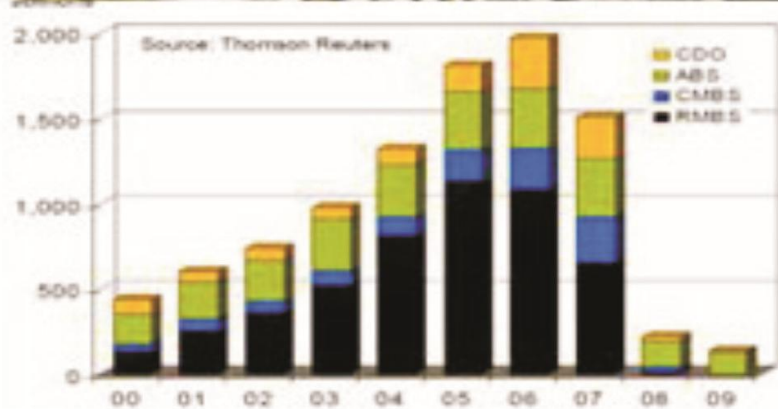


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## A COMPARATIVE STUDY OF ACTIVITY BASED COSTING AND TRADITIONAL COSTING AS A FRAGMENT OF PRICING

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### ABSTRACT

*To support compliance with financial reporting requirements, a company's traditional cost-accounting system is often articulated with its general ledger system. In essence, this linkage is grounded in cost allocation. Typically, costs are allocated for either valuation purposes (i.e., financial statements for external uses) or decision-making purposes (i.e., internal uses) or both. However, in certain instances costs also are allocated for cost-reimbursement purposes (e.g., hospitals and defense contractors). Activity-based costing (ABC) which has become an important aspect of manufacturing/service organizations can be defined as a methodology that measures the cost and performance of activities, resources and cost objects. It can be considered as an alternative paradigm to traditional cost-based accounting systems. The objective of this paper is to illustrate an application of Activity Based Costing method and to compare the results of ABC with traditional costing methods. However an attempt has made to study the importance of activity based costing in present competitive business environment to exercise minimum control over on the cost.*

**KEYWORDS:** *Activity-Based Costing, Cost Drivers, Overheads, Traditional Costing*

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### INTRODUCTION

Present global competition forced manufacturing and services organizations to become more flexible, integrated and highly automated in order to increase their productivity at reduced costs. Activity-based costing (ABC) provides the tools necessary to understand indirect costs. The traditional approach to cost-allocation consists of three basic steps: accumulate costs within a production or nonproduction department; allocate nonproduction department costs to production departments; and allocate the resulting (revised) production department costs to various products, services, or customers. Costs derived from this traditional allocation approach suffer from several defects that can result in distorted costs for decision-making purposes. For example, the traditional approach allocates the cost of idle capacity to products. Accordingly, such products are charged for resources that they did not use. Seeking to remedy such distortions, many companies have adopted a different cost-allocation approach called activity-based costing (ABC). But it is impossible to sustain competitiveness without an accurate cost calculation mechanism Proposed by as an alternative method to traditional cost accounting methods, ABC assigns costs to activities using multiple cost drivers, then allocates costs to products based on each product's use of these activities. Using multiple activities as cost drivers, it reduces the risk of distortion and provides accurate cost information. In an ABC system, the total cost of a

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product equals the cost of the raw materials plus the sum of the cost of all value adding activities to produce it. In other words, the ABC method models the usage of the organization resources by the activities performed and links the cost of these activities to outputs, such as products, customers, and services. Each product requires a number of activities such as design, engineering, purchasing, production and quality control. Each activity consumes resources of different categories such as the working time of the manager. Cost drivers are often measures of the activities performed such as number of units produced, labor hours, hours of equipment time, number of orders received.

Traditional costing methods fail in many pricing situations because they arbitrarily allocate indirect costs. Today, indirect costs such as rent, depreciation, utilities and supervision are often a significant portion of the company's cost structure. While many people think such costs are unrelated to specific products, an analytical mind will quickly see cause and effect connections between products and the activities required to provide them to a customer.

In traditional cost accounting systems, direct materials and labor are the only costs that can be traced directly to the product. By using the ABC system, activities can be classified as value-added and non-value-added activities. In order to improve the performance of the system, non value-added can be eliminated.

### **Activity-Based Costing**

In contrast to traditional cost-accounting systems, ABC systems first accumulate overhead costs for each organizational activity, and then assign the costs of the activities to the products, services, or customers (cost objects) causing that activity. As one might expect, the most critical aspect of ABC is activity analysis. Activity analysis is the processes of identifying appropriate output measures of activities and resources (cost drivers) and their effects on the costs of making a product or providing a service. Activity analysis provides the foundation for remedying the distortions inherent in traditional cost-accounting systems.

**Activity based costing (ABC)** is a costing method that is designed to provide managers with cost information for strategic and other decisions that potentially affect capacity and therefore "fixed cost".

**Activity based costing system** is used to determine product costs for special management reports. This system is ordinarily used as a supplement to the company's usual costing system. Most of the organizations that use ABC system have two costing systems--the official costing system that is used for preparing external financial reports and the activity based costing system that is used for internal decision making and for managing activities.

In traditional cost accounting systems, the objective is to value inventories and cost of goods sold for external financial reports in accordance with the generally accepted accounting principles (GAAP). In activity based costing (ABC) system the objective is to understand overhead and the profitability of products and customers and to manage overhead. As a consequence of these differences in objectives, "best practice" activity based costing system differs in a number of ways from traditional cost accounting.

In activity based costing:

1. Non-manufacturing as well as manufacturing costs may be assigned to products.
2. Some manufacturing costs may be excluded from product costs.

3. A number of overhead cost pools are used, each of which is allocated to products and other costing objects using its own unique measure of activity.
4. The allocation bases often differ from those used in traditional costing system.
5. The overhead rates or activity rates may be based on the level of activity at capacity rather than on the budgeted level of activity.

### **Activity Based Costing (ABC) Systems versus Traditional Cost-Accounting**

ABC systems are not inherently constrained by the tenets of financial reporting requirements. Rather, ABC systems have the inherent flexibility to provide special reports to facilitate management decisions regarding the costs of activities undertaken to design, produce, sell, and deliver a company's products or services. At the heart of this flexibility is the fact that ABC systems focus on accumulating costs via several key activities, whereas traditional cost allocation focuses on accumulating costs via organizational units. By focusing on specific activities, ABC systems provide superior cost allocation information—especially when costs are caused by non-volume-based cost drivers. Even so, traditional cost-accounting systems will continue to be used to satisfy conventional financial reporting requirements. ABC systems will continue to supplement, rather than replace, traditional cost-accounting systems.

Geared toward compliance with financial reporting requirements, traditional cost-accounting systems often allocate costs based on single-volume measures such as direct-labor hours, direct-labor costs, or machine hours. While using a single volume measure as an overall cost driver seldom meets the cause-and effect criterion desired in cost allocation, it provides a relatively cheap and convenient means of complying with financial reporting requirements. In contrast to traditional cost-accounting systems,

### **Treatment of Costs Under Activity Based Costing (ABC) System:**

**Non-manufacturing Costs and Activity Based Costing (ABC) System:** In traditional cost accounting system, only manufacturing costs are assigned to products. Selling, general, and administrative expenses are treated as period costs and are not assigned to products. However, many of these non-manufacturing costs are also part of the costs of producing, selling, distributing, and servicing products. For example commissions paid to salespersons, shipping costs, and warranty repair costs can be easily traced to individual products. The term overhead is usually used to refer non-manufacturing costs as well as indirect manufacturing costs under an ABC system. In activity based costing, products are assigned all of the costs—manufacturing as well as non-manufacturing—that they can reasonably be supposed to have caused. The entire cost of the product is determined rather than just its manufacturing cost.

**Manufacturing Costs and Activity Based Costing (ABC):** In traditional cost accounting, all manufacturing costs are assigned to products—even manufacturing costs that are not caused by the products. For example, a portion of the factory security guard's wages would be allocated to each product even though the guard's wages are totally unaffected by which products are made or not made during a period. In activity based costing, cost is assigned to a product only if there is a good reason to believe that the cost would be affected by decisions concerning the product.

**The Cost of Idle Capacity and Activity Based Costing (ABC):** In traditional cost accounting, predetermined overhead rates are computed by dividing budgeted overhead costs by a measure of budgeted activity such as budgeted direct labor hours. This results in applying the costs of unused or idle capacity to products, and it results in unstable unit product cost. In contrast to traditional cost accounting, in activity based costing system, products are charged for the costs of

capacity they use and not for the costs of capacity they do not use. The costs of idle capacity are not charged to products in activity based costing system. This results in more stable unit costs and is consistent with the objective of assigning only those costs to products that are actually caused by the products. Instead of assigning the costs of idle capacity to products, in activity based costing system these costs are considered to be period costs that flow through to the income statement as an expense of the current period. This treatment highlights the cost of idle capacity rather than burying it in inventory and cost of goods sold.

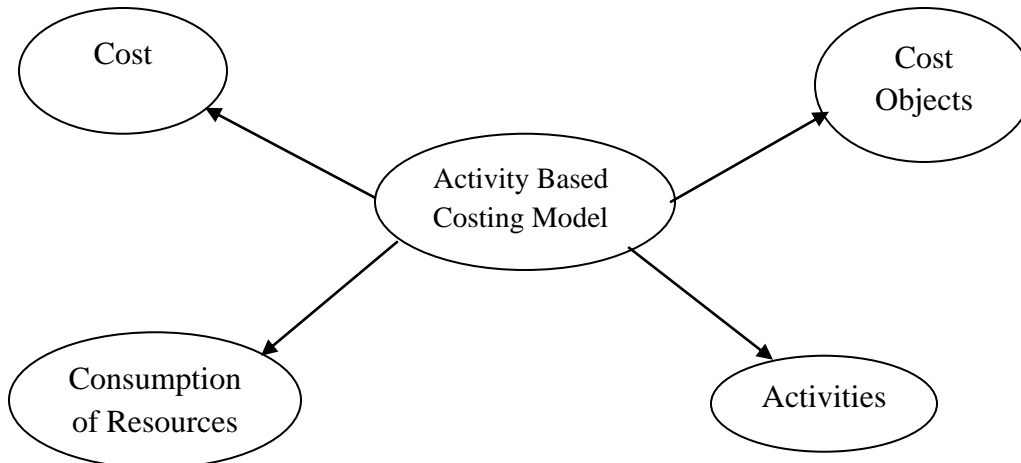
### **Designing and Implementing Activity Based Costing (ABC) System:**

First, the initiative to implement activity based costing must be strongly supported by top management. Second, the design and implementation of activity based costing system should be the responsibility of a cross functional team rather than of the accounting department. The team should include representatives from each area that will use the data provided by the activity based costing system. Ordinarily, this would include representatives from marketing, production, engineering and top management as well as technically trained accounting staff. An outside consultant who specializes in activity based costing system serve as an advisor to the team.

The reason for insisting on strong top management support and a multifunction team approach is rooted in the fact that implementing activity based costing system is difficult in organizations unless those changes have the full support of those who are affected. Activity based costing changes "the rules of the game" since it changes some of the key measures that managers use for their decision making and for evaluating individuals' performance. Unless the managers who are directly affected by the changes in the rules have a say, resistance will be inevitable. In addition, designing a good activity based costing system requires intimate knowledge of many parts of the organization's overall operations. This knowledge can only come from the people who are familiar with those operations.

Implementation of activity based costing system must be initiated by top management due to two reasons. First, without leadership from top management, some managers may not see any reason to change. Second, if top managers do not support the ABC system and continue to play the game by the old rules, their subordinates will quickly get the message that ABC is not important and they will abandon the ABC initiative. Time after time, when accountants have attempted to implement an ABC system on their own with top-management support and active cooperation from other managers, the results have been ignored.

For designing and implementing activity based costing system, management should carefully study the existing cost accounting system and review the articles in professionals and trade journals. In most of the organizations, the new activity based costing system supplement, rather than replace, the existing cost accounting system, which continues to be used for external financial reports.



Usually, company's traditional cost accounting system adequately measures the direct material and direct labor costs of products since these costs are directly traced to products. In most of the organizations activity based costing study is usually concerned solely with the other costs of the company - manufacturing overhead and selling, general, and administrative costs.

### **Activity Based Costing and Product Pricing**

At the time of product pricing there will three things can happen in pricing – and two of them are bad. A company's reward for a price set too low is an unprofitable sale. Their reward for a price set too high is a lost sale that would have been profitable at a lower price. Only some place between these two numbers does the company have the opportunity to both make a sale and a profit.

While companies rarely price their products below cost intentionally, they often do so due to poor costing information. Traditional costing methods do a good job at telling the average cost of an average product sold to an average customer; but they do a poor job of identifying the specific costs related to a specific situation.

Cost, of course, is not the only issue in establishing price. The product's value as perceived by the customer is another key factor. In fact, when a company has a superior value proposition or is the only one who does what they do, value is the most important factor in the pricing decision. However, value pricing falls apart in the face of real competition and cost becomes a more significant concern.

Traditional costing methods fail in many pricing situations because they arbitrarily allocate indirect costs. Today, indirect costs such as rent, depreciation, utilities and supervision are often a significant portion of the company's cost structure. While many people think such costs are unrelated to specific products, an analytical mind will quickly see cause and effect connections between products and the activities required to provide them to a customer.

### **Illustrative Example**

MV Corporation makes a single product - a fire resistant commercial telephone cable - that it sells to office furniture distributors. The company has a simple ABC system that it uses for internal decision making. The company has two overhead departments whose costs are listed below:



Manufacturing overhead	Rs. 5,00,000
Selling and administrative overhead	Rs. 300,000
Total overhead costs	Rs. 8,00,000

The company's activity based costing system has the following activity cost pools and activity measures:

Activity Cost Pool	Activity Measures
Assembling units	Number of units
Processing orders	Number of orders
Supporting customers	Number of customers
Other	Not applicable

Costs assigned to the "other" activity cost pool have no activity measure; they consist of the costs of unused capacity and organization-sustaining costs - neither of which are assigned to products, orders or customers.

MV Corporation distributes the costs of manufacturing overhead and of selling and administrative overhead to the activity cost pools based on employee interviews, the results of which are reported below:

Distribution of Resource Consumption Across Activity Cost Pools					
	Assembling Units	Processing Orders	Supporting Customers	Other	Total
Manufacturing overhead	50%	35%	5%	10%	100%
Selling and administrative overhead	10%	45%	25%	20%	100%
Total activity	1,000 units	250 orders	100 customers	--	--

**Required:**

1. Perform the first stage allocation of overhead costs to the activity cost pools.
2. Compute activity rates for the activity cost pools.
3. SGR Ltd., is one of the MV Corporation's customers. Last year SGR Ltd., ordered filing Cables four different times. SGR Ltd., ordered a total of 80 cables during the year. Construct a table showing the overhead costs of these 80 units and four orders.

**Solution:**

1. The first stage allocation of costs to the activity cost pools appears below:

Activity Cost Pools					
	Assembling Units	Processing Orders	Supporting Customers	Other	Total
Manufacturing overhead	Rs. 250,000	Rs. 175,000	Rs. 25,000	Rs. 50,000	Rs. 500,000
Selling and administrative	30,000	135,000	75,000	60,000	300,000

overhead

Total activity	Rs. 280,000	Rs. 310,000	Rs. 100,000	Rs. 110,000	Rs. 800,000
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2. The activity rates for the activity cost pools are:

Activity Cost Pools	Total Cost	Total Activity	Activity Rate
Assembling units	Rs. 280,000	1,000 units	Rs. 280 per unit
Processing orders	Rs. 310,000	250 units	Rs. 1,240 per order
Supporting customers	Rs. 100,000	100 customers	Rs. 1,000 per customer

3. The overhead cost for the four orders of a total of 80 filing cables would be computed as follows:

Activity Cost Pools	Total Cost	Total Activity	Activity Rate
Assembling units	Rs. 280 per unit	80 units	Rs. 22,400
Processing orders	Rs. 1,240 per order	4 units	Rs. 4,960
Supporting customers	Rs. 1000 per customer	Not applicable	

4. The product and customer margin can be computed as follows:

<b>Filing Cable Product Margin:</b>		
Sales (Rs. 595 per unit × 80 units)		Rs. 47,600
Cost:		
Direct materials (Rs. 180 per unit × 80 units)	Rs. 14,400	
Direct materials (Rs. 50 per unit × 80 units)	4,000	
Volume related overhead (above)	22,400	
Order related overhead (above)	4,960	45,760
		Rs. 1,840
		=====
<b>Customer Profitability Analysis – SGR Ltd.,</b>		
Product margin (above)	Rs. 1,840	
Less: Customer support overhead (above)	1,000	
		Rs. 840
		=====

## CONCLUSION

ABC utilizes the activity concept and by using the activities, ABC can successfully link the product costs to production knowledge. How a product is produced, how much time is needed to perform an activity and finally how much money is absorbed by performing this task are answered by the help of ABC studies.

As it is seen in this application, ABC is capable of monitoring the hidden losses and profits of the traditional costing methods.

Activity-based costing (ABC) which has become an important aspect of manufacturing/service organizations can be defined as a methodology that measures the cost and performance of activities, resources and cost objects. It can be considered as an alternative paradigm to traditional cost-based accounting systems. The objective of this paper is to illustrate an

application of Activity Based Costing method and to compare the results of ABC with traditional costing methods. However an attempt has made to study the importance of activity based costing in present competitive business environment to exercise minimum control over on the cost.

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**SENSITIZING GENNEXT FOR SUSTAINABLE DEVELOPMENT  
THROUGH EDUCATION WITH SPECIAL REFERENCE TO INDIAN  
PRIMARY AND SECONDARY EDUCATION**

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**ABSTRACT**

*The entire literate world is now waking up to the reality of Sustainable development, Environment Conservation and its implications. This awakening is slowly seeping through all strata of society, be it business corporations, academia, or even social and community life. These ideas need to be sown at grass root levels for them to take root and flower in society. Schools in India at Kindergarten, Primary and Secondary levels are taking a lot of effort to ensure that the concepts of sustainable development are made effective in society. The authors have tried to study the assortment of programs at varied levels of schooling to understand how they have impacted the young minds and also how the schools have taken serious efforts to thus sensitize society and communities as a result. Although, such programs are given much credence at school levels, they do not translate into career options for the students. Especially in a Tier II city like Nagpur, in Central India, these activities do not add up in the student's psyche as a full time profession. A break in thought occurs at matriculate levels where the student concentrates only on professional courses like engineering or medical sciences. The exposure towards such diverse streams is very limited. The authors have also tried to unravel the conundrum regarding the awareness of such career options.*

**KEYWORDS:** *Sustainable Development, Education, Professional courses.*

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**INTRODUCTION**

**Research Paper:**

*We shall require a substantially new manner of thinking if mankind is to survive. ~Albert Einstein*

When renowned scientist, Einstein uttered these words, he couldn't have been more prophetic. It surely seems as if he was talking about the topic *du jour*, of Environmental Conservation and Sustainable development through collaborative efforts with NGOs, Activists, Governmental Agencies, and stakeholders of modern society. The appalling rise in air, water and soil pollution, the degradation of human health and rise in human population, Deforestation, extinction of plant

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and animal species are causes of concern for all. It is not just policymakers but also the common man who is gravely affected by these issues.

Planet Earth, evidently is going through extremely tough times. She seems on the verge of a breakdown owing to despair. But it surely seems that all is not lost and there is light at the end of the tunnel. The message that our planet earth is in grave danger, if steps to save her are not taken immediately, is doing the rounds in all strata of society.

Policymakers all over the world are trying to formulate and pass decrees for environmental rights and against their violation. Trading of Carbon credits, Green technology, are slowly gathering momentum as focus shifts on such imperative environmental concerns and issues.

At a macro level, such measures will bring about certain compulsions and mandates for all to follow. But a change can be effected only if its need is felt from within. Each stakeholder and citizen of society should feel the need to commit to the environment. When this happens, Sustainable Development can be an achievable dream.

As each citizen of society is a stakeholder, he or she needs to be sensitized to this ominous need for conservation. This can be affected only if; the correct habits are imbibed in them from childhood. This in turn can happen if such habits are imbibed by a child's first figure of authority outside her family, which is the teacher. The school is an ecosystem in which, a child's value system is fortified and validated. The teacher, for any child becomes the torchbearer of such values. Hence, when a child learns in a healthy, ethical ecosystem; the chances of his evolving into an ethical stakeholder of society increase.

*Our children may save us if they are taught to care properly for the planet; but if not, it may be back to the Ice Age or the caves from where we first emerged. Then we'll have to view the universe above from a cold, dark place. No more jet skis, nuclear weapons, plastic crap, broken pay phones, drugs, cars, waffle irons, or television. Come to think of it, that might not be a bad idea. ~Jimmy Buffet, Mother Earth News, March-April 1990*

This paper studies the various programs that are being conducted at all levels; i.e., Kindergarten, Primary, Middle and High school in and around Nagpur, India. Nagpur is the 13<sup>th</sup> largest two city in India with a population of approximately 242000. It is regarded as a tier II city, with a semi urban status.

Any school in Nagpur follows either of the two Boards of Education at Secondary Level; which are CBSE or the Central Board of Secondary Education and the Maharashtra or State Board. Both these boards have made the study of Environment as a separate subject in their curricula.

The modus operandi of this subject is also specified with a high thrust on practical implications by Ministry of Environment and Forests, Government of India.

Besides these specifications, some schools have even come up with their own innovative methods to create awareness about sustainable development.

### **Kindergarten Level:**

A case in point is Mother's Pet Kindergarten, which was the pilot venture of Centre Point School and its group of educational Institutions. Mrs. Gauri Kanoria, the Vice Principal of Mother's Pet Kindergarten, Sadar, had a lot to share when it came to the programs initiated by their school and its other branches.

She specified that to teach toddlers and pre-schoolers (4- 6 year olds) such a complex topic like environmental awareness is a daunting task. Hence they break down the concept in such a manner that it is easily understood and identified with by the children. The following activities are taken up by this particular Kindergarten to sensitize the tender minds:

- They teach the toddlers the concept of germination through actual sowing of seed, wherein each child gets a plant to herself, to care for and grow.
- They have various activities in which they take the children to visit the vegetable patch that they have in their premises. This patch is cultivated with the help of manure that is made out of compost. They have their own compost pit, where all biodegradable waste is deposited.
- The children are taught the concept of separating garbage from the very beginning. At any given time, they have made available three bins, one for plastic, the other for vegetable and biodegradable waste and one for glass etc. The toddlers are taught the importance of sorting the waste and are also shown how vegetable waste is reused as compost.
- The children are engaged through stories about how paper can be recycled and plastic cannot. They are also given various simple storybooks which deal with the concept of recycling, like “Pepper learns about Recycling” by Sterling Publishers. The children are also told stories about Diwali and the infamous firecracker factories in Sivakasi. This makes them aware about child labour and also the ill effects of noise and air pollution.
- They also organize various competitions where the children are asked to prepare greeting cards from waste. They also hold Parent – child competitions to propagate the concept. The cards are sold to parents and the money is utilized for charity to lesser developed schools.
- They take part in the annual event, “Hirwai”, which means greenery that is organized by an NGO with the Forest Department for tree plantation and Green Awareness.
- They also had an awareness project on Fuel Conservation. In this, Kindergarten children conceptualized and painted an entire “Carpool” themed poster and highlighted its advantages. (Example slide attached as Annexure 1).

#### **Primary School Level (Ages 7 – 10 yrs):**

Although children at this level of schooling do not have environmental studies as a separate subject, they are given insights regarding such issues using a variety of means. Mrs. Archana Kinkhede, a primary and secondary school teacher in a Government aided school in Nagpur has given the following points to ponder.

- Each class is taken on field trips to nearby parks or for nature trail excursions. They are taught the touch and feel of different flowers and leaves.
- Each child has to prepare small charts and projects on the ecosystem and energy sources. They are taught the importance of renewable and non renewable energy sources through simple films, graphics and illustrations.
- They have specially planned nature games that are played in their outdoor games periods.
- They are taught simple principles of gardening and rain water harvesting. In their school, they have a special pond that has been created by harvesting rainwater. They have also developed a system to use waste and sewage water for fertilizing and cultivating their landscaped garden.

- They are made to participate in tree plantation drives and art competitions on environmental themes.

### **Middle School and High School Level (Ages 10 – 16 yrs):**

*The activist is not the man who says the river is dirty. The activist is the man who cleans up the river. ~Ross Perot*

At these levels, the children are better suited to understand the gravity and ramifications of sustainable development. This is also when the students can take a more active part in the conceptualization and implementation of such programs. From the eighth grade, a separate subject of Environmental studies is introduced in the curriculum for both, CBSE as well as State Board. But the routine academic curriculum is further supplemented by various activities as follows:

- **Eco clubs:**

All schools have established eco clubs in their premises under the aegis of Department of Environment, which has provided a token grant of Rs. 10000/- to each school or college with an Eco Club for undertaking various eco-friendly activities. Eco Clubs been instrumental in playing an important role in creating environmental awareness amongst the budding environmentalists. These clubs have motivated the students to keep their surroundings green and clean. They have promoted ethos of conservation of water by minimizing the use of water. They have also bought about a few lifestyle changes by promoting minimal waste generation, separation of waste and disposing the waste to the nearest storage point and stop the indiscriminate burning of waste which causes respiratory diseases. They have also sensitized the students to minimize the use of plastic bags, not to throw them in public places as they choke drains and sewers, cause water logging and provide breeding ground for mosquitoes.

Organize awareness programmes such as Quiz, essay, painting competitions, rallies, nukkad natak (street plays etc. regarding various environmental issues and educate children about re-use of waste material & preparation of products out of waste.

- **Tree Plantation:**

Each year, Tree Plantation drive is undertaken by the School Authorities as an initiative to spread environmental awareness. Before the start of each plantation activity, students are briefed about the significance of native trees, how to plant them and post plantation care. Children show great enthusiasm in planting these trees which they understand would recharge ground water, prevent soil erosion and prevent siltation of their river. They are also told that this activity would help revive air, land and water quality as well as maintain the ecological balance, prevent soil erosion, provide medicines, provide habitat for faunal species, providing nutrients to the soil etc. At the end of the activity, each student is presented with a certificate which acts as a reminder of the ennobling task he/she had performed. The students are asked to conduct follow-up activities to see how the saplings they had planted are and also submit a report on the activity after a period of three weeks. All the findings by the students are documented and sent to the Department of Environment in the form of a report which consists of the following points:

- Tree guards to be provided for roadside plantations.
- Saplings to be watered regularly during times of a dry spell.
- Well-drained deep sandy loams which are best suited for plant growth to be provided.



- Soil or plantation area to be free of construction waste, debris etc.
- Compost manure to be applied during plantation and during the initial growth phase of the plants. Fertilizers should not be added.

Schools and colleges are encouraged to adapt "one child one plant" scheme, where the responsibility of growing the plant lies with the individual student. This becomes an enriching, learning experience for the student as well.

- **Science Exhibitions:**

Mrs. Wilfred, a high school teacher in Binzani Vidyalaya was in charge of the Science project and the Science Exhibition in her school for the past two years. In 2010, CBSE tried to create awareness about sustainable development amongst school children by taking up Environmental Stability as their Science Project work theme.

She had the following points to highlight:

As an initiative to provide a participatory, hands on learning experience to the students, the CBSE has made it compulsory for schools to organize Science Exhibitions at Regional and National Levels. The event is aimed at providing a common platform to schools, teachers and students to give shape to their creative and innovative ideas.

The main theme of the event in 2010 – 2011 include, Science, Technology, Society with a wide array of extremely relevant and topical sub themes like, Climate change-Causes and Consequences, Green Energy, Biology in Human welfare.

These instill awareness in the adolescent minds about the confluence of Man and Nature and also highlight the dependency of humans on the Planet Earth.

- **Science Projects:**

Each High School student is expected to submit Project Reports periodically. The Report is a mini research on any relevant topic on environment and environment protection. The research topic is so chosen that it provides a pertinent base for applying the concepts of the subject to practicalities of the issue.

All topics pertain to environmental sustenance and protection.

Environment related programmes like the National Green Corps of Ministry of Environment and Forests and the school Eco clubs of the state governments have helped in providing learning experiences to deepen the understanding of environmental issues.

- **Creating compost as School Activity:**

As already mentioned at the Kindergarten level, in high school too students are asked to create compost manure as science project from food scraps, plant waste, biomass from gardens, paper waste etc. This helps as a good way to cut down on the amount of trash that goes into a landfill. This compost is used in school gardens which help create rich soil.

- **Associations with Clubs:**

Mrs. Shende, a science teacher in Sindhi Hindi High School, Nagpur has also mentioned the various tie ups that schools have with locally active social groups.

Schools regularly tie up with social groups like the Rotaract Club to leverage a sense of social responsibility amongst the students. Such clubs organize various activities like tree plantation

and clean up drives. One clean up drive of note has been the Ganesh Visarjan Drive. Ganesh Visarjan is an important festival in Maharashtra and Nagpur, when after ten days of festivities, the idol of the elephant God, Ganesh is immersed in water. In this event, volunteers from various schools helped out in immersing the idols in the local water bodies. They separated the offerings from the idols and created awareness in the devotees about keeping the local water bodies clean.

Similarly each year Vanrai – the Forest Department carries out a major Tree Plantation Drive. Also, regular trips to NEERI, National Environmental engineering Research Institute are conducted every year to make the students understand the responsibility of being an environmental scientist.

- **Special Days – Earth Day and Shramdaan**

**Earth Day – Awareness Program:**

In schools, a number of activities take place on 22<sup>nd</sup> April every year. It starts with a Guest lecture on issues about the environment to motivate students to safeguard the environment. Skits and songs on Earth theme performed by the students with gusto. Art and craft competitions on Earth day theme are also conducted. A bicycle rally is also organized to promote non polluting modes of transportation.

**Shramdaan:**

Gandhi Jayanti is celebrated in schools all over India to celebrate the birth of Mohandas Karamchand Gandhi, the Father of the Nation. On this day each student is asked to give “shramdaan” – Donate Labor. Under Shramdaan, students are made aware of cleanliness and hygiene where they have to clean the school premises, plant trees, make people understand the harmful effects of using plastic and promote mental and spiritual wellness.

*Every day is Earth Day. ~Author Unknown*

The aforementioned programs have surely impacted urban living in a city like Nagpur. The Times of India reported that Air and Noise Pollution Levels had substantially reduced in Nagpur during Diwali 2010 as compared to 2007. Most of the school children had refused to buy and burst crackers as a result of such inputs in school. This GenNext is effectively propagating development which is sustainable as well as forward thinking.

Although schools have been instrumental in sensitizing the generation towards the conservation of Nature and heighten a sense of concern for the environment, this stream as a career choice has not caught on, especially in Nagpur.

Nagpur is a semi urban population which offers a limited exposure to the outside world. Although it is flanked by two of the most rich forest areas, Karmazari and Tadoba, environmentalism has not struck a chord.

After their secondary education, the student population of the city is conveniently divided into aspiring doctors or engineers, and commerce students. The University does offer a Bachelors in Science, but does not offer any subject on Environmental studies at the undergraduate level. There is no professional course on environment Management that is offered at undergraduate or post graduate levels in the university.

The only option for a student to become an environmentalist is either to take up an undergraduate degree in Agriculture or take up a research project with NEERI. The NEERI has a branch in Nagpur, but the criterion for becoming a research scholar is very tough.

Besides this, a student can take up an engineering course in environment or a postgraduate course specializing in Environmental studies like an M.Phil or PhD.

But the end is not as lucrative, the salary for environmentalists is not as attractive and hence it finds very few takers. Nagpur itself has very few career options as it can boast of only a handful local environment companies. There are only eight to ten organizations in Nagpur that consult for pollution control and environmental systems. Such a limited employment space makes this field further unattractive.

An upward trend has been observed in the NGOs lately. A lot of well placed, educated individuals from the city have started or joined local NGOs that work for forest conservation, Tiger conservation projects, animal census projects, rehabilitation and re-skilling of tribal communities and such other germane issues.

Such NGOs are also being backed by corporations and international organizations through funding and environmental literacy drives.

Nagpur was envied as a 'green' city, second only to Bengaluru. It still retains its old title of being the most Green city in India. But the how long can it hold on to this title is the question at hand. Hope reigns, with concern for the environment being the main point on the agenda for the stakeholders and policymakers of society. If the sensitizing of GenNext continues as creatively and effectively, dreams may become reality.

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