



Vidnyanvahini

Annual Report 2013-2014



संवाद आणि कृतिगत



THE YEAR IN PICTURES

Vidyarthi Shibir :
Maths through models



Takali Bhima :
Atomic structure being explained

Kamathadi:
Optics experiment in a temple



Front cover (clockwise from top): The bus; Chemistry experiment at Takali Bhima school;
Students watching anti-superstition video inside the bus

Vidnyanvahini

Members of Dialogue & Action group

President

Pushpa Deshpande

Secretary

Sharad Godse

Aparna Ambekar

Asavari Adke

Rohini Atre

Mukund Bhadbhade

Narendra Bhide

Dr Madhukar Deshpande

Dr Pradnya Deshpande

Dattatray Dewal

Vinayak Dixit

Vivek Erande

Govind Gadgil

Umesh Godbole

Snehal Godse

Shailaja Joshi

Dr. Suvarnalata Kandalgaonkar

Meghana Mhaskar

Shirish Mokashi

Nalini Mungel

Pushpa Palkar

Urmila Parchure

Shubhangi Parkar

Jayant Phalke

Dr Kiran Phatak

Ashok Prabhu

Nirmal Rege

Ashok Rupner

Achyut Sapre

Nirmal Sathe

Atik Sheikh

Shreenivas Tataka

Ulhas Vaishampayan

VIDNYANVAHINI, PUNE
Public Trust Registration No E 2024, Pune
Donations tax exempt under section 80G
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VIDNYANVAHINI

MOBILE SCIENCE LABORATORY

Annual Report for the period April 2013 to March 2014

About Vidnyanvahini

While urban India has made impressive progress to meet the challenges of the twenty-first century, rural school education in India has never quite made it out of the nineteenth. This is especially true with respect to science education due to the lack of adequate laboratories in the schools. Vidnyanvahini's vision is to reduce this gap as much as possible at the educational level by offering rural school children in the state of Maharashtra a means of learning science through laboratory experiments.

The flagship project of Vidnyanvahini is the Mobile Science Laboratory (MSL): a minibus imaginatively designed to accommodate storage for lab apparatus, audio-visual equipment, laptops, an uninterruptible power supply powered by the engine battery, a generator, portable lab tables, an overhead water tank .

The backbone of Vidnyanvahini is its team of volunteers consisting of retired scientists, engineers, and teachers collectively called the Dialogue and Action Group (DAG). The MSL carries a team of six members of DAG to the selected school on a given day. Priority is given to small rural high schools, which lack a science laboratory and do not enjoy state grants. During a tightly organised full-day session, students perform some science experiments themselves in groups of 4 to 6 and observe demonstration of others. The theoretical principles underlying the experiments are also explained to them, often with the aid of educational audio-visual material. Students are also provided guidance on issues faced during adolescence.

In addition to school visits, a number of teacher-training workshops are held to enhance science-teaching skills among rural school teachers. An annual student camp seeks to expose rural students to a wide variety of science and technology related topics through presentations from subject experts and visits to factories, and laboratories. Several book-bags are circulated among schools to act as mobile libraries.

Vidnyanvahini is a not-for-profit organization constituted as a public trust, which does not charge schools for its visits and operates solely on public donations. In January 2014 Vidnyanvahini completed 19 years of service. During this period the Mobile Science Laboratory travelled about 3,01,200 kms while making 2580 visits and touching the lives of 2,84,000 rural students spread over 24 districts of Maharashtra.

This report summarises the activities of the organisation for the period April 2013 to March 2014.

"Truly, my view of looking towards Science, my attitude changed entirely."

Shivani Chandak, Student of IXth standard, Sindphana Public School, Majalgaon, Beed district (Feedback after Vidnyanvahini visit)



Vidnyanvahini activities at-a-glance

The following table provides a summary of the major activities of Vidnyanvahini during the year 2013-14.

Number of Mobile Science Laboratory (MSL) visits to rural schools	139
Number of schools visited*	108
Number of schools visited once in the year	77
Number of schools visited twice in the year	31
Number of visits to unaided or partly aided schools	28
Number of students who benefited by the MSL visits	20000
Number of outstation visits (each lasting 3 to 5 days)	9
Number of Kms logged by the MSL	13100
Number of science teachers' workshop days	4
Number of student camp days	5
Number of schools using mobile library	4

These activities are described in detail in the following paragraphs.

School visits

During the year 139 visits were made to rural schools with the Mobile Science Laboratory (MSL).

Apart from visits to schools in and around Pune (which are covered during a single day) Vidnyanvahini also undertook 9 outstation visits- typically lasting three to five days each- to the following places: Karjat (Ahmednagar District), Kada (Beed District), Baramati (Pune District), Islampur (Sangli District), Alibag (Raigad District), Pen (Raigad District), Gadhinglaj (Kolhapur District), Majalgaon (Beed District) and Chiplun (Ratnagiri District) . These visits were sponsored by organisations/schools in those places and were used to cover rural schools in the surrounding areas.

Visit to the North East

A remarkable feature of the activities this year was the visit to Nagaland, Assam and Arunachal Pradesh by a few of Vidnyanvahini members who braved considerable hardship to visit remote schools in these states at the invitation of local

"The (teacher's) training has been a great learning platform..." A participating teacher quoted by Eastern Mirror, Nagaland

* Some schools are visited twice in the year. Hence the number of school visits is less than the number of MSL visits

organizations there. The first such visit was in October 2013. The success of this visit led to a repeat invitation for a second visit in March 2014. The visits were utilized to conduct science sessions for students as well as teacher training workshops. These efforts received wide coverage among local newspapers.

Science Club

The visit of Vidnyanvahini to rural schools is restricted to one or two days a year. During the rest of the year interest of students in science can be sustained only through the efforts of the school itself. To assist select schools in this Vidnyanvahini started a pilot project of setting up a science club in three schools in villages around Pune viz. Kalyan, Mahude and Tulapur. In all twelve visits were made to these schools during December 2013 to March 2014 on Saturdays. A group comprising 15 to 25 students was formed by each school and the science club met for two hours after school on Saturdays. Vidnyanvahini provided the resources to the respective science clubs to learn a few science topics more intensively through means of hands-on activity, question/answer sessions, videos and quizzes.

Teacher workshops

Vidnyanvahini conducted two teacher workshop lasting two days each at Nashik and Pen (dist. Raigad). In all 73 science teachers attended these. The subjects covered included atomic structure, radioactivity, chemical bonds, periodic table, electricity and light. As in the past the participants expressed much appreciation for the quality of the workshop.

Miscellaneous activities

Vidnyanvahini deputed three members as resource persons to New English School, Kasaba Tarale in Radhanagari (Kolhapur Dist.) for a period of three days in January 2014 to help 3 schools there in setting up a mobile science laboratory.

Shri Jayant Phalke, Trustee of Vidnyanvahini, attended National Children's Science Congress arranged by the Department of Science and Technology at Bhopal, Madhya Pradesh from 27 to 30 December 2013. One of the highlights of the conference was an interactive session with the children curious about various scientific phenomena.

Vidnyanvahini also participated in the science day function at Balasaheb Bharde High School, Shevgaon (Ahmednagar District) on 27 Feb and 28 Feb 2014.

Often there are requests from a few schools/institutions for a visit of Vidnyanvahini's Mobile Science Laboratory on a specific occasion/event. The packed schedule does not always permit us to do oblige them. As an alternative some of our DAG members go to these institutions,



carrying some laboratory apparatus and demonstrate a few experiments along with explanation of the related concepts. Such visits were made this year to schools in Narayangaon, Chinchwad and Alandi.

Student camp

Vidnyanvahini has been conducting an annual *Vidyarthi Shibir* (student camp) in Pune for many years. The camp attended by students of rural schools seeks to widen their knowledge horizon by exposing them to a diverse range of experiences through factory visits, presentations from experts etc. An innovative addition to the program this year was asking students to interview eminent personalities in Pune.

This year the camp was held from 18 to 22 June 2013. It was attended by 32 students (16 girls, 16 boys) and 8 teachers selected from schools visited by Vidnyanvahini. The highlights of the camp were the following presentations/ activities:

- ‘Songs of Bahinabai, a poet from rural Maharashtra’ by Ms Jyoti Joshi,
- ‘Learning maths through models’ by Ms Geeta Mahashabde,
- ‘Visit to Antarctica’ by Shri Suhas Kane,
- ‘Swami Vivekanand’ by Nitin Apte,
- ‘India’s space exploration’ by Shri Yogendra Dixit,
- ‘Science in everyday life’ by Shri Vinay R.R,
- ‘Travelling in Europe’ by Ms Savita Kelkar,
- ‘First aid workshop’ by Dr Subhash Mhaskar,
- ‘Climbing the everest’ by Nirajan Palsule,
- ‘Employment opportunities in the Army’ Col. Prafulla Joshi,
- ‘Archery demonstration’ Ranjit Chamale and his team
- ‘Interviewing techniques’ Shri Sudhir Gadgil,
- ‘DNA and evolution’ by Dr Sulabha Brahmanalkar,

The participants were also taken for visits to the Indian Air Force Station at Lohagaon, Pune and the Volkswagen Automobile factory, Chakan.

Mobile library

To encourage the habit of reading among students, Vidnyanvahini has been circulating book bags among schools. The bag contains about forty books on science and related subjects and is kept in a school for a semester. A teacher is given the responsibility of circulating the books among students. During 2013-14 this 'Mobile Library' was used by four schools.

Meetings of the Dialogue and Action Group

The Dialogue and Action Group (DAG), comprising volunteers who work with Vidnyanvahini, meets periodically to review performance and discuss changes. During 2013-14 these meetings were held 7 times.

The 18th annual meeting of DAG was held on 4 and 5 March 2014 at Rashtra Sewa Dal Hall, Sane Guruji Vidyalaya, Sinhagad Road, Pune. This meeting was utilized to review the activities of the previous year, make plans for the activities of next year, make changes to the list of schools and outstation visits, decide on changes to curricula and experiments etc.

Surodi

Vidnyanvahini has been involved in a watershed development project at Surodi, a village in Ahmednagar district about 120 kms from Pune, with financial support by Association for India's Development (AID), USA. As described in the previous annual reports this project has been highly successful with the village showing significant increase in the household incomes as a result of the increased availability of water for farming. This year there was a good crop of onions and the farmers in village sold produce worth about Rs. 2 Cr.

Vidnyanvahini has also channelized aid to the science activity centre in the village school. This school has continued to win laurels. It recently won the first prize for overall development among all schools in Ahmednagar district.

Anadur Grameen Vidnyan Kendra

The *Vidnyan Kendra* at Anadur in Osmanabad district, jointly operated by Vidnyanvahini with Halo Medical Foundation, is running quite well. Students from nearby schools come regularly to the Vidnyan Kendra for doing experiments and learning science. Three instructors help with instruction and experimental help. There were 215 class days with over 5000 school students participating. In addition another 1000 students took part in essay competition, etc. The Kendra also managed book bags donated by the Kale Trust and by the Maharashtra Foundation. They hold science day usually in December which was done in 2013 also. They also hold an essay competition sponsored by Lalita Gandbhir in her father's memory. Durga Devi Charitable Trust



supports the Kendra with teacher salaries and other expenses. The Trust holds competitions for students and the winners get scholarship to cover their school related expenses.

Vidnyan Prasarini, Gulbarga

Vidnyan Prasarini, one of the offshoots of Vidnyanvahini, has been visiting rural schools with its own Mobile Science Lab in Northern Karnataka for the last 8 to 10 years. It continues to be operated by Nutan Vidyalaya High School. During 2013-14, a total of 80 school visits were made at 40 schools. The school has been using their own teachers for Vidnyan Prasarini since no independent staff is available. The teachers also man the sister organization "Jog-Shete Science Center" located in a hall where students from several schools nearby come once a week for learning and doing experiments.

Recognition

Marathi Vidnyan Parishad, the prominent organization engaged in popularizing science in Maharashtra, felicitated Mrs Pushpa and Dr Madhukar Deshpande, founder trustees of Vidnyanvahini, at its annual meeting held on 8 December 2013. This was in acknowledgement of their effort in taking science to rural schools through the innovative medium of a mobile science laboratory.

Benefactors

Numerous donors and well-wishers have been helping Vidnyanvahini through contributions in cash and kind. We are grateful for their generous gestures and the trust they have reposed in Vidnyanvahini. Some of these benefactors are mentioned below.

- M/s Cognizant Foundation have donated a mobile science laboratory vehicle and related equipment.
- M/s Bharat Petroleum Corporation Limited (BPCL) have sponsored the *Vidyarthi Shibir*.
- Shri Ramesh Rahalkar, Chartered Accountant, has been preparing the financial accounts and audit reports of Vidnyanvahini for many years at no cost to the organisation.
- The Vidyarthi Sahayyak Samiti, Pune has helped by providing lodging facility at their hostel at concessional charges for Vidnyanvahini's *Vidyarthi Shibir* year after year.
- Shri Namadeo Salunkhe of Sahyadri Chemicals has been supplying the chemicals required for Chemistry experiments free of cost.

- Shri Vasant Nehate of Corona Systems has been supplying equipment required for some Physics experiments free of cost.
- M/s Johnson and Johnson have supported permanent exhibits at Dhayri on chemical bonds and valency with a supplementary grant.
- M/s Shree J Printers Pvt Ltd. have undertaken printing of the annual report at a discounted cost since 2009.

In addition to the above, donor agencies based in USA (such as India Development Service), Indian corporates, charitable trusts as well as many individual donors have made financial donations to Vidnyanvahini. A list of donors is enclosed at annexure 1.

Financial statements

Copies of the audited balance sheet and income and expenditure account for the year ended 31 March 2014 are enclosed.

Annexure 1

List of donors

(Rs 10000/- and above)

P. H. Ravikumar
M. S. Phadnis
Saraswat Hitwardhak Mandali
Chitra Damle
Ashok G. Khandekar
S. P. Erande

(Rs. 5000/- and above but less than Rs 10000/-)

U. R. Sapre
Madhyamik Vidyalaya, Nimgaon Dhaku, Karjat
Giants Group, Islampur
S. V. Soman
Rohan Bhutkar

(Less than Rs. 5000/-)

J. V. Phalke
Achyut Sapre
J.V.Kanitkar
Sharad Godse
Shailaja Damle
Anjali Patil
Sonia Patankar
Chitpavan Mitra Mandal

THE BOMBAY PUBLIC TRUSTS ACT, 1950

SCHEDULE VIII

Name of the Trust : Vidnyan Vahini

Registration Number: E - 2024 / Pune

Balance Sheet as at 31st March 2014

Funds and Liabilities	Amount(Rs)	Fixed Assets	Amount(Rs)
Trusts Funds or Corpus	96,19,970	Immovable Properties - (at cost)	10,35,600
Schedule 11			
Bal. as per last Balance Sheet	96,19,970	(Suitable classified giving mode of valuation)	-
Add: During the year	-	during the year	
Other Earmarked Funds (Schedule 6)	98,114	(Refer Fixed Assets Schedule 7)	
(Created under the provisions of the Trust deed or scheme or out of the Income)		Investments	58,26,222
Opening Balance	2,34,700	Schedule 8	
ADD: During the Year	1,36,586	HDFC and RBI Bonds	18,00,000
Less: Transfer	-	Bank fixed Deposits	40,26,222
Loans (Secured or Unsecured)		Furniture and Fixtures	
From Trustees		Bal. as per last Balance Sheet	15,76,930
From Others		Additions during the year	19,149
Add : During the year		Less : Sales during the year	
		Less : Depreciation upto date	3,09,867
			12,86,212
Liabilities		Loans (Secured or Unsecured) :	
For Expenses	-	Loan Scholarships	-
For Advances	-	Other Loans	-
For Rent and other deposits	-		
For Sundry Credit Balance	-	Advances Schedule 10	
		To TDS	2,10,376
		To Trustees	-
		To Employees	-
		To Contractors	-
		To Lawyers	-
		To Others	11,00,000
			13,10,376
Income and Expenditure Account		Income Outstanding	
Bal. as per last Balance Sheet	-	Rent	-
Less : Appropriation if any	-	Interest	-
Add : Surplus	-	Other Income	-
Less : Deficit	-		Nil
		Cash & Bank Balances	
		(a) In Current / Saving account	1,68,889
		(Schedule 3)	
		(b) With the trustee	-
		(c) With the Manager	-
		(d) Cash Balance	17,386
			1,86,274
		Grant Receivable (From ICSSR)	-
		Income and Expenditure Account	
		Bal. as per last Balance Sheet	1,48,355
		Less : Surplus	-
		Add : Deficit	2,21,755
			73,400
Total (Rs.)	97,18,084	Total (Rs.)	97,18,084

For Ambar Naik & Associates

Proprietor
Mr. Ambar S Naik
Place : Pune
Date : 17/09/2014
Membership No. 157493



For Vidnyan Vahini

Place : Pune
Trustee
Date : 17/09/2014

Place : Pune
Trustee
Date : 17/09/2014

THE BOMBAY PUBLIC TRUSTS ACT, 1950

SCHEDULE IX

Name of the Trust : Vidnyan Vahini

Registration Number: E-2024/Pune

Income and Expenditure Account for the year ended on 31st March 2014

Particulars	Amount(Rs)	Particulars	Amount(Rs)
To Expenditure in respect of properties:-	3,92,238.64	By Rent [accrued]	Nil
Rates, Taxes, Cess	-	By Interest [accrued]	5,06,214.00
Repairs and Maintenance	53,362.00	On Securities	
RTO Taxes paid	2,784.00	On Bank Fds (Refer Schedule 4)	5,06,214.00
Vehicle Insurance	26,226.00	On Loans	
Depreciation [by way of provision or adjustment]	3,09,866.64	On Bank Account (Saving Bank)	
To Eastablistment Expenses	-	On FCRA Saving	-
To Remuneration to Trustees	-	By Dividend	Nil
To Remuneration [in case of a math] to the head of the math including his household expenditure, if any	-	By Donations is cash or kind	1,91,852.00
To Legal Expenses	-	By Grants (From ICSSR)	-
To Audit Fees	-	By Income from other Sources [in details as far as possible]	-
To Contribution and Fees	-	Grants For A.Y. 2011-12	-
To Amount written off	-	Annual Membership	
(a) Bad Debts	-	Contribution to Colour Printing	
(b) Loan Scholarships	-	By Sale of Books	6,267.00
(c) Irrecoverable Items	-	DVD's and CD's Sales	2,962.00
(d) Other items	-	By Misc Income (Insurance and Reimbursement of Exp)	2,05,949.00
To Miscellaneous Expenses (Donation u/s 80G)	25,000.00		2,15,178.00
To Depreciation	-		
To Expenditure on objects of the trust	-		
(a) Religious	-		
(b) Educational (incl. surodi activity) (Schedule 2)	7,17,760.00		
(c) Medical Relief	-		
(d) Relief of poverty	-		
(e) Other Charitable objects	7,17,760.00	By Transfers from Reserve	
To Surplus carried to Balance Sheet	-	By Deficit carried over to Balance Sheet	2,21,754.64
Total (Rs.)	11,34,998.64	Total (Rs.)	11,34,998.64

For **Ambar Naik & Associates**

Ambar Naik

Prop.
Mr. Ambar S Naik
Place : Pune
Date : 17/09/2014
Membership No. 157493



For **Vidnyan Vahini**

[Signature]

Trustee
Place: Pune
Date : 17/09/2014

[Signature]

Trustee
Place: Pune
Date : 17/09/2014

THE YEAR IN PICTURES

Nagaland :
Students at rapt attention



Narayangaon:
Experiments under a tree

Beed Sangavi:
Biology lesson on a laptop



२७ जानेवारी २०१४ रोजी आमच्या शाळेत विज्ञान वाहिनीचे समाजसेवक आले होते. नावाप्रमाणेच ते विज्ञानाचा प्रत्येक गावामध्ये प्रचार करत होते. देशाला विकसित राष्ट्र होण्याकरिता अंधश्रद्धा तसेच जादूटोणा मिटवण्याचे नेक काम ते करीत आहेत.

दिवसभर त्यांनी आम्हाला विविध प्रयोग करून दाखवले. त्यांनी आम्हाला बाबांच्या भोन्दुगिरीचे रहस्य आमच्या डोळ्यासमोर आणले. जादूगाराने केलेली जादू ही खोटी असून त्यामागे विज्ञान आहे.

भौतिकशास्त्र विषयामधील कठीण व डोकेखाऊ व्याख्या सोप्या भाषेत सांगितल्या. त्यांनी आम्हाला जे भोंदू बाबा व ज्योतिष कुमकुम जादूने बनवणे असे इतर गोष्टी जी आपण देवाची कृपा, जादू म्हणतो यामागील कारणे फक्त जी फक्त सायन्सची काही सूत्रामुळेच असे होते. हे आमच्या मनाला पटवून दिले.

आजकाल अन्नभेसळ व इतर भेसळी खूप वाढत आहेत. त्यांनी आम्हाला ह्या भेसळी कशा ओळखायच्या हे शिकवले. रवा, दूध यातील विविध भेसळी त्यांनी सांगितल्या. हा दिवस आमचा सकारात्मक व मजेशीर गेला असे मला वाटले.

शंभूराजे भिल्लारे
९ वी