



# IMPACT ASSESSMENT REPORT

Skill Development Project sponsored by METSO INDIA PVT. LTD.



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# Acknowledgement

It gives me immense pleasure in submitting this Impact Assessment Study and Evaluation report for one of the flagship skill development projects conducted by the Skill Council for Mining Sector for METSO India for the period 2018-19. Ostensibly, this study evaluates the impact of the training program through quantitative and qualitative data inputs of Successful Trainees who completed the training objectives and are presently working in the mining sector.

A sincere thanks to Mr. Sanjay Sharma, Chief Executive Officer and Mr. Deepak Mishra, Head Training of Trainers and Partner Affiliation of Skill Council for Mining Sector for their valuable time and inputs throughout the duration of this research project and continued support and guidance especially during data collection stage and identifying the various stakeholders and getting us in touch with them for collecting the qualitative and quantitative data at each stage of the fieldwork component is deeply appreciated. I would also like to convey my heartfelt gratitude to Mr. Kuldeep Singh, Graphic Designer of Skill Council for Mining Sector for his tremendous support and assistance in the completion of this Impact Assessment study.

I would like to express my special thanks of gratitude to Prof. Dr. Manas Pandey as well as Prof. Mr. Ashutosh K Singh who gave me the golden opportunity to do this Internship, which also helped me in doing a lot of Research and I came to know about so many new things and I am really thankful to them.

I sincerely hope this report helps all stakeholders in their endeavor to providing skilled manpower especially Ore Processing Operator and charts out the way forward for further training enhancements and really makes a positive difference in their lives.

I wish them the very best in life and all their future endeavors.

-Swastika Mishra

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# 1. List of Abbreviations

CSR : Corporate Social Responsibility

MSDE : Ministry of Skill Development and Entrepreneurship

NSDC : National Skill Development Corporation

OJT : On the Job Training

SCMS : Skill Council for Mining Sector

TOA : Training of Assessor

TOT : Training of Trainers

TP : Training Partners

OPO : Ore Processing Operator

MoU : Memorandum of Understanding

## 2. Executive Summary

The report is about findings of the 'Impact Assessment Study' conducted for the Skill Development Project sponsored by Metso India Pvt. Ltd. under their CSR, executed by the Skill Council for Mining Sector (SCMS) during the year 2018-19 in the trade of Ore Processing Operator. The study seeks to gauge the impact of skill program on the trainee enrolled, his family and the community at large.

Metso India Pvt. Ltd. is a leading process performance provider, with customers in the mining, construction, and oil & gas industries. Metso India Pvt. Ltd. and Skill Council for the Mining Sector (SCMS) came together and managed a training project of skilling the rural youth of Rajasthan. A training academy in 'Neem ka Thana' town was set up by the training partner of SCMS.

Post a rigorous selection process including written test, interview and medical fitness, a batch of 34 qualified candidates out of total 816 applied was started on 12<sup>th</sup> February 2019. The candidates completed their two months of classroom training on 12<sup>th</sup> April, 2019 and continued 4 months on-the-job training at crusher site near around 'Neem Ka Thana' town which is the hub of stone-crushing activities. The trainees were spread across eight different crushing zones located about 15 Kms from the town. Post assessment and certification more than 85% of candidates were placed in the surrounding mining industries.

The sampling plan was carefully formulated to interview all the successful Trainees with questionnaires covering various key evaluation factors. Out of 34, 21 successful trainees were interviewed telephonically. The research findings were done both qualitatively by means of in-depth interviews and quantitatively. The questions and answers were recorded verbatim in both English and Hindi as per respondents' comfort levels.

Though the program focus was to mobilize and train ITI holders, only 48% of candidates were ITI, 38% were diploma engineers and 14% were B-Tech degree holders.

## Key Findings

1. 48% of the surveyed candidates were student, 28% were unemployed and 24% of the surveyed candidates were in a private job/self-employment before joining the training program. 38% were married.
2. All the interviewed respondents were in the age group of 22-28 years. OBCs constituted 48%, 48% belonged to General Category and 4% to SC category.
3. The quality and quantity of the training components such as training material, equipment facilities, lodging facilities, boarding, mine commuting, co-curricular activities, uniform and personal protective equipment (helmet, shoes etc.) had majority of the respondents (65.08%) in satisfied state.
4. A substantial 62% (13) of the respondents were satisfied with the overall training experience imparted to them in the course while 81% (17) were either satisfied or highly satisfied. Those stating the overall training experience as neutral or unsatisfied numbered 19% (04) of the respondents.
5. A huge 95% (20) of the respondents found the skill development course useful in up-skilling them found the training industry relevant.
6. For the majority 62% (13) of the respondents the skill training imparted has indeed improved their income levels.
7. Respondents were overall satisfied with different factors of their current job role aspects, like working hour 62% (13), future scope 81% (17), salary 43% (9), overtime pay 10% (2), medical benefits and insurance 52% (11), leave or time off benefits 71% (15), incentive bonus 43% (9), canteen facilities 62% (13) and transportation services 52% (11).

Overall, the program was very demanding from the point of view of Aspirational aspect, the requirements of skilled operators for heavy machinery and equipment in mining sector and lastly supported by the Government Policy 'Atmanirbhar Bharat' to train the youth for the job opportunity available within India and also find avenues for placement of such highly skilled trained youth abroad.

### 3. Introduction & Background

Metso India Pvt. Ltd. focuses on the continuous development of intelligent solutions that improve sustainability and profitability. Metso employs around 16,000 professionals in 50 countries. A Memorandum of Understanding (MoU) was signed between Skill Council for Mining Sector (SCMS) and Metso India Pvt. Ltd. on 17<sup>th</sup> December 2018 for enhancing technical skills of Indian youth in the trade of Ore Processing Operator by engaging SCMS affiliated training partner, Indian Institute of Skill Development, Gurgaon.

The program was named "Unnat-Kushalata ki aur" which meant youth transformation by enhancing technical skills to build employability and ensure easy availability of skilled workforce in ore processing segment.

Online applications were invited for the entrance test. A total of 816 candidates applied for the test. Post screening 507 candidates were shortlisted for the selection process. 117 candidates appeared for written test and interview. 64 candidates were selected for the medical examination. Finally, 34 candidates were enrolled for the program.

The candidates completed their two months of classroom training and four months On-the-Job training.

**Table 1: Details of Candidate Enrolment/Undergone Training Program**

1.	Number of online applications received	816
2.	Number of eligible candidates	507
3.	Candidates appeared for written test	117
4.	Number of candidates shortlisted for Interview	117
5.	Candidates shortlisted for the medical examination	64
6.	Candidates enrolled for Training	34
7.	Number of Dropout candidates	Nil
8.	Number of candidates certified	34
9.	Total candidates placed in jobs	85%
10.	Candidates engaged in self-employment/entrepreneurship	None

Source: SCMS Data Base

## 4. Approach & Methodology

The impact assessment study is to evaluate and ascertain the socio-economic impact of skill development training (Ore Processing Operator) provided to the trainees of one batch of 34 students from Rajasthan.

### 4.1 Sampling Techniques:

The assessment was carried out in training center located near 'Neem ka Thana', Rajasthan. According to the scope of the project, evaluation indicators were developed. It consists of variables such as employability, quality of employment, income, and working conditions, among others. The questionnaires were developed with an emphasis on key evaluation questions which included both quantitative and qualitative questions with open-ended answers.

The quantitative survey covered 21 successful trainees.

### 4.2 Approach and Methods:

A holistic approach was followed for inclusiveness, independent, involving subject matter experts and deriving sustainability for the program.

Research Methods and Tools included Desk Research, Telephonic Questionnaires and case studies with ethical considerations.

### 4.3 Evaluation Questions:

The following key criteria have been established for the achievement of the study's objectives -

- 4.3.1. Have job prospects improved as a result of access to training?
- 4.3.2. Has training improved skill sets, and how has it affected job wage growth?
- 4.3.3. Evaluation of the training quality using quantifiable criteria.
- 4.3.4. What are the challenges and motivations for the trainees?
- 4.3.5. Suggestions for bridging the gap in the current training program and ideas to improve the training program in the future?
- 4.3.6. To determine whether similar training regimens would be in demand.



## 5. Socio Economic Profile - Trainee

All the trainees who completed the course were from the state of Rajasthan. The findings stated herein are a result of the survey in legitimate responses.

### 5.1 Social Profile

The program was inclusive of various social groups from the state and the contribution made from different categories. OBCs constituted 48% (10) of the respondents; General category had 48% (10) respondents. SCs made up for only 4% (1) of the respondents interviewed as part of this study.

### 5.2 Age Group

All the interviewed respondents were in the age group of 22-28 years. The majority was in between 26-28 years constituting 62% (13) and the interviewed candidates between the age group of 22-25 years were 38% (8).

### 5.3 Religion

The majority of the respondents 76% (16) were Hindu and 24% (5) were Muslims.

### 5.4 Educational Qualifications

The majority of the respondents 48% (10) were ITI Tradesmen and Diploma holders were 38% (8). There were also 14% (3) B.Tech holders. No other educational profiles were found in the respondents other than these three. This indicates that all the trainees selected were as per the prescribed criteria.

### 5.5 Marital Status

The majority of the respondents 62% (13) were unmarried. Married made up 38% (13) while there were no divorcees enrolled in the program.

### 5.6 Prior Occupation

The majority of the respondents 48% (10) were students. Only one was in the wage employment and similarly only one of the total interviewed candidate was self-employed. Total Unemployed candidates were 29% (6) of the respondents.

### 5.7 Family Occupation

The majority 52% (11) of the family was in agriculture while families in private job were 14% (3) other occupations such as labor constituted 14% (3), both tailor and in transportations had one candidate each. One family was in Government Sector whereas one (5%) was self-employed.

### 5.8 Family type and size

Total of the respondents were living in Joint families (parents, self, spouse, and kids) ostensibly before joining the training. Not a single respondent stated belonging to a nuclear family made up of self, spouse, and kids or living in extended family setups comprising of uncles, aunts, parents, self, spouse, and their kids.

### 5.9 Monthly family income

The majority of the respondents 38% (8) were in the range of Rs. 10,000 - Rs. 20,000 monthly incomes. 33% (7) of respondents were in the Rs. 20,000 - Rs. 50,000 monthly income earning range.

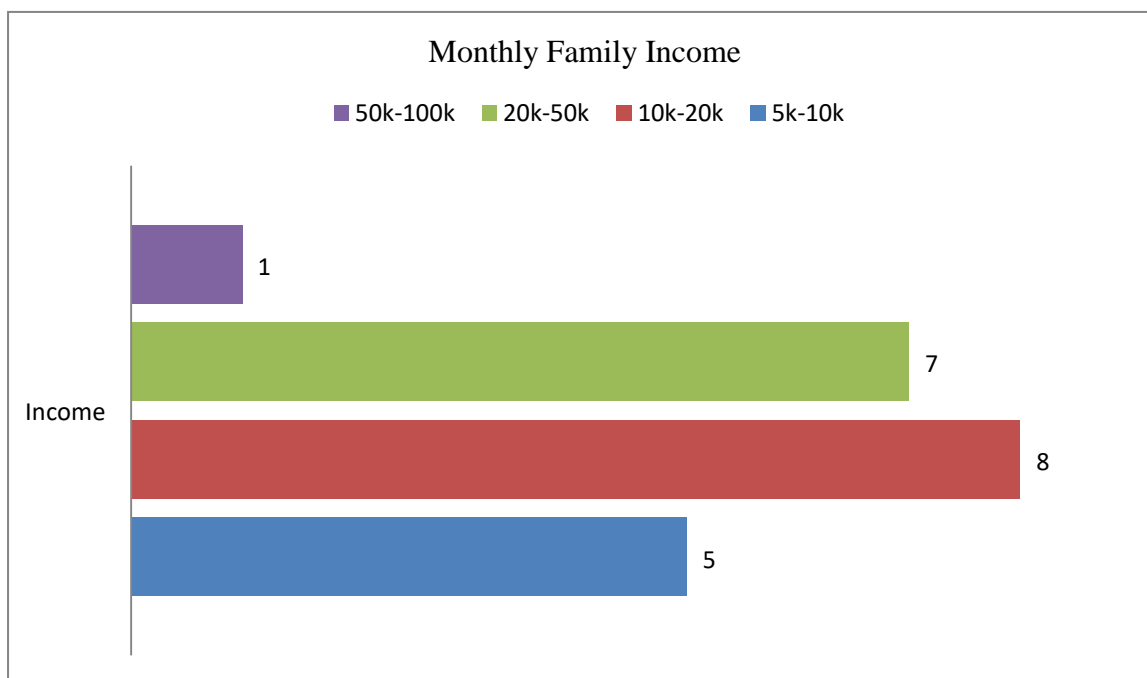


Fig. 1

Those in Rs. 5,000 - Rs. 10,000 monthly income earning range numbered 24% (5) while in Rs. 50,000-Rs.1,00,000 monthly income earning range there was 5% (1) of the respondents.

## 6. Program Implementation, Data Analysis & Interpretations

### 6.1 Program Awareness and Mobilization

The effectiveness of the mobilization process shapes the awareness levels of the candidates about the scheme and its benefits. The program required building awareness through various media campaigns to reach out. Accordingly, when asked 38% (8) informed about knowing the program through newspaper and website advertisements, while friends or relatives were the source of information for 62% (13) of the respondents. All other sources of information like course mobilizers, panchayat representatives and school/college teachers etc. were not the enabling sources for enrollment as per the survey.

The nature of job prospects was the prime reason for taking up this course as pointed out by 57% (12) of the respondents. Financial need stated as a reason by 29% (6) of the surveyed. About 14% (3) of the surveyed took up this course because it was recommended by someone.

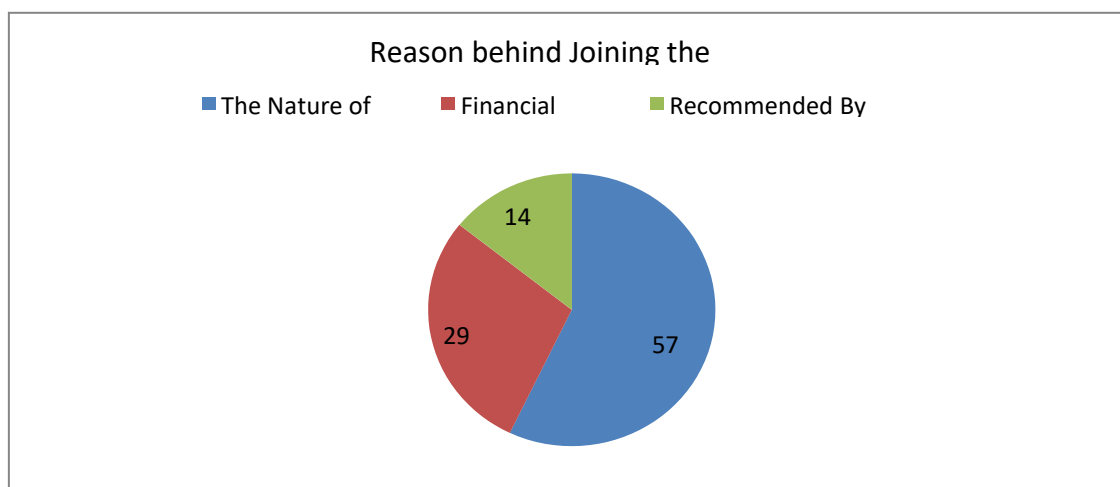


Fig. 2

### 6.2 Initial Assessment, Screening and Selection

The eventual selection was done on the basis of scores obtained in the entrance test and interviews. However, the final eligibility for enrolment was on the next steps of medical examinations and other verification.

### 6.3 Quality and Quantity of the Training Components

The quality and quantity of the training components such as training material, equipment facilities, lodging facilities, boarding, mine commuting, co-curricular activities, uniform and personal protective equipment (helmet, shoes, etc.) had the majority of the respondents (59%) giving a rating of ‘Satisfied’.

(Highly unsatisfied) 1 - - 2 - - 3 - - 4 - - 5 (Highly satisfied)

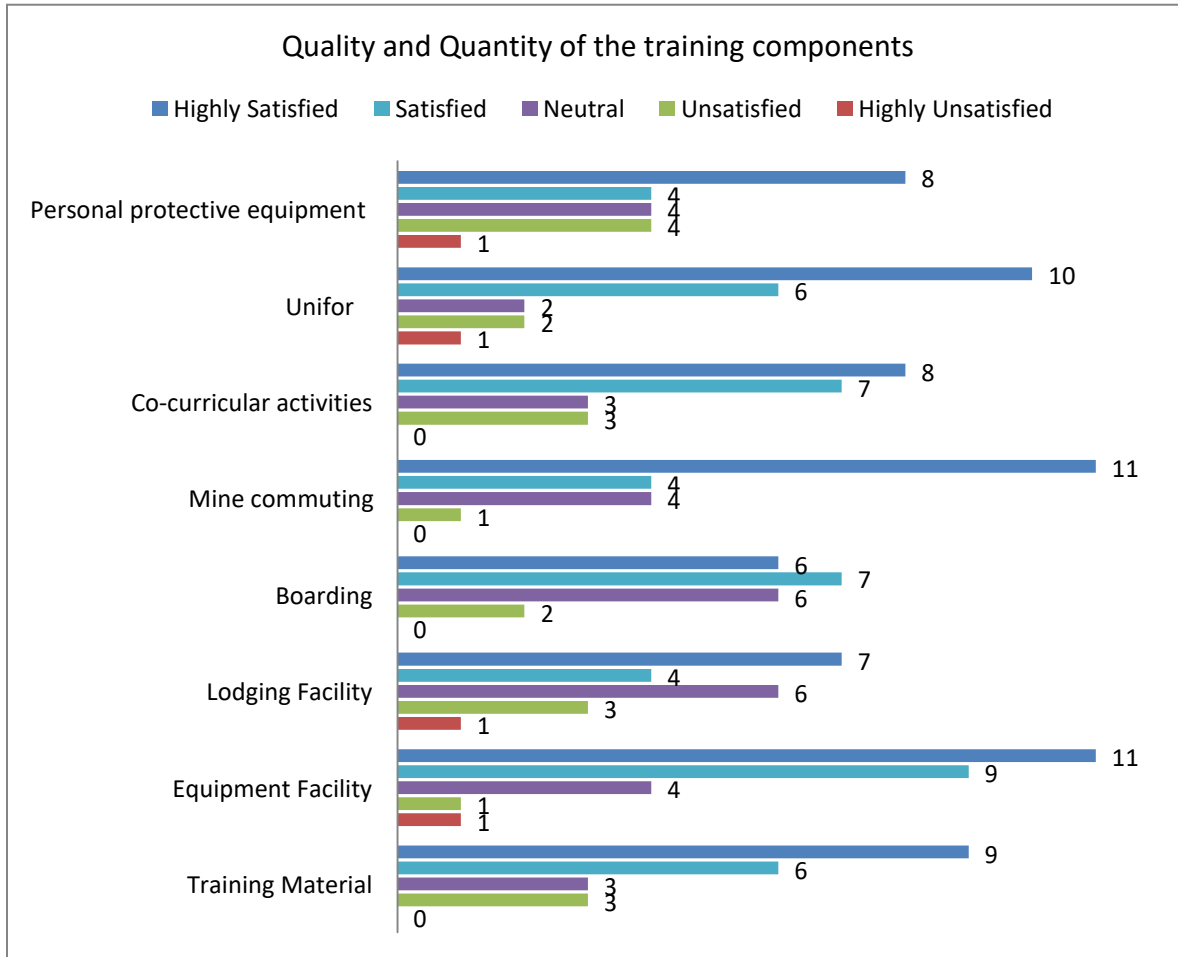


Fig. 3

### 6.4 Difficulty Level of the Training Course

A majority of 76% (16) of the respondents found it to be neither easy nor difficult. However, those who found the course to be easy were pegged at 24% (5) of the respondents. The majority of the respondents rated the satisfaction level as 4 (satisfied) followed by 5 implying that they were extremely satisfied with the different factors such as knowledge level, operational skills, behavior, delivery, and additional support (extra classes, query resolution).

## 6.5 Satisfaction Level

This section examines the satisfaction of trainees with placement jobs, in terms of the match of actual salary with expected salary, satisfaction with job role/type of work, work shift, and working conditions. (Highly unsatisfied) 1 - - 2 - - 3 - - 4 - - 5 (Highly satisfied)

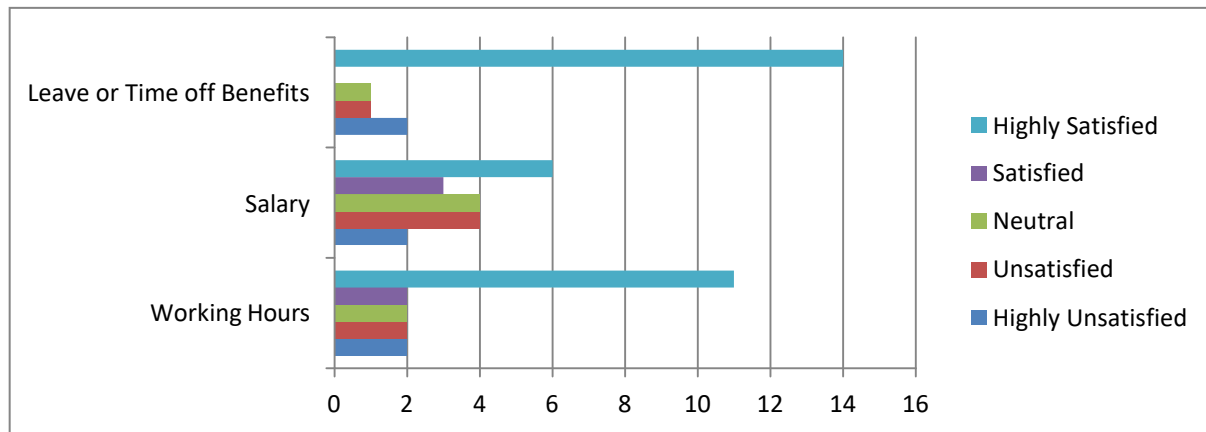


Fig. 4 – Satisfaction Level

## 6.6 Skill training in terms of equipment practice and industry relevance

The skill training imparted in terms of hands-on practice on equipment was found to be excellent by 76%(16) of the respondents and adequate by 19% (4) and inadequate by 5% (1) of the rest of them. Only 2%(3) of the surveyed found it to be inadequate as per se. A majority of 81% (17) of the trainee surveyed found the training to be relevant in terms of industry utility and relevance with another 14% (3) finding it to be highly relevant. Only 5%(1) of the respondents found it to be irrelevant.

## 6.7 Placement

Placement is the key outcome of any skill development training and ensures initial employment for the trained candidate. The offering of jobs to candidates is the essential prerequisite for placement. Placements and absorption in the industry remain a cause for concern. Out of the total 21 respondents, a vast majority, 71% (15) got their placements through the training partner and 29% (6) did not.

## 6.8 Acceptance of Job

Receipt of a job offer is no guarantee of placement since the candidates would not necessarily accept or take up the offered job. The data shows the extent to which beneficiaries accept the job offered by their training centers and all 15 of the respondents joined the organization that offered them job placements.

## 6.9 Job Role Offered

As far as job role is concerned, an overwhelming 80.95%(17) of the respondents agreed that they were assigned the role for which they had been trained i.e., for Ore Processing Operator as the case may have been. Those negating this fact numbered 19.04%(4) of the respondents. However, a substantial number of 9.52%(2) of the respondents agreed with the option if not, reasons and what role was offered. This implies that in all probability for multiple reasons they were not assigned to the role for which they had been trained and perhaps absorbed in different job work roles depending on the pressing need or urgency of the organization offering placements.

## 6.10 Training enhanced employability and income

A vast majority 95%(20) of the respondents agreed that the skill training imparted to them has actually increased their employability. For 5% (1) of the respondents the skill training has not done so (increased their employability). For the majority, 62% (13) of the respondents the skill training imparted has indeed improved their income levels. 38% (8) of the respondents feel that the skill training has not improved their income. The trainees 95% (20) found the training relevant for the skill training in terms of industry relevance.

## 6.11 Current Employment status

Almost 57% (12) of the respondents were employed in a related job or were found to be continuing with the same job. Further, 9.5%(2) of the respondents were employed in the mining sector but in other job roles. Unemployed post-training numbered 14% (3) of the respondents. Those employed but not in the mining sector were 19% (4).

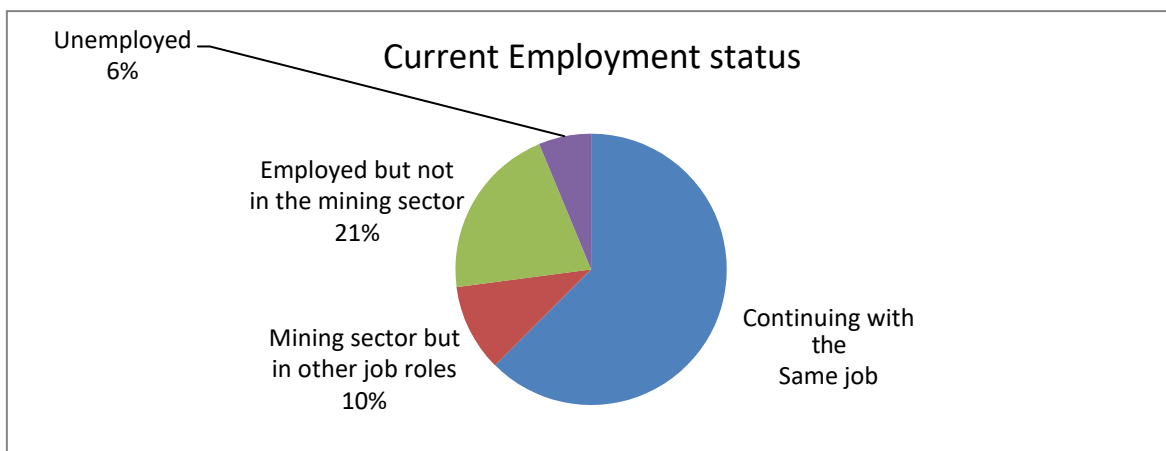


Fig. 5

### 6.12 Unemployment and reasons

Based on beneficiary survey data, shows that a majority of unemployed candidates stated reason such as Lack of availability of jobs, Lack of skills populated and other reasons like low educational level, low wages, and unsafe working conditions are a veritable explanation of the present unemployed state by them.

### 6.13 Job satisfaction

This study found that respondents gave a rating of 4 or 5 (on a scale of 5) from satisfying level to highly satisfying level with the different factors of their current job roles aspects like working hours 62% (13), future scope 81% (17), salary 43% (9), overtime pay 10% (2), medical benefits/insurance 52% (10), leave or time off benefits 67% (14), incentives/bonus 43% (9), canteen facilities 62%(13), transportation service 5% (11). (Highly unsatisfied) 1 - - 2 - - 3 - - 4 - - 5 (Highly satisfied)

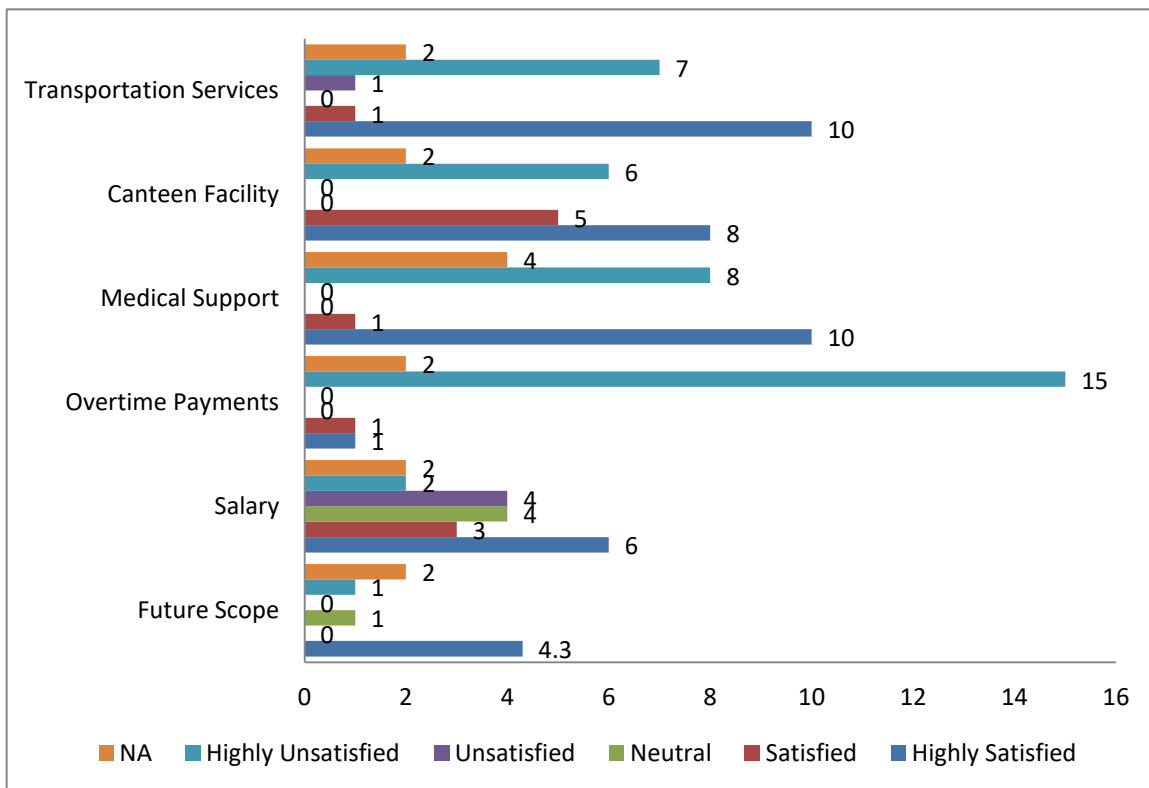


Fig. 6

### 6.14 Overall training experience

A substantial 62% (13) of the respondents were satisfied with the overall training experience imparted to them in the course while 29% (6) were highly satisfied. Those stating the overall training experience as neutral numbered only 5% (1) of the respondent and 9.5% (2) of the respondents felt unsatisfied with the overall training experience of the course.

## 7. Conclusion and Way Forward

All stakeholders went out of their way to ensure the success of this endeavor. The sponsoring organization **Metso India Pvt. Ltd.** and the skilling agency **Skill Council for Mining Sector** have done a commendable job in bringing this training project to fruition and training youth by giving them not only the right skill sets but also the right mindsets and providing them a lifelong means of employment and learning.

All successful trainees who were part of this training program for fulfilling the mining sector's specific industry requirements need to be complimented.

For a long, the mining sector conjures up notions of difficult work conditions and challenging circumstances and often gets headlines only when things go wrong such as mining disasters due to cave-ins, miners getting trapped due to flooding of underground mines or other fatal accidents. While these disasters are not desired at all, they serve to remind one and all of how difficult the working conditions are for people involved in the mining sector. Sector need for skilled manpower who are young, hardworking, have sound theoretical knowledge and practical hands-on experience on equipment/machinery and know how to operate them in live situations is a much-needed intervention as part of the Corporate Social Responsibility of the patrons. It is a tribute to both Metso India Pvt. Ltd. and SCMS for conceiving, designing, implementing, and executing this training academy program with all-around appreciation and satisfaction levels of key stakeholders.

Looking into the future, more such training programs not just in Rajasthan but all other states like Jharkhand, Orissa, Chhattisgarh and Madhya Pradesh are also required with the other sponsors like other mining industry, both state and central government etc. The Mining Ministry can be approached for title sponsorships and mining companies for co-sponsorships of such training programs.



## 8. Trainee Questionnaire

Questionnaire used for successful trainees who have finished the course:

### 1. Socio Economic Profile

#### 1.1. Age (in years) of the trainee:

- 18-22
- 23-27
- 29-32
- more than 32

#### 1.2. Educational Qualification:

- Below 10<sup>th</sup>
- 10<sup>th</sup> and above
- ITI
- Diploma
- Graduate
- Technical Graduate

#### 1.3. Social group:

- SC
- ST
- OBC
- General

#### 1.4. Religion:

- Hindu
- Muslim
- Sikh
- Christian

- Jain
- Others

**1.5. Marital Status:**

- Married
- Unmarried

**1.6. Family type:**

- Joint (Parents, Self/Spouse & Kids)
- Extended (Uncles, Aunts, Parents, Self/Spouse & Kids)
- Nuclear (Self/Spouse & Kids)

**1.7. Family Occupation:**

- Agriculture
- Animal Husbandry
- Labour
- Small business
- Government Service
- Private Job

**1.8. Monthly family income:**

- Less than Rs. 5,000
- Rs. 5000-10,000
- Rs. 10,000-20,000
- Rs.20, 000-50,000
- Rs.50,000-Rs. 1,00,000
- More than Rs.1,00,000

## **2. Training and Placement Information**

### **2.1. Trainee occupation before joining the program**

- Student
- Unemployed
- Wage Employed
- Self Employed
- Other

### **2.2. How did you come to know about the training program?**

- Friend/Relative
- Course Mobilizer
- Panchayat Representative
- Poster/Banner
- School/ College teacher
- News Paper/Website
- Other

### **2.3. Why did you decide to take this course?**

- Recommended by someone
- I like the Job nature
- Financial need

### **2.4. Please rate the quality and quantity of the training components on a scale of 1 to 5. (Highly unsatisfied) 1 -- 2 -- 3 -- 4 -- 5 (Highly satisfied) /NA (Not Applicable)**

- Training material
- Equipment facilities
- Lodging facilities
- Boarding
- Mine commuting

- Co-curricular Activities
- Uniform
- Personal protective equipment (Helmet, Shoes, etc.)

**2.5.** Based on your expectations, how difficult was this course?

- Easy
- Very Easy
- Neither easy nor difficult
- Difficult
- Very Difficult

**2.6.** How satisfied are you with the overall training experience?

- Unsatisfied
- Neutral
- Satisfied
- Highly satisfied

**2.7.** Rate the satisfaction level of the different factors related to trainers (Highly unsatisfied) 1 -- 2 -- 3 -- 4 -- 5 (Highly satisfied)

- Knowledge Level
- Operational Skills
- Behaviour
- Delivery
- Additional Support (extra classes, query resolution, etc.)

**2.8.** How do you perceive skill training in terms of equipment practice?

- Excellent
- Adequate
- Inadequate

**2.9.** How do you perceive the skill training in terms of Industry relevance?

- Highly relevant
- Relevant
- Not relevant

**2.10.** How long did it take to organise a placement drive after the training?

**2.11.** Did you get placement through the training partner?

- Yes
- No

**2.12.** If yes, did you join the organisation?

- Yes
- No

**2.13.** Were you assigned the role on which you have been trained?

- Yes
- No

**2.14.** Nature of your first job after training

- Regular
- Contractual
- Other

**2.15.** Have you changed your job after first placement?

- Yes
- No

**2.16.** Has the skill training increased your employability?

- Yes
- No

**2.17.** Has skill training improved your income?

- Yes

- No

**2.18.** Your monthly income detail:

- Before joining the training
- After placement
- Current

**2.19.** Do you feel there is a need for a more advanced course?

- Yes
- No

**3. Post Placement Survey**

**3.1.** What is your current employment status?

- Unemployed
- Self Employed
- Employed in related job/Continuing same job
- Employed but not in mining sector
- Employed in mining sector but in other job role
- Government Job
- Other

**3.2.** If unemployed, what do you feel is the most appropriate reason?

- Low educational level
- Lack of skills
- Low wages
- Lack of jobs available
- Unsafe working conditions
- Other

**3.3.** Place of Job

- Within district

- Within state
- Outside state
- Not Applicable

**3.4.** Do you enjoy and feel fully engaged in the current role?

- Yes
- No
- Not Applicable

**3.5.** Rate the satisfaction level of the different factors of your current Job (Highly unsatisfied) 1 -- 2 -- 3 -- 4 -- 5 (Highly satisfied)

- Working hours
- Future scope
- Salary
- Overtime payments
- Medical benefits/Insurance
- Canteen facilities
- Transportation services
- Leave or time-off benefits
- Incentives/Bonus

# Gallery

## Glimpses of Training Programme





## Glimpses of Training Programme



On-the-Job training

