

An Action Research Case Study on Water Awareness Program in The Rural Schools in Goa

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Introduction

According to a research conducted by MIT, it is estimated that over 50%¹ of the global population will struggle to fetch adequate water to meet their basic needs by the year 2050². Currently, around 663 million population are still without adequate drinking water and sooner 3.3 billion people will face water crisis³. Studies reveal that vulnerable group of population, mostly children, would suffer due to diseases related with poor water supply and associated sanitation and hygiene problems. That data also reveals noted that nearly 1000 children each day would die due to water and sanitation related diseases such as diarrhoea. The world population reliance on the drinking water resource has drastically increased from 76% to 91%⁴.

Clean water is vital to meet basic survival needs of human being. An inadequacy or a scarcity will lead to severe health related issues, starvation, and a major global crisis. Variety of factors contributes to inadequate supply and scarcity of water. In the past years particularly, India faced drought effecting the Agriculture GDP by bringing it down to 0.5 % between 2015-16. Severe drought condition in Maharashtra has forced the government to act by sending train carrying water to some regions in that state. Out of 678, about 250⁵ districts faced drought and near to drought condition in India. In India or anywhere in the world, water dominates primary role in policy related to economy and environment.

UN has taken major steps concerned to water security by creating a Sustainable Development Goal focusing on this issue. It is crucial to note that other SDG global goals (**annexure – I**) on poverty, affordable and clean energy, decent work and economic growth, good health and well-being, hunger, sustainable consumption and production, climate change, life below water, and life on land, are strongly connected with this SDG -6 on clean water and sanitation (annexure – II).

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- 1 Retrieved from www.unwater.org/app/uploads/2018/10/WaterFacts_water-scarcity/ 12/3/2019
 - 2 Retrieved from https://www.populationinstitute.org/external/files/Fact_Sheets/Water_and_population.pdf/21/03/2019
 - 3 Retrieved from <https://www.wilsoncenter.org/sites/default/files/popwawa2.pdf/12/03/2019>
 - 4 Retrieved from <http://in.one.un.org/page/sustainable-development-goals/sdg-6/12/03/2019>
 - 5 Emerging Water Crisis in India: Key Issues and Way Forward. Indian Journal of Economics, Special Centennial Issue, Vol. XCVI, No. 383, 2016: 681-704

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Current Study and Objectives

The goal of the project was to create awareness about the conservation of Water. This awareness program was focussed on the school students belonging to the rural and urban schools in Goa.

The primary objective cannot be achieved without the engagement and involvement of the stakeholders in the community. In this project, the school students were treated as an important stakeholders of the community and the awareness program was conducted by inspiring the them to take up the role as “water ambassadors”. One of the outcome of the project was to sensitize the students to carry forward the message of water conservation to the community and motivate them to practice those measures in their daily life. The initiative was expected to create a responsibility by sensitizing them about the conservation of water.

The study was conducted through a Community-Based Participatory research method. Since research goal was to inculcate water conservation responsibility in the young minds who were either unaware or indifferent, the researchers have decided to adapt this method to empower the stakeholders and to encourage their involvement in this change management.

Review of Literature

The Community Based Participatory research method lays importance on collaborating with stakeholders who are part of the community. The significance of involving members helps in facilitating changing by enabling the members to take the ownership of the change management. This methodology enables facilitation of change and empowers stakeholders in the community by treating them as an agents of change⁶.

The Community-Based Participatory research method focuses on social, structural and physical environmental inequities by creating engagement and collaboration in the community members⁷.

The method required continuous investment of time. It also needed understanding, empathizing and appreciation of the strengths, values and knowledge of the stakeholders. The effectiveness of the method is determined by its flexibility and application of creativity towards the stakeholders. The student participation as community members often display valuable knowledge and skills to take forward the project goals. When the students are trained in environmental related research goals, they tend to develop their skills and it provides them an opportunity to display their learnt skills while working with the community⁸. The schools are an ideal setting for promoting a child’s social

6 Holkup, P. A., Tripp-Reimer, T., Salois, E. M., & Weinert, C. (2004). Community-based participatory research: an approach to intervention research with a Native American community. *ANS. Advances in nursing science*, 27(3), 162.

7 Israel BA, Schulz AJ, Parker EA, Becker AB. Community-based participatory research: policy recommendations for promoting a partnership approach in health research. *Educ Health*. 2001;14:182197.

8 Rao, P., Arcury, T. A., & Quandt, S. A. (2004). Student participation in community-based participatory research to improve migrant and seasonal farmworker environmental health: Issues for success. *The Journal of Environmental Education*, 35(2), 3-15.

engagement. It helps the child to feel valued and consider in the decision making process develop a sense of belonging, responsibility, commitment⁹. However, the process is time-consuming and requires an adequate level of motivation, commitment and engagement from all stakeholders¹⁰.

About the Stakeholders

The project targeted government schools in Goa to conduct water awareness sessions. Children between classes VII and X were the participants. Some of these children belonged to the underprivileged strata of the society and were unaware of the crisis that India is reeling under.

Methodology

This project was conducted through a framework of Action Research. The project method followed a community based participatory research more specifically an improvised form of Rapid Rural Appraisal (RPA). The methodology followed a rapid rural appraisals (RPA)¹¹ method which is considered as a cost-effective way of learning, involving brief rural visits with knowledge teams. The objective of RPA is to provide information to stakeholders. It is widely used a mean to empower, capacity building, creating ownership, empowerment. The process is controlled by external institution particularly with respect to dependence on funding or sponsorship.

In this research, the objective was to create ownership and responsibility on the school students about water conservation and spreading the message. It is a form of capacity building considering the future need to creating responsible behaviour towards water preservation.

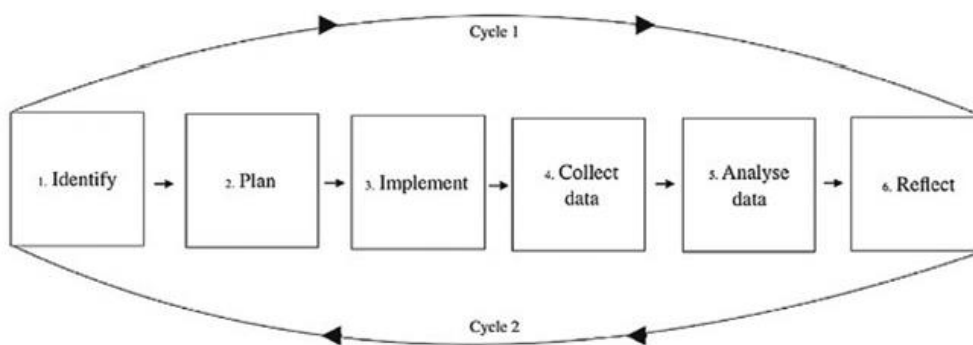


Fig. 1. Action Research Framework Adapted from Kemmis and McTaggart¹²

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- ⁹ Lansdown, G. (2001). Promoting children's participation in democratic decisionmaking. Florence: UNICEF.
- ¹⁰ Lugo-Hernández, E. A., Ávila, L. S. B., Rosa-Rodríguez, Y., González, A. S., & Santiago, N. G. M. (2016). Why adult views matter: School personnel perspectives about child school participation. *Revista Puertorriquena de psicología*, 27(2), 292.
- ¹¹ Rammelt, C. F. (2014). Participatory action research in marginalised communities: Safe drinking water in rural Bangladesh. *Systemic Practice and Action Research*, 27(3), 195-210.
- ¹² Kemmis, S., McTaggart, R., & Nixon, R. (2013). *The action research planner: Doing critical participatory action research*. Springer Science & Business Media.

The project targeted 1500 students largely in the school located in the rural area of Northern part of Goa. However, the team was able to cover a population of 770 from seven rural schools. The total number of awareness program organized was nine. The visits to the schools were spread across 20 Thursdays and every visit required one and half to two hours of class room sessions. Over 25 School authorities were approached and explained about the purpose of the project and the intended benefit; however, conducting the program at 17 schools became feasible.

The project team used various pedagogical tools for the awareness program such as using multimedia tools like videos, conducting quizzes and providing compliments to encourage learners, and conducting poster making competitions.

Approach

The first step was to get in touch with the schools in the rural areas of the northern part of Goa. Respective school authorities were met and explained about the goal of the program and expected learning outcome. The authorities responded positively and allowed the team to conduct sessions with students from classes VII to X.

The Schools that were chosen for this awareness program were rural Government schools located in villages. Initially, the team faced with some challenges in conveying the message that was part of the awareness program. However, the gap was identified and delivered it in a way which was more acceptable to the community.

The students had very little knowledge in English and their fluency level in that language was extremely low. Due to this reason, the team had to address the challenge by facilitating the programme with a mix of Hindi, Konkani and sometimes in English. This ensured that the students were not deprived from understanding the valuable information that was being presented to them. The team displayed empathy in their approach and was flexible to introduce new teaching style catering the needs of the learners.

Educational Model

The school students were taught using reading materials and presentations on the conservation of water. It was observed that the students enjoyed viewing the presentation and reading the material. However, at the end of the presentation, they seemed to be a less empathetic towards the water-crisis. They remain indifferent and responded as if the issue was unimportant. The team also faced challenge to sensitize the students

As a response to the above observation, the team identified a strategy to connect the students with the ground reality. It identified and visited three water scarce areas of Northern part of Goa met the localities to understand their difficulties through observation and interviews. The data were captured through audio & video means and compiled as a short documentary. Those documentary was used in the class rooms to create awareness and develop empathy on the issues. The filmed documentary was incorporated as a part of awareness program to add visuals impact on the ground reality.

In addition to the above documentary, a 12-minute video was created which demonstrated the need to conserve water and presented it in all the classes. The video presentation showcased the people's plight living in water stressed places in India. The video also showcased incidents of Shimla and Ladakh which had to face major water crisis due to overexploitation of the use. These real-life stories help audience connect better with the issue in hand. The experiences of the people facing tough times due to water scarcity were created sensitization on the audience. The second part of the video showcased the innovative ways to conserve water to manage crisis besides prescribing judicious use of the resources.

Design of the Program

The design of the awareness program was to create a long-lasting impact on the young minds. At every stage of the facilitation, the methodology was improved to engage the learning community. During the initial stages, the awareness was focussed on discussing the information about the resource, importance of conservation; however, it was realized that the delivery methodology resulted in a challenge to capture the students' attention by providing only data through news, tables & graphs. Therefore, a flexibility in the pedagogical delivery was incorporated in the features which created a far greater influence. A transition was introduced from data presentation session to interactive session. Each session was approached with a goal to make it interactive as possible to grasp the attention of the students. Apart from providing information through interactive meetings, we encouraged students to design posters in groups of 5-6 to pictographically, with few words, display the learning acquired through the sessions. Their response through pictures and words ensured the effectiveness of the team's delivery and provided an evidence in the learning transformation. Strategies adopted to inculcate learning amongst students included:

- Skits on water awareness
- Screening video on water awareness
- Drawing competitions
- Guessing the word (related to the session conducted),
- Storytelling and poetry writing
- Sharing facts on water as a resource
- Sharing real life examples of water related issues that the people of Goa faced.

At the end of every session, the feedback was taken from the school teachers and try to analyse our teaching style and new learning methods. What started with just an informative session, gradually manifested in sessions of high participation with the enthusiasm from students. Their ignorance and indifference in their attitude towards the program eventually moved to engaging participation.

The students showed their involvement through the poster presentation, short skits, paintings etc. Every output that was created displayed the effectiveness of the program (refer: annexure).

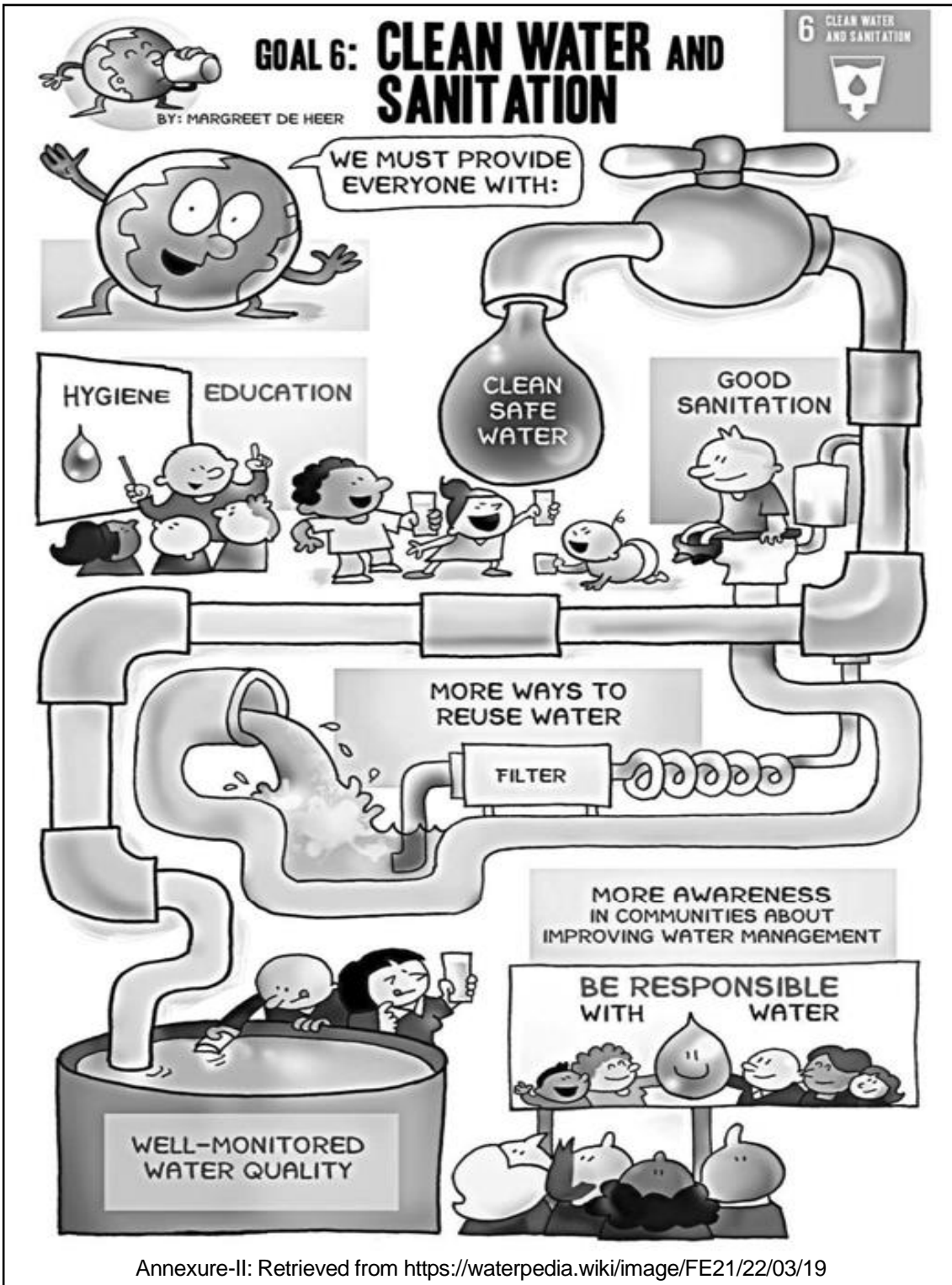
Conclusion

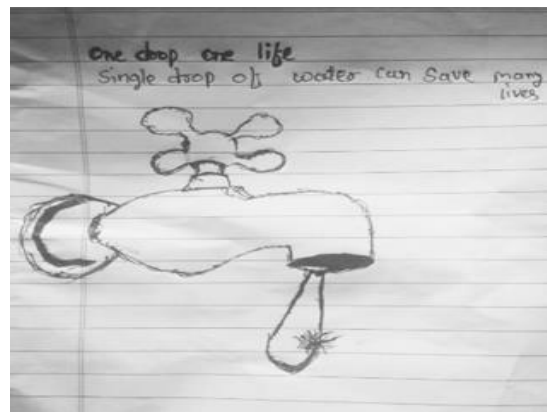
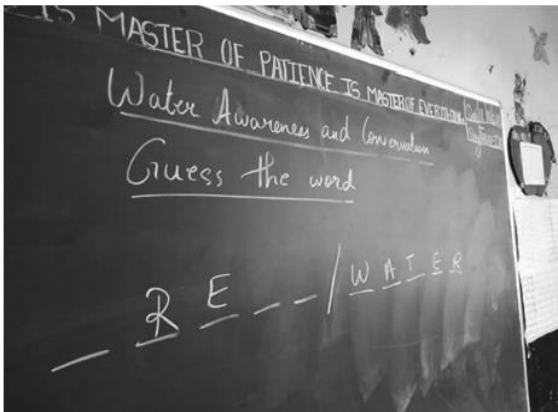
There were many challenges during the project implementation and the critical part was getting permission from the schools. It was a tedious part of the project to get any school officials to understand about the objective and significance of the programme. It required a continuous follow-up with the government school authorities who were hesitant in the beginning. Even after receiving their consent, fixing a schedule with the schools for the session was the next big challenge. There were a few times when the school authorities did not feel that it was worth giving a 45 minutes' time slot to conduct the session.

The students' feedback was helpful as it provided insight about what went well and what needed improvement. In the beginning, when the researchers used an out-of-India context audio-video English presentation, the student were not able to appreciate it. Subsequently, when an audio-video presentation in Hindi became effective when presented the situation in India and more about local scenario. The feedback during every session helped the team to improve and make the learning effective. The community-based participatory research was effective and it helped the researchers to approach the stakeholders with empathy and compassion.

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Annexure-III Activities conducted in the schools

