An Introspective strategy for Palpable Sustainable Development

Vaibhavi Gawarikar[1], Sangeeta Pramanik[2]

(Ph.D. Scholars in School of Science & Education, Navrachana University, Vadodara, India

Abstract:

Education for Sustainable Development is taken up as a tool to revamp the paradigm of Sustainable Development. The popular paradigm made much bruit and aggrandized in the last three decades. This issue has been taken up very seriously by several Governments. Awareness regarding environmental preservation through school curricula and laws and regulation for industries to safeguard the environment, along with several other measures are in progress. But things are happening at very high levels. These efforts if not underpinned with positive implementations at the grass root level, the magnanimous actions for sustainable development would be futile. In India, this aspect is disconnected from reality and more in theory. The theory simply cannot address the problem of sustainability as its implementation is quite uncharted. To make it functional and applicable, the paper provides with a handy and convenient strategy so that the practical application is observed, planned, curtailed and recorded. The reflective practice of the strategy will provide students as well as the people with eye-opening findings. The package will engage in conducting a self-audit of consumption and waste patterns and will also help us engage in correcting our behaviors in pursuit of sustainable development**.**

Introduction

The transition of a man from being a tribal animal to social animal started about four million years ago. The metamorphis of a man sought various social drives like compassion, love, instincts for survival and competitiveness. The survival instincts and the vehemence of a man (great force) with various social drives led the man to develop in gobs and one can see what he is today. With this development of social drives man developed an important element commonly known as intelligence. The evidence of the drives in man could be seen long before intelligence could develop. The most important thing that separates a man from an animal is the intelligence. The animals are also believed to have intellect but the intellect with adaptable behavior makes a man different from animals. The human being is able to modify his behavior according to the

acceptable norms of the society. Self-control, self-discipline, reflection are the various elements that separates a man from an animal. The more disciplined and the more controlled a human being is in terms of these elements and behavior is, the more human he is.The inherent tendency of a man to advance to survive the competition and urge to have more power has intensely and seriously damaged and intimidated environment. The social drives which are reflected in behavior of the human being can be modified to have a balance in ecosystem as well as social system of life. Education is being identified as a segment (element) which can helps these instincts of a man to modify for innate change so that the correct behavior is sought and reflected in human beings. Thus the paper provides with a package or methodology for achieving sustainable development. This paper focusses on meaning of sustainable development, efforts in the direction, challenges for achieving it and the methodology that can be adopted for by an individual to meet it.Awareness, Self-reflection and habit are the pivotalcontrivances used by the author in the methodology to achieve sustainable development

Meaning of sustainable development:

Sustainable development is a complex and evolving concept. Many scholars and practitioners have invested years in trying to define sustainable development and envisioning how to achieve it on national and local levels. [1] Because sustainable development is hard to define and implement, it is also difficult to teach. Even more challenging is the task of totally reorienting an entire education system to achieve sustainability. [1][2][3]Perhaps the greatest obstacle to reorienting the world's educational systems is the lack of clarity regarding goals. [1][4].There are many models of sustainability; there are many concepts and debates about sustainability, but its applicability is rare. [5]Sustainable development involves use of resources in such a way that needs of future generations are kept into consideration. Giving meaning is not enough it needs to be understood as to how the needs of future generations can be considered and how to implement it personally, locally and nationally.Students need to understand and reflect upon the amount of resources they consume so that it can be reduced and thus understood.Very few students have an accurate idea of their own consumption and waste, because they receive little or no feedback on these behaviors. [1]

When we examine successful national education campaigns, we find they often have simple messages. [1]For example, messages that encourage us to vaccinate our children

and boil our water, or discourage us from driving drunkard taking drugs, are simple concepts compared to the complex range of environmental, economic, and social issues that sustainable development encompasses. In simple terms, those who will be called upon to educate differently eventually will ask, "What am I to do differently?" "What should I do or say now that I didn't say before?" These simple questions leave most "experts" in a quandary and the questioner without an adequate response.

There are Penalties for offences committed for cutting trees, clearing forest areas etc. acts in contravention of notification under section 30 or of rules under section 32 but when a person is not caught or unseen he seems to do the act for several personal benefits and financial rewards unable to self-control upon behavior and thus creating disharmony among environment and needs. Behavior needs to have self-reflection and should create awareness of what is right and wrong. Studies over many years have found that behavior modification programs are rarely successful at producing lasting changes in attitudes or even behavior. When the rewards stop, people usually return to the way they acted before the program began resulting in no innate change. More disturbingly, researchers have recently discovered that children whose parents make frequent use of rewards tend to be less generous than their peers [6].

Indeed, extrinsic motivators do not alter the emotional or cognitive commitments that underlie behavior–at least not in a desirable direction. A child promised a treat for learning or acting responsibly has been given every reason to stop doing so when there is no longer a reward to be gained. Thus, to improve our chances of reaching our goals, we must remain aware of our current behavior to have a clearer sense of its departure from our goals. 41.1% students of national union of students strongly agree that SD should be actively incorporated and promoted by universities and should be obliged to develop their sustainability skills as part of their course. [7].

Students show a concern but it is not matched with applicability aspect. To meet this aspect of the sustainability this program will provide students with a 4days audit wherein the students will be allowed to record their own consumption levels leading to an awareness for reflection upon consumption and thus reducing it and finding effective ways for actually applying sustainable development and will be surprised to see the results and the contribution they would do for the environment concerns. This will be an

innate change encountered by the students.Furthermore, the case for practicing sustainability becomes more compelling when consumption and waste are made more tangible as well as personal, and when students engage in self-reflection on their consumption and waste behaviors.[1]

Aims for Education for Sustainable Development by UNESCO

UNESCO gives two pedagogical interpretations of ESD:

1) ESD as a means to transfer the 'appropriate' sets of knowledge, attitudes, values and behavior; and

2) ESD as a means to develop people's capacities and opportunities to engage with sustainability issues so that they themselves can determine alternative ways of living. Where the emphasis is placed is likely to depend on the traditions and specificities regarding issues like governance and participation in a particular region or country. Although there is no hard evidence to support this claim, there is anecdotal evidence to suggest that there is more emphasis today on the E in ESD than there was at the beginning of the Decade.

There are some differences in emphasis between countries and regions, although these need not apply to a region or country as a whole. In Latin America and the Caribbean, as well as in some parts of southern Africa, social transformation and the democratization of knowledge tend to be emphasized. There are also differences in what might be called the ethical vantage point with most taking on a more anthropocentric (or human-centered) perspective while some try to promote a more eco-centricinterpretation of SD by frequent references to living in harmony with nature and to the rights of other species and the non-human world.

Sustainable development: A conundrum for government

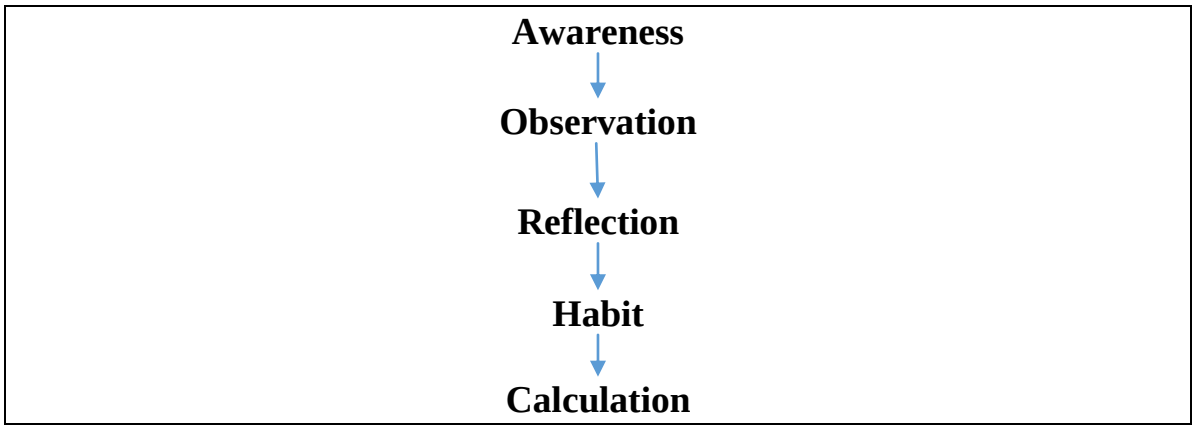
Education for sustainable development remains an enigma to many governments and schools. [1][8][9].Governments, ministries of education, school districts, and educators have expressed a willingness to adopt ESD programs; however, no successful working models currently exist.[1]Without models to adapt and adopt, governments and schools must create a process to define what education for sustainability is with respect to the local context. Such a process is challenging. It calls for a public participation process in which all of the stakeholders in a community carefully examine what they want their children to know, do, and value when they leave the formal education system.[8][9] This means that the community must try to predict the environmental, economic, and social conditions of the near and distant future. ESD carries with it the inherent idea of implementing programs that are locally relevant and culturally appropriate. Just as any sustainable development program must take into consideration the local environmental, economic, and societal conditions, so too must ESD programs consider these same conditions. As a result, each region must create its own ESD program. It is impossible to create an international, or even in many cases a national, curriculum that would be relevant to all communities.

It should be apparent to ministries of education and school districts that developing locally relevant ESD curriculums will be facilitated by creating public participation processes that allow communities to shape the major ideas underpinning their own curriculums.[10] Rather than spending time searching for curricular models to adapt, it would be better to invest time and resources in developing processes by which communities of different sizes and traditions can define their own ESD programs.In conjunction to the above conundrum and the challenges to implement Sustainable Development the author provides a methodology/strategy at a diacritic level to contribute to sustainable development so that it can be made a part of curriculum in alignment with the goals of sustainable development.

Students show a concern but it is not matched with applicability aspect. To meet this aspect of the sustainability this program will provide students with a 4days audit wherein the students will be allowed to record their own consumption levels leading to an awareness for reflection upon consumption and thus reducing it and finding effective

ways for actually applying sustainable development and will be surprised to see the results and the contribution they would do for the environment concerns. This will be an innate change encountered by the students.

METHODOLOGY



1. BEING AWARE:

The students should be asked to follow the usual routine to note down their regular consumption levels. We need to make students fathom that everyday choices can have lifelong consequences.The first stage is to make them informed students about the prevailing environmental quandary. We can construct a situation in front of the students to make them aware. Construction of situation will require stalwart facts to be given.Facts which will help them discern and be cognizant of the depletion of resources.

To make them know the situation we can give staunch facts about the items for which one can aim and curtail reduction.It was surveyed by a German waste management company AVL, in collaboration with a Stuttgart University doctorate student, of a number of households between March and May 2011 that the very act of inviting consumers to keep a record of their patterns of purchasing and throwing away food leads directly to a significant reduction in food waste. [11]. Furthermore, Awareness to the climate change phenomenon does lead to significant behavioral change amongst managers in the industry, alleviating the potential and existing threats of climate change phenomenon.In particular, the awareness to health impacts of climate change has significantly impacted individuals taking up the cause to lead climate change campaigns to counter its onslaught.

Thus, awareness regarding significant issues of environmental degradation and ecological/social imbalances, would set ground for the students to observe their own consumption patterns, reflect on them and probably change their behavior patterns in terms of waste management.

By becoming self-aware, students can create the things they need to become in control of their emotions and behaviors.[12] When they reach a high level of self-awareness it is almost as if their thoughts are speaking to them directly, helping them to figure out what paths to take in their life, more sensibly the sustainable life. One is able to control how to react to things and how to focus the attentions to the most beneficial areas. These things are what help a person to make positive changes in life. Thus, students are needed to be guided to bring awareness in daily life issues like the consumption levels of water, fuel and electricity at their home, school, locality, state and the whole of the country. This self-awareness would motivate them to critically observe their own behavior towards their consumption patterns.

Here are some facts:

Wastage of water

As per a UN report published on water conservation in March this year, India will face the consequences if it will not plan for water conservation. The report had predicted that by 2025, nearly 3.4 billion people will be living in ‘water-scarce' countries. As per the Ministry of Water Resources, India has 18% of the world's population but has only 4% of total usable water resources.

Here are some more facts to enunciate the upcoming water crisis:

- India's annual per capita availability of water decreased from 6,042 cubic meter in the year 1947 to 1,545 cubic meter in 2011.
- In 2001, India's annual per capita availability of water was 1,816 cubic meter
- By 2025, India's annual per capital availability of water will further reduce to 1,340 cubic meter and by 2050, to 1,140 cubic meter.90 % of waste water discharged in rivers fails to meet environmental norms.• 65% rainwater runoff goes into the sea, which is a major wastage.

- In India, agriculture sector is the biggest user of water followed by domestic sector and industrial sector.[13]

Wastage of electricity

- Around 27,000 mw of electricity, which could ensure uninterrupted power supply to Delhi for four days in peak summer, goes waste every day in India as the power sector records.According to the panel of experts at an energy conservation conference, "The biggest issue contributing to the energy crisis in the country is not insufficient generation of energy but large amounts of wastage involved in transmission and usage". In the words of Appavoo, 'if transmission losses, which in India stand at 40-48 per cent as against the world standard of 8 per cent, could be rectified and end-user wastage be reduced by just 10-20 per cent in the domestic segment, the current shortage would be more than mitigated.' [14].Appavoo agreed and went on to say that if transmission losses, which in Indian stand at 40-48 per cent as against the world standard of eight per cent, could be rectified and end user wastage reduced by just 10-20 per cent in the domestic segment the current shortage would be more than mitigated. India is presently the sixth-greatest electricity generating country and accounts for about 4% of the world's total annual electricity generation. India is also currently ranked sixth in annual electricity consumption, accounting for about 3.5% of the world's total annual electricity consumption. [15]
- India's need for power is growing at an extraordinary rate; annual electricity generation and consumption in India have increased by about 64% in the past decade, and its projected rate of increase (estimated at as much as 8-10% annually, through the year 2020) for electricity consumption is one of the highest in the world.Power Shortage across the world and India, Worldwide, some 2 billion people are currently without electricity. [16][17]

- Developing countries use 30% of global energy. Rapid population growth, combined with economic growth, will rapidly increase that percentage in the next 10 years.
- The World Bank estimates that investments of $1 trillion will be needed in this decade and upwards of $4 trillion during the next 30 years to meet developing countries' electricity needs alone. [18][19]

- India is facing a power shortage of 70,000 MW which is due to increased demand in power. Maharashtra faced a 25.2 per cent deficit while Uttar Pradesh has 15.9 per cent shortfall.Gujarat had 30.6 per cent shortfall and Bihar 24.9 per cent. Delhi had a peak demand deficit of 2.5 per cent. [19]

Wastage of fuel:

- According to a conservative estimate, one litre fuel is wasted per hour if commuters keep their engines on during traffic jams. So, an average 0.1 litre is wasted per trip.
- Burning one litre fuel leads to 2.5 kg of carbon dioxide emissions (2.3kg for petrol and 2.5kg for diesel). Based on these numbers, it is estimated that fuel worth Rs 54 crore is wasted every year due to snarls at the toll plaza. [20]

2. SECOND STAGE: OBSERVATION OF OWN BEHAVIOR

Self-awareness with the help of facts given above on the first day about resources will lead to observation .When you become aware about the facts that the resources are depleting so fast then you tend to observe your own behavior.The daily chores which had become an unconscious mechanism of his physical system would be given a conscious thought. Thus, **in the second stage, the students would be asked to observe their usual course of events of consumption throughout a day and note it down in a "Consumption Table" that would show their consumption in each category, i.e. water, electricity and fuel**. The measurement units that might be used are enumerated below.

- Measurement of water might be in gallons or buckets or liters' that is actually being used.
- Measurement of electricity could be done by recording the reading of the meter at the beginning of the day and at the end of the day in kilowatts; or by recording on individual basis the amount of time in hours and minutes that fans, A.C. various bulbs and lights, are used per day.
- For measuring fuel, the number of times one goes out of the house for his/her daily requirements and recreation, could be recorded.

Observation and recording of the usage of the resources is needed. When a person observes, it leads to creation of awareness in one's mind about handling of various resources.Trying to write down every time that they use energy, water, gasoline, or throwing something away can be a challenging task as they quickly will realize that almost everything they do in their daily routine resulted in using or wasting something.[1]Also this will help children recognize the wastage in daily use of resources.The students can be asked to prepare a waste table in which things that can be recycled are thrown awaylike notebook pages, pencil usage, pen-ink, food, money etc.

3. THIRD STAGE: SELF-REFLECTION

Observation and noting down of consumption levels of own will lead to Self-reflection. [21]Self-reflection is the exercising of introspection, coupled with the willingness to learn about yourself. Engaging in reflection is traditionally thought to be the best way to make wise choices.The second stage of observation and recording would instigate students to carry out a mental analysis of their own consumption and wastage levels. **This self-reflection would help them judge themselves and this inner criticism would bring about change in them which would be permanent. This further would motivate students to reduce the wastage levels** and do their bit to promote sustainable development.

For example a person taking shower everyday can aim at taking bath with measured number of buckets of water for bath and can also do the same for washing clothes and utensils and usage and toilet usage and flush.

Fuel, one can again plan and aim to recreate and do variety of chores together. And see the amount of fuel used in a weeks' time as it will give some definite results.

With regards to electricity one can sit together instead of sitting in different rooms and pool. One can try and aim to reduce the usage of a.c's and various other appliances used during the day. A person who reflects throughout his or her practice is not just looking back on past actions and events, but is taking a conscious look at emotions, experiences,

actions, and responses, and using that information to add to his or her existing knowledge base and reach a higher level of understanding

4. FOURTH STAGE: MAKING IT A HABIT LEADING TO ZERO WASTE

At this stage students could be asked to aim at experimenting new ways of reducing the consumption of the above and aim at no waste for the day. If they practice it for a day then it might turn out to be a habit wherein they act in for zero waste.

They can also create a note in a diary or a table of list of items that you throw and that which are essential and can be useful. This will quickly make them aware of the wastage that is happening because of them and the places they visit. This will also lead to critical analysis of their own behavior and thus challenging task to reduce it.

This audit looks simple but challenging for the students as it involves students to change their habits so that they can reach the zero waste target.

5. Fifth stage: Calculating the consumption and reduced consumption levels and the difference between them enough to see the impact of the package. The students can also make a card shown below to make the results extrovertly available to others. They can be asked to write the reflections and feedback after the exercise of the fifth day and also their reaction to this project, and what they learnt about their consumption and waste behavior. How this project will affect your behavior in the future.

The students then after calculation of the reduced numbers and actually the zero waste numbers would be surprised to note the results leading to an innate change within them. They can be asked to share the reflections after the fourth day as in what did they feel when they were implementing this methodology, what change they find within themselves and how do they feel with regards to the contribution to the cataclysmic scene of the changing global condition.

Findings and discussion:

The package was implemented by the author in small society of 20 children and the findings were reported as follows:

The self-audit with observation and self-reflection of consumption and waste patterns looks simple and easy but it's quite challenging when it's actually to be practiced. As one of child wrote in his reflection part,"To note the levels of all the resources that we are consuming and attempting to reduce it is challenging and tough part". "The noting of consumption levels instantly leads to critical reflection of almost of all the things we are wasting. The best part of the exercise or implementation of the methodology was that each and every student did the task diligently and seriously.

Based on the charts provided to the students to perform the exercise following reflection and feedback of the students the following conclusions can be reached:

- Most of the students reported that they felt as if they were actually contributing towards sustainable development. "I feel as if I have actually contributed towards society and reduced wastage".
- students were very happy about the project and wrote that they were actually following sustainable development lifestyle now and will follow it permanently from now on. The exercise made them more aware about their calculation with regards to consumption and waste of the resources and daily life.
- Few students also could not implement it properly because of their busy lifestyle and routine of the school.
- Some students also made a plea of making this activity a part of the curriculum. This exercise should F.A activity in the school itself so that it can be done more seriously.
- Some of the students said that they were not aware of their consumption and waste patterns but after an implementation of the package they felt shocked about their behavior and the exercise made them more aware about saying that,"I used 3 buckets of water every day for bathing but then I have reduced to 1 that is essential".
- Few students also added a component of food by themselves which they wasted much and attempted to reduce to significantly on the last day of the exercise.
- Many students reported use of A.C significantly in house and reported 50% reduction in use after the implementation of the exercise.
- Advantages of the audit

This audit can also be conducted for a longer period of time with more number ofcategories included in it like money, food etc. It must be stressed that the audit is not restricted to few disciplines but can be implemented across the schooling as well as higher education. It can lay a real groundwork for behavioral change as well as sense of empowerment to students by making them feel contributing towards the helpless scenario existing.

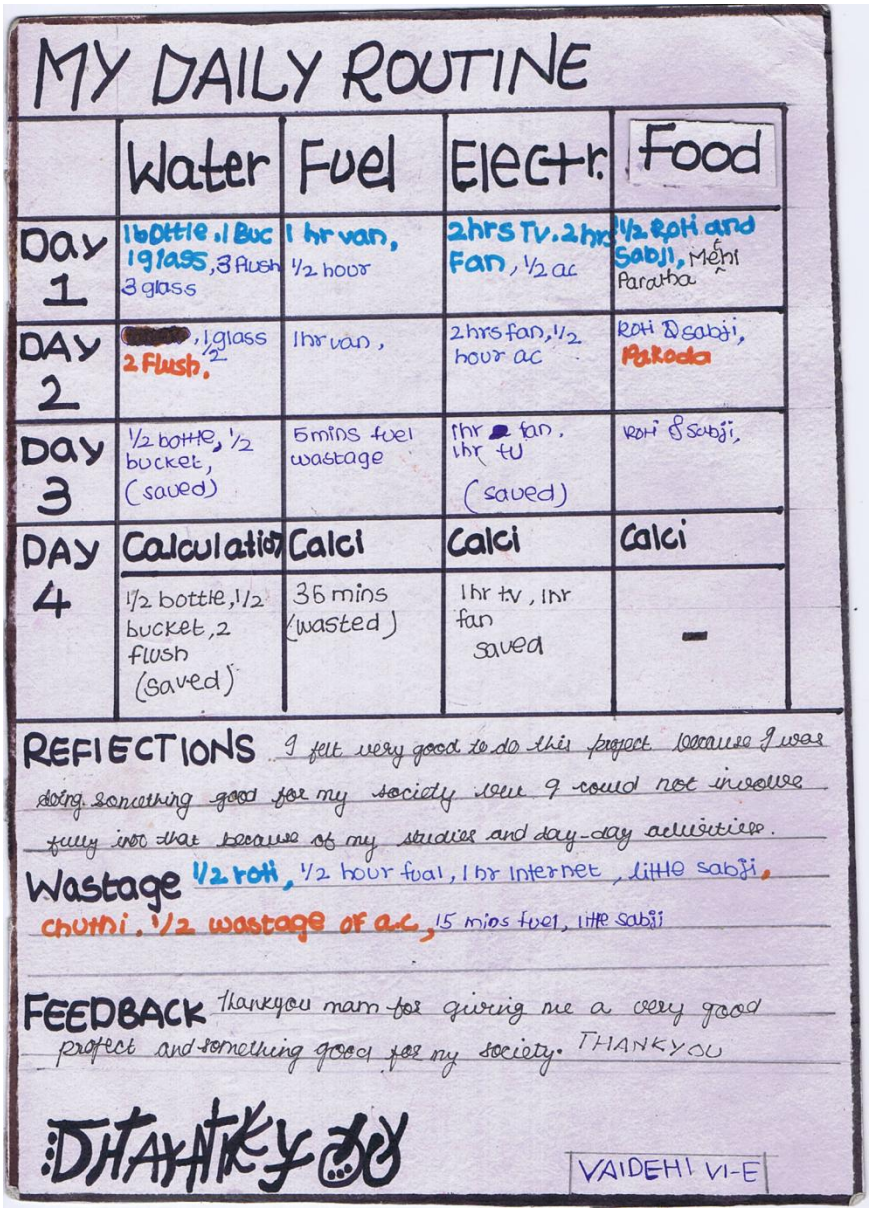
Conclusion

Large global investments and great political commitments are directed towards the goal of achieving sustainable development in several areas. But the actual power lies in the hand of common man. Specific changes are needed to be brought about in the mindsets of this common man, life styles are needed to be changed, wastages are needed to be treated as sin and miniature changes in the daily chores are needed to be acknowledged by each and every citizen. Plans made at the top-notch levels are implemented at the grass root level by citizens, who have to be trained for the same. The youngsters of today represent the future citizen. So strategies discussed in the present paper provide an action plan for the youngsters to bring about an innate change within them helping to reduce wastage of natural resources at the grass root level. The strategy uses the concept of self-audit and self-reflection, which can bring about permanent habitual changes. Also, the feeling of helplessness of youngsters on environmental concerns would be swamped, as they would be contributing for a global cause. Furthermore the strategy does not demand hi-fi gadgets, gizmos, appliances or policies to achieve the outcome. It must also combine a mass movement of grassroots initiatives at all individual levels applying pressure to policy makers and legislators, setting barriers for would-be-traffickers and increasing penalties to achieve the meaning of sustainable development.

Appendix

Methodology card

Sr no	Water	Electricity	Fuel
Being aware-Day 1			
Observation –Day 2			
Reflection-Day 3			
Habit-Day 4			
Calculation			



MY DAILY ROUTINE

	Water	Fuel	Electr.	Food
Day 1	1bottle, 1 Buc 1 glass, 3 flush 3 glass	1 hr van, ½ hour	2hrs TV. 2hrs Fan, ½ ac	½ Roti and Sabji, Meth Paratha
DAY 2	[redacted], 1 glass ½ 2 Flush,	1hr van,	2hrs fan, ½ hour ac	Roti & Sabji, Pakoda
Day 3	½ bottle, ½ bucket, (saved)	5mins fuel wastage	1hr [redacted] fan, 1hr tv (saved)	Roti & Sabji,
DAY 4	Calculation ½ bottle, ½ bucket, 2 flush (saved)	Calci 35 mins (wasted)	Calci 1hr tv, 1hr fan saved	Calci -

REFLECTIONS I felt very good to do this project because I was doing something good for my society. But I could not involve fully into that because of my studies and day-day activities.

Wastage ½ roti, ½ hour fuel, 1 hr internet, little sabji, chutni, ½ wastage of a.c, 15 mins fuel, little sabji

FEEDBACK Thankyou mam for giving me a very good project and something good for my society. THANKYOU

THANKYOU

VAIDEHI VI-E

REFRENCES

1.Savageau, A. (2013)"Let's get personal: making sustainability tangible to students", International Journal of Sustainability in Higher Education, Vol. 14 Iss: 1, pp.15 - 24retrieved on June 25, 2015from http://www.esdtoolkit.org/discussion/challenges.htm

2. http://www.teriin.org/events/Intrl_seminar.pdf International Seminar on ESD: Understanding Present Trends, Pedagogy and Challenges 12 November 2011

3.Berkins, K. (N.A.) "Current Issues in Teacher Education and Sustainable Development In India" retrieved on June 25, 2015 from http://www.academia.edu/3348246/current_issues_on_teacher_education_and_sustainable_development_in_india

4. Challenges and Barriers to ESD Education Essayretrieved on June 26/2015 from http://www.ukessays.com/essays/education/challenges-and-barriers-to-esd-education-essay.php

5.Sartori, S (2014) "Sustainability and Sustainable Development: a taxonomy in the field of literature" retrieved on June 26/2015 from http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-753X2014000100002&lng=en&tlng=enAmbiente&SociedadeOn-line version ISSN 1809-4422 Ambient. soc. vol.17 no.1

6.http://www.alfiekohn.org/article/risks-rewards/ the risk of rewards by Alfie Kohn Eric Digest ERIC Identifier: ED376990

7. Agombar, J. (2015) "Students, Skills and Sustainability" retrieved on June 26, 2015 from https://www.plymouth.ac.uk/uploads/production/document/path/3/3064/Students_Skills_and_Sustainability_Jamie_Agombar_2015.pdf

8.Unesco's" Education for Sustainable Development Toolkit" retrieved on June 26, 2015 from unesdoc.unesco.org/images/0015/001524/152453eo.pdf Education for sustainable development toolkit

9.Haque, F. (2013) " Education for Sustainable Development : An Evaluation of the new Curriculum of the formal Primary Education in Bangladesh " retreived on June 26,2015

from eujournal.org/index.php/esj/article/viewFile/2311/2184 education for sustainable development European scientific journal

10.“Education for Sustainable Development” retrieved on July 1, 2015 from www.wildscience.org/topics/2.pdfESD TEAMS Proposal Education is an essential tool for achieving sustainability.

11.Observation and self-awareness: the perfect starting point for all waste reduction action retrieved on July 1, 2015 from http://www.green-cook.org/Observation-and-self-awareness-the.html

12. www.theravive.com/.../The-Art-of-Self-Awareness-and-Self-Reflection

13.Mohan, V. (2014) World Water Day retrieved on July 2, 2015 fromUN report predicts grim scenario for India; experts pitch for making water conservation a nationalobsession″ retrieved on July2, 2015 fromhttp://timesofindia.indiatimes.com/home/environment/the-good-earth/World-Water-Day-UN-report-predicts-grim-scenario-for-India-experts-pitch-for-making-water-conservation-a-national-obsession/articleshow/32507693.cms

14.Mahapatra, D. (2011)“27% of the power goes waste: Moily” retrieved on July 3, 2015 fromhttp://timesofindia.indiatimes.com/india/27-of-power-goes-waste-Moily/articleshow/15441795.cms

15.N.A, (2014)“Power wastage largest contributor to Energy Crisis”retrieved on July 3, 2015 from http://www.newindianexpress.com/cities/chennai/Power-Wastage-Largest-Contributor-to-Energy-Crisis/2014/02/26/article2077459.ece

16.Bhaskar, U. (2014) ″India faces daily power outage of 30,000 MW” retrieved on July 2, 2015 from http://www.livemint.com/Industry/tnV2NUSAK8PbFs7pSzoL0I/India-faces-daily-power-outage-of-30000-MW.html

17.N.A“Statutory nods barrier for Indian power sector” retrieved on July 2, 2015 from http://indianpowersector.com/home/tag/power-shortage/ statutory nods barrier for Indian Power Sector.

18.N.A (2015) World Energy Needs and Nuclear Powerhttp://www.world-nuclear.org/info/Current-and-Future-Generation/World-Energy-Needs-and-Nuclear-Power/

19.Resources retrieved on July 4, 2015 fromhttp://www.saveenergy.co.in/resources.php

20.“Commuters waste worth Rs 5 Crore due to traffic jams” retrieved on July 6, 2015 fromhttp://www.hindustantimes.com/gurgaon/commuters-waste-fuel-worth-rs-54-crore-every-year-due-to-jams/article1-1104379.aspx

21.Cosh, J.(N.A)“Peer Observation: A reflective model” http://203.72.145.166/elt/files/53-1-3.pdf peer observation: A reflective model.