Impact of Outreach programme—[UBA] UNNAT BHARAT ABHIYAN

Anjali. Ch¹, Santosh Madeva Naik², Akshaya G³, Sowjanya.k⁴

^{1,3,4}UG Student, Hyderabad Institute of Technology and Management, Hyderabad, Telangana, India.
²Assistant Professor, Hyderabad Institute of Technology and Management, Hyderabad, Telangana, India.
anjalichennuri938@gmail.com
santoshn.mech@hitam.org
gangulaakshaya2002@gmail.com
ashokkummari169@gmail.com

Abstract:

In HITAM Unnat Bharat Abhiyan (UBA) was launched by Ministry of Human Resource Development (MHRD) on August 2018. The main objectives of this initiative were building institutional capacity, providing professional support such that the villages which lack lack the technical support can be helped for the better. Higher educational Institutions in our nation interact with rural India, identifies challenge and come up with solution. It connects institutions of higher education with local community. This programme involves interacting with rural communities and using technologies for their development. The main purpose of this initiative is introducing good education in those areas that are far from accessing education. It creates good relationship between society and higher educational institutes by this the livelihood of rural areas can be changed. The mission of Unnat Bharat Abhiyan is to enable higher educational institutions to work with with the people of rural india in identifying development challenges and evolving appropriate solutions for accelerating sustainable growth.

Keywords: UBA, Team work, Village Development.

1. Introduction

UBA was launched by MHRD in presence of the honourable president of India [Shri. Pranab Mukharjee] on 11th Nov 2014. It was started with the group of dedicated faculty members of IIT Delhi in which they were working in the area of rural development, number of technical institutions, rural technology action group [RuTAG] [2].

The Vision and Mission

Vision: To involve professional and other higher educational institutions of the country in the process of indigenous development of self-sufficient and sustainable village clusters in tune with the nation of 'Gram Swaraj' propounded by Mahatma Gandhi.

Mission: Develop the necessary mechanism and proper networking among educational institutions, implementation agencies(Panchayat Raj Institutions) and the grass root voluntary organisations to enable effective intervention at the field level.

Select suitable rural clusters and effectively participate in the holistic development of these clusters using ecofriendly sustainable technologies and local resources creating sufficient employment opportunities in the process, harnessing multifarious govt. schemes as well as the efforts of voluntary organisations.

Simultaneously, reorient the ethos, the academic curricula and research programs in professional institutions to make these more compatible with the national needs including those of rural areas, thus contributing to capacity building towards indigenous development [1].

Coordinators, voluntary organisations and government agencies actively were activley involved in this rural development related activities. IIT Delhi was given responsibility to take this programme forward. They bought different institutions together to launch this UBA such as IIT, NIT, and NITTTRs. The first workshop was held at IIT Delhi in September 2014. This programme was sponsored by Council for advancement of peoples action and rural technology (CAPART). UBA was introduced because 65% of people in India live in the rural areas. We need to focus on the villages and start working with them to provide better facilities and education to develop the nation.

The development of rural areas is possible by some means when the higher institution collaborates with rural areas. Ideally, every higher educational institution must adopt a village so that every graduate can play a significant role in development of rural India [2].

Most of the student projects and/or student assignments in engineering institutions focus on solving a problem which is textbook based or some sort of a hypothetical problems and lack the essence of real-world problems. Some examples include control system problems [A], basics of electronics [B], controller designing [C], software integration [D], speed control of a motor [E], security management etc Some notable exceptions include applying general analysis process in solving a real-time problem [F], open-ended problems [G], decision making in solving realworld problems [H], etc In this study an attempt is made to highlight the impact of the UBA outreach program [3].

2. Method

Major areas of intervention

There are two major domains, i.e. human development and economic development [4] shown in figure.1.

(a)Human development

- Health: Health is central to human happiness and well-being. It is also makes an important contribution to economic progress.
- Education and culture: Education and culture teaches us how to live in a society.
- Values and perception development: Values refer to stable life goals that people have, reflecting what is most important to them. Perception, as we have defined, is a generic term for the complex sensory control behaviour.
- Skills and entrepreneurship: Entrepreneurship is important as it has the ability to improve standards of living and create wealth.

(b)Economy development

- Organic agriculture and cow based economy: Agriculture is an important sector of Indian economy as it contributes about 17% to the total GDP and provides employment to over 60% of the population.
- Water management and conservation: Water is at the core of sustainable development and is critical for socio economic development, healthy ecosystems and for human survival itself [5].
- Renewable energy sources: Renewable energy is responsible for sustainable jobs resulting in a boon for the youth of India
- Resources: they contribute towards fiscal revenue, income, and poverty reduction.
- Basic amenities: The basic amenities such as roads, running water, and electricity. These are the things that are considered to be essential to make life easier and more pleasant [6].
- E-support(IT-enabling)

Hyderabad institute of technology and management visited five villages in 2018: Gowdavelli, Basuragadi, D Pochampally, Bachupally, Gnanapoor [7]. The flow chart of process is shown in figure.3.

Village and household survey:

- Conducted Grama Sabha on 15-08-2018, shown in figure.2.
- Student/Faculty interaction with villagers
- Meeting with Grama Panchayat member
- Interaction with local government official

• Awareness programmes about health issues, government policies and education, shown in figure.4.

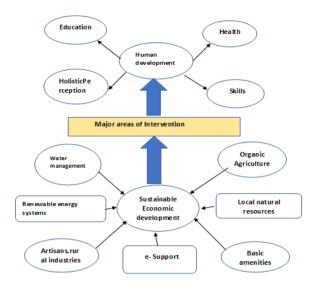


Fig. 1 Major Area of interventions

Problem identification

Gnanapoor Village:

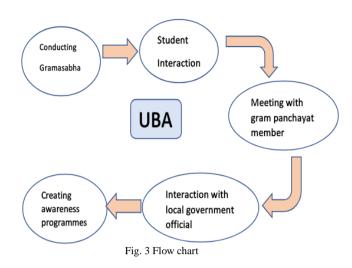
- The available paddy cutter in the market is of heavy weight and large in size and it is not portable easily [8].
- Borewell is not in the working condition.
- There is no proper transportation to commute from village to town only one bus.
- There is no dust bin to throw waste.

Interaction with communities shown in figure.5.



Fig.2 Conducted Grama Sabha

Journal of Engineering Education Transformations, Volume 34, January 2021, Special issue, eISSN 2394-1707



Basuragadi Village:

- There is no proper drainage system so the water gets stagnated on either side of the roads.
- No proper roads.
- People are finding difficulty to travel on roads especially during nights.



Fig. 4 Grama Sabha in Basuragadi village



Fig. 5 Interaction with villagers

D Pochampally village:

• Farmers are facing problems to remove stones in the field. Its time consuming and a difficult task to them.



Bachupally village:

- In this village, roads are not properly laid thus people are facing problem to travel from place to place, shown in figure.6.
- In this village a slum area was identified, people living in these slums are not having proper identify cards like aadhar, ration or pan. They are not aware of policies provided by government like accident insurance, LIC etc [9].
- There is a water scarcity in that village,

The survey of the village article is published in media shown in figure.8.



Fig. 7 Survey in villages

Gowdavelli village

- In this village people are facing difficulties like removing dung.
- For harvesting the paddy fields it requires large number of labour. But in the harvesting season, labour is in great demand and very difficult to find and hire.
- Problems faced by farmers while spraying fertilizers.

The farmers are facing problems to remove stones so we came up with an idea of

- Solar pool skimmer which can be operated from any remote place.
- There is water over flow so we obtained a solution that whenever water fills it turns off automatically, survey of villages shown in figure.7.



• Buffalo waste removing equipment, Spraying fertilizer, Milk sucker, Paddy cutter, Bus stop seating arrangement [10].



ఆలేదరూరల్ : ఆరుట్ల కమలాదేవి ఫాండేషన్ హితం కళాళాల సందర్భు ఆధ్వర్యంలో ఆలేరు మండలం కొలను పాకలే ఉన్నత భారత్ అభియాన్ సర్వే నిర్వహించారు. ఈ సర్వేమ సోమవారం నుంచి గురువారం వరకు నిర్వహిం చారు. సర్వేలో స్థ్రినిక సముస్యలపై స్థిని కులతో చర్చించి వారి స్థితిగతులు, వివ రాలు, మౌలిక సదుపాయాల గురించి అదిగి తెలుసుకున్నారు. కార్యక్రమంలో ఆరుట్ల సుశీలాదేవి, హితం కళాళాల ఆరుట్ల సుశీలాదేవి, హితం కళాళాల



/c/40352243

ມືດາງຊ່ວຍ ອໍດິອັດຍ ລ.ກາງດ່າ. ກາອະ. Fri, 14 June 2019 https://epaper.ntnews.com

Fig.8 Media content



Fig.9. Giving jute bags for plastic free villages



Fig 10. Village mapping by villagers



Fig 11.Village mapping

3. Results

These types of activities make us to identify the areas under each theme that need immediate attention. We can use technical knowledge in agriculture for better productivity paddy, vegetables etc, shown in figure10 & figure11.

Intervention of local technologies with digitalisation. New technologies can be identified. Development of new technologies can be done. This makes engineering students to use their engineering knowledge practically. Awareness on harmful effect of using plastic bag event conducted shown in figure.9.

Physical, social, economic, political, financial, social, ecological condition of a rural area can be improved. Various programmes can be introduced in a village. It enriches rural India. It creates a cycle between society and higher education institutes by providing knowledge and by extending the quality of existing materials. The villages can be encouraged to step forward in development. This makes faculty and students of higher educational institutions to work with the people of rural India in identifying challenges and producing appropriate solutions for accelerating sustainable growth of village.

Expected Outcomes from UBA

- Much needed technical support becomes available to various authentic voluntary organisations engaged in rural development and the professional institutions get directly exposed to the real needs and the ground reality.
- Gradual movement towards holistic development of the chosen cluster takes place.
- Enough livelihood opportunities are created for the youth to reverse the migration.
- A mechanism is put in place to ensure knowledge exchange traditional knowledge from villages and modern scientific, technological knowledge.
- Contribution to technology policy of the nation to facilitate the process of indigenous development of the nation in a sustainable way.

4. Discussion

Spreading the love, making people aware of using these biodegradable materials. We can identify backward villages and they work towards a path of further development. Government schemes and policies can be introduced to help further aid the development of villages. Making the people secure. Transformation of rural areas can be done in a better way. Connection of villagers to the digital world. Village infrastructure can be developed in better way.

By introducing digital world village youth can gain their own skills. Eco-friendly development of the villages and the creation of appropriate employment opportunities locally is also possible. Knowledge and resources available from all the institutions of the country can bring transformational change in the rural developmental process. Educational institutions in the country can help in overall nation development by adopting villages. UBA creates vibrant relationship between society and higher educational institutions, with the later providing knowledge and technology support to improve livelihoods in rural areas.

5. Conclusion

This study provides a brief summary of an outreach program aimed at developing rural areas by introducing technical aspects in institutions by collaborating on project ideas based in rural areas. "The soul of India lives in its villages. If we have to build the nation, we have to start from the villages". It is necessary to promote development of rural areas. 70% of people live in villages and India is a developing country, in which India totally depends only on agriculture.

In future, the authors wish to conduct a more detailed quantitative and qualitative research study on this topic. A quantitative study will be focused on development of survey instrument to critically understand the skills gained by students and what factors influence students' skills [9-10]. A qualitative study will be designed to dig deeper and gain critical insights about the impact of the program from both the student and institutions perspectives [11-12].

Acknowledgement

I'll thank HITAM UBA team, faculty, HITAM coordinator sir and total HITAM management for giving me such an opportunity in visiting the villages and making my survey successful.

References

- Bandi, S. (2020). Outreach and Community Engagement Activities to Complement Engineering Program Outcomes in Indian Context. Journal Of Engineering Education Transformations, 33, 537-540.
- 2. Unnat Bharat Abhiyan. (2019, January 01). Retrieved September 22, 2015, from www.unnatbharatabhiyan.gov.in: <u>http://unnatbharatabhiyan.gov.in/app/webroot/files/circ</u> <u>ulars</u>
- Santosh Madeva Naik, S., Mahajan, H., Yakub, B., & Sreeramulu, M. (2019). Implementing PBL to Enhance Technical Knowledge through Design Thinking Process. Journal Of Engineering Education Transformations, 33(1), 36-42.
- 4. Kittur, J., & Salunke, M. (2020). Mixed Learning Styles: A Strategy for Team Formation. Journal of Engineering Education Transformations, 33, 434-441.
- Sachan, A., Bhadri, G. N., & Kittur, J. (2019). Design and Development of Concept Assessment Tool (CAT): A Concept Inventory. Journal of Engineering Education Transformations, 33(1), 16-21.

- Kittur, J. (2018). Enhancing the Controller Design skills in the course Linear Control Systems. system, 3, 2.
- 7. Muntasher, K., & Kittur, J. (2018). Outcomes of Integrating Total Station and Surfer8 Software in Survey Practice Laboratory. Journal of Engineering Education Transformations.
- Salunke, M., & Kittur, J. (2017, November). An experiential learning in electrical machines laboratory course. In 2017 5th IEEE International Conference on MOOCs, Innovation and Technology in Education (MITE) (pp. 15-20). IEEE.
- 9. Kittur, J. (2018). Applying the General Analysis Procedure in Solving an Engineering Problem-An Assessment. Journal of Engineering Education Transformations.
- Muntasher, K. H., & Kittur, J. (2016). Improving Students' Learning Outcomes by Solving Open-Ended Problem in Highway Laboratory: Work in Progress. Journal of Engineering Education Transformations.
- Kittur, J., & Kavale, S. M. (2016, December). Teaching Decision Making Method in Engineering Exploration Course–An Experience. In Special Issue of National Conference NCIEME (pp. 2394-1707).
- 12. Kittur, J. (2020). Measuring the Programming Self-Efficacy of Electrical and Electronics Engineering Students. IEEE Transactions on Education.
- 13. Kittur, J., & Brunhaver, S. (2020) Developing an Instrument to Measure Engineering Education Research Self-Efficacy.
- 14. Kahu, E. R., Nelson, K. J., & Picton, C. (2017). Student interest as a key driver of engagement for first year students. Student Success, 8(2), 55-66.
- Kittur, M., Coley, B., & Kellam, N. (2020) Understanding how Novice Indian Faculty Engage in Engineering Education Research.