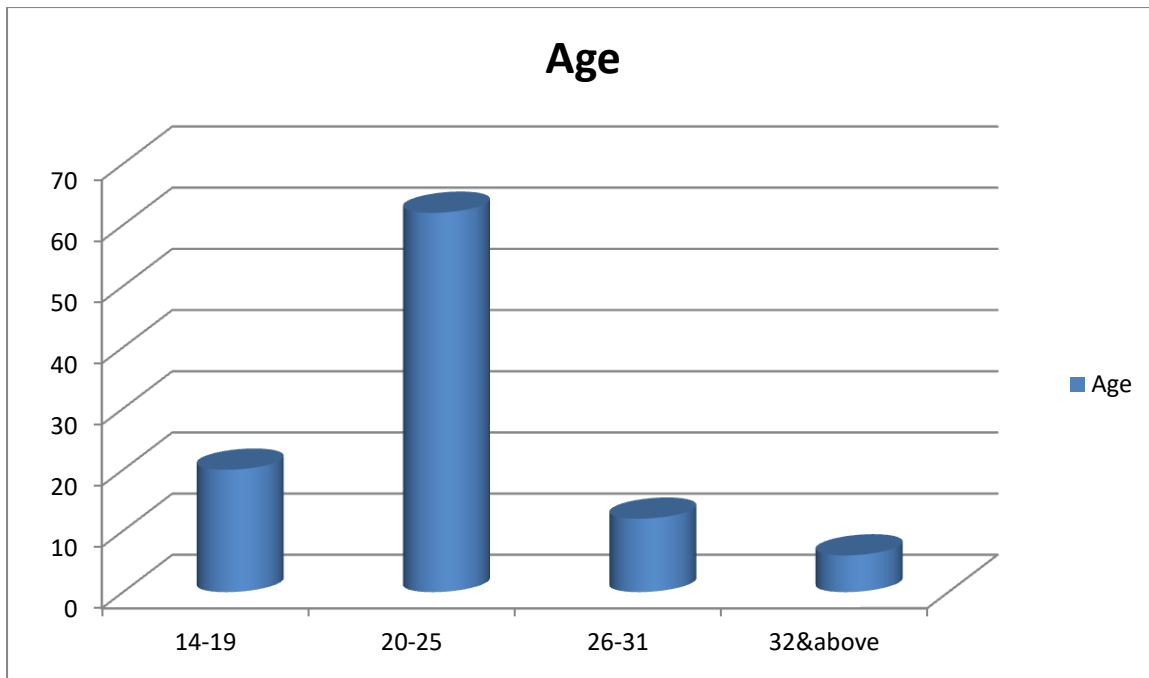


60% of the respondents were female and 40% were male.

Source: Survey N=100

b) Age

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|--------------|------------|-----------|----------|----------------|---------------------|
| Valid | 14-19 | 20 | 20.0 | 20.0 | 20.0 |
| | 20-25 | 62 | 62.0 | 62.0 | 82.0 |
| | 26-31 | 12 | 12.0 | 12.0 | 94.0 |
| | 32 & above | 6 | 6.0 | 6.0 | 100.0 |
| Total | | 100 | 100.0 | 100.0 | |



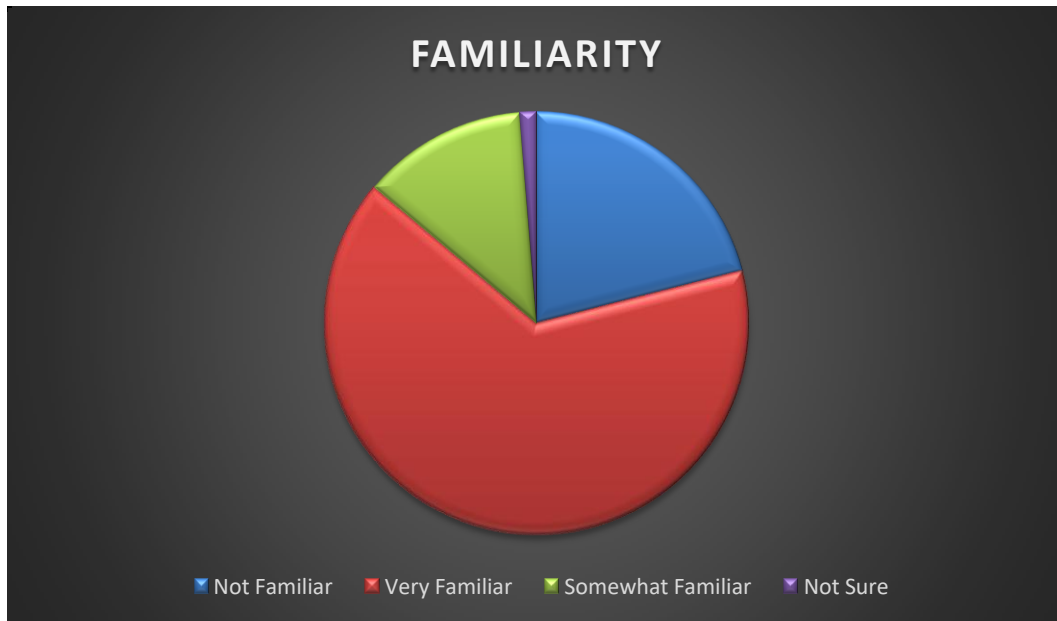
20% of the age group belong to 14-19, 62% of the age group belong to 20-25, 12% belong to the age group of 26-31, and 6% were above the age of 32.

Source: Survey N=100

2. General Perception

Familiarity with automation

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|-------|-------------------|-----------|----------|----------------|---------------------|
| Valid | Not Familiar | 20 | 20.0 | 20.0 | 20.0 |
| | Very Familiar | 62 | 62.0 | 62.0 | 82.0 |
| | Somewhat Familiar | 12 | 12.0 | 12.0 | 94.0 |
| | Not sure | 6 | 6.0 | 6.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |



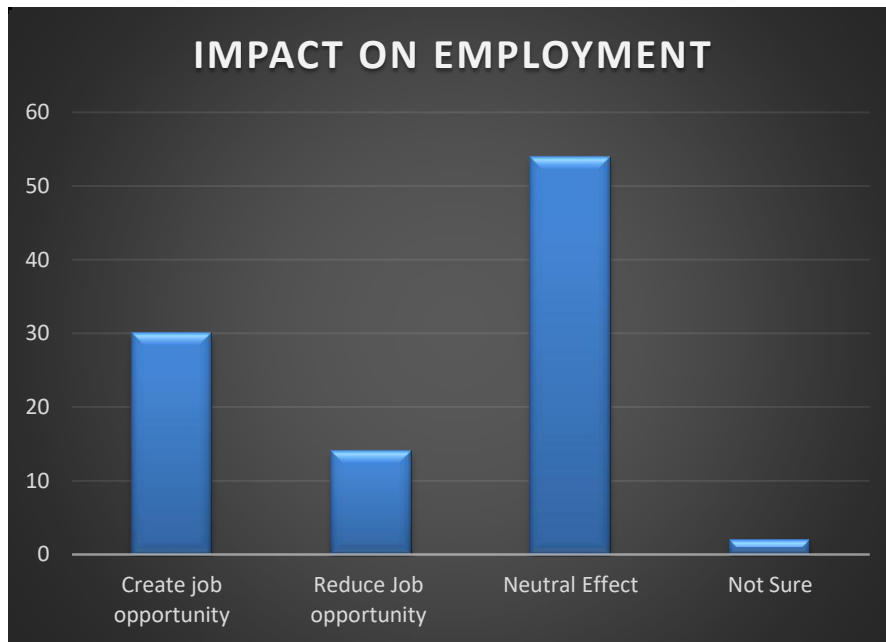
20% Not familiar, 62% Very Familiar,12% Somewhat Familiar and only 6% Not sure.

Source: Survey

N=100

1. Impact on Employment

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------------------|-----------|---------|---------------|--------------------|
| Valid | Create more job opportunities | 30 | 30.0 | 30.0 | 30.0 |
| | Reduce Job opportunities | 14 | 14.0 | 14.0 | 44.0 |
| | Neutral effect | 54 | 54.0 | 54.0 | 98.0 |
| | Not sure | 2 | 2.0 | 2.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |



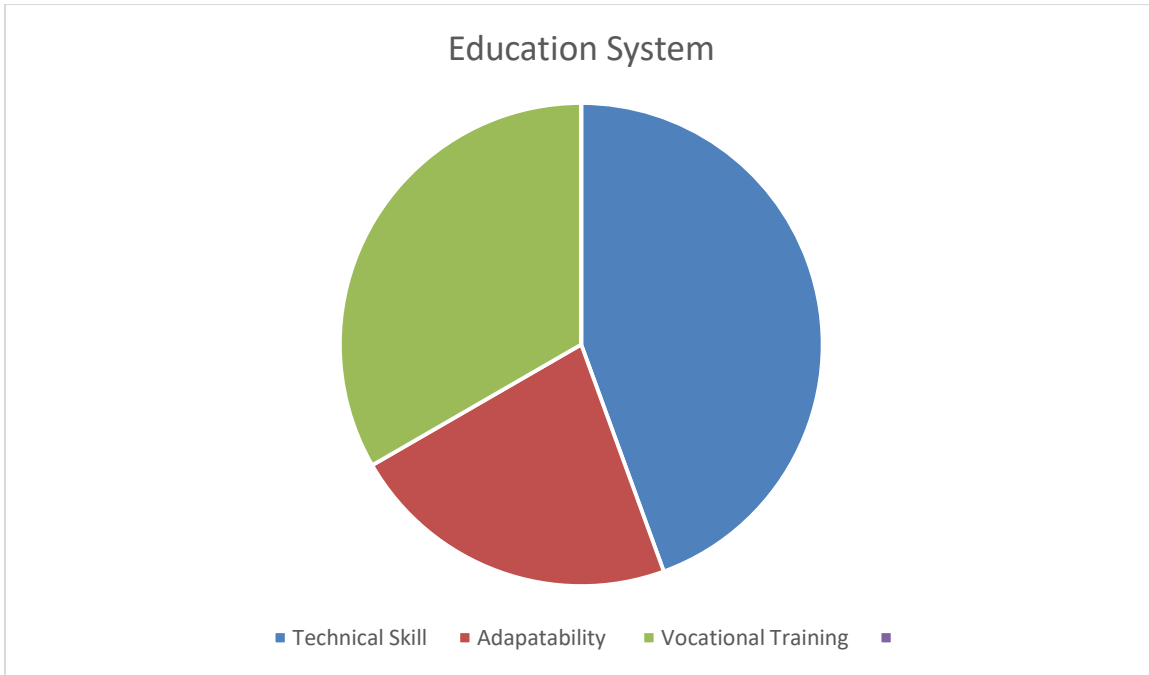
30% Create Job opportunities, 14% Reduce Job opportunities, 54% Neutral effect and only 2% Not sure.

2. Education systems influenced by Automation

Source: Survey

N=100

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------------|-----------|---------|---------------|--------------------|
| Emphasize Technical Skill | 32 | 32.0 | 32.0 | 32.0 |
| Focus on Adaptability | 16 | 16.0 | 16.0 | 48.0 |
| Vocational Training | 52 | 52.0 | 52.0 | 100.0 |
| | 100 | 100.0 | 100.0 | |

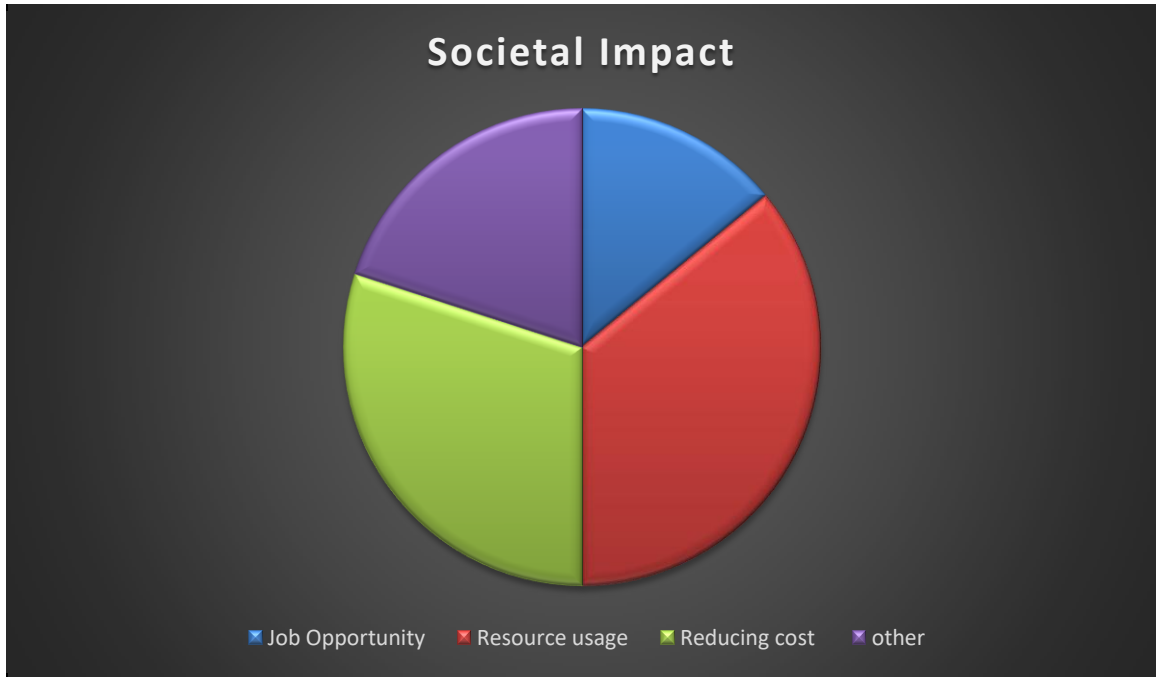


32% of the respondents are given Technical Skill, 16% respondents are focused on adaptability and Critical thinking, 52% Vocational training yearly and no one are given training daily basis

Source: Survey N=100 N=100

3. Societal Impact

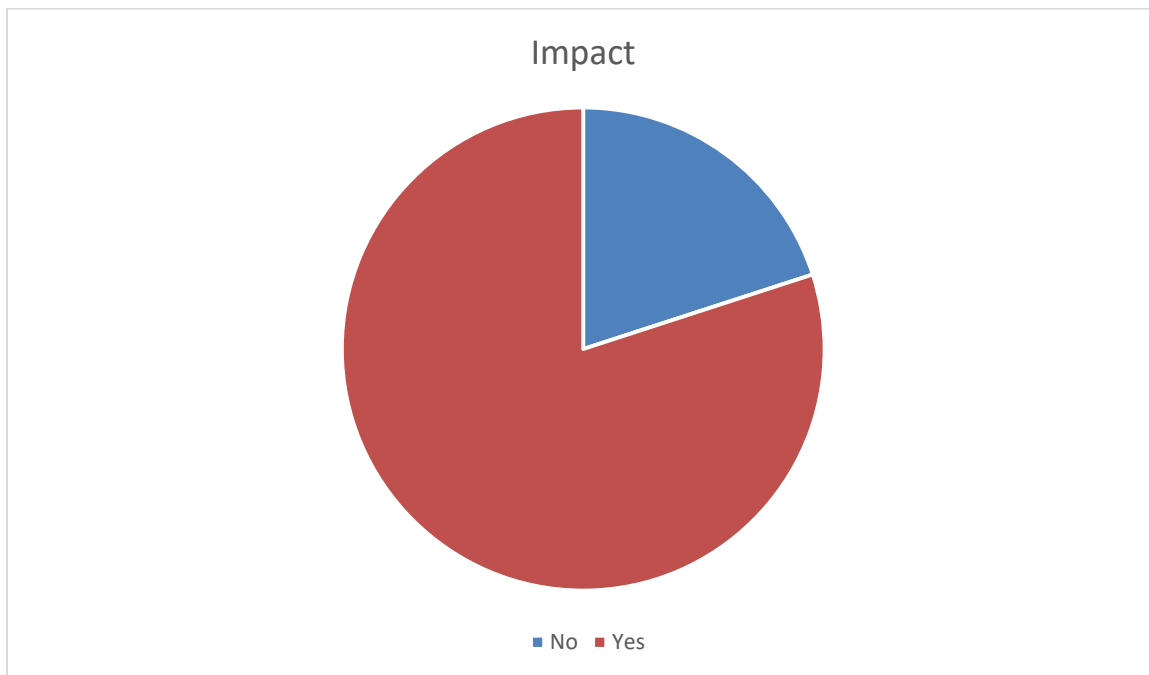
| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|-----------|---------|---------------|--------------------|
| Valid Job opportunities | 14 | 14.0 | 14.0 | 14.0 |
| Increasing efficiency in resource usage | 36 | 36.0 | 36.0 | 50.0 |
| Reducing cost | 30 | 30.0 | 30.0 | 80.0 |
| Other | 20 | 20.0 | 20.0 | 100.0 |
| Total | 100 | 100.0 | 100.0 | |



Majority of the respondents said 36% Increases in resource usage , 14% emphasises on Job opportunities , 30% reducing costs for essential services, 10% on other reasons.

4. Personal Experience and Observation on the effects of Automation

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid yes | 20 | 20.0 | 20.0 | 20.0 |
| no | 80 | 80.0 | 80.0 | 100.0 |
| Total | 100 | 100.0 | 100.0 | |



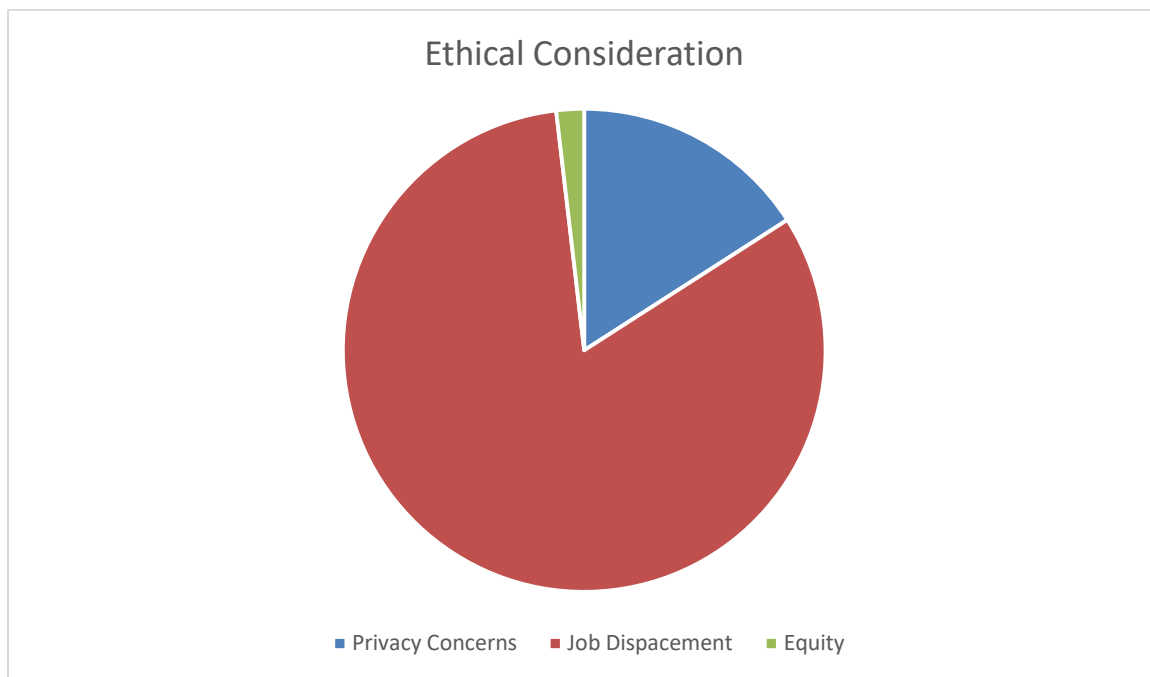
80% Responded “No” 20% Responded “Yes” with their personal Experience and Observation on the effects of Automation.

Source: Survey

N=100

5. Ethical Consideration

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------------------------|-----------|---------|---------------|--------------------|
| Valid | Privacy concerns | 12 | 12.0 | 12.0 | 12.0 |
| | Job displacement | 62 | 62.0 | 62.0 | 74.0 |
| | Equity and accessibility | 26 | 26.0 | 26.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |



62% of the respondents Strongly believe that Job displacement is the crucial part, 26% of the respondents believe that Equity is the part of Ethical consideration and 12% on Privacy concern .

Source: Survey

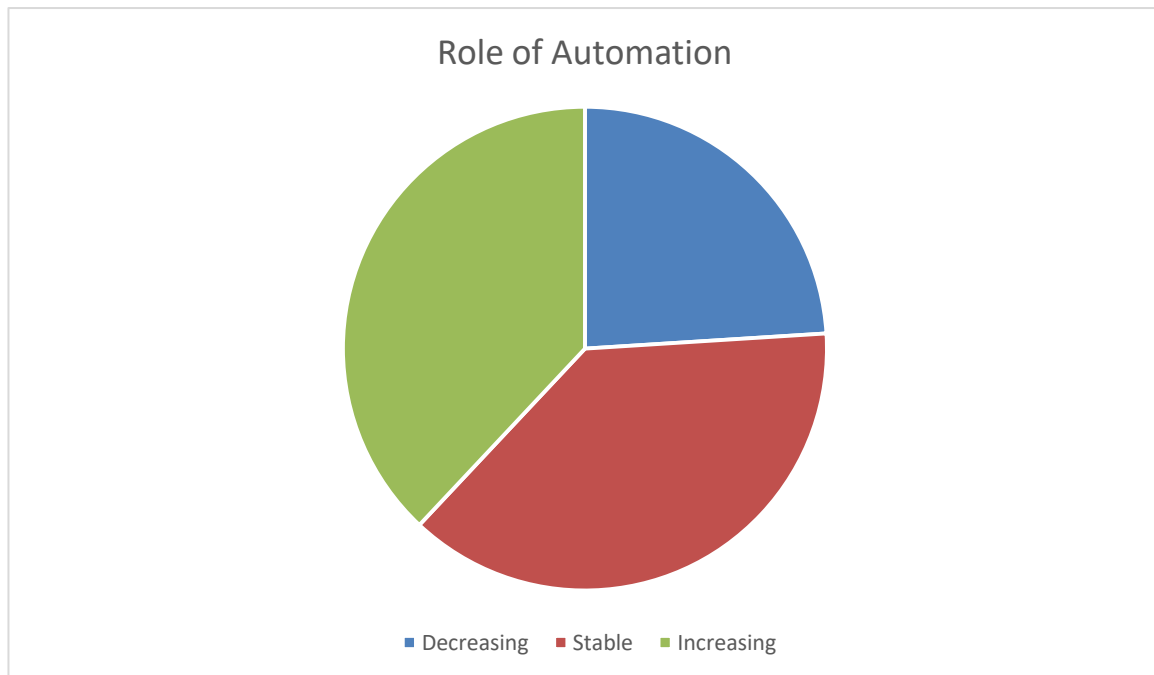
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6. Role of Automation evolving in the next 10-20 yrs

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | Decreasing | 24 | 24.0 | 24.0 | 24.0 |
| | Stable | 38 | 38.0 | 38.0 | 62.0 |
| | Increasing | 38 | 38.0 | 38.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |

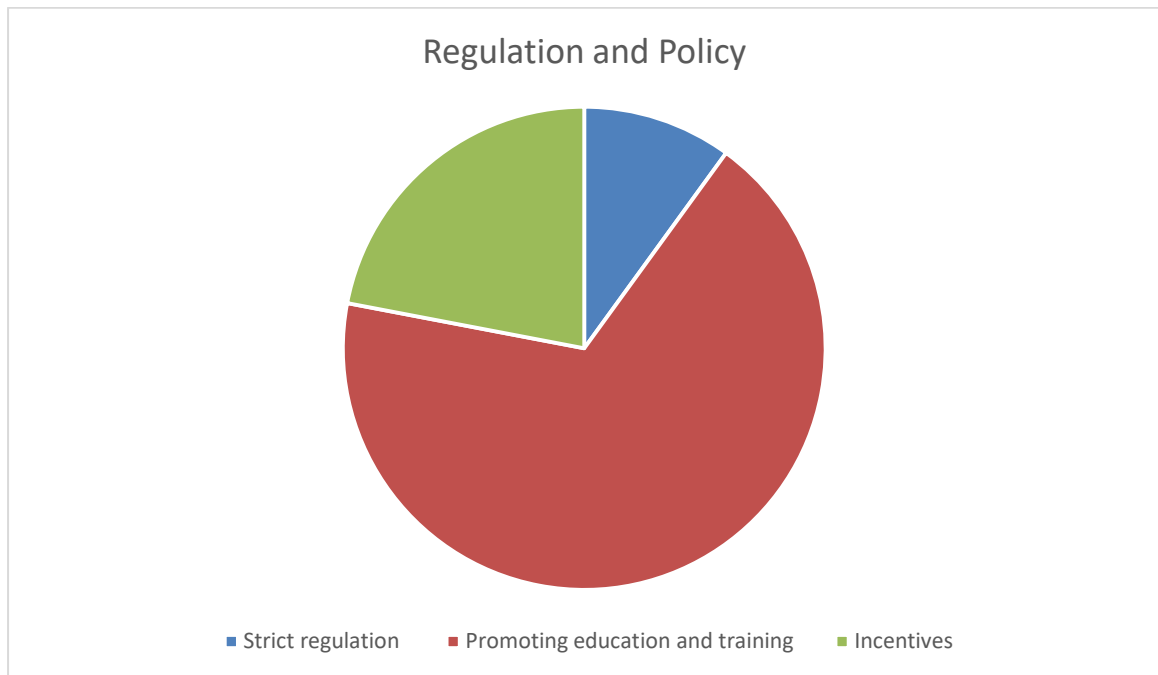
38% respondents believe that the Role of Automation evolving in the next 10-20 yrs is stable , other 38% respondents believe it is stable and 24% respondents believe it is decreasing.

Source: Survey N=100



| Regulation and Policy | | | | | |
|-----------------------|--------------------------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Implementing Strict Regulation | 10 | 10.0 | 10.0 | 10.0 |

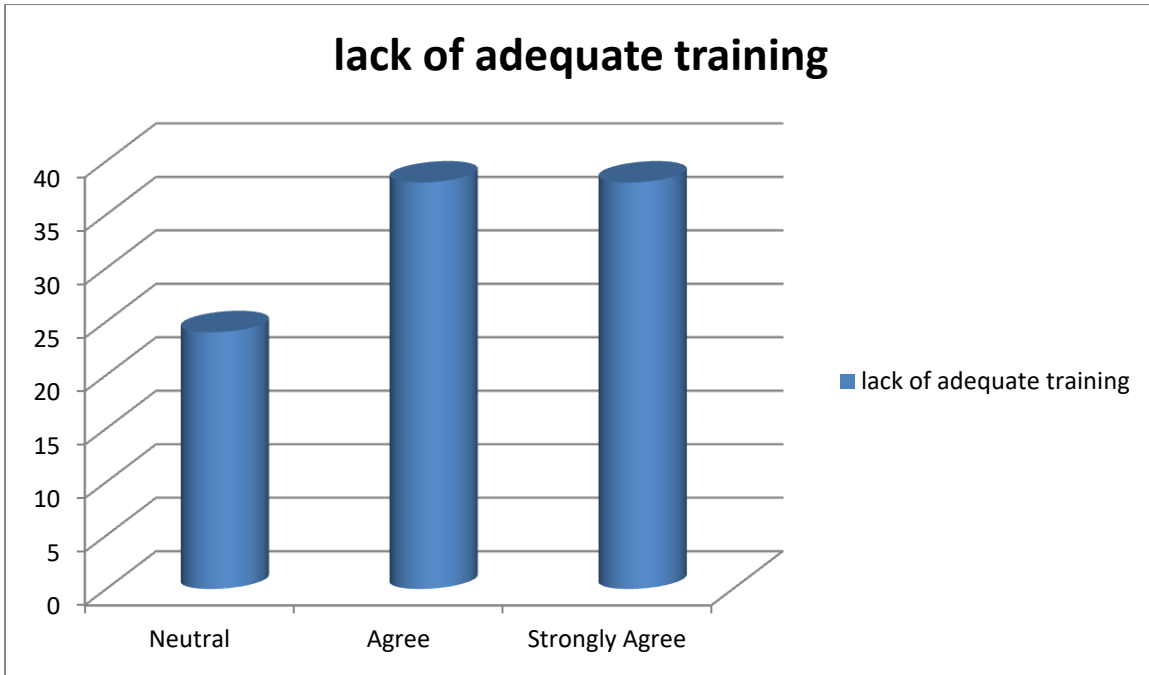
| | | | | |
|--|-----|-------|-------|-------|
| Promoting Education and Training Program | 68 | 68.0 | 68.0 | 78.0 |
| Providing incentives for responsible automation practice | 22 | 22.0 | 22.0 | 100.0 |
| Total | 100 | 100.0 | 100.0 | |



68% of the respondents believe that Promoting Education and Training Program is necessary, 22% respondents believe by Providing incentives for responsible automation practice is required and 10% respondents believe Implementing Strict Regulation is necessary.

7. Lack of necessary information, skills and adequate training

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------|-----------|---------|---------------|--------------------|
| Valid | Neutral | 24 | 24.0 | 24.0 | 24.0 |
| | Agree | 38 | 38.0 | 38.0 | 62.0 |
| | Strongly Agree | 38 | 38.0 | 38.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |



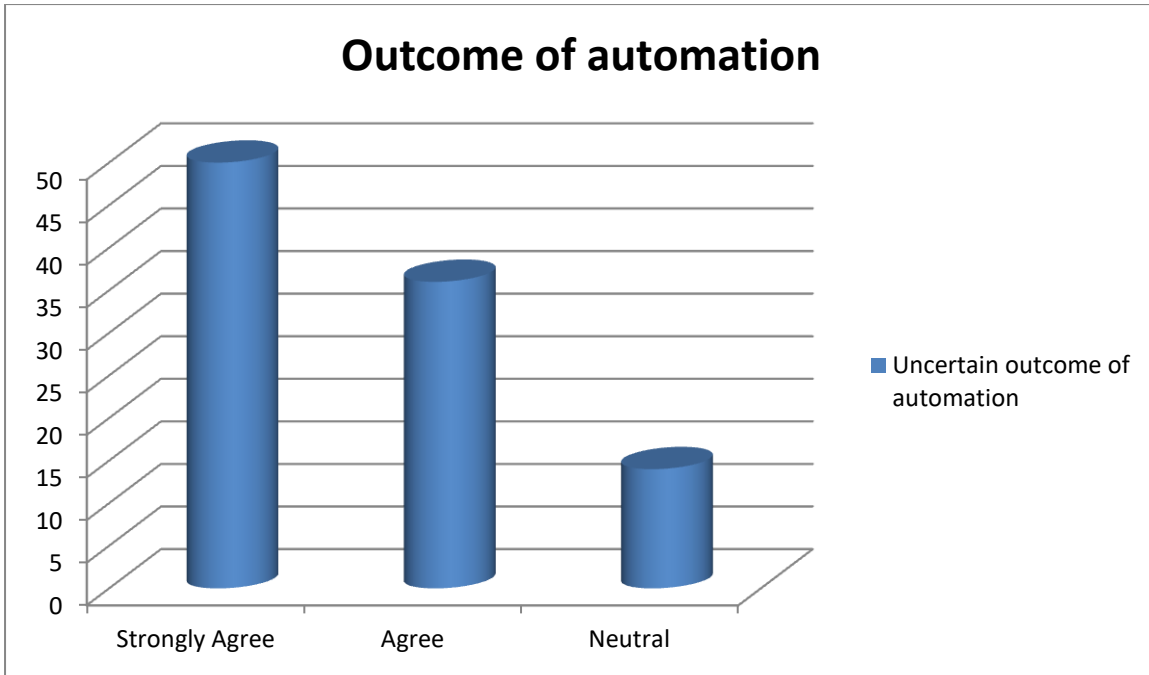
38% of the respondents agree that there are lack of information among the youth, and 24% are neutral on it.

Source: Survey

N=100

8. Fear of uncertain outcome of Automation.

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------|-----------|---------|---------------|--------------------|
| Valid | Neutral | 14 | 14.0 | 14.0 | 14.0 |
| | Agree | 36 | 36.0 | 36.0 | 50.0 |
| | Strongly agree | 50 | 50.0 | 50.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |

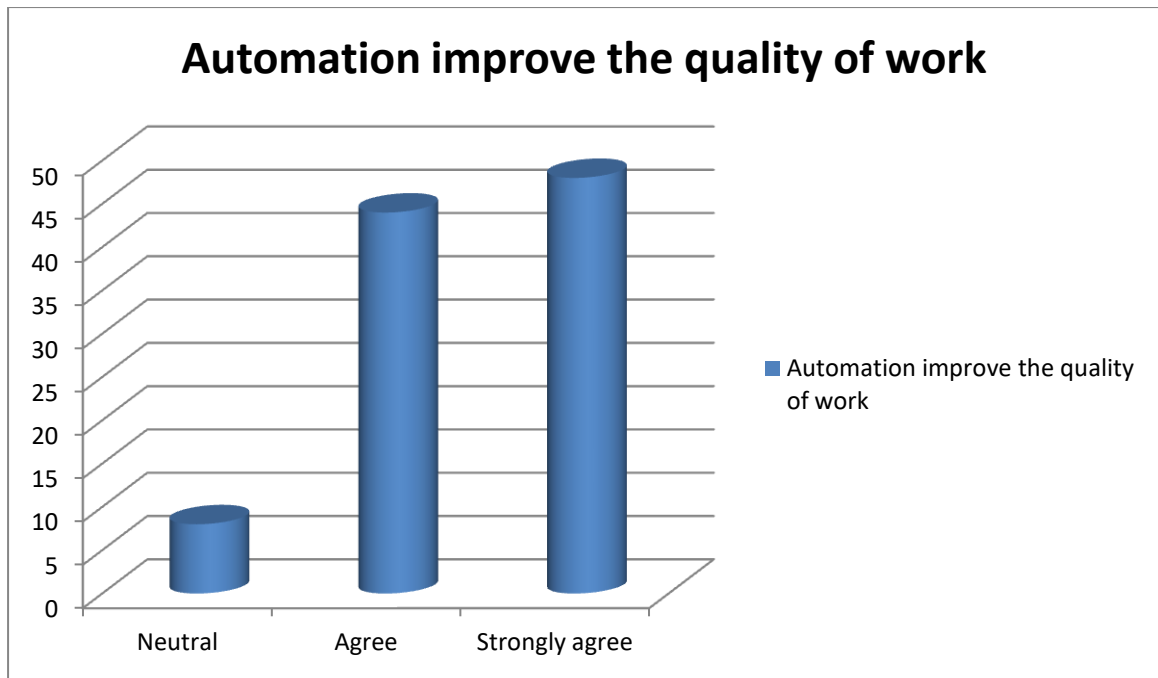


50% of the respondents strongly agree and 36% agree , and 14% are neutral on it.

Source: Survey N=100

9. Automation improves the quality of work

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------|-----------|---------|---------------|--------------------|
| Valid | Neutral | 8 | 8.0 | 8.0 | 8.0 |
| | Agree | 44 | 44.0 | 44.0 | 52.0 |
| | Strongly Agree | 48 | 48.0 | 48.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |

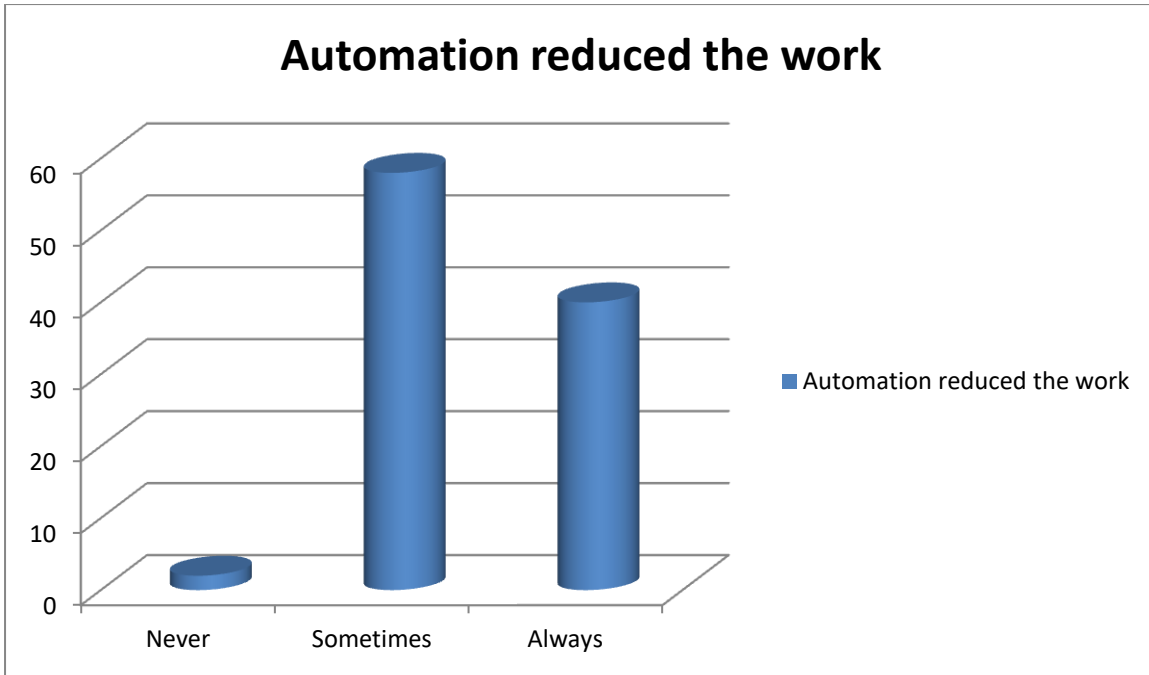


48% of the respondents strongly agree and 44% agree that and 8% are neutral on it.

Source: Survey N=100

10. Automation reduced the work

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|-----------|---------|---------------|--------------------|
| Valid | Never | 2 | 2.0 | 2.0 | 2.0 |
| | Sometimes | 58 | 58.0 | 58.0 | 60.0 |
| | Always | 40 | 40.0 | 40.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |



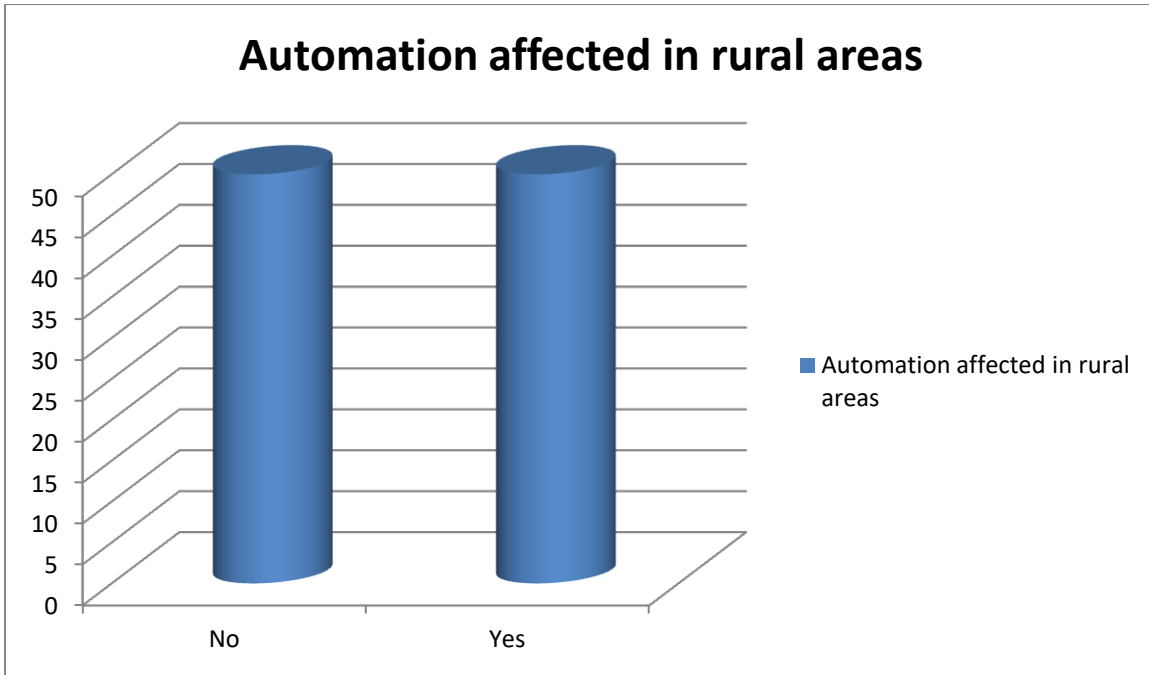
40% of the respondents say that Automation has reduced the work, 58% respondents say that sometimes it reduced the work and 2% of the respondents say that it never reduced the work

Source: Survey

N=100

11. Automation affected in rural areas

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | No | 50 | 50.0 | 50.0 | 50.0 |
| | Yes | 50 | 50.0 | 50.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |

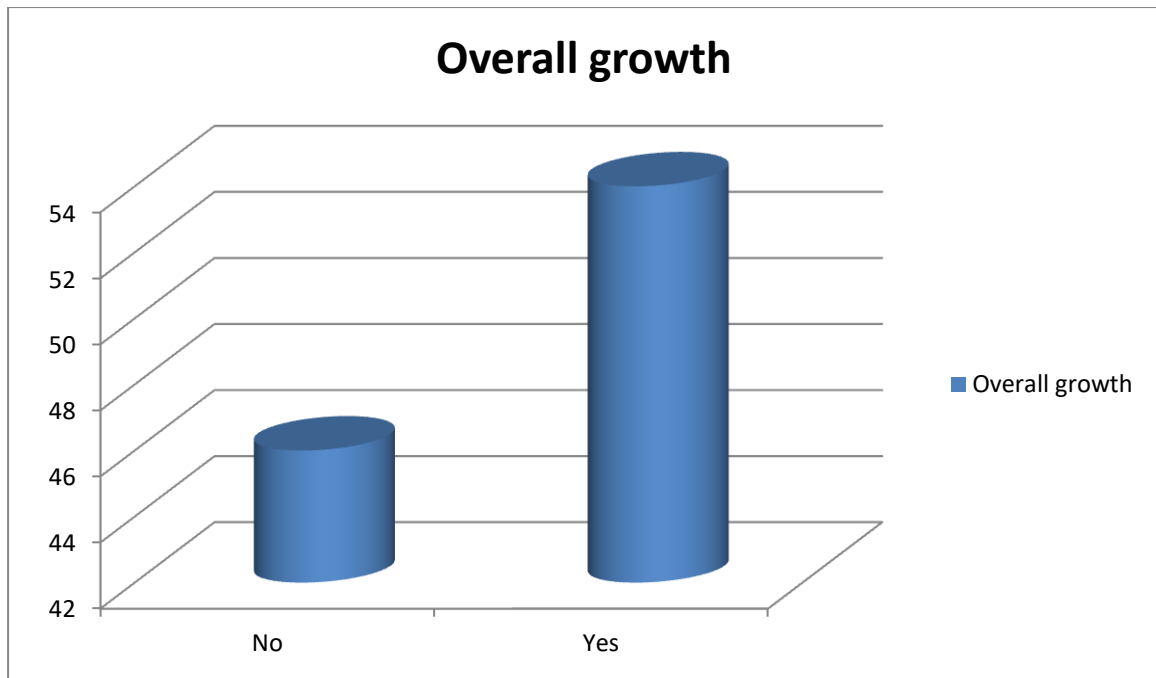


There is mixed opinion of respondents on the current changes in economy

Source: Survey N=100

12. Overall Growth in carrier opportunity due to Automation

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | No | 46 | 46.0 | 46.0 | 46.0 |
| | Yes | 54 | 54.0 | 54.0 | 100.0 |
| | Total | 100 | 100.0 | 100.0 | |



54% of the respondents feel that there will be a growth in carrier opportunity 46% say that there wont be growth .in carrier opportunity

Source: Survey N=100

FINDINGS OF THE STUDY :

1. The level of awareness among youth about the potential implications of automation on different industries and job sectors 20% Not familiar, 62% Very Familiar,12% Somewhat Familiar and only 6% Not sure.
2. 30% Respondents replied that automation leads to Creating Job opportunities, 14% Reduce Job opportunities,54% Neutral effect and only 2% not sure.
3. Explored the role of education and training for youth in preparing them for careers in an increasingly automated workforce 32% of the respondents perceive through Technical Skill, 16% respondents are focused on adaptability and Critical thinking, 52% Vocational training.
4. Majority of the respondents said the automation leads to 36% Increases in resource usage, 14% emphasises on Job opportunities, 30% reducing costs for essential services, 10% on other reasons
5. Personal Experience and Observation on the effects of Automation.
6. 80% Responded “No” 20% Responded “Yes”.
7. Provided insights that can inform policymakers, educators, and stakeholders in developing strategies to support youth in navigating the challenges and opportunities presented by automation in the job market 62% of the respondents Strongly believe that Job displacement is the crucial part, 26% of the respondents believe that Equity is the part of Ethical consideration and 12% on Privacy concern.
8. There is a Mixed opinion on the Role of Automation evolving in the next 10-20 yrs whereas 24% respondents believe it is decreasing.
9. Investigated the factors influencing youth decision-making regarding the role education, training, and career pathways in the context of automation 68% of the respondents believe that Promoting Education and Training Program is necessary, 22% respondents believe by Providing incentives for responsible automation practice is required and 10% respondents believe Implementing Strict Regulation is necessary.
10. 38% of the respondents agree that there is lack of information among the youth, and 24% are neutral on it.
11. 40% of the respondents say that Automation has reduced the work, 58% respondents say that sometimes it reduced the work and 2% of the respondents say that it never reduced the work
12. There is mixed opinion of respondents on the current changes in economy
13. 54% of the respondents feel that there will be a growth in carrier opportunity 46% say that there won't be growth .in carrier opportunity

CONCLUSION :

The study found that majority of respondents are giving their view on the perception of automation in carrier opportunity, young people's comments reflected the full spectrum of negative and positive outlooks. The majority agreed there is a need to improve the quality of training among the youth. All government should provide spaces for young people to share their views and discuss the issue they face with regard to unemployment. Government and private sector should ensure that technology development or training programme is widely available to all segments of the youth population and support those social group which experience the most difficulties in accessing and completing these training, such as young people living in extreme poverty and in rural location could get benefit from this training programme. We also must consider that technology development or Automation is good but it must not go to that extent that people forget to survive, when our country is developing, the technology also must be at the developing stage.

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