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Role of Education on Poverty Reduction: The Case Study of Marunji Village in Pune

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Abstract. This case study examines how education reduces poverty in Marunji Village, Pune's Mulshi taluka, Maharashtra, India. Marunji Village is close to Hinjawadi Industries and Rajiv Gandhi Infotech Park. A 35-person main qualitative survey explores the village's setting, demography, and education's impact on poverty reduction. The poll sheds light on educational facility accessibility, government programme awareness, gender discrepancies, school attendance issues, and dropout rates. The findings emphasise the need to address financial issues, infrastructure issues, and gender inequality to improve education and alleviate poverty. The study advises upgrading educational infrastructure, expanding vocational and skill-based training programmes, giving financial support and scholarships, increasing parental involvement, and promoting gender equality in school. Comprehensive educational policies and projects for Marunji Village require government, NGOs, and community collaboration. The study emphasises context-specific educational initiatives and community involvement. Marunji Village can end poverty, empower people, and promote sustainability by prioritising education. This case study helps rural communities improve education and socioeconomic conditions by shedding light on education's role in poverty reduction.

Key words: education, poverty reduction, India, educational policy, gender inequality.

Роль образования в сокращении бедности: пример деревни Марунджи в Пуне

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Аннотация. В этом тематическом исследовании рассматривается, как образование снижает уровень бедности в деревне Марунджи, талука Мулши, Пуна, Махараштра, Индия. Деревня Марунджи находится недалеко от предприятия Hinjawadi Industries и информационно-технического парка Раджива Ганди. Основное качественное исследование с участием 35 человек изучает обстановку в деревне, демографию и влияние образования на сокращение бедности. Опрос проливает свет на доступность образовательных учреждений, осведомленность о государственных программах, гендерные различия, проблемы посещаемости школы и уровень отсева. Результаты подчеркивают необходимость решения финансовых проблем, проблем инфраструктуры и гендерного неравенства для улучшения образования и борьбы с бедностью. В исследовании рекомендуется модернизировать образовательную инфраструктуру, расширить программы профессионального обучения и повышения квалификации, предоставить финансовую поддержку и стипендии, повысить участие родителей и способствовать гендерному равенству в школе. Комплексная образовательная политика и проекты для деревни Марунджи требуют сотрудничества правительства, НПО и сообщества. В исследовании особое внимание уделяется контекстно-зависимым

образовательным инициативам и участию сообщества. Деревня Марунджи может положить конец бедности, расширить возможности людей и способствовать устойчивому развитию, уделяя приоритетное внимание образованию. Этот практический пример помогает сельским общинам улучшить образование и социально-экономические условия, проливая свет на роль образования в сокращении бедности.
Ключевые слова: образование, сокращение бедности, Индия, образовательная политика, гендерное неравенство.

Introduction

Marunji, a village in Pune's Mulshi taluka, is famous for the Rajiv Gandhi Infotech Park. The Hinjawadi Industries Association (HIA) helps develop Marunji and other nearby communities. The village borders Karjat, Talegaon Dabhade, Mawal, Khalapur, Raigad, Thane, Mumbai City, and Mumbai Suburban. Vadgaon and Begdewadi railway stations are nearby, and Line 3 of the Pune Metro will improve accessibility along the Hinjawadi-Marunji Road. This case study examines how education reduces poverty in Marunji. By studying the educational landscape and its impact on poverty reduction in this region, we can learn how education can improve comparable rural communities.

Marunji Village: Context and Demographics

This case study examines Marunji village in Pune's Mulshi tehsil. Marunji has 4,853 residents, including 2,827 men and 2,026 women, on 655.05 hectares. The village is 25 kilometres from the sub-district headquarter of Paud and 23 kilometres from Pune. Marunji governs as a gramme panchayat. Marunji's 2011 literacy rate was 70.93%, with 78.21% of men and 60.76% of women literate. Under pincode 411057, the community has 1,145 dwellings. Marunji is mostly residential, but Pune, 23 kilometres away, is the regional economic centre. Understanding Marunji's context and demographics is vital to measuring education's impact on poverty reduction in this community.

Marunji hamlet in Pune's Mulshi tehsil is known for its population, connection, and neighbouring villages. These elements greatly influence the region's social, economic, and educational scene. 2,827 men and 2,026 women live in Marunji. Education's impact on poverty alleviation depends on population size. With a tiny population, specialised educational programmes can improve the community. Village development requires connectivity. Marunji residents have easy access to public buses within the community. The village is 10+ kilometres from private bus services. A railway station within 5 to 10 kilometres improves commuting and economic activity. Marunji neighbours Dattwadi, Jambe, Mahalunge, Sus, Bavadhan Bk, Mulkhed, Nande, Lavale, Bhugaon, Bhukum, and Kule. These villages enrich regional culture and society. Neighbouring communities allow for collaboration, idea sharing, and economic collaboration. It emphasises the need to consider context and interconnection while planning educational interventions and poverty reduction measures. Therefore, Marunji village in Pune district's population, connectivity, and neighbouring villages help explain the educational environment and its potential impact on poverty reduction. Marunji can achieve comprehensive development, empower people, and end poverty by addressing educational needs, enhancing connections, and collaborating with neighbouring communities.

Education Initiatives in Marunji Village

Education helps Marunji village flourish and reduce poverty. Marunji has improved its literacy rate to 70.93%. 1,411 people—616 men and 795 women—are still illiterate. Marunji must improve education to end poverty. Educational infrastructure can be improved by building schools and learning centres that foster learning. This ensures that students receive formal education and learn valuable skills for their future. Vocational and skill-based training can supplement formal education to give students marketable skills. Training in agriculture, healthcare, tourism, and technology can meet local economic requirements. These programmes increase employment and income creation, lowering local poverty. Adult education might also help persons who missed out on childhood education. Adult literacy programmes help people improve their skills, livelihoods, and community development. These programmes can teach functional reading, numeracy, and life skills. It's also crucial to provide a welcoming educational environment for girls

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and women. Addressing gender inequities in education, providing safe and inclusive learning places, and encouraging education for everyone can achieve this. Educated women are more likely to earn income, make informed decisions about their families' well-being, and alter their communities. Education in Marunji requires government, NGO, and community collaboration. Together, these groups may design comprehensive policies, secure funding, and implement projects that address the village's educational needs and concerns. This collaborative approach sustains and improves education.

Several education programmes can help Marunji village reduce poverty and improve education. First, building and improving neighbourhood primary and secondary schools may give youngsters a solid education. These institutions offer a comfortable learning atmosphere, well-trained teachers, and a complete curriculum targeted at Marunji children. Mobile libraries deliver books and educational materials to the hamlet, encouraging reading and self-directed learning. Marunji people can borrow books, access educational resources, and learn from these mobile libraries that tour different communities.

Scholarships and financial aid can help low-income students. These initiatives can help talented Marunji students attain their academic goals by providing financial aid. Vocational training programmes provide local job-market-relevant skills. These programmes can teach inhabitants job skills in agriculture, technology, healthcare, and hospitality. Marunji locals can reduce poverty by improving their vocational skills and finding better jobs. Illiterate or semi-literate Marunji residents can benefit from adult education programmes. Functional literacy, numeracy, and life skills can help adults better their livelihoods, participate in community development, and become empowered change agents. Marunji should take steps to ensure females' education is valued. These programmes can include awareness campaigns to shift societal standards, scholarships for girls, safe school transportation, and a friendly environment that encourages girls to continue their education and challenge gender stereotypes. Marunji pupils can benefit from digital education materials. Computer laboratories, internet access, and digital literacy training help prepare kids for a future driven by technology.

A paper examines Marunji Village's poverty reduction efforts in the context of the entrepreneurial university model and the Triple Helix framework. It emphasises stakeholder participation and policy reforms to foster entrepreneurship [Ray 2021]. Education succeeds with parental and community involvement. Workshops, awareness programmes, and parent-teacher associations can encourage parental involvement and strengthen home-school partnerships. Parents may help their children succeed in school by supporting, guiding, and emphasising education. Enhancing Marunji's education requires teacher professional development. Training, workshops, and mentoring can improve educators' teaching approaches, pedagogical abilities, and topic knowledge. Providing teachers with effective methods and current knowledge can improve education. Education awareness campaigns transform attitudes and remove societal barriers to education. These efforts can promote the long-term benefits of education, debunk myths, and persuade families to prioritise education for their children. These activities can motivate the community to invest in education by raising awareness and promoting a positive outlook. These education programmes could improve Marunji village. These programmes require government, educational, non-governmental, and community cooperation. Marunji empowers people through education to break the cycle of poverty and create a better future.

Methodology

The Marunji village study on education and poverty reduction used a basic qualitative survey. This method sought participants' deep views into education's impact on village poverty reduction. The survey participants were 35. This sample size was intended to represent the population and enable in-depth data analysis. Systematic random sampling ensured fairness and representativeness in the sample. Open-ended questions and prompts allowed participants to discuss their experiences, thoughts, and observations about education and poverty reduction in Marunji village. The questions covered access, quality, impediments, and the perceived benefit of education on poverty reduction. Trained researchers visited Marunji village to interview participants and the researchers explained the study, received informed consent, and guaranteed confidentiality. Face-to-face interviews were used to explain responses. Additionally, the researchers used active listening

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and probing questions to get extensive and nuanced information from participants during interviews. They urged people to share education and poverty reduction anecdotes, problems, and successes. Field observations supplemented interview data and helped the researchers grasp the village context. The data-driven themes and sub-themes were transcribed, coded, and categorised. To generate significant results, the researchers found patterns, trends, and repeating concepts in the responses. The study's 35 participants limited its generalizability to Marunji village's total population. The study's self-reported data may have been biased or subjective.

Results

Question 1: How would you rate the overall accessibility of educational facilities in Marunji Village?
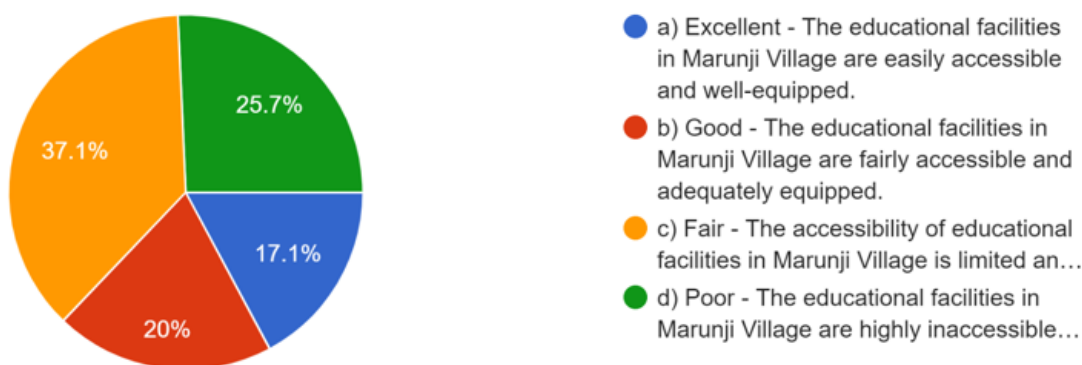35 responses

a) Excellent - The educational facilities in Marunji Village are easily accessible and well-equipped.

b) Good - The educational facilities in Marunji Village are fairly accessible and adequately equipped.

c) Fair - The accessibility of educational facilities in Marunji Village is limited an…

d) Poor - The educational facilities in Marunji Village are highly inaccessible…

Figure 1. Question 1, *35 responses*

As per the result of the above figure, 37.1% of survey respondents have found that "Fair — The accessibility of educational facilities in Marunji Village is limited and improvements are needed." Besides that, 25.7% have found "Poor-The educational facilities in Marunji Village are highly inaccessible and lack essential resources." 20% have found "Good — The educational facilities in Marunji Village are fairly accessible and adequately equipped." Finally, 17.1% have found "Excellent — The educational facilities in Marunji Village are easily accessible and well-equipped."

Question 2: Have you or any family members received formal education beyond primary school in Marunji Village?
35 responses

a) Yes, myself - I have received formal education beyond primary school in Marunji Village.

b) Yes, family members - Some members of my family have received formal education beyond primary scho…

c) No, none - Neither I nor any of my family members have received formal education beyond primary school in M…
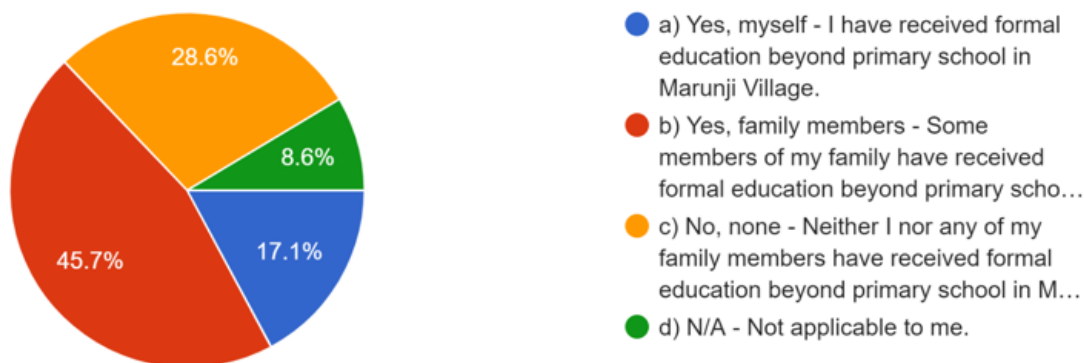
d) N/A - Not applicable to me.

Figure 2. Question 2, *35 responses*

For the second survey question, the majority of the respondents (45.7%) found that "Some members of my family have received formal education beyond primary school in Marunji Village." 28.6% have responded, "Neither I nor any of my family members have received formal education beyond primary school in Marunji Village."

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Question 3: In your opinion, how has education contributed to poverty reduction in Marunji Village?
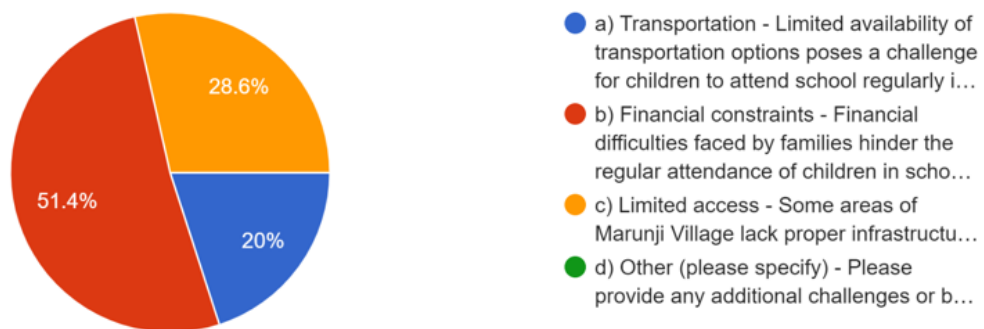35 responses

- a) Significantly - Education has played a significant role in reducing poverty in Marunji Village by empowering individ…
- b) Moderately - Education has contributed moderately to poverty reduction in Marunji Village, with some…
- c) Slightly - Education has had a slight impact on poverty reduction in Marunji…
- d) Not at all - Education has not contributed to poverty reduction in Ma…

Figure 3. Question 3, *35 responses*

For the third survey question, 40% responded positively to "Education has contributed moderately to poverty reduction in Marunji Village, with some positive impact on the overall well-being of individuals." Besides that, 28.6% have responded that "Education has had a slight impact on poverty reduction in Marunji Village, with limited improvements in the socio-economic conditions."

Question 4: Are there any specific challenges or barriers that prevent children from attending school regularly in Marunji Village? If yes, please specify.
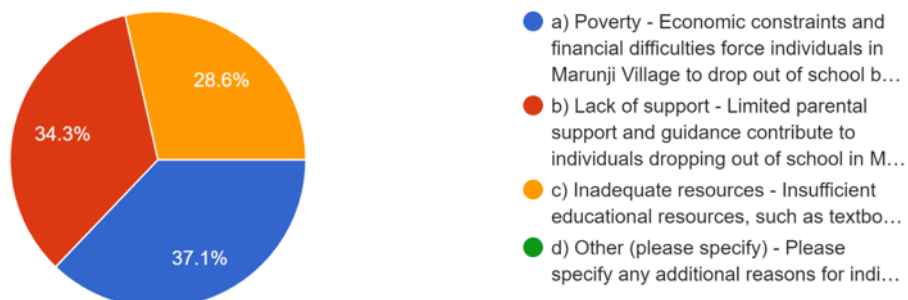35 responses

- a) Transportation - Limited availability of transportation options poses a challenge for children to attend school regularly i…
- b) Financial constraints - Financial difficulties faced by families hinder the regular attendance of children in scho…
- c) Limited access - Some areas of Marunji Village lack proper infrastructu…
- d) Other (please specify) - Please provide any additional challenges or b…

Figure 4. Question 4, *35 responses*

For this survey question, more than half of the survey respondents have found that "Financial difficulties faced by families hinder the regular attendance of children in schools in Marunji Village." Besides that, 28.6% have found "Some areas of Marunji Village lack proper infrastructure, making it challenging for children to access schools regularly."

Question 5: What are the main reasons for individuals in Marunji Village dropping out of school before completing their education?
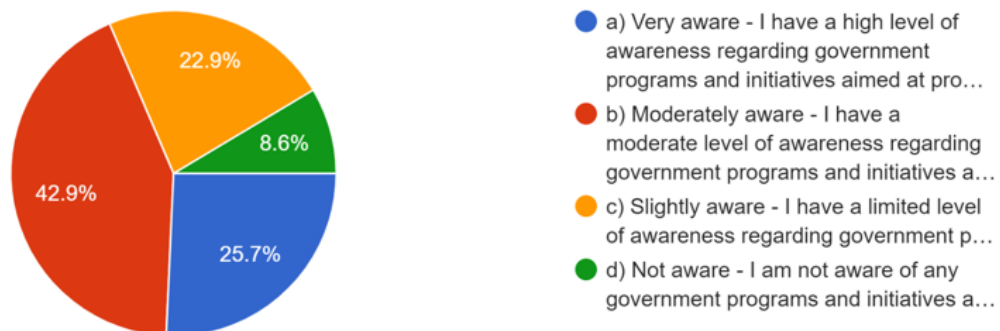35 responses

- a) Poverty - Economic constraints and financial difficulties force individuals in Marunji Village to drop out of school b…
- b) Lack of support - Limited parental support and guidance contribute to individuals dropping out of school in M…
- c) Inadequate resources - Insufficient educational resources, such as textbo…
- d) Other (please specify) - Please specify any additional reasons for indi…

Figure 5. Question 5, *35 responses*

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For this fifth question, 37.1% stated that "Poverty — Economic constraints and financial difficulties force individuals in Marunji Village to drop out of school before completing their education." Additionally, 34.3% have found that "Lack of support — Limited parental support and guidance contribute to individuals dropping out of school in Marunji Village." Moreover, 28.6% responded "Inadequate resources — Insufficient educational resources, such as textbooks and learning materials, lead to individuals leaving school prematurely in Marunji Village."

Question 6: How aware are you of government programs and initiatives aimed at promoting education and reducing poverty in Marunji Village?
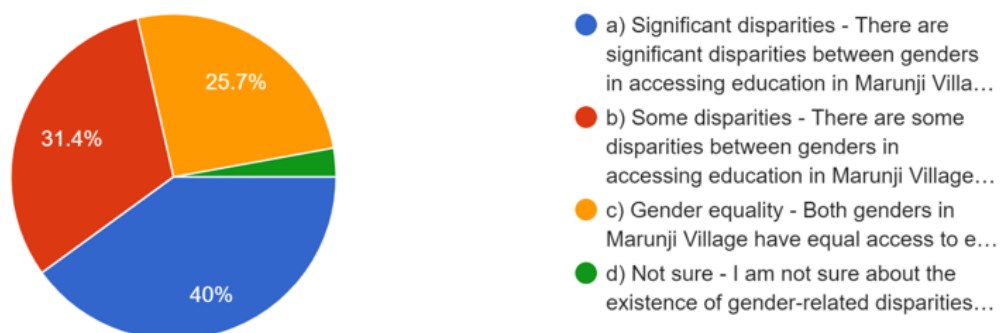35 responses

a) Very aware - I have a high level of awareness regarding government programs and initiatives aimed at pro…

b) Moderately aware - I have a moderate level of awareness regarding government programs and initiatives a…

c) Slightly aware - I have a limited level of awareness regarding government p…

d) Not aware - I am not aware of any government programs and initiatives a…

Figure 6. Question 6, *35 responses*

For this question, the majority of the respondents (42.9%) have found that they are moderately aware of the government programs and initiatives for promoting education and reducing poverty. 25.7% have stated that "Very aware-I have a high level of awareness regarding government programs and initiatives aimed at promoting education and reducing poverty in Marunji Village."

Question 7: Are there any specific gender-related disparities or challenges in accessing education in Marunji Village?
35 responses

a) Significant disparities - There are significant disparities between genders in accessing education in Marunji Villa…

b) Some disparities - There are some disparities between genders in accessing education in Marunji Village…

c) Gender equality - Both genders in Marunji Village have equal access to e…

d) Not sure - I am not sure about the existence of gender-related disparities…

Figure 7. Question 7, *35 responses*

For this survey question, 40% of the respondents have found that "There are significant disparities between genders in accessing education in Marunji Village, with one gender facing greater challenges." Whereas, 31.4% have stated that "There are some disparities between genders in accessing education in Marunji Village, with certain challenges faced by one gender." Besides that, 25.7% have found that "Both genders in Marunji Village have equal access to education without any notable disparities."

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Question 8: Have you witnessed any positive changes in the socio-economic conditions of Marunji Village as a result of educational interventions?

35 responses

Figure 8. Question 8, *35 responses*

42.9% have responded that "I have noticed some positive changes in the socio-economic conditions of Marunji Village due to educational interventions." Additionally, 34.3% responded, "I have not seen any noticeable improvements in the socio-economic conditions of Marunji Village as a result of educational interventions". 20% stated, "I have observed significant positive changes in the socio-economic conditions of Marunji Village resulting from educational interventions."

Question 9: How important do you believe vocational and skill-based training programs are in empowering individuals to overcome poverty in Marunji Village?

35 responses

Figure 9. Question 9, *35 responses*

For this question, 42.9% of the respondent answered "Vocational and skill-based training programs are important in empowering individuals to overcome poverty in Marunji Village." Moreover, 25.7% have found that "Vocational and skill-based training programs have some importance in empowering individuals to overcome poverty in Marunji Village". 22.9% have found "Vocational and skill-based training programs are of utmost importance in empowering individuals to overcome poverty in Marunji Village."

Question 10 (Figurine 10): For this final question, 51.4% have found an improvement that "Offering scholarships and financial assistance to support educational pursuits in Marunji Village." 25.7% have found that "Improving training programs for teachers in Marunji Village to ensure quality education." 20% of the respondents stated "Allocating more funds to improve educational infrastructure in Marunji Village".

Question 10: What additional measures or improvements do you suggest to enhance the role of education in reducing poverty in Marunji Village?
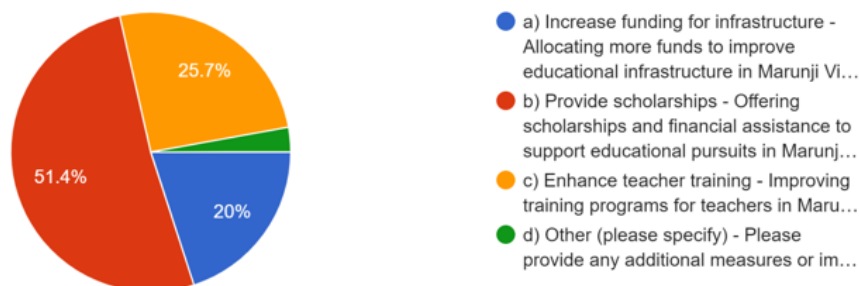35 responses

- 🔵 a) Increase funding for infrastructure - Allocating more funds to improve educational infrastructure in Marunji Vi…
- 🔴 b) Provide scholarships - Offering scholarships and financial assistance to support educational pursuits in Marunj…
- 🟠 c) Enhance teacher training - Improving training programs for teachers in Maru…
- 🟢 d) Other (please specify) - Please provide any additional measures or im…

Figure 10. Question 10, *35 responses*

Analysis and Interpretation

The poll found that participants had different opinions on Marunji Village's educational facilities' accessibility. 37.1% said Marunji Village's educational facilities are "Fair." This suggests that village residents may have trouble obtaining educational resources and facilities. 25.7% of respondents rated Marunji Village school facilities "Poor." This shows that a large segment of the population struggles to access educational resources and facilities. The lack of key resources may contribute to this view, emphasising the need for improved educational infrastructure. Fortunately, 20% of respondents ranked Marunji Village's educational facilities as "Good." This suggests that the hamlet has enough educational resources and facilities, however, they might be improved. 17.1% of participants ranked Marunji Village's educational facilities as "Excellent." This suggests that a lesser but significant percentage of respondents view the village's educational resources and facilities as accessible and well-equipped. This good answer shows that Marunji Village's educational infrastructure is meeting or exceeding expectations.

India's multi-generational poverty persists. In 2022, India's child poverty rate was alarming. According to your data, nearly 13 million 10–14-year-olds were poor. Poverty affected a large chunk of India's youth. Poverty limits education, healthcare, nutrition, and other resources for children. Childhood poverty might affect their development and future possibilities. It's promising that poverty rates dropped after 40. This drop may be due to increasing work experience, wealth accumulation, job prospects, or access to social security programmes for elderly people. Poverty reduction in India should prioritise vulnerable age groups, including children, who are most affected by it. Quality education, healthcare, and social assistance can help break the cycle of poverty and improve their quality of life (Refer to appendix 1).

The survey found interesting responses to the question about formal education beyond primary school in Marunji Village. Most respondents (45.7%) said some family members had formal education beyond primary school in Marunji Village. This indicates a positive trend towards educational advancement in Marunji Village. However, 28.6% of respondents said neither they nor any of their family members had formal education beyond primary school in Marunji Village. This shows that many people haven't gone to college. Due to limited educational resources, financial constraints, or cultural and societal barriers become crucial. Addressing this group's educational needs is essential to ensuring equal education and preventing poverty. Marunji Village's post-primary education results are mixed. A significant portion of respondents reported that their family members have had post-primary education, but a significant portion have not. Marunji Village must improve education accessibility, affordability, and quality to address this disparity. Scholarships, financial aid, and support systems can help families afford higher education. Vocational and skill-based training programmes can also help non-traditional students find jobs and economic independence. Technology and education can reduce poverty, as shown by machine learning crop output prediction [Using Machine Learning... 2022]. Farmers and politicians may use machine learning algorithms to analyse geography, weather, and season to choose crops, price markets, and allocate resources [Machine Learning- and Feature... 2022]. Accurate crop yield projections help farmers plan, optimise production,

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and reduce hazards, boosting income and reducing agricultural communities' poverty risk.

Marunji Village respondents' views on education's role in poverty reduction vary. 40% of participants believed education has moderately reduced village poverty and improved individual well-being. Education appears to reduce poverty and improve community socioeconomic conditions. 28.6% of respondents said education has slightly reduced poverty in Marunji Village, with limited socio-economic improvements. This response suggests that while education reduces poverty, there is still room for improvement in using education to reduce poverty more significantly. These findings support Marunji Village's poverty reduction efforts through education. It recognises education's power to empower, employ, and advance. The positive responses also suggest that education can help break the cycle of poverty and promote community development. However, 31.4% of respondents were unsure how education reduces poverty.

Agriculture's role in economic growth and poverty alleviation is relevant in the context of education. Agriculture provides money and jobs for many, especially in rural areas with greater poverty rates. The discussion emphasises the importance of agriculture as a livelihood and the potential impact of agricultural education and training on poverty reduction (Refer to appendix 3). A farmer wanting to return to traditional farming methods, which may not be successful in today's market, underscores the need for agricultural education and innovation. Modern, sustainable farming practises that maximise productivity and profit can be learned through education. Farmers can increase crop yields, reduce post-harvest losses, and react to market changes through supporting agricultural education and training programmes. In this respect, Indian government has become more focused on setting up higher educational institutes across different regions of India. Universities and colleges can reduce poverty. In 2021, the AISHE portal featured 1,113 degree-granting universities from over 55,000 higher education institutions worldwide. These institutions help underprivileged people and spur change. Universities first provide scholarships, grants, and financial aid to low-income students. These institutes help people escape poverty by teaching them. Higher education institutions offer a variety of academic and vocational programmes to enhance skills. These programmes give students job-ready skills. Higher education improves economic opportunities and reduces poverty by increasing work prospects and income. University research and innovation reduce poverty. They research and solve social issues like poverty. Research helps politicians, NGOs, and others develop successful poverty reduction methods. Universities can also work with local communities on community-based research and innovative solutions for disadvantaged populations. Higher education institutions reduce poverty by encouraging entrepreneurship and economic growth. University entrepreneurship programmes, incubation centres, and resources stimulate job creation. Entrepreneurship boosts economic growth, employment, and underprivileged communities, reducing poverty (Refer to appendix 2).

Technology and education can reduce poverty, as shown by machine learning crop output prediction. Farmers and politicians may use machine learning algorithms to analyse geography, weather, and season to choose crops, price markets, and allocate resources. Accurate crop yield projections help farmers plan, optimise production, and reduce hazards, boosting income and reducing agricultural communities' poverty risk. Education helps farmers use machine learning and other technologies. Educational programmes on data analysis, technology adoption, and decision-making can help farmers use machine learning for yield prediction. Education also helps farmers navigate the market and make informed decisions that promote their economic well-being.

The survey results on the primary reasons Marunji Village students drop out provide significant insights. 37.1% of respondents attributed school dropouts to poverty. Families' financial problems sometimes cause students to put their education on hold. In Marunji Village, 34.3% of participants cited a lack of support, particularly parental guidance, as a factor for early school dropout. Without parental participation, advice, and encouragement, students may lack desire and direction, leading to increased dropout rates. 28.6% of respondents also cited insufficient educational materials, textbooks, and learning resources as a reason for dropping out. Lack of necessary resources can slow learning, reduce engagement, and limit educational options, resulting in lower interest and dropout rates. These

findings demonstrate the complex causes of Marunji Village school dropouts. Poverty, lack of support, and insufficient resources hinder school completion.

The respondents' awareness of government programmes and measures to promote education and reduce poverty in Marunji Village is revealed by the survey results. Most participants (42.9%) were moderately aware of these government programmes and efforts. This shows that respondents are aware of government attempts to alleviate education and poverty in the community. 25.7% of respondents were extremely aware of these government programmes and initiatives. This shows that many Marunji Village residents understand the government's efforts to promote education and reduce poverty. This shows that these individuals are involved in the community, aware of the activities, and familiar with the support and resources. Respondent's awareness of Marunji Village government programmes and efforts varied. Some respondents are moderately acquainted, while others are quite familiar with the initiatives.

31.4% of respondents also noted that one gender faces certain problems in acquiring education. This solution acknowledges gender-related impediments to schooling in Marunji Village. It is crucial to develop gender equality strategies to encourage boys and girls to access and pursue education without discrimination. This can involve supporting girls' education, resolving cultural and societal conventions that prevent females from attending school, and providing support structures for all genders. Creating a secure and inclusive learning environment for all kids, regardless of gender, is equally important. This can include gender-sensitive teaching, anti-discrimination regulations, and a supportive education ecosystem that promotes and respects gender equality. 34.3% of respondents said educational interventions haven't improved Marunji Village's socioeconomic conditions. This suggests that educational measures may not have directly improved the community's socioeconomic status. Educational interventions in Marunji Village must be monitored and evaluated to determine their efficacy and opportunities for improvement. Stakeholders can improve educational interventions to reduce poverty and develop communities by addressing any socio-economic barriers.

42.9% believed vocational and skill-based training programmes help people escape poverty. This shows the importance of such programmes in giving people the skills and knowledge they need to obtain work and better their lives. These findings emphasise the relevance of vocational and skill-based training programmes for poverty reduction and empowerment in Marunji Village. Practical skills associated with local economic needs can help people get better jobs, create enterprises, and earn more to improve their quality of life. Diverse training solutions for different sectors and businesses are needed to maximise vocational and skill-based training programmes. Agriculture, technology, healthcare, hospitality, and other local economic industries may be included. Collaboration with government agencies, NGOs, and local industry can also help build demand-driven training programmes that provide job-market-relevant skills. Access to vocational and skill-based training programmes for disadvantaged people, such as those without financial resources or educational possibilities, is vital. Scholarships, financial aid, and outreach to marginalised populations can achieve this.

Most participants (51.4%) suggested providing rural students with scholarships and financial aid. This suggests removing financial barriers and guaranteeing equal education for all, especially those from low-income families. Promote community involvement in education, foster partnerships with local industries for vocational training and employment opportunities, expand access to digital learning resources and implement comprehensive educational policies that address Marunji Village's needs and challenges.

Conclusion

In conclusion, Marunji Village in Pune shows how education reduces poverty. Marunji Village, near the Rajiv Gandhi Infotech Park and Hinjawadi Industries, faces socio-economic issues. Population, connectivity, and neighbouring villages affected the village's social and economic landscape, according to the study. The Marunji Village survey revealed how education reduces poverty. Community members' survey responses addressed issues such as educational facility accessibility, government programme awareness, and gender-related inequities in education. The study emphasises context-specific techniques and community involvement in educational intervention design and implementation. Marunji Village can reduce poverty, economic empowerment, and sustainable development by addressing identified obstacles and

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using education. Marunji Village shows that education may overcome the cycle of poverty. Marunji Village can boost socioeconomic advancement, livelihoods, and holistic development by prioritising education, empowering individuals, and creating an inclusive and friendly learning environment.

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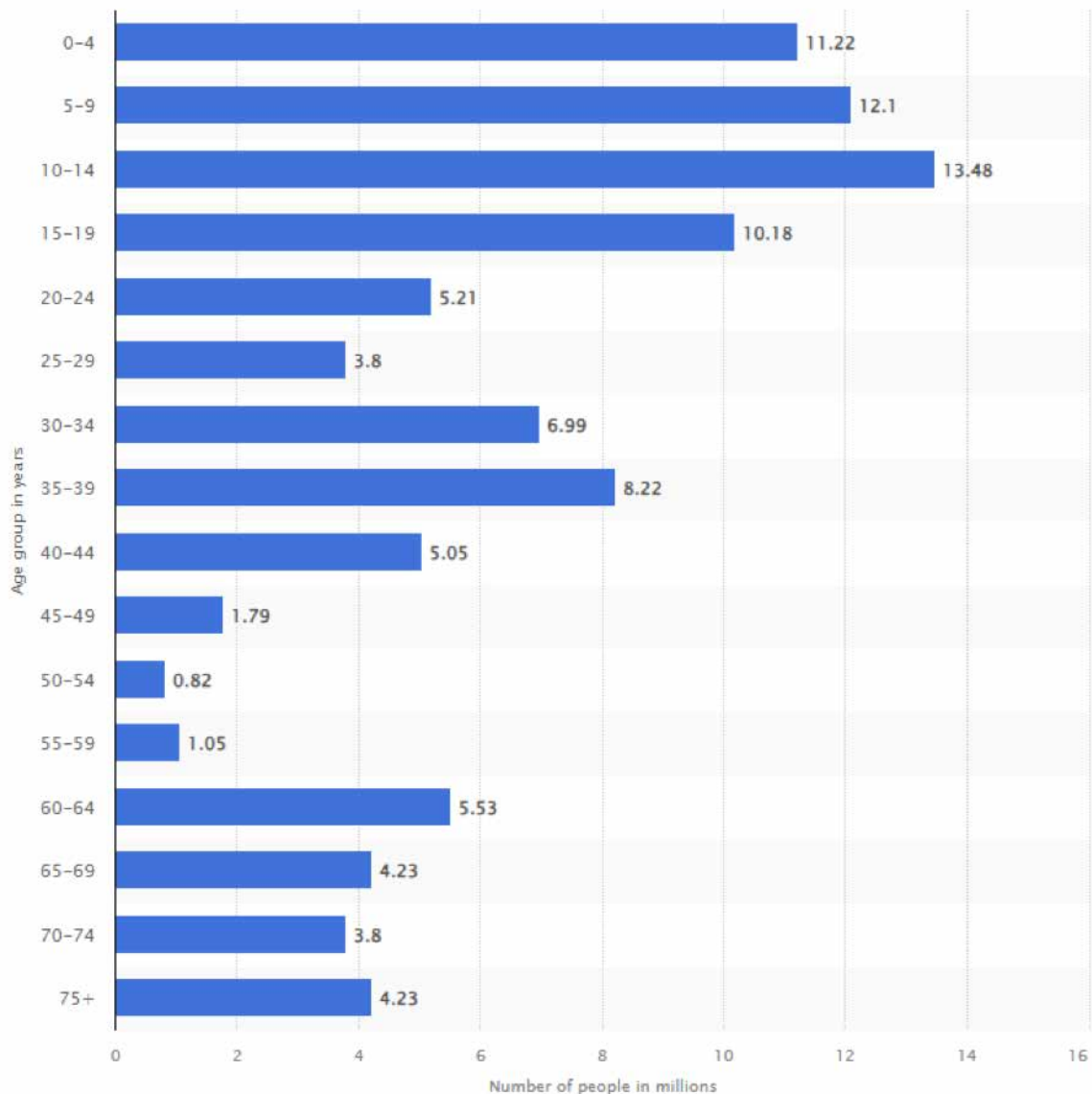
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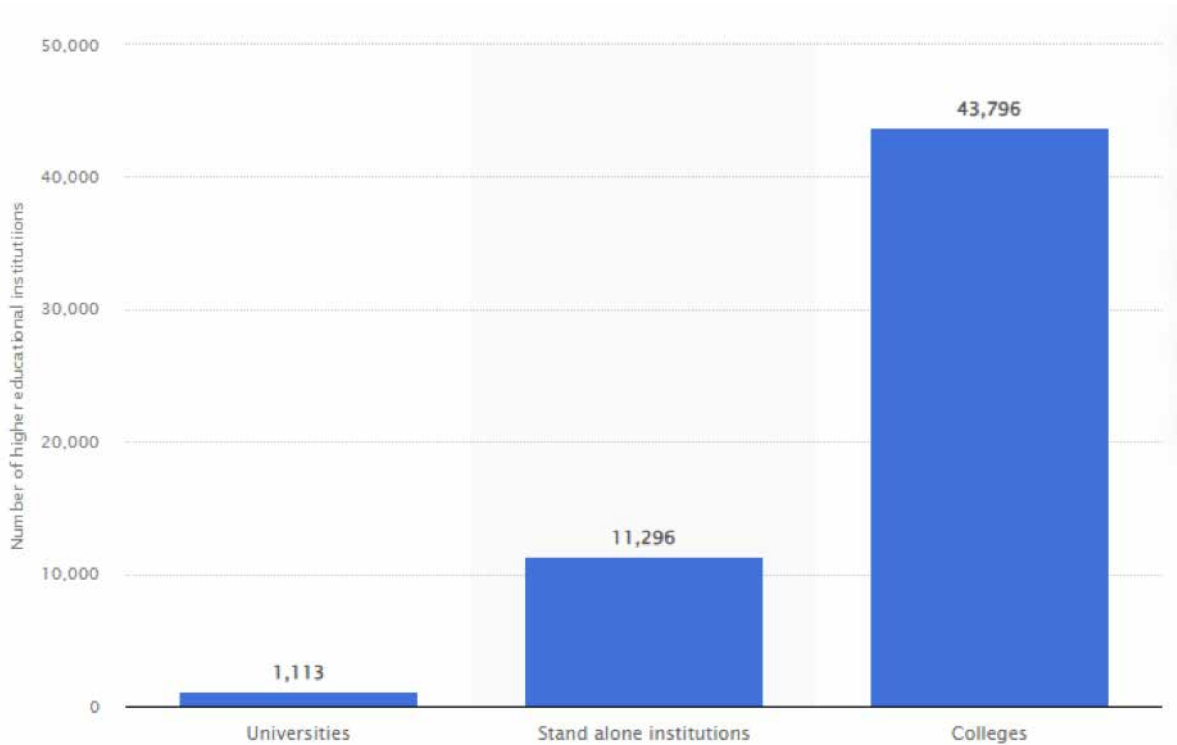
Applications to the article "Role of Education on Poverty Reduction: The Case Study of Marunji Village in Pune"

Appendix 1: India's estimated 2022 poverty rate, broken down by age group

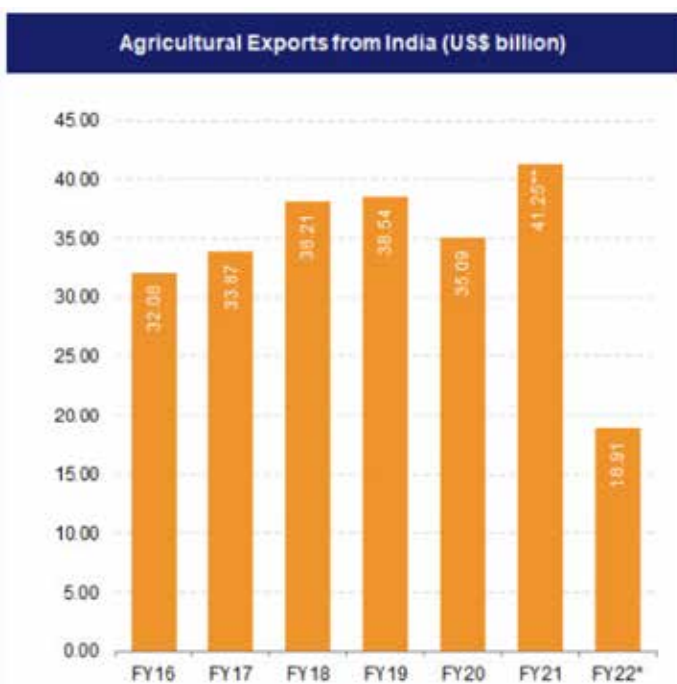| Age group in years	Number of people in millions
0–4	11.22
5–9	12.1
10–14	13.48
15–19	10.18
20–24	5.21
25–29	3.8
30–34	6.99
35–39	8.22
40–44	5.05
45–49	1.79
50–54	0.82
55–59	1.05
60–64	5.53
65–69	4.23
70–74	3.8
75+	4.23

In 2022, more than 13 million children aged 10–14 were poor, and Marunji Village in Pune discusses education's role in poverty eradication. This statistic emphasises the necessity to address poverty early and the power of education to break the cycle. Marunji Village may reduce poverty by promoting high enrolment and quality education. Education helps people escape poverty. We can evaluate Marunji Village educational programmes by analysing enrolment, attendance, and literacy data. Education can help people get better jobs and earn more. This improves living circumstances and reduces poverty. Education also affects agricultural growth, which is crucial in rural places like Marunji Village where agriculture is a major source of income. Farmer education, access to agricultural resources, training, and market information can boost the agricultural sector. This expansion can improve farming households' income and living conditions, reducing village poverty. It is noteworthy that Marunji Village's poverty rate falls after 40 years old. This shows that variables other than education may reduce later-life poverty. Work experience, social security, and sector-specific career prospects may be factors. However, education is essential to combating poverty at all ages, including childhood and adolescence.

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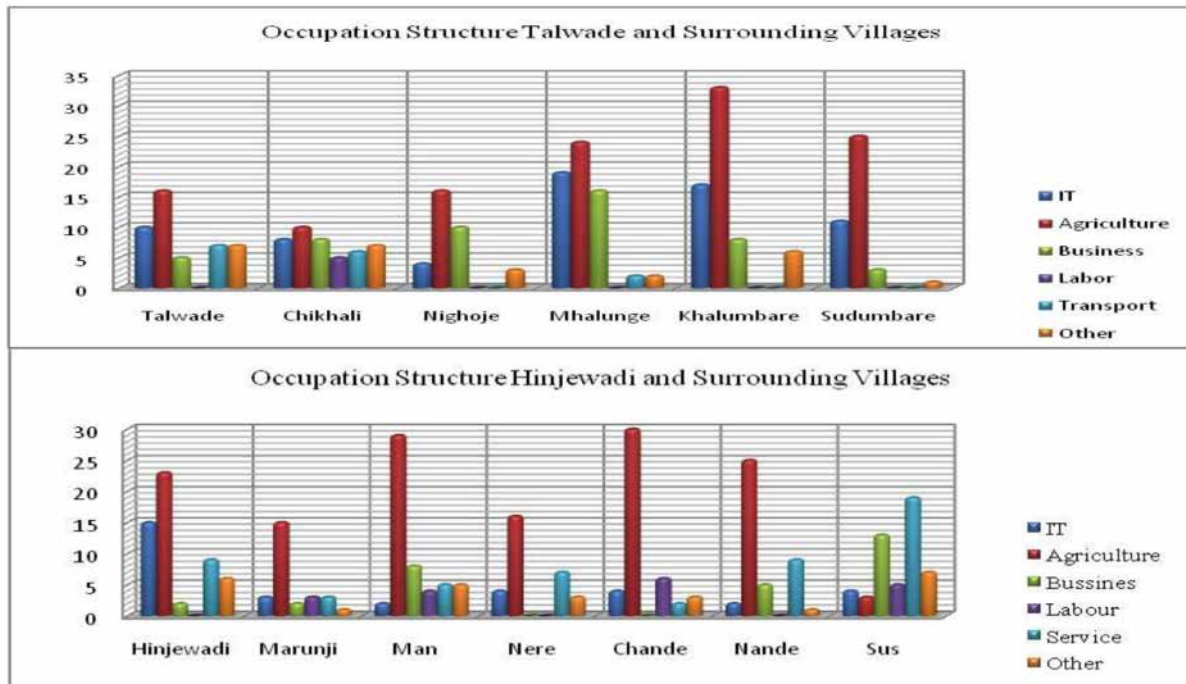**Appendix 2: Number and type of educational institutes in India in 2021**

Education's impact in poverty reduction in Marunji Village in Pune can be enhanced by studying India's higher education landscape. Out of nearly 55,000 higher education institutions, the AISHE portal identified 1,113 universities in 2021. Colleges are affiliated or recognised by these universities, which grant degrees. However, stand-alone schools generally provide diplomas. Marunji Village inhabitants may benefit from nearby universities and colleges. Higher education, especially universities, helps people gain specialised skills and increase their employability and income. Affiliated colleges help remote students get higher education. They offer undergraduate and postgraduate education in numerous fields through universities. Local students can get higher education without travelling far thanks to linked colleges in Marunji Village and nearby. This accessibility can close the education gap and give students the skills they need to find better jobs and escape poverty.

Appendix 3: Agricultural exports from India

Education, agriculture, and India's agricultural export business are major factors in Marunji Village, Pune's poverty reduction. India is the world's largest agricultural exporter, and its agricultural export growth affects poverty reduction. India's agricultural exports have grown rapidly. Agricultural exports rose to US$ 19.7 billion from US$ 17.5 billion in April–December 2022. 2021-22 farm exports totaled US$ 50.2 billion, up 20% from US$ 41.3 billion in 2020-21. These figures show India's agriculture sector's growth. Education improves agricultural practises, production, and market potential for agricultural exports. The government may help farmers adopt modern farming methods, access resources, and comprehend market dynamics through fostering education and knowledge sharing. This can enable farmers in Marunji Village and other agricultural areas to diversify their crops, increase their value, and export.

Appendix 4: Occupation structure in Marunji Village

In various villages, including Marunji, a large percentage of the population works in agriculture, according to a sample study. Agriculture supports the local economy with 40% to 60% of workers. However, urbanisation and infrastructure development have reduced the number of farmers in Sus. The village's occupation structure may alter due to urbanisation, new roads like the Pashan-Sus road, and the IT Park. These developments may have reduced agricultural employment. The IT Park has little impact on employment in nearby areas, notably Marunji. Rural areas lack trained workers and technological education. Thus, most IT workers in these communities work as guards, drivers, gardeners, sweepers, and similar jobs. This shows how education can help Marunji village overcome its problems. Villagers can learn IT and other non-agricultural skills through education and training. Education can help villages join the burgeoning industrial and IT industries by filling the skilled labour gap. Education can boost Marunji's agriculture. Villagers can learn modern farming methods, sustainable practises, and resource management through agricultural education and training. This information, paired with their farming expertise, can boost village output and results.