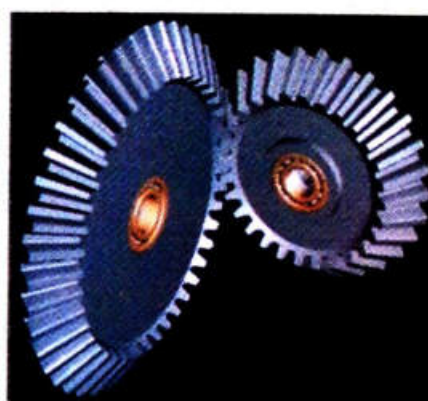


NATIONAL WORKSHOP
On
INTEGRATING HUMAN VALUES
IN
TECHNICAL EDUCATION

14-16 March 2002

A Summary of Deliberations and Recommendations



Edited by
Prof. P. L. Dhar
Prof. R. R. Gaur

**National Workshop
On
Role of Technical Institutions in
Promoting Gandhian Vision of
Rural Industrialization**

(Feb 28 – March 2, 2003)

Venue : Sewagram, Wardha



Organized by

**Centre for Rural Development and
Technology**

&

**National Resource Centre for Value
Education in Engineering**

INDIAN INSTITUTE OF TECHNOLOGY, DELHI

Preamble

The saga of India's development in the post independence era is one of remarkable achievements. Nation has made notable strides in the fields of food security, atomic energy, space exploration, information technology etc. However, much more needs to be done since 35% of our population still lives below the poverty line and inequity in the society is increasing at an alarming rate leading to social problems like strife, corruption, crime, violence and terrorism. It is apparent that the prevailing vision of development, especially 'Industrial Development', for meeting the very basic needs of people has certain inherent shortcomings which are responsible for aforementioned social maladies as also technogenic maladies like ecological degradation, resource depletion etc. These are getting exacerbated by the policy of unbridled liberalization and globalization threatening the very socio-cultural fabric of our country. Analyzing the situation little deeper, it becomes evident that there is a strong need for reorientation of the S&T talent of the country to effectively harness their excellent capabilities for welfare of the masses.

Gandhiji realized this fact almost a century ago and repeatedly emphasized that strengthening of rural industries was absolutely essential for achieving regional self-sufficiency and a harmonious social setup. However, this view was never taken seriously. The most common criticism of Gandhian model of development is that it is infeasible since tiny cottage and village industries are not capable of meeting even the basic needs of population. Of course, these are only reflections of the apprehension that the nation may be left behind in the race of 'development', and is based on the assumption that decentralized production systems can never be cost effective.

In order to realize the true potential of decentralized production systems, it is necessary to increase their productivity, product quality and marketability by integrating science, technology and management inputs with traditional wisdom, while keeping the basic philosophy of non-exploitation intact. There is no reason that 'production by masses' cannot be done so efficiently as to enable it to co-exist in complementarity with the mainstream industry. Recently a humble step in this direction has been made through joint efforts of KVIC and IIT Delhi by initiating the process of setting up MGIRI (Mahatma Gandhi Institute of Rural Industrialization) at Wardha.

This workshop is planned to address the above mentioned issues especially related to the role that technical institutions can play in providing science, technology and management inputs for strengthening tiny cottage and village industries to promote holistic development in such a way that both nature and people are enriched.

Main objective of the workshop is to identify the expertise and 'concern' available in technical institutions across the country and to devise strategies to harness its potential to upgrade and accelerate the process of rural industrialization in right direction.

Workshop Themes

1. Vision of Rural Industrialization for a harmonious and prosperous society.
2. Value orientation of professionals towards holistic development and traditional knowledge base – change in the ethos of technical institutions.

3. Responsibility and role of Science, Technology and Management manpower in rural industrialization.
4. Synergy of technical institutions with artisans
5. Identification of R&D issues and enhancement of the technical capabilities of village industries in the following generic areas :
 - a. Khadi and textile industry
 - b. Bioprocessing based industry
 - c. Rural crafts and engineering
 - d. Chemical products
 - e. Rural infrastructure & energy
 - f. Management, information and marketing systems
6. Globalization and village industries
7. Small scale industrial sector and its networking with rural industries.
8. Case studies of typical decentralized small enterprises.
9. Policy and implementation issues.

Organising Committee

Prof. R. S. Sirohi - Patron
 Prof. P. L. Dhar – Chairman
 Prof. R. R. Gaur
 Prof. R. Prasad
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Registration Form

Name:

Affiliation:

Address for Correspondence:

.....

E-mail Address:

.....

Telephone No.:

My institution would reimburse my travel expenses: YES / NO

Signatures :

We are keen to initiate research, development and technology transfer work related to rural industrialization in our institution and would like to nominate to participate in the National Workshop.

Director/Principal
 Institute seal

Participation

Faculty members of various technical institutions, who have been actively involved in any of the areas identified in the 'Workshop Themes', are invited to share their vision and experiences. Those strongly motivated to work in these areas and can be sponsored by their institutions to initiate such programmes are also welcome to attend.

Interested participants are requested to respond by Nov. 30, 2002 by sending the completed registration form by email or by post along with a brief note highlighting their background, experience and interest in rural industrialization, and a short paper giving their views on any of the workshop themes. Selected participants would be sent formal invitation by Jan 15, 2003.

The workshop will be held in Gandhiji's ashram in Sewagram, Wardha. Suitable arrangements for boarding and lodging would be made and travel expenses limited to II AC railway fare can be provided to the participants, if needed. All correspondence regarding the workshop should be addressed to:

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NATIONAL WORKSHOP

Human Values_IITD_JV mention_c

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Editors

**Prof. P.L. Dhar
Prof. R.R. Gaur**



**National Resource Centre for Value Education in Engineering
Indian Institute of Technology,
Delhi**

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PREFACE

A National Workshop on “Integrating Human Values in Technical Education” was organized by The National Resource Centre for Value Education in Engineering (NRCVEE), Indian Institute of Technology, Delhi from March 14 to March 16, 2002 in response to the increasing awareness among engineering community that serious technogenic and social maladies afflicting the society today cannot be solved merely by technological improvements but need improvement in the value system of the society in general, and engineers in particular. How to achieve this, however, remains very fuzzy. In fact, there are apprehensions whether it is at all feasible to carry out any education in human values (EHV) in the prevailing environment.

This workshop aimed at removing this fuzziness by creating an opportunity for various engineering educators experimenting in this field to share their vision and formulate an effective EHV package for integrating human values in engineering education. This, in fact, is also the main mandate of NRCVEE, the latest interdisciplinary academic center set up in IIT Delhi by MHRD to identify, develop and disseminate techniques by which engineering students and practicing engineers can be motivated to imbibe human values and appreciate the impact of values on technology development, professional ethics and human welfare (Details given in Appendix). The participation in this workshop was by invitation. Letters were written to faculty members from various engineering colleges, IITs, IISc, and University departments of engineering and technology inviting them to send brief papers highlighting their background, experience and interest in this area. On the basis of the papers received, about sixty engineering educators from all parts of the country were selected to participate in this workshop. (List of participants given in Appendix) All the selected participants were sent a comprehensive questionnaire on various dimensions of the workshop theme and their feedbacks were compiled and analyzed during the workshop. A separate questionnaire seeking views of stalwarts, who have dedicated their lives to the value orientation of masses, on the vision and strategies for value education of scientists and engineers was also prepared and sent to about 30 distinguished people from various traditions. We were very fortunate to get response from 15 of them and these have been put together as a separate part of this volume. These responses were of great help in formulating the vision and strategies for implementation of EHV package and were also discussed at length during the workshop.

The discussions during the workshop were organized in eight technical sessions broadly devoted to two themes, viz. Sharing of Experience and vision,

and Development of an EHV Package. The details of various sessions, including the inaugural and the valedictory session are given just after this preface. In each session, a few delegates identified as lead discussants were invited in the beginning to make brief presentations on the session theme. This was followed by discussions in which all other delegates participated and attempts were made to arrive at some sort of consensus, though we must admit, it was not always possible to do so. Accordingly, in the summary of the deliberation presented herein we have chosen to present these consensual views rather than what each and every individual said in various sessions.

The presentation has been divided into four sections viz. Vision and strategies, Sharing of experiences, Formulation of an EHV package and Major recommendations. The consensual opinions have been collected from the views expressed by the delegates in various technical sessions and also from their (and stalwarts') written feedback on the questionnaires. This manner of presentation doesn't give the flavour of what exactly transpired in each session, but brings out clearly the conclusions emerging from the deliberations, which we hope would be more useful from the practical point of view.

We would like to express our gratitude to all the stalwarts and delegates to the workshop for their contributions in making it a success. Special thanks are due to the chairpersons of various sessions, the convenors and the lead discussants for their help in conduction of various technical sessions and the rapporteurs for their assistance in summarizing the deliberations. Finally, we would like to express our gratitude to Prof. R. Natarajan, Chairman AICTE for inaugurating the workshop, Prof. R. S. Sihori, Director, IIT Delhi for presiding over the inaugural session and for patronizing the workshop, Shri M.K. Kaw, former Education Secretary, Government of India for agreeing to be the chief guest at the valedictory session and Prof. R. G. Menddiratta, former Deputy Director, IIT Delhi presiding over this session.

We hope the deliberations of this workshop as presented here would be helpful in spreading the message of value education among engineering educators.

Prof. P.L. Dhar
Prof. R.R. Gaur

CHAPTER - I

Vision and Strategies

The vision and strategies for integration of human values in technical education were outlined in the theme paper of the workshop entitled "Education in Human Values for Engineers" presented by Prof. P.L. Dhar. He brought out the importance of universal human values in personal and professional life of engineers and suggested a methodology for education in human values for engineers and scientists.

Prof. Dhar defined human values as the principles and beliefs that we think are valuable or important in life. These not only help us decide our goals and aspirations but also enable us to choose the means to achieve these. Unfortunately, in our present education system, there is no discussion on values, and as a result, the students implicitly embrace the default value system of hedonism, based on 'materialistic' worldview. This influences not only the choice made in personal life, but also the choice of technology. The heavy industrial technological culture being promoted throughout the world is also based on this world-view. As a result, this technology has developed certain fundamental traits like centralization, mass production through automation, planned obsolescence etc. which are responsible for multifarious technogenic and social maladies like ecological degradation, inequity, strife, corruption, dehumanization etc. To ameliorate these problems, just tinkering with the technology would not be enough. We need to bring about a change in the world-view from the crass materialistic world-view prevalent at present to a 'holistic' and humane world view which promotes inculcation of universal human values like truthfulness, straight-forwardness, friendliness, compassion, sharing, humility, forgiveness etc. Education can play a key role in bringing about this transformation. In fact, in Indian thought, this has been recognized as the prime purpose of education,... *Vidyaya amritam ashnute, sa vidya ya vimuktaye*,.. the real purpose of education is freedom, liberation from bondage, immortality, perfection.

Prof. Dhar gave a brief account of a possible methodology of using education to bring about a change in the world-view. He highlighted a three pronged strategy for such education, viz.:

- a) Using recent developments in science to appreciate that materialistic world-view is "unscientific" and that modern science supports a holistic world-view indicating interconnectedness of all existence.
- b) Detailed analysis of the "mechanics" of happiness to enable a clear distinction between *preya* (pleasant) and *shreya* (really good), and appreciation of the fact that real happiness accrues from purity of mind.

- c) Understanding mind-matter interaction and the nature of human reality first intellectually and then experientially through introspection and meditation.

He also brought into focus the common doubts/criticism about the possibility of such an education in human values, and gave following five basic principles of value education, which respond to this criticism.

- 1) The foundation of value education should not be made dependent on any myth, or authority
- 2) The students should be provoked to analyze their own experiences of life to understand what gives real happiness and thus appreciate the basis of universal human values.
- 3) Value dimension should permeate teaching of all subjects.
- 4) Practical training in self-restraint and self-observation should be an integral part of such education to actually inculcate values.
- 5) The teachers of human values should not act as moral masters but teach with humility as senior students.

He then gave some details of how by analyzing nature in the light of modern science the students could appreciate the interconnectedness of all existence. Analysis of breathing process, the interaction of continually changing constituents of human body with the surrounding, and the recent developments in Quantum Theory-all point towards this interdependence and interconnectedness which naturally leads to an attenuation in selfishness and concern for "others"—for "they" too are a part of "Me"

The universal nature of human values can be very easily appreciated by analyzing the experiences of our life by provoking students through questions like:

- i) Do you feel happy when others cheat, abuse or humiliate you?
- ii) What makes you really happy: Greediness or generosity? Anger or forgiveness? Cruelty or compassion?

By discussing such questions in a free and frank manner, the students can easily appreciate that these universal human values are, in fact, the requirements for happy living as imposed by Nature-the very constitution of human beings.

In connection with the value orientation of teaching various subjects, Prof. Dhar gave a few examples from engineering design philosophy, thermodynamics, management, social and environmental audit of technical projects etc. to illustrate how value dimension could permeate technical education. He also emphasized the need for practical training in self-control and mental purification which is possible through meditation techniques involving careful observation of body-mind complex.

He concluded his presentation by highlighting the fact that education in human values is the only peaceful and sustainable way to bring about a change

in the world view of the youth and thus ameliorate the serious technogenic and social problems bedeviling the society today. Only a humane society would patronize the humane technologies which are necessary for ushering sustainable development in place of the lopsided economic growth and moral shrinkage that we find throughout the world.

This issue was taken up for intensive discussion in technical session IV of the workshop. Here reference was also made to the article sent by the Education Secretary, MHRD wherein government's thinking on strategies for implementation of value education programme were outlined. A brief summary of the feedback on these issues received from stalwarts' was also presented by Prof. R.R. Gaur. Many delegates also commented on the vision and strategies during other sessions, e.g. while sharing their experiences during sessions I & II. The consensual opinion which emerged is as follows:

- i) Value education should have a sound logical/philosophical basis and should not be superficial in the form of do's and don'ts.
- ii) A discussion on the nature of human reality-various perceptions could be presented-could help in providing such a rational basis.
- iii) The discussions should not have sectarian overtones and universality should be kept in focus.
- iv) Self-control, introspection, self-observation are essential to appreciate the nature of human reality.
- v) There is a need to strike a balance between spiritual understanding and understanding the impact of social, political and economic systems on the world view.
- vi) The vision of value education should present a harmonious blend of pleasant ('*preya*') under overall control of good ('*shreya*')
- vii) Proper understanding of complementarity and inter-relationships will naturally lead to harmonious co-existence, meaningful synergy and concern for 'others'.
- viii) The presentation on basis of human values should not be heavily loaded with metaphysics for that often turns off engineering students.
- ix) We shouldn't focus exclusively on rare great individuals like Buddha, Jesus, Gandhi etc. as the role models. Even contemporary person, who lives upto human values should also be highlighted as role models.
- x) Teachers should be made cognizant of their role in changing the world view of the society.
- xi) An in depth comprehension of the unity and interconnectedness of all existence could be a solid foundation for universal human values like love, compassion, honesty, truthfulness, non-violence etc.
- xii) Education should be relevant to the totality of human life and not only for earning money. Discussion of larger issues related to living and life should be a part and parcel of curriculum.

- xiii) Value inculcation essentially boils down to changing the habits and managing negative emotions like anger, greed, jealousy, ill will, hatred, lust etc.
- xiv) The teachers have to act as role models, and therefore, should earnestly attempt to practice what they teach in the classroom.
- xv) Exposure to suffering people-be these in slums, hospitals or schools for physically/mentally challenged children-can increase sensitivity to others' suffering and compassion and should, therefore, be used as an essential supplement to value education.
- xvi) The students should be encouraged to intellectually analyse the implications of transgressing human values so that they can truly appreciate that these values are like laws of nature, which have to be obeyed for leading a happy and peaceful life.
- xvii) While intellectual discussion and clarity of fundamental issues is an essential prerequisite for value education (and this can be very well done through a well designed course), it has to be supplemented with a practical training in self-observation, mind control and watchfulness of one's day-to-day thought and actions. In fact there is a need for developing a comprehensive package for Education in Human Values, specially tailored to the requirements and inclinations of engineering students.
- xviii) A direct interaction with individuals, and groups earnestly working for value augmentation in the society will be very helpful.

Sharing of Experiences

The two sessions immediately following the inaugural session were devoted to sharing of experiences. We had in all eleven structured presentations by delegates from different technical institutions*. Besides these, there were interventions by many other delegates and the remarks by the two session-chairpersons Prof T. Karunakaran and Prof. J.C. Haran. Even in other sessions, many remarks made by the delegates were based on their own experiences and their spirit has also been captured in the following enumeration of the main observations made in this session.

- 1) At some institutions, formal courses on value education have either been already introduced in the curriculum or the process of doing so, has been initiated. These include, IIT Delhi, IIT Roorkee, IIT Kharagpur, IT-BHU, ISM-Dhanbad and Chitrakoot Gramodaya University. At Places where such courses had already been initiated, the response from the students has been quite encouraging. The nature of these courses varied from basic introductory course on value education / human values to those involving discussions on interaction between Science, Technology and Human Values. In the latter type of courses, by focusing on the inherent unsustainability of the materialistic world-view, the need for adopting a holistic world-view and the concomitant values, is brought to light.

The detailed contents of these courses are included in the Appendix.

- 2) NSS, if appropriately harnessed, provide a ready platform for supplementary value education in Educational Institutions. Many delegates pointed out the efficacy of exposure to the harsh realities of the society in sensitizing the students towards the fundamental human value of concern for others.

At IIT Kharagpur, numerous short-term training programmes on human values have been conducted as a part of NSS activities. It was pointed out by some delegates that in most institutions short duration camps are organized as a part of NSS activities and these offered a good opportunity for imparting education in human values.

3. Yoga training is being offered in some institutions like ISM Dhanbad for improving the general physical and mental health of students. It was pointed out by one of the delegates that an important adjunct purpose of value

* See programme (in Appendix) for details.

education should be promotion of healthy life style which includes proper diet, physical exercise and mental training. Yoga and pranayaam are helpful in this.

4. Value inculcation is also possible through appreciation of creative arts and cultural heritage. Attempts have been made in some institutions to integrate value education with cultural clubs and other fora with limited success. The experiment being conducted at IIT Bombay is a notable success in this direction. A distinguished musician, appointed as a visiting professor, resides in the campus. A number of students are getting trained under his guidance not only in music but also in all the values which are concomitant with the rigorous discipline of training in Indian classical music.
5. Special lectures by eminent engineers known for their professional ethics; humanists; social, environmental and human rights activists; scholars and saintly persons belonging to various religious denominations have been the most common resource persons for inspiring students and teachers alike. Such lectures are being organized in many institutions. However it was also pointed out by some delegates that these should not be considered as a substitute for intensive interaction possible in a course included as a part of the curriculum.
6. Some delegates shared their experiences of value sensitization of students through regular engineering courses. It was possible to integrate education in environmental, social and even ethical values with various courses. Examples were given of how value dimension could be incorporated in courses on engineering design, water resource management, thermodynamics, power plant engineering, automation, robotics, textile technology etc.
7. Prof. Shree Prakash of Bihar Institute of Technology, presented an interesting case study of value based education initiative launched by him in collaboration with Lion's Club. He pointed out that most internationally reputed clubs like Lion's Club and Rotary Club have certain core values which they are keen to propagate. Since many members of these clubs are eminent people, their inputs are helpful in convincing youth about the possibility of adopting core human values even in 'modern time'.
8. Some delegates while sharing their experience about the efficacy of various attempts at value education pointed out that even though it sometimes seems that the effect of such interventions is very limited, these efforts nevertheless do plant a seed in the psyche of students which does sprout and flower in due course. This was corroborated by the letters received from students many years after their graduation from the institute.
9. Prof. T. Karunakaran, VC, Chitrakoot Gramodaya University shared his experiences of involving students in the development of rural areas adopted

by the university. This social work, if carried out in proper spirit, quite naturally sensitizes the youth towards the core human values like compassion, self-less service and concern for the underprivileged sections of the society.

10. Shri Samir Bajpai of Government Engineering College, Raipur mentioned about their successful interaction with a socio-spiritual NGO, Abhyudaya Sansthana in promoting value education of students. Numerous short duration camps on the philosophy of "Jeevan Vidya" (as taught by a saintly person from Amarkantak, Sh. Nagraj ji) have been conducted from small batches of students, both within the college campus and at the premises of the NGO. These have been received very well by student community. Some other delegates also mentioned about their successful interactions with other socio-spiritual NGOs and advocated making use of their rich experience in value education of teachers and students alike.

Formulation of an EHV Package

There was a general consensus among all the delegates that for effective integration of human values in technical education, mere introduction of a foundation course, or improvement in N.S.S., or inviting eminent people to address students and teachers would not suffice. There is a need to evolve a comprehensive EHV package specially tailored to the pre-dispositions and requirements of students of technology. Three important components of this package as identified by workshop organizers, viz. a foundational core course, practical training and other courses, value orientation of regular courses, were discussed at length in Sessions V, VI and VII of the workshop. Besides, this issue also figured in the questionnaire sent to all participants. Their feedbacks were discussed in a separate session (Session-III). This topic was also discussed in some of the presentations made in Session VIII on implementation strategy. The essence of various observations made during these sessions in this regard is summarized below.

1. There was a broad agreement on the main objectives of this package as laid down in the background note prepared for the workshop. These objectives are :
 - (a) To enable the students to clearly appreciate the need and purpose of EHV in their professional education. In other words, the essential complementarity of 'skills' and 'values' must be clearly established and the impact of values on all the activities in life and profession has to be logically understood and observed in practice.
 - (b) The salient features of the inter-relation and interaction between Science, Technology and Human Values should be elucidated so that its implications may be incorporated in the entire professional training.
 - (c) Suitable non-formal and practical inputs must be incorporated to enable inculcation of a holistic world-view in students' personality.
 - (d) Through self-study, actual involvement, case studies and social interaction, the students should be exposed to ennobling and inspiring literature, personalities and holistic experiments in various fields.
 - (e) Through appropriate inputs the students should be exposed to the actual social reality of the country and the relevance of the professional training should be assessed.
 - (f) Finally, the EHV package must also include practical and non-formal inputs which enable the students to practice mind purification, self-discipline and development of a wholesome personality.

2. This package should include a core foundational course on value education in tune with the objectives (a) and (b) above. The discussions in this course should be non-dogmatic and should bring out rationally the basis of universal human values. This could be one of the courses listed above in the appendix to Chapter 2, or a hybrid based on these, or even same totally new course in tune with the aforementioned general principles.
3. Besides this core course other courses with heavy emphasis on values could also be offered as electives. Quite a few of the courses offered in IITs by the Humanities and Social Science departments could fall under this category. There is also a need to develop a course on engineering ethics with examples relevant to Indian conditions drawn from various disciplines.
4. Many participants emphasized on self-study as an effective mode of value education. This could be regulated through periodic assignments/presentations. The topics for self-study could range from writings of eminent thinkers, philosophers, scientists, engineers, social and environmental activist to classical literature and films.
5. To supplement these formal inputs, the students should be encouraged to undergo 30 days of practical training in value education during summer after first year or after the second year. This could involve getting training in reputed social service NGOs, and those engaged in rural technology development, living with inspiring spiritual personalities, undergoing meditation camps or holistic living retreats etc. This training could form a major part of the NSS Work.
6. Value dimension should be incorporated even in regular engineering and science courses. The choice of technology involves a value judgment and this aspect should be brought to light in all disciplines. There is a need to present a broad interpretation of the laws and important conclusions emerging from physical and engineering sciences, so as to bring to fore the "scientific" background of many universally accepted ethical and moral values. NRCVEE should initiate research work in this direction.
7. Various projects – minor and major- done by engineering students at various levels, viz. B.Tech, M.Tech and Ph.D. should invariably include a chapter on its social and environmental impact. This will initiate thinking on such issues among the students and the faculty.
8. The industrial tours, which are a part and parcel of engineering education, should also be used to expose the students to the rich cultural and spiritual heritage of the country.
9. To provoke the students and the faculty to think on these issues constantly, debates, seminars, panel discussions, special lectures by distinguished personalities should be organized regularly. The importance of 'honour code' they sign on admission to the institute and the 'oath' they take at convocation should be discussed at length. It would be helpful to involve parents too in such discussions.

Major Recommendations

A summary of the main recommendations of the workshop, about which there was a general consensus, was presented by Prof P.L. Dhar in the valedictory session of the workshop. This session was preceded by a very lively session where the various suggestions made during the workshop for integration of human values in technical education were analyzed for their practical feasibility. The difficulties likely to be encountered during this process were highlighted by many delegates and an attempt was made to find solutions, wherever possible to circumvent these. The final selection of the main recommendations of the workshop was naturally influenced strongly by these discussions. Most of these recommendations have, in fact, been already listed in earlier sections of the workshop proceedings. It doesn't imply that the suggestions listed above in other sections, which do not find mention below were not acceptable. The recommendations presented below are essentially those which in the opinion of most delegates were of utmost importance and needed urgent attention for implementation.

- 1) Good engineering education should, in addition to imparting technical knowledge, communication and experimental skills, ability to design engineering products, processes and systems, also make the future engineers sensitive to the social and environmental impact of technology, and equip them with the abilities of cooperative working, self-analysis, self-restraint and ethical professional and personal conduct.
- 2) It is imperative for engineering educators to recognize that education in human values is vital for harnessing the skills and the knowledge of future engineers for real human welfare. (See Chapter I for details)
- 3) It is essential to introduce a universally applicable philosophical framework highlighting the purpose of human life and interconnectedness at all levels of existence as a basis for human values.
- 4) There is a need for comprehensive package for Education in Human Values specially tailored to the pre-dispositions and requirements of technical students.
- 5) This package should include: (See Chapter- III for details)
 - a) A core foundational course on 'Human Values and Technology'.
 - b) A course on Engineering Ethics.

- c) A few elective courses (including self-study) chosen from a wide repertoire of courses offered by Humanities and Social Science Department and other engineering departments which have a heavy emphasis on values.
 - d) Organisation of debates, seminars, panel-discussions etc. preferably in hostels to provoke students to think on these issues.
 - e) Thirty days of practical training in value education during summer (This may be appropriately amalgamated with ongoing NSS activities).
- 6) Even though difficulties are likely to be encountered in evaluation of a formal course on human values, there was a general consensus that to ensure that the students take this course with due earnestness, it should be a formal (3 or 4) credit course with at least one tutorial per week. The difficulties in course evaluation could be substantially reduced by using a three-point scale: Excellent, Satisfactory, Unsatisfactory.
 - 7) Practical training in value education should be organized with the help of reputed socio-spiritual organizations of well-established credentials. Students could also be sent to reputed NGO's engaged in development of appropriate technologies for rural areas, literacy, environmental and human rights awareness campaigns.
 - 8) Every institute should provide a Meditation Hall (or SILENT ROOM) within the academic area to create a habit among students and teachers to sit silently and introspect during breaks between classes.
 - 9) Efforts should be made to have distinguished people known for their value based living, reside in the campus for a few days for intensive interaction with students and staff. This can act as a great inspiration and stimulate the interest of the students in EHV.
 - 10) NRCVEE should initiate research on how to incorporate value dimension in regular engineering courses.
 - 11) MHRD and AICTE should be requested to include EHV programme as one of the parameters for accreditation of technical institutions.
 - 12) NRCVEE should take pro-active measures to create a network of technical institutions having active EHV programmes. These could include e-groups, newsletter and eventually a journal dedicated to spreading this message of integrating human values and technology, and also conducting workshops on various aspects of EHV periodically.
 - 13) The efficacy of value education can be judged by its impact on restoration of human sensitivities. This should help in imparting a rational and moral attitude towards material prosperity, consumerism and avarice. The eternal values of love and service hopefully be restored through well designed inputs in value education.

- 14) A technical teacher training programme should be launched wherein teachers should be given a comprehensive vision of holistic technical education involving a judicious mix of physical, intellectual, emotional and spiritual education. In many engineering colleges, the quality of teachers is rather unsatisfactory and they can never do any meaningful value education of students, and teacher training is therefore of paramount importance in the success of any EHV programme.
- 15) In order that the value education programmes can be effectively implemented, it is also highly desirable that the heads of institutions and departments are sufficiently convinced about the need of such inputs.

Appendix A

Giving Value Education a Stable Infrastructure

M.K. Kaw

Education Secretary, Govt. of India

The path of educational development is littered with the reports of commissions and committees. Every subject has been endlessly discussed and debated, and there is detailed and comprehensive documentation of every imaginable concept or idea that has been or can be tried out either in this country or abroad. Where we fail is in implementation. We are big on ideas and small in working out the practical implications of those ideas.

This is as true of education in human values (EHV, for short) as it is of other branches and facets of education. During the last year or so, I have been mulling over all the bright ideas on EHV that have already been enunciated over the years, in order to work out a strategy for putting up a stable and permanent infrastructure, so that those ideas can be operationalised.

This article will try to bring together the different initiatives that we have taken in the various fields of education and the organizations which look after the different levels and aspects of the educational process.

The Philosophy of EHV

The basic premise of our strategy is that EHV cannot be implemented unless there is a clear-cut philosophy behind it. Merely to itemize the different values that need to be inculcated among the teachers and the students, whether it a generic classification of values into the five fundamental values of truth, dharma (righteous conduct), love, peace and non-violence or the highly detailed classification of more than a hundred values developed by the NCERT, cannot take us far. It is not enough to tell a boy or girl to be good. He would like to know why he should be good, why not rich or powerful or strong?

Now the interesting point about the philosophy of EHV is that most people try to find an escape route that is easy and non-controversial. Some of the most common escape routes are the following:

- Some people refuse to teach EHV in educational institutions on the ground that values cannot be taught, they have to be imbibed. If there are no values being practiced at home or in society, there is no point in talking about values in the classrooms. The students will just make fun of it.
- Others say that values have been prescribed by traditional religions. Because there are multi-religious societies in most countries, they decide

not to teach religion or morality in the school. This is called "secularism". The theory is that the state has to be neutral towards all faiths and the best way of maintaining equi-distance from all of them is to ban their entry.

- There are others who believe that religions may be superficially different in terms of their founders, cosmogony, rituals or deities, but the values all religions teach are broadly the same. Thus, the value can be taught without reference to any particular religion.

It is our basic hypothesis that religions have lost their traditional hold over the minds of educated people. Most scientifically trained persons today are either unbelievers or at best, agnostics. The moment we teach anything that traces its lineage from a religious doctrine, it would be anathema to the scientists and they will discard it as shibboleth and superstition.

However, just as astronomy grew out of astrology and chemistry out of alchemy, there are positive sign that a new Science of Spirituality is emerging out of the welter of competing doctrine and ideologies that are vying for supremacy over the minds of men. This new Science has the following novel features:

- It is a science, in the sense that it accepts only those facts and theories, which are capable of being experimented upon and verified. It is also prepared to accept certain unproved theorems as tentative hypotheses, that have to establish their credibility over a period of time.
- It is a science in the sense that it does not go against any known law or concept of modern science. It accepts the present theories about the origin of the universe, origin of our solar system, theories of gravitation, relativity, uncertainty, quantum mechanics, biological evolution, genetic transmission of characteristics over generations and so on.
- It also accepts the findings of the social sciences about the ideal systems of economic development, political governance, social equity, gender parity, justice, fair play, democracy, freedom, autonomy, self-governance, non-exploitation, etc.
- At the same time, it enunciates certain broad parameters, which redefine everything in terms of consciousness. It assumes as a fundamental hypothesis that the true nature of reality is cosmic consciousness, which is at once unborn, immortal, undying, eternal and ineffable. No human being with his limited equipment can ever hope to understand the nature of the total or the cosmic in all its ramification.
- It is consciousness, which is the stuff of existence. In that sense, only consciousness exists. Everything else is a manifestation of consciousness at different levels. At the intellectual level, it manifests as thought; at the emotional level as emotion; and at the gross level as matter. The universe is only consciousness manifesting itself in various names and forms.
- There is certain direction to the total. Consciousness first involves itself in matter, matter then evolves into consciousness. This is an eternal process

of involution and evolution. The process of biological evolution is, therefore, true, but only a part of the story. The full story would take matter right upto cosmic consciousness.

- We are part of this evolutionary process. The aim of our life is thus clearly to flow with the total and move to higher and higher levels of awareness, from unconsciousness to sub-consciousness to uni-consciousness to consciousness to super- consciousness and finally to cosmic consciousness. While moving through this overall process, we have also to tread the middle path, remain in a state of mindfulness, try to move from the past and the future to an ever evolving and ever lasting present, and be in a state of dynamic equilibrium at every moment.
- It is only an overarching hypothesis like this that can provide a stable basis for any discussion on values. Values are not things that we have conjured up like rabbits out of a magician's hat, but logical corollaries of this process of evolution into progressively higher levels of awareness. To a child's question, "Why should I be good?", we can then give a clear-cut answer: "Because that is the way you can evolve into a person at a higher level of awareness and be in tune with the movement of the macro-reality of which you are a part."

All these thoughts have been summarized by me in a book called 'The Science of Spirituality' (Full Circle). What is required to be done is to build on this foundation and create a number of inter-disciplinary teams that can work on the project of building a universal science of spirituality.

The various ideas that are currently in the process of germination are the following:

- a) Vice-Chancellor, JNU has accepted the challenge that JNU should create a multi-disciplinary Centre for Spirituality, with a team that draws upon the faculties of physics, biosciences, philosophy, economics, political science, sociology, and so on. A proposal is currently being formulated.
- b) Chairman, Indian Council of Philosophical Research has agreed to set up a National Centre for Research Into Consciousness, which will provide the philosophical under-pinning to consciousness research in this country.
- c) I have received overwhelming response to a letter I wrote to the VCs of universities, asking for their views on the possibility of starting courses on Applied Philosophy for Everyday Living in the university department of philosophy. A debate has started and this will lead to such courses being started in a few universities.
- d) The UGC recently announced that it would sanction Departments of Yoga and Consciousness in 11 universities. This will also give a spurt to research and teaching in Yoga and consciousness.
- e) The MHRD has given deemed university status to the Bihar Yoga Bharti a Mungher. A "yoga-spirituality" pattern has thus been innovated within the

deemed university system and this will open the way for according similar status to other such institutions. This will create the necessary infrastructure for further research into yoga and consciousness.

Value Education – The Educational Aspects

The philosophical education apart, what we have to do next is to create an educational expertise in the teaching of values in the classroom. A number of initiatives have been started in this direction and these need to be enunciated as follows:

- (i) At the apex of the school system, the main responsibility has been placed on the shoulders of National Council for Educational Research & Training (NCERT). It is currently in the process of setting up a National Centre for Value Education. This is collecting all the educational material – the books, poems, stories, parables, teaching-learning material etc. that have been brought out by a host of spiritual, religious and educational organizations belonging to all religions, sects and denominations in order to build a national data-base, documentation centre and library. It is also creating a separate website on Value Education, which will bring together all this material and place it in the public domain. NCERT has decided to bring out a journal on EHV, which will provide a forum for educationists around the world to publish their experiences and research papers on this important subject. Thus the NCERT will be the epicenter for the EHV explosion in the schools.
- (ii) NCERT has also agreed to write textbooks on EHV. These will be the model textbooks for all the Boards in this country and will create the necessary basic teaching material, duly certified by a national body. Textbooks have to be written for classes I to XII. Even at the primary level, certain values can be inculcated by the oral telling of stories, common singing of songs that exhort children to uphold different values, playacting etc. These will provide a joyful learning experience to children of different ages. At senior levels, the teaching will also be of philosophy and teachings. An attempt will be made to impart the teachings of all important religions in order to discover the common thread that binds them all. In the senior classes, comparative religion would make a fruitful subject of study, in order to show that the differences are superficial, while the similarities are amazing.
- (iii) There is need to create a similar body of literature for the university and college system. This task has been assigned to the UGC. We have to teach a core course on spirituality or applied philosophy to all students at the under-graduate level. This can be a foundation compulsory course, which includes spirituality, value education, personality development, time and energy management, stress management, yoga and mediation, comparative religion, the art of living and so on. It is planned to devise this course in some universities to begin with and then make it compulsory for all the universities and colleges.

- (iv) For the entire engineering system, the Indian Institute of Technology, Delhi has taken the initiative to suggest the creation of a National Centre for Value Education for the Engineering Sector. This is being set up, in order to devise course material for all the engineering college in the country. Apart from core teaching courses on the pattern envisaged for general universities and colleges, there would also be special techniques for including value education as part of normal teaching of course material on individual subjects.
- (v) Similarly, the Centre for Value Education, Indian Institute of Management, Calcutta has been working assiduously for the last more than two decades to inculcate values among the management graduates. Despite all this effort, it has not been possible as yet to create a paradigm shift in the mainstream thinking of management specialists, in order to enunciate a theory of management based entirely on classical Indian concepts. It is, therefore, proposed to strengthen the Centre in IIM, Calcutta and also create a Centre for Consciousness and Leadership in IIM, Lucknow. Other IIMs have also shown interest in setting up cells on value education. An important input here is the work done by the management faculty of the Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam which bases its entire management education on the Bhagwat Gita.
- (vi) The National Open School has also agreed to run a course on the Art of Living as a programme of continuing education. This will take spiritual ideas to a large audience through the distance education mode. A Similar initiative is expected to be taken by the Indira Gandhi National Open University for its special clientele.

A Network of Teacher Training Centres

All this effort will come to naught if we do not have adequate provision for teacher training. In the ultimate analysis, all high-sounding courses and programmes can only reach the students if the teachers are first trained in this difficult area of learning. And this is not only an intellectual effort at understanding, memorizing and recapitulating, but also a spiritual effort at practically applying the principles that have been theoretically learnt from books.

It has, therefore, been suggested that we should select 10-20 major resource centres such as those belonging to the Ramakrishna Mission, Chinmaya Mission, Vivekananda Rock Memorial, Sri Satya Sai Organization, Bahai' World Faith, the Brahamakumaries, Radhaswami Satsang, Shivananda Ashram, the Christian Missions and other religio-spiritual organizations, in order to activate them as 'Resource Centres for Teachers' Training in EHV. Such Resource Centres would be selected by the NCERT for the school system, the UGC for the university and college system and the AICTE for the technical and management education system.

It will be necessary to network these Resource Centres so that, over a period of time, it seems gradually possible to have somewhat uniform syllabi,

course content, textbooks, teaching-learning materials, pedagogic strategies, etc. Such networking would be facilitated by the setting up of the separate website on EHV and the Journal of EHV, referred to earlier.

The National Council of Teacher Education will also need to take active interest in this area. As the elements of EHV will have to be made an integral part of all teacher training programmes across the country.

EHV – The Organizational Back-up

Finally, there is need to have an organizational backing for the EHV programmes. This has been initiated on the following lines:

- (i) At the level of the Ministry of HRD, a separate EHV Division has been created under an exclusive Deputy Secretary, to deal with the value education. Apart from the above strategic initiatives, this Division also services the Expert Group on Value Education which meets once a quarter under the chairmanship of Education Secretary to frame further policies and coordinate action on the various fronts.
- (ii) There is an on-going scheme for promotion of NGO Initiatives in Value Education, which is being implemented by the Ministry of HRD. Under this scheme, grant-in-aid upto a maximum of Rs. 5 Lakh per year can be given to NGOs, which apply for the same. Grants are generally given for promotion of value education among school and college students, by organization of training programmes. This scheme needs to be given more funds and greater depth.
- (iii) Instructions have been issued to all organizations under the MHRD to create Cells on Value Education.
- (iv) NCERT has established the National Centre for Value Education.
- (v) IIT, Delhi is in the process of setting up the National Centre for Value Education for the Engineering Sector.
- (vi) IIM, Calcutta has an on-going Centre for Value Education, which is promoting EHV in management institutions. IIM, Lucknow is setting up a Centre on Consciousness and Leadership.
- (vii) UGC, AICTE, NCTE, IGNOU, NOS, etc. have either set up or are in the process of setting up Cells on Value Education.

Conclusion

To sum up, it is felt that if the EHV programme in India is adequately backed up by (a) a philosophical base, (b) a pedagogical strategy, (c) a network of training institutions and (d) an organizational structure.

We can be assured that EHV will be here to stay and it will go on from strength to strength. We have, therefore, to ensure that firm and active steps are taken to bring all these ideas on the ground and start implementing them in the right earnest.

NATIONAL WORKSHOP ON INTEGRATING HUMAN VALUES IN TECHNICAL EDUCATION

14-16 March, 2002

(Venue: NRCVEE Committee Room, IIT Delhi: Block V- 401)

PROGRAMME

Thursday, March 14, 2002

9:00 – 10:00 a.m. : REGISTRATION

10:00 – 11:15 a.m. : INAUGURAL SESSION

Invocation & Welcome – Prof. R.R. Gaur

Education in Human Values for Engineers – Vision and Strategies : Prof. P.L. Dhar

Inaugural Address – Prof. R. Natarajan

Address by Chairman – Prof. R.S. Sirohi

Vote of Thanks – Prof. A.K. Gupta

11:15 - 11:45 a.m. : TEA BREAK

Part I : SHARING OF EXPERIENCE AND VISION

11:45 - 1:30 p. m. : SESSION I : Sharing of Experiences

Chairperson : Prof.T.Karunakaran

Convener : Prof T.C. Kandpal

Presentations by : Prof. George Kurian, Prof. Shree Prakash, Prof. D.K. Nauriyal, Dr. A.K. Saha.

Rapporteur : Dr. Amulya Khurana

1:30 - 2:30 p.m. : LUNCH BREAK

2:30 - 4:00 p.m. : **SESSION II : Sharing of Experiences**

Chairperson : Prof. J.C. Haran

Convener : Dr Kanika T. Bhal

Presentations by : Dr. S.L. Batra, Prof. D. Mukherjee,
Prof. A.N. Tripathi, Prof Amitabh Gupta, Mr.
Nirupam Rohatigi, Prof. R.R. Gaur

Rapporteur : Dr. Sangeeta Kohli

2.

4:00 – 4:15 p.m. : **TEA BREAK**

3

4:15 – 5:30 p.m. : **SESSION III: Feedback on Questionnaire**

4

Chairperson : Prof. A.N. Tripathi

Lead Discussant : Dr. Amrit Srinivasan

Convener : Dr. Santosh Satya

Rapporteur : Dr. Vijay Chariar

Friday, March 15, 2002

9:30 – 11:30 a.m. : **SESSION IV : Feedback on Questionnaire & Vision Formulation**

Chairperson : Prof. R.S. Nirjar

Lead Discussants : Prof. R.R. Gaur, Prof. A.N. Tripathi, Mr. Sadhan Bhattacharya

Convener : Prof. Anuradha Sharma

Rapporteur : Dr. Sangeeta Kohli

11:30 – 11:45 a.m. : **TEA BREAK**

Part -II : Discussion on Proposed EHV Package

11:45 – 1:15 p.m. : **SESSION V : Core Course**

Chairperson : Prof. S.B. Srivastava, ISM Dhanbad

Lead Discussants : Prof. P.L. Dhar; Dr. Santosh Satya

Convener : Dr. Amulya Khurana

Rapporteur : Dr.Sasvat Das

1:15 – 2:15 p.m. : **LUNCH**

2.15 – 3:45 p.m. : **SESSION VI : Other Inputs (Courses & Practical Training)**

Chairperson : Prof. S.C. Handa

Lead Discussants : Sh. Ganesh Bagaria,
Dr. A.K. Saha, Dr. R. S. Gupta

Convener : Prof. R. R. Gaur

Rapporteur : Dr. (Ms) Duru Arun Kumar

3:45 – 4:00 p.m. : **TEA BREAK**

4:00 – 5:30 p.m. : **SESSION VII : Value Orientation of Other Subjects**

Chairperson : Prof. Amitabh Gupta

Lead Discussants : Prof. S.K. Aggarwal,
Prof. S.S. Murthy, Prof. Padma Vasudevan

Convener : Dr. M.R. Ravi

Rapporteur : Mr. Nirupam Rohatgi

Saturday, March 16, 2002

10:00 – 11:30 a.m. : **Session VIII : Implementation Strategy**

Chairman : Prof. M.R. Chillana

Lead Discussants : Prof. R. R. Gaur, Prof. S. C. Handa

Convener : Prof. K.B. Singh

Rapporteur : Dr. M.R. Ravi

11:30 – 11:45 a.m. : **TEA BREAK**

..... : **SESSION IX : Valedictory Session:
Conclusion and Recommendations**

Invocation : Prof. R. R. Gaur

Workshop Recommendations : Prof. P.L. Dhar

Comments from participants.

Chief Guest's Address : Shri M.K. Kaw

Address by Chairman : Prof. R. G. Mendiratta

Vote of Thanks : Prof. R. R. Gaur

1:15 – 2:30 p.m. : **LUNCH**

2:30 p.m. : **WORKSHOP ENDS**

List of Participants in National Workshop on Integrating Human Values in Technical Education

14-16 March, 2002

1. Prof. Joshi C. Haran., *Amrita Institute of Technology and Science*, Coimbatore.
2. Prof. K. B. Singh, *Regional Engineering College*, Kurekshetra.
3. Dr. Subhash Chandra Mishra, *Indira Gandhi Institute of Technology*, Dhenkanal.
4. Dr. George Kurian, *School of Management and Social Science*, Patiala.
5. Prof. Shree Prakash, *Bihar Institute of Technology*, Jharkhand.
6. Prof. J.P. Sharma, *M.M.M. Engineering College*, Gorakhpur.
7. Sh. D.J. Shah, lecturer, *Government Engineering College*, Modasa.
8. Sh. J. A. Vadher, lecturer, *Government Engineering College*, Modasa.
9. Dr. S.K. Agarwal, *M.N.R. Engineering College*, Allahbad.
10. Mr. Dinesh Tripathi, lecturer, *Government Engineering College*, Chhattisgarh.
11. Prof. N.T. Desai, *Sardar Vallabhbhai R C of E & T*, Surat.
12. Prof. G. N. Mehta, *Sardar Vallabhbhai R C of E & T*, Surat.
13. Sh. S. S. Gupta, Assistant Professor, *Netaji Subhas Chandra Institute of Technology*, Delhi.
14. Sh. Satish Chand, Assistant Professor, *Netaji Subhas Chandra Institute of Technology*, Delhi.
15. Dr. (Ms) Duru Arun Kumar, lecturer, *Netaji Subhas Chandra Institute of Technology*, Delhi.
16. Dr. T. Ravichandran, H & SS, *Indian Institute of Technology*, Roorkee.
17. Prof. D.K. Nauriyal, H & SS, *Indian Institute of Technology*, Roorkee.

18. Dr. A.K. Saha, *NSS Training and Orientation Centre, Kharagpur.*
19. Prof. Sanjay Nayyar, *Information Technology, Vadodara.*
20. Sh. Prabhuling Jatti, *Amrutvahini College of Engineering, Ahmednagar.*
21. Dr. Navneet Arora, Assistant Professor, *Indian Institute of Technology, Roorkee.*
22. Dr. Shubhashis Sanyal, *Government Engineering College, Raipur.*
23. Dr. P. Syamala, *Calicut Regional Engineering College.*
24. Mr. Sanjay Kumar, lecturer, *Calicut Regional Engineering College.*
25. Dr. Sureshchandra J. Batra, *Visvesvaraya Regional Engineering College, Nagpur.*
26. Sh. Satyendra M. Deshmukh, *Visvesvaraya Regional Engineering College, Nagpur.*
27. Dr. R.G. Mendiratta, *Physics Deptt., IIT, Delhi.*
28. Sh. Samir Bajpai, lecturer, *Engineering College, Raipur.*
29. Prof. D. Mukherjee, *Sparta Institute of Social Studies, Noida.*
30. Lipi Mukhopadhyay, Assistant Professor, *IIPA, New Delhi.*
31. Prof. A. N. Tripathi, IT, *Banaras Hindu University.*
32. Prof. Amitabha Gupta, *Deptt. of H & SS, IIT, Bombay.*
33. Ms. Vineeta Mohindra, lecturer, *Value Education Cell, MACT, Bhopal.*
34. Dr. R.S. Gupta, *BRCM College of Engineering and Technology, Haryana.*
35. Prof. Padma Vasudevan, *CRDT, IIT Delhi.*
36. Prof. P.K. Paul, *Regional Engineering College, Assam.*
37. Dr. Y.C. Bhatt, *Malaviya Regional Engineering College, Jaipur.*
38. Mr. Nirupam Rohatgi, *Malaviya Regional Engineering College, Jaipur.*
39. Dr. Vibhash Chandra, *MG Chitrakut, Gramoday University, M.P.*
40. Sh. G. D. Agarwal, *Malaviya Regional Engineering College, Jaipur.*
41. Sh. R. Hariharan, *Indian Society for Tech. Education, New Delhi.*
42. Dr. S.C. Handa, *IIT, Roorkee.*

43. Dr. S.K. Atreya, Assistant Professor, *IDDC, IIT, Delhi.*
44. Sh. K.K. Sharma, *Malaviya Regional Engineering College, Jaipur.*
45. Dr. B.C. Sarkar, *Sant Longowal Institute of E & T, Longowal.*
46. Prof. S.K. Kashyap, *IIT, Delhi.*
47. Prof. D.P. Tewari, *Amity School of Engineering and Technology, Delhi.*
48. Dr. Vijay Chariar, *BITS, Pilani.*
49. Sh. Sadhan Bhattacharya, *Amarkantak.*
50. Sh. Ganesh Bagaria, *HBTI, Kanpur.*
51. Dr. Mishra, *ISM, Dhanbad.*

Details of Courses / EHV Package at Various Institutes

Human Values & Technology

VEL 700 : (2-1-0)

Course Objective

At the end of the course the students should be able to

- i) Identify the root cause of maladies affecting the society today, which threaten the very survival of civil society as the wrong value system emanating from materialistic view.
- ii) Distinguish between 'needs' and 'wants', 'pleasure' and 'happiness' and 'good' and 'pleasant'.
- iii) Understand the difference between Universal Human Values and the Values dependent on society, culture, race etc.
- iv) Understand the inter-relationship between technology and the value system of the society.
- v) Understand that the materialistic worldview is inherently unsustainable.
- vi) Identify the value system suitable for a harmonious and sustainable society.
- vii) Understand the rational basis of these universal Human Values.
- viii) Understand how these universal human values can be actually imbibed.
- ix) Visualize a holistic paradigm accruing from integration of Human Values with Science and Technology.

Course Contents

1. Introduction

No. of lectures

Present state of society-achievements and maladies of modern age. Notions of progress, development and human welfare. Distinction between 'pleasure' and 'happiness'; 'good' and pleasant; 'needs' and 'wants'. Are there any universal human values? Complementarity of values and knowledge.

(5)

No. of lectures

2. Technology and World View

Typical modern technologies- information technology, Biotechnology, nuclear technology, telecommunications, space technology-their impact on mankind. The worldview behind these technologies. Consumerism and Materialistic world View. Fundamental characteristics of modern

(5)

technology-their relationship to values. Sustainability of modern technology.

3. Sustainability and values

Values of materialistic paradigm, their conflict with Universal human values, and its implications. Values for harmonious and sustainable development. (3)

4. Basis of universal Human Values

The various rationales behind universal human values. Understanding the nature of human reality – an empirical approach. Its congruence with evolutionary paradigm and modern science. Universal human values and real happiness. The Golden Rule and harmony in society. Values and humanistic psychology. (5)

5. How to Imbibe these Values

Practical difficulties in living unto these values-typical Dilemmas. Limitations of intellectual understanding – need for inner transformation. Various approaches towards purification of mind. (5)

6. UHVs and Holistic Development

Concept of holistic development. Integrating scientific knowledge and UHVs-concept of holistic technology. A vision of a holistic society. Engineering ethics. (3)

Suggested Reading

1. A. Nagaraj : Jivan Vidya, *Jivan Vidya Pratishthan*, Amarkantak, 1999.
2. A Parthasarthy : Vedanta Treatise, *Vedanta Life Institute*, Bombay, 1984
3. Andrew Wilson (Ed) : World Scripture, *A comparative Anthology of Sacred Texts*, MotiLal Banarasi Dass Publishers, Delhi, 1993.
4. B.O. Watkins and Roy Meador (Eds) : *Technology and Human Values*, Ann Arbor Science, Michigan, 1977.
5. D. Zohar and Ian Marshall : *Quantum Society*, Flamingo, 1994.
6. E. Schrodinger : *What is Life*, Canto Edition, Cambridge University Press, 1992.
7. E.F. Schumacher : *Small is Beautiful*, Abacus, London, 1974.
8. J. Goldstein and J. Kornfield : *Seeking the Heart of Wisdom*, Shambhala, Boston, 1987.
9. J. Rifkin and T. Howard : *Entropy-a new world view*, Viking Press, NY, 1980

10. Kahlil Gibran : *The Prophet*, (Indian Reprint) Allied Publishers, Delhi. 1976.
11. Paul Brunton, *The Spiritual Crisis of Man*, (Indian Reprint) B.I. Publications, 1975
12. P.L. Dhar and R.R. Gaur : *Science and Humanism – Towards a Unified World View*, Commonwealth Publishers, New Delhi, 1992
13. Teilhard de Chardin : *The Phenomenon of Man*, Collins, NY, 1959
14. R. Bach : *Jonathan Livingstone Seagull*, Avon Books, New York, 1970
15. Swami Ranganathanada : *Eternal Values for a Changing Society*, Vol. 1-4, Bhartiya Vidya Bhavan, Bombay, 1987
16. William Hart : *The Art of Living-Vipassana Meditation as Taught by S.N. Goenka*, Vipassana Research Institute, Igatpuri. 1995

Science and Humanism

- Towards A Unified World View

HU481N (3-1-0)

Course Objectives

This course is intended to bring into focus that SCIENCE and HUMANISM are two COMPLEMENTARY aspects of human endeavor, essential for man's well being and advancement Humanity, for its peaceful, happy and continued existence needs both of them in an INTEGRATED manner.

Somehow, the growth of Science and Technology (particularly upto nineteenth century) while causing phenomenal increase in knowledge, power and material prosperity, has brought in its wake a mechanistic, reductionistic and materialistic worldview. Simultaneously there has been continual erosion in HUMAN VALUES.

Problems that are rampant in various spheres of our modern life, some of which even threaten the very survival of humanity, can directly be traced to this imbalance and the divorce between Science and Humanism.

The last century, while contributing to colossal and widespread application of Science and Technology has also witnessed the following salient trends globally which force us to seriously review the prevailing worldview and, in fact, evolve a more wholesome worldview integrating Science, Technology and Human Values:

- (a) Increasing global crisis resulting from multiple technogenic maladies.
- (b) New revolutionary developments in Sciences such as the relativity theory, quantum mechanics, new biology etc. through the contributions of Einstein, Bohr, Schroedinger, Heisenberg, Prigogine, Sheldrake and others. These developments while helping to understand the physical reality better, have also been instrumental in shaking off the prevailing worldview and pointing towards a more holistic worldview.
- (c) Simultaneously, there has also been a rational and practical rejuvenation of the ancient humanistic philosophies by modern stalwarts like Vivekananda, Gandhi, Aurobindo-to name a few.

The above developments, when seen in the context of the CRISIS OF MODERN CIVILISATION are engendering, so to say, A NEW UNIFIED WORLDVIEW, an appreciation of which forms the theme of the present course.

Course Contents

Topics

- n Introduction, – The Progress of Modern Age – its Achievements and Maladies.
- n Modern Technology as an Instrument of Progress-an Assessment
- n Development of the Mechanistic/Materialistic Worldview with the growth of Science and Technology
- n Implications of the Materialistic Paradigm-the Modern Predicament
- n The New Paradigm emerging from 20th Century Developments in Science.
- n Humanism and its True Basis-the universal foundation of Human values.
- n Implications of The New Unified Worldview and the Methodologies of Inner Development. A Vision of Holistic Development.

Suggested Reading

1. Dhar, P.L. and R.R. Gaur, *Science and Humanism-Towards a Unified World View*, Commonwealth Publishers, 1992.
2. Swami Budhananda, *Can One be Scientific and Yet Spiritual*.
3. Capra F., *The Tao of Physics*, Fontana Collins, 1976.
4. Capra F., *The Turning Point*, Flamingo, 1983.
5. Einstein A., *Out of My Later Years*.
6. Kothari D.S., *Atom and Self*
7. Swami Ranganathananda, *Science and Religion*.
8. Gandhi M.K., *Hind Swarajya*, Navajivan Publishers House, 1909.
9. Schumacher, E.F., *Small Is Beautiful*, Abacus, London, 1974.
10. Sorokin P.A., *Reconstruction of Humanity*.
11. Brunton P., *The Spiritual Crisis of Man*.
12. Swami Nirvedananda, *Religion and Modern Doubts*.
13. Swami Ranganathananda, *Vivekananda and His Humanism*.
14. Schumacher E.F., *A Guide for the Perplexed*.
15. Dampier W.C., *A History of Science*.
16. Mumford L., *Techniques and Civilisation*, Routledge and Kegan Paul Ltd., London, 1934.
17. Laszlo E., *Goals for Mankind*, 5th Report of the Club of Rome series on the predicament of mankind.
18. Rifkin J., *Entropy – The New World View*, The Viking Press, New York, 1980.
19. Sheldrake R., *A New Science of Life*, Collins, London, 1988.

20. Briggs & Peat, *Looking Glass Universe*, Fontana paperback, Glasgow. 1985.
21. M. Fukuoka, *The One Straw Revolution*, Friends Rural Centre, Rasulia, 1978
22. Dossey L., *Space Time & Medicine*, Shambhala, London, 1982.
23. Chopra D., *Quantum Healing*, A Bantam Book, NY, 1990
24. Swami Ranganathananda, *The Message of the Upanishads*, Bharatiya Vidya Bhavan, Bombay, 2001.
25. Amadeo Sole Leris, *Tranquility & Insight*, Century Hutchinson Ltd., 1992.
26. Kahlil Gibran, *The Prophet*, Allied Publishers, Delhi, 1976.
27. Fromm M.E., *To Have or To Be*.
28. Zhukav G., *The Seat of the Soul*, Rider, 1990.

1. Programme :
B.Tech. (Hons.)
Offered as an Elective

Subject :
Introduction to Ethics
L-T-P : 3-0-0
Credits : 3

- I. Theoretical Aspects : Introduction, distinctive characteristics of moral considerations, normative and descriptive, responsibility, human excellence.

Ethical Standpoints : Morality and self-interest, Utilitarianism, Morality as its own end, Aristotle's virtue ethics and character development, existentialist ethics. Perspective from Indian Philosophy.

Moral Epistemology : How do we know what is right or wrong? Intuition, social and ethical relativism, ethics and observations outline for a decision procedure for ethics, John Rawl's distributive justice.

- II. Applied Ethics : Applications in Science, Applications in Engineering, Information Ethics, Medical Practices.

2. Programme :
MBM
Offered as an Elective

Subject :
Business Values and Ethics
L-P-T : 2-0-0
Credits: 2

Course Objective :

The aim of the course is to develop values, reasoning and analytical skills to resolve dilemmas in different areas of business and in social and environmental issues.

Course Contents :

Ethics in Business, Philosophical and Psychological Theories and Values; Argumentative Dialogue and Group Decision Process; Market System; Laws and Ethical Codes; Ethics in HRD; Finance, Marketing and International Business; Gender Balance; Environmental Ethics; Strategies for Ethical Transformation; Methodology for Research in Business Ethics.

3. Programme
Master's in Medical Science & Technology
Offered as an elective subject

Subject :**Medical Technology, Society and Ethics****L-P-T : 3-0-0****Credits: 3**

Evolution of medical science, principles of clinical medicine and research, Evidence Based Medicine. Ethical considerations of research and 'clinical trial designs'. Principles of preventive medicine, epidemiology, infectious and communicable diseases. Scope of technology in preventive and social medicine with special reference to health needs of India. Health care economics.

Examples (and their study) of commonly used technology innovations in Clinical medicine.

One Semester, 3 Credit Course on Human Values for Engineering Students

The objective of the course is an exploration of human values, which go into making a "good" human being, a "good" human society and a "good" life. The context is the work life and the personal life of modern Indian professionals. The course has been taught for four years as an elective course to B. Tech. Part-III students of IT-BHU.

Topic

	No. of lectures
1. The value-crisis in the contemporary Indian Society	2
2. The nature of values : the value spectrum for a 'good' life	2
3. The Indian system of values	2
4. Material development and its values : the challenge of science and technology	2
5. Psychological values : integrated personality; mental health	2
6. Societal values : the modern search for a 'good' society; justice, democracy, rule of law; values in the Indian Constitution	2
7. Aesthetic values : perception and enjoyment of beauty	2
8. Moral and ethical values : nature of moral judgments; canons of ethics; ethics of virtue; ethics of duty; ethics of responsibility	
9. Work ethics; professional ethics	4
10. Spiritual values : different concepts; secular spirituality	2
11. Relative and absolute values	2
12. Human values : humanism and human values; human rights; human values as freedom, creativity, love and wisdom	6
13. Management by values : professional excellence; inter-personal relationships at work place; leadership and team building; conflict resolution and stress management; management of power	6
Total number of lectures	42

Human Values

Credit – 4

L-3 T-1

Objective

The course aims at helping students of technology to grow as full and integrated human beings through value-education which is like the lighthouse and provides guidelines to develop and lead a value-based life, and thereby, it enhances to maintain a equilibrium between high-tech and high-touch approach in life.

Background

Due to rapid growth of technology and increasing competition, cases of unethical practices and absence of values have become serious problems and threaten collapse of organization life. Value-development, along with material development, is the essential requirement of any true human development.

Brief Relevance of the Course

Value education has begun to gain importance in the corporate world, as good ethics and sound values are the basis of good business. If value system of work is accepted, then work is elevated for different plane and would satisfy the basic human urge for meaning in life through work. However, in changed scenario when the whole world is becoming a global village, the distances are reducing and technocrats are supposed to work across the different countries. Thus it is imperative to have mutual trust, faith, compassion, justice, sincerity and promote cooperative living amongst diversity.

While teaching this course, care should be taken not to impose any value system or ideology on the students. Students should be encouraged to critically examine any particular ideology and principles of living. The purpose is to develop sensitivity among them for both intellectual and emotional values, and to develop a clear understanding in them for their duties, responsibilities and obligations.

Methods of Teaching this Course

We know that the practice of values is more important than mere teaching. Besides the lectures, classroom interaction in the form of discussion, debates, real life examples, understanding of values through literature should be included. Students should be asked to analyze the issues and give their opinion as what would be the right thing to do.

A Sensitivity Training Method be adopted for teaching and understanding of this course. Nobody should be criticized or condemned for his views however

small and wrong his views are. Everybody should be encouraged to participate in discussion and analysis, and at the same time, they should be very sensitive for the suggestions and view presented by others. Freedom should prevail in classroom to ask the questions, express their views and concerns.

Essay Writing or *Passage Writing* should be included in tutorial assignments. These essays should be related with the theme of values, value conflict, examples from personal and social events and experiences.

Chapters

1. **The Importance of Human Values in Modern Indian Society**
 - 1.1 Development of modern technology society
 - 1.2 Growth of civilization and cultural decline, their impact on individual and society.
2. **Meaning and Purpose of Human Striving**
 - 2.1 Human happiness and fulfillment
 - 2.2 Success and satisfaction
3. **Values, Beliefs and Ideals**
 - 3.1 *Introduction* : Concepts
 - 3.2 *Types of Values* :
 - Social : Justice, Democracy, Responsibilities and Obligations
 - Religious : Major religions and their common values
 - Cultural : Customs, Traditions
 - Moral : Integrity, fairness, ethics of duty, ethics of responsibility, humility
 - Spiritual : Science, Materialism, Spirituality and Transcendental Values
 - Description of Human, Divine and Demonic Nature
 - Three Modes of Material Nature : Goodness, passion and Ignorance
4. **Understanding Ethics : Concepts and Practices**
 - 4.1 ***Environmental Ethics*** : Responsible use of natural resources
Preservation and Conservation of Environment
 - 4.2 **Business Ethics**
 - 4.2.1 Corporate responsibility, responsible exercise of technical advancement
 - 4.2.2 Organizational values, pursuit of excellence
 - 4.2.3 The ethics of market place and competition
 - 4.3 **Work Ethics**
 - 4.3.1 Work Values and Attitude towards work.

Lecture Distribution Table

Topics

	No. of Lectures
1. The Importance of Human Values in	6
2. Modern Indian Society	
3. Meaning and Purpose of Human Striving	4
4. Values, Beliefs and Ideals	18
5. Understanding Ethics	14
Total	42

References :

1. Chakraborty S.K. (ed), *Human Values for Managers*, New Delhi : Wheeler Publishing, 1995.
2. Chakraborty S.K. (ed), *Human Response Development : Exploring Transformational Values*, New Delhi : Wiley Eastern, 1990.
3. Tripathi, A.N. *Human Values in the Engineering Profession*, Monograph Published by the Management Centre for Human Values IIM, Calcutta, 1997.
4. Stephen R. Covey, *The Seven Habits of Highly Effective People : Restoring the Character Ethic*, New York : Simon & Schuster, 1989.
5. *The Bhagwat Gita*.
6. *The Koran*
7. *The Holy Bible*.

An Introductory Course in Value Education

Value Education - 1

This would be a compulsory course for all B. Tech / M. Tech. / M. SC. Tech. students. The course will be introductory in nature and may be introduced in the 1st / 2nd Semester.

Objectives

The objectives of the course would be :

1. To sensitize the students towards various ethical and moral values which are universally accepted;
2. To acquaint our students, of the relevance of values in personal and professional life;
3. To encourage the students to give up moral relativism and promote humility; reduce arrogance, selfishness and aggressiveness;
4. To promote inquisitiveness, motivation to learn, healthy nationalistic feeling and ecology, friendly attitude;
5. To emphasize that true happiness arises from virtuous living in tune with the Laws of Nature.

Part - A

Classroom Instruction

1. **Meaning, Nature and Scope of values**

Definition of 'Human Values'; Nature of values in social interactions; Cultural values and Social norms; Social norms and Sanctions; Cultural values, Ethical values and social values; Human Values and professional ethics.

2. **Type of Values**

- a) Human Values
- b) Community or Social Values
- c) Cultural Values
- d) Institutional Values
- e) Ethical Values

3. **Need for value Education**

Onslaught of technology and its effects on society and industry; Loss of values in our society; Need to introduce value education ; Imbibing certain values,

habits of thought, and qualities of mind; cultivation of imagination, strengthening of will and training of character.

4. *Interetation and Integration of Ethical Values*

Basic human and social values in Hinduism, Islam, Sikhism, Buddhism Jainism, Christianity, Judaism and other religions of the world, integration of these values and their common features.

5. *Moral Relativism and its Imapact*

Moral Relativism and its negative impact; Virtues of humility; Reducing arrogance, selfishness and aggressiveness.

6. *Living in Tune with Nature*

Importance of human inquisitiveness; motivation to learn, developing healthy nationalistic feelings and eco-friendly attitude; The art of virtuous living in tune with the laws of Nature.

Part - B

Discussion & Academic Interaction

1. *Small Group Interaction*

Smaller groups should be formed in order to have healthy discussions on topics of relevance to value education; Problems in society due to value erosion, and other relevant issues.

2. *Students' Seminar*

Students' seminar on relevant topics, Values and personality development, Attitudinal shift.

3. *Student-Teacher Question - Answer Sessions*

Part - C

Practical Sessions, Project Work & Assignments

Value Education - 2

This would be a compulsory course for all B. Tech / M. Tech / M. SC. Tech students. This may be introduced in the 2nd / 3rd Semester.

Objectives

The objectives of the course would be :

1. To make the students aware of our cultural heritage and introduce them to cultural values of our nation / country;
2. To acquaint them with the changing face of our society and means to stop the growing value erosion;
3. To make them aware of the impact of IT Revolution and the resulting value erosion in society and industry;

4. To provide them necessary information and skills to manifest desirable values in their personal dealings and professional interactions, and
5. To make them better human beings and better professionals.

Part - A

Classroom Instruction

1. *Cultural values in India through the ages*

Values in ancient India, The Harrapan city culture, Vedic culture, (Sangam literature); Mauryan period; Gupta period; Medieval India; The impact of the West and Westernization of Indian Values.

2. *Upholding our Traditional values*

Preserving and respecting our cultural heritage; scientific evaluation of Indian values; Developing scientific temper and Rational thinking.

3. *New Society and value Erosion*

Advances in science and technology, lifestyle and changes in values; Impact of western culture and erosion of human values; Attitudinal Shift; Spiritualism to Materialism.

4. *Impact of it revolution on human values*

Impact of Information Technology Revolution; Internet phenomenon; Information Superhighway on Indian culture; Changes in Lifestyle and Concepts; Changing Human Values and Socio-cultural norms and organizational structure of India.

Part - B

Discussion & Academic Interaction

1. *Small Group Interaction*

Smaller groups should be formed in order to have healthy discussions on topics of relevance of value education; Problems in society due to value erosion and other relevant issues.

2. *Student Seminars*

Student seminars on relevant topics; Values and personality development; Attitudinal shift.

3. *Student-Teacher Question-Answer Sessions*

Part - C

Practical Sessions, Project Work & Assignments

Value Education – 3

Professional Values

This would be a compulsory course for all B. Tech / M. Tech/ M. Sc. Tech students. The course will be introductory in nature and may be introduced in the 4th semester.

Objectives

The objectives of the course would be:

- 1) To make the students aware of the importance of developing professional ethics.
- 2) To provide them necessary information and skills to manifest desirable values in their personal dealings and professional interactions.
- 3) To make them better human beings and better professionals.

Part - A

Classroom Instructions

1. *Values in University Education*

The role of administrators, teachers and supporting staff to build culture and quality of the university environment by following Indian ethos; The role of administrators in maintaining quality and standards in education system and academic discipline.

Teaching / learning strategies and use of the incentives, allowing for multiplicity of concepts and conflicting views and adopting problem solving techniques; Evolution of proper value system.

2. *Values in Technical Education*

Industrial and management ethics and human values; Value orientation as Business Ethics or Management of values; Indian Ethos in Management and Technology.

3. *Value Oriented Technical Education*

Technical Education, assumptions, values and economic considerations; Characterizing Indian environment; Service mindedness or concern for all segments of the society; Excellence in work, moral courage, integration.

4. *National Policy of Education (1986) and Value Education*

Salient feature of NPE (1986); Value development through the process of value education; Difference between moral education and religious education.

Part - B

Discussion & Academic Interaction

1. *Small Group Interaction*

Smaller groups should be formed in order to have healthy discussions on topics of relevance to value education; Problems in society due to value erosion and other relevant issues.

2. *Student Seminars*

Student seminars on relevant topics; Values and personality development; Attitudinal shift.

3. *Student-Teacher Question-Answer Sessions*

Part - C**Practical Sessions, Project Work & Assignments****New Module****I - Semester**

Course No.	Subject	L	T	P	Cr. Hrs.
1. HSS – 151	English for Science and Technology	3	0	0	06
2. MAT – 151	Mathematics – I	3	1	0	07
3. PHY – 151	Physics – I	3	0	2/2	07
4. CHE – 151	Chemistry	3	0	2/2	07
5. (a) FME – 101P	Engineering Materials	1	0	0	02
(b) EMM – 101P	Engineering Materials	1	0	0	02
6. EMM – 102	Engineering Graphics	1	0	3	05
7. HSS – 152 (S)	Human Values in Science & Technology	1	0	2	04
8. EMM – 103(S)	Workshop Practice	0	0	2	02

II - Semester

Course No.	Subject	L	T	P	Cr. Hrs.
1. MAT – 251	Mathematics – II	3	0	0	06
2. PHY – 251	Physics – II	3	0	2/2	07
3. EMM – 201	Engineering Mechanics & Thermal Engineering	4	0	2	10
4. MAT – 252	Introduction to Information Technology & Computer Programming	3	0	2/2	07
5. EMM – 202	Engineering Graphics – II	1	0	3	05
6. AGL – 251 (S)	Introduction to Geo-sciences and Geo-engineering	2	0	0	04
7. HSS – 251	Value Education	2	0	0	04
8. CCA – 251 (S)	Co-curricular Activities Vocational Training (1)	0	0	0	(03)
Total		18	0	7	43 + (03)

III-Semester

Course No.	Subject	L	T	P	Cr. Hrs.
1. MAT – 351	Mathematics – III	3	1	0	07
2. EMM – 301	Theory of Machines & Mechanics of Solids	4	0	2	10
3. EMM – 302	Electrical Technology	3	0	2/2	07
4. HSS – 351(S)	HSS Optional & Value Education	3	0	0	06
5.	Professional Course	3	0	0	06
6.	Professional Course	4	0	2/2	09
7. HSS - 352 (S)	Vocational Training (Value Education)	0	0	0	(03)
Total		20	1	4	45 + (03)

IV-Semester

Course No.	Subject	L	T	P	Cr. Hrs.
1. EAI – 451	Electronics & Instrumentation	3	0	2/2	07
2. MAT - 451	Numerical and Statistical Methods	3	0	2/2	07
3. EMM – 401	Elements of Fluid Mechanics	3	0	2/2	07
4. HSS – 451 (S)	English for Professional Communication	1	0	0	02
5. HSS – 452 (S)	Value Education	1	0	0	02
6.	Professional Course	3	0	2/2	07
7.	Professional Course	3	0	2/2	07
8. DMS – 451	Managerial Economics	3	0	0	06
9.	Composite Viva - Voce	0	0	0	(04)
10.	Excursions	0	0	0	(04)
11. CCA – 451 (S)	Co-curricular Activities Vocational Training (1)	0	0	0	(03)
Total		20	0	5	45 + (11)

Foundation Course in Values and Social Responsibilities (VSR)

Introduction

The academic council of MGCGV, Chitrakoot in its 8th meeting resolved that about 25% of the courses under any programme should be dedicated to creating the rural development related foundational knowledge and skills in every student who joins MGCGV.

The present document is preliminary attempt to present a recipe of foundation course for experimentation.

Specific objectives of the stream

- n With a view to realizing the dream of Grundvig to impart education for life (as opposed to education for death), to realize the Gandhian dream of an education for head, hand and heart, the Tagorian dream of liberated and integrated personality, and in short, to reach a strategy for a man-making education. This stream provides those missing links for creating a graduate with an integrated personality.
- n Even if the student of MGCGV is pursuing a narrow specialization programme it is felt essential that he / she has to acquire the minimum essential knowledge and skill related to various dimensions of rural development so that he / she can professionally relate his / her specialized study to real life rural development problems. Through VSR, it is expected to awaken requisite sensitivity to understand the problems at the ground level, the capability to analyze and propose alternative solutions and the humility to do so in a people-centered way and in a participatory style.
- n To consciously enable the students towards self-actualization through programmes of personality development, creativity and communicative capabilities so that he / she could evolve into a stakeholder, advocate and enabler of the dumb millions who are below the poverty line.

Approach

- (1) To create formal activity schedules through which the dimensions missing in the specialized programmes are added; to finally provide the supplementary dimensions namely – Vocational, Cultural, Ethical and Environmental. In this, art, yoga, craft practices, language and communication skills etc. are also incorporated.
- (2) To create a live context of villages : a number of contact programmes including village camps will form part of the programme. In this, all available schemes like – N.S.S., Shanti –Sena etc. are also included.

- (3) To make special efforts to develop a citizen compatible with the emerging globalization trends – “A citizen who can think globally and act locally”. Thus, subjects like Global Economy, Environmental Ethics, Appropriate Technology for Sustainable Development, Global Civic culture, Human Rights, Consumer Awareness etc. should be incorporated through extra-mural channels. The vision is to prepare every MGCGV graduate as an evolving world citizen capable of contributing to the shaping of an emerging global village and “Our common future”.
- (4) To make special efforts to awaken spirituality inside a person and help the individual grow into a community being. For this the campus life will be reshaped into one with a flavour of community life and participative problem solving. On the mundane side, opportunities to develop communicative and linguistic skills will be consciously designed – the latter also including the tools of information technology.

Activities for UG & PG students under VSR (Semester-wise distribution of marks)

Activity	Sub-activity	08 Sem. Course					
		06 Sem. Course					
		04 Sem. Course					
		02 Sem Course					
		I	II	III	IV	V	VI
Philosophical Foundation related courses	Gandhian Thought & Gram-swaraj	15	15	15	15	15	15
	Jeevanadarsh (Jeevan Vidya)	10	10	10	10	10	10
	Vocational Training	—	10	—	10	10	10
	Dev. Communication, Arts and Music	10	10	10	10	—	—
Activities oriented towards community service	Tree Plantation & Caring	10	10	10	10	10	10
	Shramdan	10	10	10	10	10	10
	Village Camp and Community Service	15	5	15	5	15	15
	Yoga	10	10	10	10	10	10
Personality restructuring and attitudinal change activities	Personality & Creativity	10	10	10	—	—	—
	Prayer	10	10	10	10	10	10
	Global Civic Culture	—	—	—	10	10	10
	Total	100	100	100	100	100	100

1. Gandhian Thought and Gram-swaraj

Objectives

Understanding the emerging scenario of a non-violent world order based on Sarvodaya vision and understanding the constructive programmes to achieve the above philosophy and practices of Gram-swaraj.

Brief Syllabus

Gandhian vision of *Sarvodaya* order (its social, economic, spiritual and political structure). Constructive programmes of Gandhi, post Gandhi movements, emerging global challenges and Gandhian solutions.

2. Jeevanadarsh

Objectives

Understanding oneself and the mission of life.

Brief Syllabus

Meaning of life, existence and co-existence, presentation of various religions to understand their prescriptions for a moral life :

- (a) Hinduism, Jainism, Buddhism, Sikhism
- (b) Christianity, Islam, Bahaism
- (c) Taoism, Confuciousism, Zen-Buddhism
- (d) Modern spiritual movements

3. Vocational Training

Objectives

To develop creative skills in the youths by giving training in a few crafts, maintenance services and manufacturing activities. The motive is to free the individuals from the obsession for white collared services and be ready to soil their hands and come into contact with mother earth and learn things by doing.

Brief Syllabus

- The crafts can including bamboo work, ceramic work, carpentry etc.
- Services including maintenance of electrical and electronic equipments, cycle repair, two-wheeler mechanism, repair of hand pumps etc.
- Knowledge of simple wiring practice, operation of office equipments like electronic, typewriter, fax machine photocopier, internet etc
- Manufacturing practices like welding, confectionery works, soap making, fruit preservation, making of simple herbal medicines etc.
- Practicing cooking during camps, driving of tractor and other utility vehicles.

4. Development Communication, Arts and Music

Objectives

The twin objectives are to humanize the personality through exposure to arts and to equip the youths with a number of development communication skills suited to various development activities. The activities could consist of :

- Preparation of posters, banners, charts and transparencies
- Skill in photography and videography
- Operation of VCD, OHP, Slide projector, Epidiascope and Power-point presentation
- Presenting patriotic and development oriented songs
- Preparing street drama
- Learning of two / three folk songs
- Preparation of drama for development communication
- Preparation and use of puppets for development communication
- Basic skill in one or two musical instruments

5. Tree Plantation

Objectives

Every human being on earth uses trees for the purpose of fuel, fibre, timber, medicine and various other essential aspects of life. The trees are responsible for the oxygen we breathe, for the water we drink and the livable habitat we have.

It is estimated that for fuel alone one tree per person per year is consumed on an average. Thus Buddha indicated that the planting of tree in the name of each child every year is a paramount civic responsibility.

The university is charged with the responsibility of guiding the country in the direction of sustainable development. It also considers tree planting as an essential component of sustainable life style. Thus every student (like every teacher and supporting staff) will plant and maintain one tree every year during his / her registration in any academic programme.

This programme also involves the following learning and related activities :

- Knowing about the important members of the following species :
 - Horticultural plants
 - Avenue trees
 - Trees and plantation that help in environment cleaning processes
 - Trees / herbs related to medicinal purposes
 - Trees / crops relevant to employment generation

- Identifying 10 trees / crops currently forming the basis of regional economy.
- Identifying 10 trees / crops / improved varieties potentially suitable for introduction in the region.
- Basic steps in developing nurseries, planting the trees, fencing, maintenance and harvesting.

Evaluation

The student will be given 10 marks (out of 100) per semester for his comprehension and practice of the above.

Work Schedule

Every semester, a few hours are devoted for theoretical exposure, video shows, field visits etc. The activities of planting and fencing is done during the prescribed few weeks of the season. Watering and maintenance is done on a day-to-day basis, during time periods suitable to the students outside the lecture / practical sessions. Either the VSR coordinator or his nominee will be responsible for guidance, monitoring and evaluation. Certain groups might carryout equivalent activities like vegetable growing, experimental farms, experiments in botanical gardens or other permitted activities.

Reading Material

- (1) For developing interest in the students, a useful book will be "The Man Who Planted Trees" by Jean Giono.
- (2) A film related to the topics including the story of Vishnoi cult as part of the film : "Crowded Desert".
- (3) A film related to "Chipko Movement".
- (4) Films related to planting, seeding etc.

6. Shramdan

Objectives

As a basis for a non-exploitative society the concept of bread labour (carrying out minimum physical activities related to sustenance – for example food, cleanliness, security etc.) was advocated by missionaries like Tolstoy and Gandhi.

The university emphasizes shramdan to inculcate in the students :

- The willingness to soil their hands.
- To understand the dignity of labour and become free from social inhibitions and social inequalities.
- To enjoy the happiness of working in a community and realize the potential of community based self-help processes.
- To acquire a sufficient set of survival kits to be able to feel confident while living in the world, no to depend on exploitative forces and to ascend the steps of self-reliance.

Practice

Besides the basic culture of keeping one's place of living and work clean, there will be the following types of organised shramdan activities :

- Various activities related to campus development.
- Cleanliness campaign, tree plantation or other constructive activities for the creation of civic amenities for any other developmental activities needing creative participation in the neighbouring villages / towns (e.g. Sundar Chitrakoot Abhiyan).
- Disaster mitigation related activities, e.g. at times of floods, earthquakes, cyclones, etc.
- Activities related to maintenance of order during major festivals, riots etc.

Evaluation

About 30 hours of intensive physical work or its equivalent per semester would be expected from each student. The work will be done in teams normally from the same class. The student will be encouraged to participate in the conception, planning, mobilization, evaluation and reporting of each work instead of being a silent muscular force. In each work, there will be certain scientific and technological principles and practice codes, safety precautions which should be told to the students or the students should be encouraged to find out.

The aim should be to make the students search for appropriate technologies for carrying out the task and to come up with innovative methods of doing the job.

To illustrate the above, let us take the example of involving the students in a cleanliness campaign where garbage, weeds etc. are involved. The student should

- know the difference between solid waste, liquid waste etc.
- know the difference between bio-degradable wastes and non-bio degradable waste.
- know the concept of separation of waste and the concept of recycling and related government regulations.
- the concepts of zero-waste management (total recycling).
- similarly while dealing with the weeds, students should know the weeds that need not be removed as they are beneficial. He/she should know whether the weed should be uprooted for eradication.
- the student should know whether the weeds are likely to create allergies etc.
- the students should be encouraged to find out whether the weed could be profitably used (for example, use of Lantana as a pesticide).
- the use of Ipomia as a bio-mass feed for gasifier etc.
- they might end up with new tools of handling the weeds.

While evaluating, care should be taken to emphasize purposeful projects, creativity and team spirit.

Important note:

During the 'shramdan' work on campus, the concept of community should be emphasized by the "doing together by all the sections of the campus community". The teacher should invariably lead the physical work.

During village based Shramdan, the students should always work with the villagers on an equal footing

Hints for reading materials

Besides certain writings of Gandhi & Vinoba and books like Shram Geeta, there are inspiring materials in form of slides, videos, write-up related to shramdan based society that could be made available.

Example

- Kibbutz in Israel
- Ark (L'Arche) community in France
- SHARE community in Cambridge (USA)
- Auroville international community
- Dayalbagh (Agra)

7. Village Camp

Objectives

In general, the courses in the rural university are expected to have as much of village based learning sessions as possible. Schemes like NSS demand 10 days camping in villages. Having this as a motivational model, the following village camp model is proposed for experimentation:

1. The whole university is declared to be transferred to the villages for a period of 10 days.
2. A compact region like a block is taken for the purpose and about 30-40 camp sites are decided. Each camp can cover a small region like one panchayat. Thus, during one camp 30-40 panchayats could be covered.
3. A common theme is selected for the camp. For example :
 - Resource mapping exercise (participatory).
 - Collection of data for computerized database.
 - Participatory planning exercise at Panchayat level.
 - Literacy campaign.
 - Health survey and awareness.
 - Campaigns against superstition, alcoholism, atrocities against women (witch craft etc.)
 - Computer awareness and cyber café planning etc.

4. Wherever interdisciplinary teams are needed, the new campaign teams will be constituted by having students from engineering health, agriculture, panchayatiraj, computer science, rural development, social work, management, arts / journalism etc. Similarly, teachers will also be from diverse disciplines. Thus, the camp provides opportunity for a multidisciplinary team to interact with a village having complex problems.
5. When the camp theme is sectoral like health (e.g. campaign for Hepatitis B) the students from department of medicine could be distributed among the other class oriented campaign groups. Suppose a campaign is on literacy, the B.Ed. students could be distributed among the other groups.
6. Before proceeding for the camp, precise planning is done and relevant theoretical foundation is given to the entire university through proper written information. The necessary survey formats are also prepared and distributed in advance.
7. Village liaison persons are contacted in advance and are given necessary advance information and training.
8. Most of the responsibilities of the camp are given to the students including choice of place for night stay, menu for food schedule of work, local link persons, entertainment programmes, dignitaries to be invited, work reporting, news reporting etc.
9. Girls should have separate place of stay. They should be accompanied by women teacher or the guardians / sisters of one or two girl students. But, the food should be cooked and served together.
10. Cooking would be done once / twice by the students for the sake of experience but whenever the camp has learning orientation, cooking should be done by others.
11. Interaction with villagers, visiting dignitaries should be a recurring feature.
12. Students should have a systematic say of understanding villages its history, social structure, class structure, land distribution, occupation distribution, poverty structure, artisan skill, other non-farm activities including business and services, educational structure, entrepreneurial potential, socio-economic problems etc.)
13. The students should be advised to maintain discipline and decorum, advised not to make promises or interfere with sensitive internal matters of villagers without prior planning with a teacher.

Assessment

The students assessed on the basis of discipline, fulfillment (against targets) and reporting; special credits are given if they solve outstanding problems. The marks are distributed across the various camps that are arranged in the semester.

8. Yoga

Objectives

The ultimate aim of yoga practice is :

- (a) To enable the individual to achieve body - mind coordination for better performance.
- (B) To inculcate the habit of silence, meditation and concentration. To penetrate deeper into one's own mind and be able to 'COME CLOSE TO ONESELF AND ONE'S MISSION'.
- (c) To help the process of expansion from **"self to community"**.
- (d) To inculcate a sound body in which a sound mind can develop. To this extent some physical exercises normally coming under the purview of sports and also activities related to other physical works would be properly integrated.

Contents

- Meditation practice
- Prayer
- Yogic posture (Asanas)
- Pranayam

Reference Material

1. *Kriyatmaka Yoga* – Swami Satyanand Saraswati, Bihar Yoga Vidyalaya, Munger.
2. *Yoga Sidhantha aur Vyavhar* – Dr. Kapil Dev Joshi, M.P. Hindi Grantha Akadami, Bhopal.
3. *Asana and Pranayam* – Swami Kavaliyananda, Kavailya Dham, Lonavala.
4. *Yoga Rashmi* – Dr. Rameshwar Das Gupta.
5. *Yaga Vyayam Padhathi* – Sh. Ashok Dubey, Gramodaya Prakashan.

Evaluation

Out of 10 marks, 5 marks will be based on attendance and 5 marks will be based on :

1. Keenness
2. Perfection achieved
3. Punctuality
4. Team spirit
5. Knowledge

9. Personality and Creativity

Objectives

- 1) To take a practical view of helping the person, namely, student overcome the hurdles in the process of expressing his / her inner potentiality – in

particular, in overcoming language related hurdles and problems in interpersonal communication and enhancing his capacity to interact with small groups.

- 2) To provide opportunities for creating sensitivity towards various sector of nature and towards various aspects of life – the objective being to realize an integrated personality.
- 3) To help the individual understand his / her own psyche with a view to inculcate an attitude of curiosity in understanding the environment, to cultivate a positive approach to problem solving situations and a capacity to unlearn whenever it is necessary.
- 4) To inculcate the spirit of innovation on professional life by introducing the capacity to create in curricular and extra curricular domains.

Contents / Activities

- (1) Having formal sessions of idea-engineering and creativity and training in group thinking as well as formal processes of creativity design (e.g. lateral thinking, analogy, reverse thinking, as well as idea-engineering methods like think tank, controlled brain storming, brain writing, Delphi etc.)
- (2) Creating curricular and extra-curricular event where critical thinking, debate, adventure, artistic creation, campaigning against evil traditions, design of innovative demonstration kits and material for people's education would be typical example of creative exercises. An exhaustive list of such possible exercises could be designed under each programme to serve as an inspiring samples. In general, the efforts should be –
 - (a) To pick up problems and puzzles through interaction with real life situations.
 - (b) To identify alternate approaches to solving it (political approach, participatory approach, self-help approach, technological intervention approach, socio-psychological approach and to make use of the knowledge gained in the classroom in the solution process).
 - (c) After conventional formulation of the approach a truly frank and free discussion in the midst of all the stakeholders and those who have opposite views.
 - (d) Workout a situation where the final decision is by the beneficiaries and the implementation is through a participative process.
 - (e) Step by step field action, review of potential mid-term correction. The above sequence may not be applicable verbatim to simple situations like fabrication of devices. But, nevertheless, it presents a broad framework for design and implementation.

Evaluation

It is proposed that the following three exercises provide the broad framework for evaluation :

- Human Values_IITD_JV mention_c
- (a) Three marks for creativity through artistic expressions or idea generation.
 - (b) Three marks for analyzing the problems of one's own village and proposing a solution and defending it in a seminar meet.
 - (c) Four marks for individual or team based work to solve a problem of the campus or the extension village.

Note

If a student comes up with an outstanding contribution like designing an equipment to solve an existing problem or creates a piece of work which is published and awarded, then he/she could be given an extra 10 marks after consulting the departmental committee. This way, the person might get even 20 out of 10 and this would enable him to get an overall better score in the course. This indirectly also expresses the determination of the university to encourage creativity.

10. Global Civic Culture

Objectives

While most of the courses provide information and skills to equip the students along his professional direction, VSR attempts to build up the wisdom dimension of the person. This needs building up the capacity to take the right decision using the knowledge and skill in one's possession. This could be done only when there is a defined value system. This part of the course equips the students to visualize informal and formal value systems and also be capable of boldly proposing new value frames for the emerging global civilization.

It might be noted that the student has to acquire a lot of stamina to unlearn and become liberated from many value systems, eastern or western (for example, nationalism has to be imbedded into an international culture of coexistence). It is felt that the following topics could form some of the pillars of the value system for peaceful coexistence of the world citizens:

- (a) Environmental ethics (the science of sustainable coexistence with nature, community and other creations).
- (b) Global civic culture (a system of multiplier community relationship from the family level to world community with appropriate social system concepts).
- (c) Human right (human rights imbibing tenets of equity, liberty and the right to self actualization) human duties.

Contents and methodology

- (a) The university will arrange a well-designed series of monthly presentation by exalted individuals in spiritual / social engineering. The series would be called "Gyan Surabhi".

- (b) Reading and group discussion under the guidance of a teacher / expert, seminal writing related to the above concern. (vide reference).
- (c) Screening of very important videos / movies created by various organizations related to the above.
- (d) Creating simple reading material and eliciting discussions in a seminar / workshop like atmosphere.

Reference

1. "The Man Who Planted Trees", *Jean Giono Chelsea Green Publishing comp.*, Chelsea, Vermont.
2. Building a Global Civic Culture, *Elise Boulding*
3. "Back to Nature", *M. Fukuoka*
4. "Uncommon Wisdom", *R. Capra (and modern reading, e.g. Zen & The Art of Motor Cycle Maintenance)*

Evaluation

- (a) 5 marks of comprehension / attending arranged lectures.
- (b) 5 marks for reading assignment and coming up with summary.

If the student comes up with an extra ordinary piece (essay / songs) giving expressions of the above themes / concerns, he may be considered for the award of an extra 10 marks under the head of creativity.

11. Prayer

Objectives

Prayer will have the connotation of meditation together as a community to create synergy which will lead to deliverance of the community from its problems.

The emphasis will be on :

- Community
- Communion
- Communication
- Development of 'sadbhavana' through inter-religion prayer.

In fact, the prayer meet will be an effective and natural mode of sharing of experience, communication of forthcoming events and finalization of common actions involving the whole community.

The occasion will also be used for the following –

- 1) Interaction (through presentations by distinguished spiritual leaders, social worker and men of achievement including rare and inspiring visionaries).
- 2) providing brief periods of artistic presentation that would create a more conducive atmosphere for communion.

- 3) presentation by various groups – items which will be educative and informative (e.g. newsbriefs in Sanskrit / English, extracts from the writings of Gandhi, Vinoba, Anna Hazare etc.)
- 4) Brief community relations event like introducing innovative solutions, achievement in a village work, newly married couples etc.

Evaluation

Through attendance and participation.

Out of 10 marks, attending of 14 prayers will provide 7 marks and 3 marks will be for contributions either on the stage or supportive level.

Ref. A compilation of inter-religious prayer songs and developmental songs will be provided to each student.

Note : For PG courses the level will be higher.

Part II : Stalwarts' Advice

PREFACE

A National Workshop on “Integrating Human Values in Technical Education” was organized by the National Resource Centre for Value Education in Engineering, IIT Delhi from March 14-16, 2002. In order to get guidance in this novel and difficult task, we carried out a consultation with the masters and visionaries who have contributed immensely towards inculcation of human values in the society at large; or have been successfully running value education programmes in their institutions. A short questionnaire (with just four questions) was prepared to elicit their views on a possible scientific (rational) framework for universal human values, practical strategies to inculcate values among youth, effective way to enthuse young students to imbibe universal human values in their life, and the manner they/their organization could help us in our endeavour. The questionnaire (copy included at the end of the booklet) was mailed sometime in February 2002, and by the beginning of the workshop we had received about 15 responses. A few responses were received late, and finally we had 19 responses in all. It was a highly heartening response considering the short time that we could give and the busy schedules of all the respondents.

In view of the great importance of these responses, we are publishing these separately as an adjunct to the proceedings of the workshop. A brief summary highlighting the views expressed has also been prepared to help assimilate the unity in apparent diversity of the views, which can be summarized in the form of key guidelines enumerated below:

- (i) An in depth comprehension of the unity and interconnectedness of all existence could be a solid foundation for universal human values like love, compassion, honesty, truthfulness, non-violence etc.
- (ii) Education should be relevant to the totality of human existence and discussion of larger issues related to living and life should be a part and parcel of curriculum.
- (iii) Value inculcation essentially boils down to changing the habits and managing negative emotions like anger, greed, jealousy, ill will, hatred, lust etc.
- (iv) The teachers have to act as role models, and therefore, should earnestly attempt to practice what they teach in the classroom.
- (v) Exposure to suffering people—be these in slums, hospitals or schools for physically/mentally challenged children—can increase sensitivity to others’ suffering and compassion.

- (vi) The students should be encouraged to intellectually analyse the implications of transgressing human values so that they can truly appreciate that these values are like laws of nature which have to be obeyed for leading a happy and peaceful life.

We hope this will act as a valuable pole-star for all the academicians interested in promoting value education. We are extremely grateful to all these luminaries for sparing their valuable time and giving us valuable insights from different perspectives into this vexed issue of education in human values.

Prof. P.L. Dhar
Prof. R.R. Gaur

Summary of the Responses

We have prepared a brief summary of the responses received from the stalwarts in value education to bring out, what in our opinion, are, the central themes emerging from individual responses. This, we hope would facilitate appreciation of unity in apparent diversity of views expressed in various responses.

These responses have been summarized in accordance with the four questions raised in the questionnaire sent to the luminaries, and included at the end of this booklet.

Q-1. What in your kind opinion, would be the scientific framework to understand human reality and human happiness which can be universally acceptable and free from dogmas, which can form the foundation of universal values?

Most stalwarts agree that while it should be possible to arrive at a set of universal human values – like love, compassion, honesty, truthfulness, service, non-violence etc.—the reasons for adopting these could differ. It doesn't seem necessary to search for a single, universally acceptable logical and rational framework for these values, though some themes occur recurrently in these responses. Thus it has been pointed out by many respondents that happiness being a subjective experience, is not a simple by-product of material well being or success. It is dependent on the satisfaction of physical and social needs as also spiritual fulfillment. Our present knowledge framework, is principally materialistic and this is also reflected in the kind of education imparted in schools and colleges. There is a need to examine the nature of human existence in its entirety-which includes not just the physical body, but also the mind with its thoughts, feelings, relationships and emotions, and the consciousness. Such an analysis could provide a foundation for universal human values (UHV). In fact even a very rudimentary analysis of our life's experiences reveals that basic human values are needed for my happiness. Thus UHV become like laws of nature which need to be complied with to ensure our own happiness, which is coterminous with the happiness of others. Unity and oneness of existence is another recurrent theme in these responses. An in depth comprehension of this fact is suggested as a possible foundation for UHVs. This brings about a transformation of ego-centric man to "Universal-centric" person who quite naturally will lead a life in tune with universal human values since, for him, none is "other". Following Gandhian thoughts – the eleven 'vows' (ekadasa vrata) and avoiding the seven sins-has also been suggested as a basis of education in human values.

Q-2. What are the practical strategies to inculcate human values among modern youth and intellectuals and how these could be integrated in the present education system?

Value inculcation essentially boils down to changing the habits, managing the negative emotions like anger, greed, jealousy, ill will, hatred, lust etc. Quite naturally, many respondents have suggested incorporating Yoga, prayer and meditation as a part of educational process as a practical strategy for value inculcation. However, care needs to be exercised while choosing the kind of prayer, and even meditation, so that these are universally acceptable and have no sectarian religious overtones. The importance of having truly motivated teachers of value education has also been highlighted in many responses. The teachers have, in fact, to act as role models, and should therefore earnestly attempt to practice, what they teach in the classroom. Proper training of teachers is thus a pre-requisite for introducing education in human values.

Study, discussion, analysis of inspiring books, novels, biographies and autobiographies, films etc. can also be very helpful in motivating students to reduce selfishness and adopt a more altruistic world view. Modern education ignores everything that is not "matter" and cannot be measured. There is a need to change this and evolve a model of holistic education which could draw in a systematic and logical way from both the methods of science and the insights of spiritual masters. While it is necessary to use scientific temper to weed out dogmatic ideas and superstitions, ignoring the spiritual dimension altogether from education is illogical and unscientific. Education should be relevant to the totality of human existence and discussion of larger issues related to living and life should also be a part and parcel of the curriculum. A study of the values inherent in the constitution of India has also been suggested as a non-sectarian and yet efficacious method of sensitizing the students about UHVs.

Another point which is implicit in most responses, and is also explicitly stated by a few, is that the school/college schedule must provide congenial atmosphere and sufficient time for meditation/prayer/study of inspiring literature etc. everyday- a suggestion being about half an hour at the beginning of the day and half an hour at the end. Value inculcation can also be catalyzed by facilitating students to do community service, help under-privileged sections of the community (even within the same educational institution). Exposure to suffering people – be these in hospitals, prisons, special schools for visually, physically and mentally challenged children, etc. – also helps reduce the "me-centric" vision and increases sensitivity to others' suffering and compassion.

Q-3. What is the most effective way of enthusing young students to develop a genuine urge to become life-long aspirants for imbibing universal human values in their lives?

The responses to this question overlap substantially with those of the previous question regarding strategies for value inculcation. Thus it has been again suggested that to enthuse students to develop a genuine urge for imbibing

UHV's, teachers need to be role models. Students should be exposed to centers where abandoned, physically and mentally challenged children, old and ill people are being taken care by committed persons. Reading inspiring life stories of great men is again suggested as another potent method of enthusing young students. Another suggestion, specially suited for science & technology students is to present a critique of technology in the light of humanism.

In order to create 'faith' in values, the students should be able to intellectually analyse the impact of these values in their daily life—they should be able to "see" for themselves what the life with human values and without human values can be. We need to convince youth that leading our life in tune with UHV's would make the world a better place. There is a need to create opportunities for such discussions both within and outside the classroom.

An interesting observation made by one of the respondents is that if the strategies for value inculcation are effectively implemented, the students would experience positive "changes" in themselves—in their attitudes, aspirations, goals, behaviour—and they would then automatically stick to the values.

Another important suggestion is to evolve methodologies to recognize "character-contributions" rather than competence achievements alone.

Q-4: What role can your organization play in this endeavor?

It is heartening to see the response from stalwarts to this question. All have volunteered to help in a variety ways ranging from preparation of course contents and resource materials for specialized courses, exposing students to rural industries, conducting self development workshops and youth training camps for students to teaching meditation to students and teachers.

We would surely like to make the best use of these generous offers to develop and implement an effective EHV package for engineering students.

List of Stalwart :

1. Shri Jyoti Bhai Desai, '*URMILA*'- opp.- *Gandhi Vidyapith*, Surat-394641.
2. Shri Bhopal Chand Lodha, *Anuvrat Mahasamiti*, Deen Dayal Upadhyaya Marg, New Delhi-110002.
3. Shri S. N. Goenka, *Vipassana International Academy*, Dhamma Giri, Igatpuri, India-422 403.
4. Om Poorna Swatantra, 280, *Bank Enclave*, Laxmi Nagar, Delhi-110092.
5. Swami Bhoomananda Tirtha, *Narayanashrama Tapovanam*.
6. Ms. Farida Vahedi , Coordinator, *Secretariat for the Promotion of the Discourse on Science*, Religion and Development.
7. Prof. M.R. Chilana, *Servitors Association of Value Education*, Janak Puri, New Delhi-58.
8. Mr. Sunil Kumar, Coordinator, *Value Education, Ramakrishna Mission*, New Delhi.

9. Father T.K. John S.J., *Vidyajyoti*.
10. Shri S.V. Giri, I.A.S. (Retd.), *Sri Sathya Sai Institute of Higher Learning, Anantapur Dist. , A. P. – 515 134.*
11. Shri Siddharaj Dhadda, *Chaura Rasta*, Jaipur-302 003.
12. Shri M.R. Rajagopalan, *Gandhigram Trust*, Gandhigram -624 302.
13. Shri Rishi Prabhakar, *Rishi Samskruti Vidya Kendra (R) Head office:* Bangalore.
14. Dr. Pranav Pandya, *Dev Sanskriti Vishwavidyalaya*, Shantikunj, Haridwar, Uttranchal.
15. Shri Pattabhiram, *Sadhana Sangam*, Bangalore.
16. Dr. Harish Chandra, *Dayananda Institute of Vedic Studies*, Secunderabad, Hyderabad 500 094 :
17. Shri R.C. Sekhar, Management Consultant, Professor Emeritus, *T.A. Pai Management Institute*, Manipal.
18. Mr. C.B. Samuel, *Partner in Mission South Asia Region*, Vasant Kunj, New Delhi-110 070.
19. Shri Nagraj, Bhajnashram, *Narmadanchal*, P.O.-Amarkantak -484 886.

CHAPTER - I

Shri Jyoti Bhai Desai

'URMILA'- opp.- Gandhi Vidyapith, Surat-394641

Q. 1. Framework for human values?

Foundation of universal human values:

1. Reverence for all Life and Creation
2. Non-violence—love
3. Frugality
4. Solidarity
5. Cooperation
6. Hope for all
7. Resistance to temptation

The above values (could) should form the basis of humaneness.

"There is enough for everybodys' need, but not for everybodys' 'greed' "—
Mahatma Gandhi covers all the above values.

To Elaborate:

'The choice is no longer between violence and non-violence. It is between non-violence and non-existence' — Martin Luther King

Every gun that is made, every warship launched, every rocket fired signifies in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed.—D.Eisenhower.

Q-2. Strategies to inculcate human values?

1. The basic approach is to develop the understanding that:

- (i) one has to learn how to learn
- (ii) one has to be:
to grow-self confident
- (iii) one has to become:
to have positive self image, psychological stability.
to adapt to real life (flexibility, adaptability)
to take responsibilities in a creative and critical spirit.
to work harmoniously in teams in all environments.
to be able to listen to others

to participate not only in local, but also in the national and international community.

2. National Institute of Design (Ahemdabad) and Industrial Design Centre (IIT Powai) have real good experiences with groups and individuals-to seek solutions to basic needs and problems-worth evaluating
3. Faculty has to live up to these values.
(Acharan)
4. All decisions at an educational institution to be based on consensus.— including students-admissions also.

Q-3. How to develop genuine urge for human values?

The answer is well covered in Q2 above.

If only one becomes a good **listener**, allows 'the other view-point' a chance, a space, in one's own scheme of things'!

Q-4. How can your organisation help in the endeavour?

Our youth training camps ranging from 5 to 15 days could be worthwhile exposures. Our groups go to meet the challenges that Nation faces-be it man-made or natural disasters.

CHAPTER - II

Shri Bhopal Chand Lodha

Anuvrat Mahasamiti, Deen Dayal Upadhyaya Marg,
New Delhi-110002

Q-1. Framework for human values?

Spirituality (not religious dogmas) if integrated with regular course curriculum of education, can play an important role in development of positive values in human beings. Human beings have both negative and positive values and these are governed primarily by emotions and mental realms. The emotions and mental realms are governed by endocrinal glands situated in different parts of human body. These glands secrete hormones and the nature of the hormones depends upon thoughts at that particular time. There is an intricate relationship between hormones, parasympathetic and sympathetic nervous systems and neurotransmitters; and negative & positive human behavior. Scientific research supports the role of such physiological activities and its direct relationship with human happiness, human values, love and hate. The nature of the physiological activity varies with the circumstance and is responsible for varied human behaviour and actions.

Q-2. Strategies to inculcate human values?

Yoga and Meditation have a direct effect on the physiology particularly the endocrinal activity of human beings. On the basis of this knowledge, Acharya Sri Mahaprajna has developed a new subject and named it "Science of Living". This subject covers the theoretical aspect which governs values, reasons of varied human behaviours, human anatomy, endocrine system, physiology and how the physiology be modified with the help of Yoga and Meditation and how as a result of this, an overall improvement in human health, thinking and behaviour is achieved. The subject covers both theory and practicals. This subject has been introduced in many schools, colleges and universities and its practical application has been tested by many Medical Practitioners, Hospitals and Institutions including All India Institute of Medical Sciences, New Delhi.

Q-3. How to develop genuine urge for human values?

A scientifically based system, which has a potential for development of positive values, if introduced in course curriculum, can help the young students to understand the values of life and if they once understand it, they will take interest in their own self-interest. Many human behaviors are inherent in character and, unless they are modified by some positive way, theoretical teachings alone cannot

go a long way. When theory is combined with the practical, a good result is experienced even in a single day, the interest is created and once scientific basis of the improvement is understood, the interest in this subject naturally increases and if this process of practices continue for some time, as our experience shows, the interest in it can become a life-long-endeavour.

Q-4. How can your organisation help in the endeavour?

Our Organization alongwith Jain Vishva Bharati Institute (Deemed University) can help in formulation of a syllabus and in providing detailed theoretical and practical knowledge. If needed, we can even send our trained persons for help in organizing practicals.

CHAPTER - III

Shri S. N. Goenka

Vipassana International Academy, Dhamma Giri,
Igatpuri, India-422 403

Q-1. Framework for human values?

To remain happy and peaceful is an innate wish of all human beings. Unfortunately we, in our ignorance, inflict misery or suffering on ourselves. The four noble truths as expounded by the Enlightened One give a rational, scientific and universal exposition on this human predicament and the way to get out of it and thereby experience real peace and everlasting happiness.

I think it is not difficult for a well-trained teacher to explain to the students how to analyse their personal experiences of life to discover for themselves the primary cause of the suffering, viz. strong craving for transient sensory pleasures and aversion towards unpleasant experiences. The way out also becomes self-evident, viz. giving up of these tenacious habits at the very root level of mind. However, to be able to actually do so we need to understand that these cravings and aversions are not towards the external objects themselves (as these seem to be prima-facie), but towards the somatic sensations produced as a result of evaluation of the stimuli on our senses as pleasant/unpleasant. This can only partly be explained intellectually. A real appreciation comes only after developing the ability of deep self-observation.

Universal human values like truthfulness, non-violence, kindness, generosity, tolerance, forgiveness, good-will etc. are the innate characteristics of a pure mind — a mind free from cravings and aversions.

Other frameworks (social contract etc.) justifying the need for imbibing these can always be questioned. The fact that these are coterminous with our own happiness seems to me the most effective framework.

The best framework is one where each student becomes a scientist of mind, and learns from his experiments within that —universal human values are not merely a societal obligation but a sine-qua-non for a happy life. Vipassana offers a systematic, practical, scientific tool for such a research on misery and happiness.

Q-2. Strategies to inculcate human values?

Practice of self-observation and self-awareness at a very deep level is the most scientific and practical strategy of value inculcation. The students can learn this art in a 10-day Vipassana meditation retreat. Here the students practice equanimity at the root level of somatic sensations and this gradually purifies the

mind of the dross of cravings and aversions. Verifiability is an important characteristic of any scientific experiment. With the practice of Vipassana, they can experientially verify the fact that universal human values are natural characteristics of a pure mind.

To integrate it in the educational system, you may send the fresh students admitted every year to your college to sit for a 10-day Vipassana meditation course before they begin their formal education and then create an opportunity for them to meditate everyday morning and evening. Let the first and last period everyday be for meditation and wonderful results will be there for all to see within a few months. I can say this with confidence on the basis of the feedback from thousands of students and their parents practicing Vipassana throughout the world.

Q-3. How to develop genuine urge for human values?

If the teachers can become the role models-they practice what they teach-that will be a great inspiration for the young students. The students will meditate only if they see their teachers meditating. Even more importantly, there should be visible differences in the behavior of such teachers-they have to epitomize the values which the students are advised to follow.

You should also create opportunities for the students to discuss and analyze the consequences of ignoring the universal human values and getting carried away by the 'animal instincts' of seeking transient pleasures. But real motivation of the kind you seem to be seeking can come only if they regularly practice Vipassana for a few years, for then all these 'consequences' can be experientially appreciated.

Exposing the students to the goodness in society, the work being done by so many dedicated individuals and organizations, may also help in dispelling the cynical attitude and inspiring them.

Q-4. How can your organisation help in the endeavour?

We have over 30 centres all over the country where Vipassana camps are regularly organized throughout the year. The students and teachers can be sent to any of these centres for learning this art of self-observation.

Special programmes are also organised for students of institutions, whenever a special request is made. For last few years MBA students of Symbiosis Institute of Management, Pune have been coming in large groups to undergo this training.

We have also started organizing special workshops for college/school teachers on "Value inculcation through Vipassana". This year the workshop will be held in Delhi from June 8-22. If special request is made, more such workshops can be organized.

CHAPTER - IV

Om Poorna Swatantra

280, Bank Enclave, Laxmi Nagar, Delhi-110092

Q-1. Framework for human values?

- Shift the focus of life from matter to man. In this original human entity matter and spirit, means and values, power and wisdom stand naturally integrated.
- This new worldview would have a revolutionary impact on the entire human system: it would re-structure not only the traditional form of spirituality but also the modern form of science. As a result of integration between science and spirituality, a new Science of Life would emerge which would be able to meet the requirements of third millennium man
- Of course, it would naturally be universal as science, you know, is only universal. There is no place for dogma and rituals in it.
- This science of life would be devoted to discovering the ever deeper realities of man,—man is not a fixed and finished entity. He is ever growing and ever enlarging unit of life, he is the nucleus of the Cosmos encompassing two 'infinities' simultaneously: objective infinity of Nature with which science deals and the subjective infinity of Spirit and consciousness with which spirituality deals.
- As a result of this integral development the scientific attitude and approach would be synthesized with spiritual vision and technological skills would be coupled with values of life; -one must fundamentally realize that values are the natural attributes of a particular level of consciousness (which you call spiritual). Therefore, unless you develop consciousness up to that level, you cannot have genuine values in life. Until then you would have to manage with the second-hand, third-hand product, call it by any name: human values, moral values or social values. So to be true to scientific spirit you, the scientific community must undertake to develop the spiritual consciousness of man and this endeavour must be incorporated in the education system.

Q-2. Strategies to inculcate human values?

- As a scientist, you would appreciate that like the properties of an element or compound, the values too are inherent qualities of a particular consciousness. Therefore, the scientific approach to the issue of developing values in the life of man, the students in particular, is the unfoldment of that particular range of consciousness. Inculcation through

instruction is not very effective way, personal example, of course, does produce some result. But the overwhelming value that modern society has placed on wealth sweeps us off the ground. Unless the life's value scale is changed and a balance between means and morals is restored, we cannot hope to achieve the desired results.

- I, therefore, request you Sir, that the scientific community should not try to go the social way of teaching, preaching, it must follow its own path of scientific research and development and apply that method in the field of spirit and consciousness.

Q-3. How to develop genuine urge for human values?

The development of man and building of the world around him should be the new prospective to create a balanced, integrated and harmonious future. If man, or the youth for that matter, is kept rooted in himself, there cannot be an end to his growth and development since his potentialities are practically inexhaustible.

Q-4. How can your organisation help in the endeavour?

We are exclusively consecrated to the cause of human unfoldment. Our services, as per our capacities, are universally available to all. And what we have stated above is the core of the approach we are following.

CHAPTER - V

Swami Bhoomananda Tirtha

Narayanashrama Tapovanam

Q-1. Framework for human values?

Rational consideration will reveal that at any time human life and its values are at once eternal and contemporary. The most ancient man and his society as well as those of the present are intrinsically the same. Our body continues to have the same five senses of knowledge and five of action. The mind also harbours the same emotions. The object world around remains the same, with earth, water, fire, air and the space reigning unchanged. Man-made things, however sophisticated and powerful, do not alter this basic fact. This unaltering character of life and the world must be the base for all values any time.

Life is a constant interaction between the senses and the objects. All interactions originate at the level of consciousness within one's body. Employing the senses and gaining their immediate ends, they come back to the same inner source. This nature of the interactions continues without change.

Happiness, unhappiness or any other emotion, resulting from interactions, is solely internal, generated by the mind-intelligence complex. Thinking, understanding, feeling, etc. are properties of the conscious inner Being, not of any material constituents of the world around. The human becomes essentially spiritual for this reason. The happiness he seeks and gains is also essentially spiritual.

Happiness is thus undoubtedly subject-based. No object ever enters the mind physically to generate joy. Mind alone weaves its relationship and identity with the outside objects to create one's happiness or unhappiness. Once this is known and appreciated, the emphasis of the quest and pursuit of happiness is bound to shift from the external causes to the internal mind. And this is the great lesson for all.

It is important that values have to be discussed and disseminated rationally, divesting them of the conventional religio-moral tones, although not all the exponents are able to do this. Students being taught to be rational and scientific right from primary classes, will naturally yearn to have the same norms for value learning too. Their attunement in this regard is to be appreciated and taken care of.

Discipline and regulation, refinement and integrity, commitment and dedication, expansion and fulfillment— all these are words representing mento-intelliential values, which none can disclaim, disallow or disregard. As long as

the human has his mind, intelligence and heart, these cannot be questioned or invalidated. Expose the 'Subject'-science, the Science of the Presence Within, to the students in this light. Then their reception, pursuit and expression will be inevitable. When right knowledge is given, the recipients cannot but honour and pursue it.

Q-2. Strategies to inculcate human values?

These are, of course, to be effectively developed. The question is – are you teachers sufficiently aware of the need and the process? Do you also have the natural compulsion to take up the mission?

The primary and ultimate means is to expose the recipients rationally to the need, structure and irrefutability of values, showing (i) how they are applicable, nay indispensable, in every field of interaction and (ii) how they enrich and empower life ensuring happiness and stability.

Study of the bhagavad-gita—without projecting it with any religious bias—will fulfill this requirement amply. The text is part of the history of the rulers of Kuru Dynasty. The scene was the war front, a field of fierce, intense action. Added to the severity of the mission was mental and emotional (moral) confrontation Arjuna felt in front of his grandfather and teacher. But for the gospel, which essentially deals with the mind and intelligence, Arjuna could not have proceeded with his difficult mission. I consider Bhagavadgita to be an administrative gospel. It is first and last secular, interactional and objective.

Q-3. How to develop genuine urge for human values?

The structure and fullness of life have to be explained thoughtfully as a vital input of knowledge to inculcate right thinking. A university is a place of learning. The study of the visible world and its objects, constitute but the exterior counterpart. The interior counterpart is even more important. The two together make life. To ignore either is unrealistic, fatal, and implies incompleteness.

Objects, including our body, subsist upon the subject within. But the subject does not subsist on anything else. This makes us think of the independence of the Subject, and the real nature of the objects.

Religion and God are a quest and outcome of the mind and its emotion. The Supreme Reality, called Brahman, is likewise a quest and finding of the intelligence. The Spirit or the Self, the Atman, is the life and content of experience, knowledge and 'intuition', when the world is rightly understood.

All these three are verily one. Brahma Vidya is the name our land has given to this sphere of knowledge, emphasizing that the knowledge before man is twofold: the object knowledge and the Subject knowledge. Object-knowledge is lower, transitory in nature and results. The Subject knowledge is higher, eternal in nature and outcome. Brahma Vidya deals with and exposes the higher knowledge. All study and values of human life come within this.

Character, behaviour, inter-personal relationships and the like come under the Subject knowledge. This is not hard to understand. For, words like goodness, fidelity, dependability, trustworthiness, confidence, commitment, dedication, integrity, ideal, value, to speak but of a few without which the individual or social life can never be thought of, these do not refer to the bodily part of man. They clearly refer to the internal part which is distinct from the body. Our language and communication would never be complete or functional without such words and the qualities they denote.

Where is then the option to neglect the study of the inculcation of Values and their role in human life and interaction? Adherence to them is indispensable. It is like constructing the walls of a house perpendicular to the earth's surface. For the welfare and stability of the mind, and for realization of happiness, harmony and fulfillment, values alone can help. Effectiveness in imparting this depends upon the teacher or the exponent.

Q-4. How can your organisation help in the endeavour?

We are already doing our part. I have been moving within our country and abroad, as an open university for nearly 45 years, interacting with students of all ages and backgrounds without distinction. The 8-year old as well as the 80-year old sit before me. They learn the same thing, but dressed in a language and level suitable to each.

We can help more if the different centres of learning realize that the true ascetics are treasure houses of value education and they have a place in their programme. I have spoken from a variety of platforms- namely, various Management centres, Rotary clubs, Lions' clubs, Police training programme, Defence Service Meets, Assembly of Doctors and Scientists, School teachers and students, Colleges, World Bank(USA), AT & T Bell Labs(USA), not to speak of the usual religious, spiritual, philosophical assemblies and our own Brahma Vidya Centres.

People with ascetic embellishment should be sought to inspire, initiate, and empower the students or the seekers of values, thereby allying the ascetic and renunciational merits to the functional pragmatic levels. Ascetics excel in their exclusive elegance of '*profession*', as different from what features in professors appointed and remunerated by Government and non-Government bodies. Unappointed, unrecognized, yet approached and yearned for by a variety of people, the ascetic stalwarts always derive their inspiration and compulsion spiritually—as opposed to the usual professional remuneration and rewards.

CHAPTER - VI

Ms. Farida Vahedi

Coordinator, Secretariat for the Promotion of the Discourse on Science,
Religion and Development.

Q-1. Framework for human values?

Human happiness, security, social harmony, justice and economic opportunity are not simple by-products of material success. Rather they emerge from a complex and dynamic interplay between the satisfaction of physical and social needs and the spiritual fulfillment of the individual. It must be recognized that the great majority of the world's people do not view themselves simply as material beings responding to material exigencies and circumstances, but rather as moral beings concerned with spiritual awareness and purpose. Indeed, the source of energy, insight, and confidence that gives rise to the individual and collective action, that awakens capacities for constructive change, that promote patterns of community learning and empowerment, and that provides a dynamic, self-sustaining sense of social purpose, flows from the stirrings of the human spirit.

Social advancement, we know arises from the ideals and shared beliefs that weld society together. Meaningful social change results as much from the development of qualities and attitudes that foster constructive patterns of human interaction as from the acquisition of technical capacities. True prosperity—a well-being founded on peace, cooperation, altruism, dignity, rectitude of conduct and equity—flows from the light of spiritual awareness and virtue as well as from material discovery and progress. From this vantage point, the entire enterprise of civilization itself can be viewed as a spiritual process involving the progressive awakening of humanity's moral and creative capacities.

The challenge before us, then, is to extend our thinking beyond a knowledge framework that is principally materialistic in character to one that truly examines the nature of a human existence in its entirety. What is called for is a fresh exploration of the connections between our rational faculties and those spiritual qualities of nobility, goodness and beauty that inspire us to action.

Clearly, the set of capacities necessary for building up the social, economic, and moral fabric of society depends upon the resources of both mind and spirit. The civilizing virtues of honesty, duty and loyalty so central to human progress are cultivated by the language of the heart and the voice of conscience. These values cannot be determined or derived solely from science or reason, let alone fostered within people without reference to those tenets and belief systems that

provides a vision of life and society. The religious sources of human values cannot be denied. It becomes apparent then that the processes of social advancement must depend on the two knowledge systems of science and religion. In discerning this point, it certainly must be understood that scientific methods and religious insights are equally susceptible of being distorted and misused. But this should not prevent us from acknowledging that science and religion are complementary avenues for discovering and understanding reality; they are both tools that enable human beings to apprehend truth. To avoid the investigation of the spiritual roots of human motivation is therefore not only untenable, but non-empirical and unscientific.

From the vantage point of history, the world's great religions can be seen to be one in their nature and purpose with each being a wellspring of knowledge, energy and inspiration. They each have served to unlock a wider range of capacities within human consciousness and society — a process that has impelled the human race toward moral and spiritual maturity. In Short, the core spiritual values held in common by the world's religions contain within them the principal means for the reconciliation and advancement of the earth's peoples. Through these values and the commitment they inspire, "Minds, hearts and all human forces are reformed, perfection are quickened, sciences, discoveries and investigations are stimulated afresh, and everything appertaining to the virtues of the human world is revitalized."

What is at issue here is not religiosity of any particular kind, but rather a serious examination of how the rational and spiritual dimensions of human experience can constructively interact to promote peaceful and progressive patterns of collective life. In this regard, a practical starting point might involve a research effort to better understand the common values of the major religious systems, so as to formulate an effective and engaging non-sectarian curricula.

Q-2. Strategies to inculcate human values?

The task of creating a culture of rectitude and integrity is intimately bound up with a process of moral and spiritual development. Education, then, emerges as an indispensable tool— a tool of active moral learning. Educational programs must strive to develop an integrated set of human capabilities— intellectual, artistic, social, moral and spiritual. There is no other way to raise up positive social actors who are builders of amity and agents of service and probity.

Educational curricula cannot therefore be solely concerned with the knowledge of physical and social phenomena, but must also be directed toward the goal of moral and spiritual empowerment. As a consequence of the deep connection between individual and social well-being, programs of education need to instill in every student a two-fold moral purpose. The first relates to the process of personal transformation — of intellectual, material and spiritual growth. The second concerns the complex challenge of transforming the structures and processes of society itself. To pursue this dual purpose of individual and collective transformation, specific moral capabilities must be developed. The capabilities of

a moral person encompass the concepts, values, attitudes, and skills that enable the person to make appropriate moral choices and to promote creative and cooperative patterns of human interaction. Underpinning all such capabilities in a commitment to discover and apply truth in every domain of human endeavor. Since moral behavior is a concrete expression of humanity's spiritual nature, moral education efforts should draw in a systematic way on both the methods of science and the insights of religion.

Q-3. How to develop genuine urge for human values?

Because of the unique position of IIT students, it should be stressed that as future leaders of Indian society they have a responsibility to act as catalysts of meaningful social transformation. At a general level, this implies adopting and developing an ethic of service to the wider society, and of being agents of social justice and social progress. Because of their particular capacities in science and technology, IIT may wish to initiate programs that encourage students to assist and empower local communities and villages in becoming capable of making appropriate technological choices— of developing the capacity for defining technological need as well as technological innovation and adaptation. Such a programme should ensure that students promote a process of technological decision-making that is directly guided by local perceptions and values so that superfluous uses of technology are avoided.

Q-4. How can your organisation help in the endeavour?

The Secretariat for the Promotion of the Discourse on Science, Religion and Development would be happy to explore further any of the themes mentioned above. We would be pleased to make a presentation on the underlying concepts of the science, religion and development discourse to IIT faculty and students. We would also be pleased to share some of our own experience in the areas of value education and moral leadership training.

CHAPTER - VII

Prof. M.R. Chilana

Servitors Association of Value Education,
Janak Puri, New Delhi-58

Q-1. Framework for human values?

A Scientific Framework to understand human reality and human happiness is based on the sole realization that every thing in the world is based on and is, in fact, CONSCIOUSNESS. As F. Capra asserts in, 'The Tao of Physics', even an object is consciousness solidified. When all is consciousness, how can one harm the other because, in ultimate analysis, that is none other than self. Even for human progress and happiness, there is need for mutual and interpersonal dependence. Newton's 3rd Law of Motion, stating that every action has equal and opposite reaction, is supportive of Doctrine of *Karma* which proves, 'As you sow, so shall you reap'. All researches and investigations in the progress of humanity and human distress to be removed, emphasize the need for team work, democratic living, spirit of service and respect for every individual. So universal values should be the foundation of all actions of an individual.

Q-2. Strategies to inculcate human values?

Before discussing practical strategies, the national workshop may reflect on importance and need for values in one's life and the Value Content to be integrated in technical education.

The practical strategies to inculcate human values among the modern youth and intellectuals should, as far as possible, refrain from *indoctrination*. As I have mentioned in my books, 'Value-orientation of Education: Significant Indian Experiments' and "*Manav-Mulyon Ka Prashikshan: Ek Gambhir Samasya: Kaise Nipte*,". It is good to teach values directly; better to teach them indirectly; but it is the best to teach them by presenting role models. The aspect of indirectly teaching values through games and 'story playing' is demonstrated in the programmes of Servitors' Association of Value Education. My booklet on, "Daily Appointment with yourself," focuses on introspection and practical exercises to know the self.

Q-3. How to develop genuine urge for human values?

The most effective way of enthusing young students to develop a genuine urge to become life-long aspirants for imbibing universal human values in their lives is to create a deep faith in these values. On the cognitive side they should be able to analyse the impact of these for them to 'grow and glow', 'to know and sow' and 'to be and make'. These are highlighted in my book entitled "Teacher

Equipment for Quality Education". The Youth should also develop the skill of not only value adoption, but value creation which will strengthen self motivation for whole life.

Q-4. How can your organisation help in the endeavour?

The Servitors Association of Value Education is committed to work on all related aspects and in all realms of life. As such, major aspects are: -

- Identification of the sources and nature of human values.
- Development of suitable methodologies and evaluation of values in all types of educational institutions.
- Preparation of Textual Materials wherever needed.
- Integration of human values in all types of programmes viz. schools, colleges, engineering courses, medical and other profession training programmes.
- Integration of human values in all types of social institutions including business and politics.
- Awareness of the present anti-value atmosphere and how to cope up with the situations to clear the way for value education.
- To prepare leaders in all spheres of life to mount programmes of value education to help every one understand human reality and to lead in creating human happiness.

CHAPTER - VIII

Mr. Sunil Kumar

Coordinator, Value Education, Ramakrishna Mission,
New Delhi

Q-1. Framework for human values?

It is a universal principle that unless we know the total and holistic picture, any judgement we make based on a partial view can never be relied upon. It will be like six blind men holding different parts of the elephant and passing judgement based on their partial and limited view.

We know knowledge is infinite and we know that the finite can never ever comprehend the infinite. And yet we glibly believe the so-called logical and rational scientists with finite knowledge-base, but ignore the words of wisdom of the ancient Rishis, the seers who saw the whole truth. Every scientific discovery is validating the *upanishadic* truth of the unity of existence. So this concept of unity and oneness of all existence alone can be the foundation of universal human values.

Let us see the logical and holistic analysis of the *upanishadic* rishis:

- (a) Subject of discussion: Unity of all existence

The entire universe can be divided into three entities: *Jagat; Jeeva and Brahman*

At first glance they look different from each other, but it will be shown that they are in fact one, and God alone is the one reality.

- (b) Utility: *Ananda*. Bliss

What will I gain from studying this subject? Bliss. If we understand the subject of discussion then we will be free of all *dukha* and realize our true blissful nature.

- (c) Connection: Only when you realize the unity of existence, you will get *ananda*. There is no other way.

- (d) Competency: Will anyone who listens to the subject understand it?

No. Some specific, universal human values are to be acquired.

These are (i) *viveka* (ii) *vairagya* (iii) *mumukshutwam* (iv) six human values: *sama; dama; upratti; titiksha; sraddha and samadhana*

Methods of Knowing:

There are three methods: Direct Perception; Inference and Comparison. For knowing the infinite God, none of these methods apply. No finite mind can

perceive the infinite; infinite can never be inferred by the finite or compared with the finite. Therefore, by sheer logic we reach the conclusion that there is no way whatsoever, for a finite person to know the infinite. The only method available is to believe the words of a Guru; follow his advice and then ourselves realize the unity of existence. But how did the Guru know? From his Guru and so on till we come to the beginning of creation itself. The logical question now is : How does the first man know? And the only logical answer is: the infinite alone must come forward and reveal its nature. This first 'telling' are the spiritual wisdom rediscovered by the first men of creation-the Vedic rishis (and not monkeys) in their meditations and contained in the Vedas, which means spiritual wisdom. That is why the Vedas are said to be divine in origin, and not man made. The essence of the Vedas is the Vedanta, or Upanishads. The Vedanta is not religion like Christianity, Islam, Buddhism etc., which owe their authority to one God, or one Prophet and one Scripture. The Vedanta is just natural laws, universal principles. We can therefore use it in our education system. At least we all accept that the Vedas are the most ancient scripture known to mankind and therefore we can study Vedanta as our common heritage. The moment we come to this logical conclusion doubts are raised. Let us recognize that the Vedas are not only for us, but belong to all mankind as the mother of all religions and are not to be connected to any one religion.

Proof of Divinity of the Vedas:

1. No one has claimed the authorship of the Vedas.
2. Not only every word of the Vedas but every syllable and the note for its recitation is fixed.
3. Vedas are immense. If it were written, it will run into millions of pages.
4. There are no contradictions in the Vedas inspite of its size.
5. It could not have been written by different people in different time because then contradictions were bound to creep in.
6. Certain facts are given in the Vedas, which we are finding out only now. How did the Rishis know: The Antarctica, for example, was found in 1911 but is mentioned in Vedas.

Vedanta, the essence of the Vedas, tells us that the cause of the universe is God and very logically and rationally leads us to understand the unity of existence and that in realizing this oneness alone we will have the bliss we are seeking.

The Bible says: The Kingdom of god is within you; the Vedas say: *Tattvamasi*-You are That; Swami Vivekananda says: Each soul is potentially divine. The goal is to manifest this divinity within by controlling nature external and internal. Do this through work, worship, meditation or knowledge, and be free. Doctrines or dogmas or temples or rituals are but secondary details.

Students can be encouraged to study the inspiring works of Swami Vivekananda, who has been declared by the GOI, way back in 1985, as the ideal of the Youth for our nation, for understanding the scientific framework of human reality and happiness and the foundation of universal human values.

Vedanta means the essence of all spiritual wisdom: To realize our oneness with all. It alone deals with eternal principles and guides all finite people towards the infinite. It owes its authority to no one man or one book. It is therefore the universal framework and foundation for human values.

Q-2. Strategies to inculcate human values?

Sadhana and swadhyaya are the time-tested methods:

We must first recognize that our every thought, word and deed leaves a *samskar* in our mind and thus we are governed by our *samskaras*. To change these is not easy and needs continuous struggle and effort.

The Colleges must provide time and space in the time table of say 20-30 minutes twice a day and encourage students to sit for prayers, meditation, study of inspiring books telling us of our true infinite, divine nature are the only way.

The students must be told the importance of *karma*. Western culture treats work as a means for *roti, kapada, makaan*. In Indian ethos, we are doing *karma* every second. *Karma* of work is our only opportunity to either go towards perfection or towards misery. The choice is ours. Therefore students must be taught that work must be done in a spirit of service and worship; it must be done for the good of the organization and society and not just for selfish reasons. We must strive for Quality and excellence in work. We must fulfill all our duties.

How to develop powers of concentration of mind, how to manage our negative tendencies, purpose of life and role of work in reaching it, are some concepts which students must be taught. Again works of Vivekananda can be made compulsory reading material for knowledge and for inspiration.

Q-3. How to develop genuine urge for human values?

We have to provide the time, space, opportunities and encouragement so that the students are made to read inspiring life and teachings of great men.

Since GOI has made Swami Vivekananda as the role model for the youth, and has declared his birthday on 12th January as the national youth day, and encourage study of his works, we can conduct quiz competitions, essays etc and even consider putting his books as part of curriculum for all technical and professional courses.

Q-4. How can your organisation help in the endeavour?

We will be happy to conduct Self Development workshop for students; facilitate setting up of study circles; identify selected books for study; help evolve programmes for *sadhana and swadhyaya*;

Facilitate whatever help is needed through Ramakrishna Missions.

CHAPTER - IX

Father T.K. John S.J.

Vidyajyoti.

Q-1. Framework for human values?

- a) The foundation for universally acceptable values is, to my thinking, the universally accessible human reason. Reason, further to it, is based on the human nature. A major component of the human nature is the transcendent 'Spirit', according to Indic and Christian worldviews, or 'anima' according to Aristotle. Hence the following values ensue: the Dignity, the Rights, the Freedom, Equality, and Justice. Free availability of these fundamental properties meets the fundamental needs of the human person and contributes to human happiness.
- b) Reason provides the base for a universal rational Ethics to govern human decisions and relationships. Its goal is the common good and fullness of the Person. Herein is the foundation, also, for planetary responsibility for the humankind.
- c) Socrates, the eternal Enquirer after and explorer of truth, told humanity that unlimited capacity of the human Spirit (mind) for unlimited Truth, yields unlimited happiness, indicating thereby that NOT setting limit or boundaries to the human spirit is a source of unlimited Happiness since truth is the 'feed' of the Spirit. This is definitely held a supreme HUMAN VALUE by humanity of all times. Search after truth is a supreme value.
- d) Value is regarded as normatively setting function of the human reason or conscience that always orients the human instinct towards what is good, true, beautiful and elevating. Following the value-instinct facilitates the growth and fullness of the human person and furthers human happiness.
- e) Creativity, proper of the human person, (the realm of the aesthetics, of the arts (novels, painting, poetry, music) and crafts (the realm of the kinetic), of inventions and discoveries-contribute to the human happiness. Therefore all that promotes unceasing search for Truth, all that is conducive to the promotion of human Dignity, endorses and nourishes Freedom, sustains Creativity, stand by supreme and even sacrificial Love, promotes self-negating Service and helpfulness to the other, such can be regarded as promoting human happiness.
- f) Supreme love, even sacrificial love, self-negating service of the other, uncompromising commitment to truth and honesty, regard and consideration for the needs of the others, the others, the all, perduring to duty in spite of obstacles-mark the nobility of the human reality. For the human person is always a subject, not an object or commodity for use or

Chapter - X

Shri S.V. Giri,

I.A.S. (Retd.), Sri Sathya Sai Institute of Higher Learning,
Anantapur Dist. , A. P. – 515 134

Q-1. Framework for human values?

The process of human evolution has reached a stage where scientific studies cannot be limited only to the gross or basic forms of evolution, but scientific enquiry will have to be extended to the process of psycho-social evolution eventually leading to the fundamental issues of the purpose of life itself.

The ancient Indian wisdom states that a human being is made of five *Koshas*: *Annamaya*, *Pranamaya*, *Manomaya*, *vignanamaya* and *Anandamaya*. It suggests the steps that humanity should take to achieve happiness. The *Koshas* could be interpreted both at an individual level and at social level. We have to move progressively from lower *Koshas* to higher *Koshas* to achieve harmony within and without. Efforts have to be made both at individual and collective levels.

Annamaya Kosha refers to the physical body at the individual level and the individual as a limb of the society at the collective level. It indicates the need of a healthy body and a clean environment. Health and hygiene must be the first and the foremost concern of the individual and the society.

Pranamaya Kosha refers to the life force. As breathing in and breathing out is a must for an individual to live, reacting and responding to the other living beings is a must for the society to survive. At the individual level, it directs for civility and at the social level civic sense.

Manomaya Kosha refers to the Mind. Mind of an individual is the source of all happiness or misery. It is the mind that needs to be controlled and directed along the right path. It is the responsibility of the intellect to control the mind at the individual level and the intelligentsia to guide the masses at the social level. If the intelligentsia gets corrupted then the society is doomed.

Vignanamaya Kosha refers to the wisdom. He is a wise one who knows the reality of human existence. All human endeavour is to reach this stage. The hallmark of this stage is *Trikaranasuddhi*-harmony of thought, word and action at individual level and care, compassion and concern for others at the social level.

Anandamay Kosha refers to bliss, the ultimate happiness. It is towards this goal that each one of us is moving individually and collectively. Till we reach this stage, we will see differences, confusion and conflicts. The realization of oneness will dawn upon us only when we realize this goal. The path to realization

may be a long one, but the knowledge of this ultimate Truth can help us in our conduct. We need to judge every one of our actions on the touch stone of this Truth.

Q-2. Strategies to inculcate human values?

The present education system is too narrow in its approach. It caters to only one aspect of human existence, the mind and the intellect to some extent. Human values cannot be inculcated without reaching higher levels of human existence. The traditional subjects are taught without giving the student the total perspective of the subject. This itself has to change at the first place. To change it, whatever else has to be changed, must be changed too (such as examination system, grading system, job prospects, syllabi etc.). The essence of the subject, its relation to other subjects, historical developments, the limitations of the subject, its relevance to human existence etc. must be made part of the subject matter. The second change that must take place is the classroom interaction. The teacher has to know his students as a human being. He must be concerned about the growth of the student in the subject as well as in life. At the third level, community living is a must for students. It is here that one learns the basic values of tolerance, patience, concern for others and the spirit of sharing. At the fourth level the student must be taken out of his narrow confines of a particular subject. A provision has to be made to make him aware of larger issues related to living and life. These must be discussed and guided as seriously as other subjects in the classroom. These must be made a part and parcel of the academic curriculum. The next suggestion goes a step further in recommending a common prayer at the beginning of everyday academic work. The prayer need not be from a religion and also need not be *Saraswati Vandana*. There are secular prayers such as *Asatoma Sadgamaya..* or *Dhiyoyonah Prachodayat*. Such prayers have their own long term effects on the minds of students, no matter how routinely they may have chanted it when in the institute. The wisdom hidden in these prayers cannot go unnoticed forever by any individual. Last of all, at the most mundane level, it should be emphasized that games, sports or *yogasanas* must be made compulsory for the students. Their value cannot be overemphasized, no matter how insignificant they sound. Participation and excellence in such events should be shown in the grade-cards and employers should be requested to give due weightage to them when selecting candidates.

Q-3. How to develop genuine urge for human values?

Young minds are mines fertile for microbes. Present day youth is exposed to the three dominant influences: political, market and religious. Each exploits him for its own purpose with scant regard for his welfare. Youth under their influence is narrowing down his vision for power, position and money. Under such circumstances, youth must be exposed to equally influential situations. One possibility is to make him see for himself the reality of the life at the grass-root levels-the sub-human level at which majority of the people are forced to live in this country and their exploitation and manipulation by the dominant forces with the help of criminals and police. We cannot predict what effect it can have on the

youth, but he would definitely be a different person after seeing it. We have to create an opportunity for young ones to visit slums, hospitals, prisons and remote villages on a social mission. It cannot be left for the outside agencies to do. This must become an essential extra-curricular activity within academic institutions on a regular basis.

Q-4. How can your organisation help in the endeavour?

Sri Sathya Sai Institute of Higher Learning has made a conscious effort to create a system to bring in a refinement in human beings progressively from lower *Koshas* to higher *Koshas*. Curricular, co-curricular and extra-curricular activities have been worked out towards this end. It has been in practice for nearly twenty years now. The results have been promising. We are now ready to share with others our experiment as well as our expertise.

The details of such an all-encompassing framework of curricular, co-curricular and extra-curricular activities and also methods of examination and evaluation have already been published by the National Institute of Educational Planning and Administration as part of their "Best Practices in Higher Education" series. This booklet is readily available and may be referred to for further details.

Chapter - XI

Shri Siddharaj Dhadda

Chaura Rasta, Jaipur-302 003

Q-1. Framework for human values?

The primary aim of all Education (not only Technical Education) should be the inculcation of human values (universal and eternal values). In the Indian (*Bharatiya*) tradition *Vidya* (knowledge) is defined as '*Sa Vidya Ya Vimuktye*'. Knowledge is that which frees the human mind from all kinds of shackles which bead the human being, e.g. superstition, anger, lust, attachment etc.

How to inculcate these values through Education? The scheme of Basic Education, or *Nai Talim*, propounded by Gandhiji and elaborated by eminent educationists of the time, Dr. Zakir Hussain (who later became the President of India), Shri Aryanayakam and Shrimati Ashadevi Aryanayakam would be a very useful guide.

Q-2. Strategies to inculcate human values?

It would be a fruitless effort to integrate human values in the present education system. Present education system (Continuation of the system introduced by Macauley under the East India Company) is a negation of human values. Its aim is personal aggrandizement and material advancement.

Q-3. How to develop genuine urge for human values?

The 'most effective way' is to set an example by the 'teachers' in their own personal life and conduct.

Q-4. How can your organisation help in the endeavour?

I do not run any organization, although I work through several organizations. My personal services are available, other commitments permitting.

CHAPTER - XII

Shri M.R. Rajagopalan

Gandhigram Trust, Gandhigram-624 302

Q-1. Framework for human values?

I am afraid that this question is complicated. Points like 'human reality' and human happiness-universally acceptable free from dogmas-are not easy to define. Then comes foundation of universal human values-and a scientific framework for the whole idea.

I am not sure I could provide the kind of answer you are eliciting; yet I would like to react to your question.

We are living in the era of hyper-consumerism depleting the resources of the earth and polluting its soil, waterways, atmosphere etc. Today greed has been institutionalized.

The Indian situation is that there is so much of poverty and misery especially in the villages of India. There is violence all round. Conflicts between castes, religions and ethnic groups often explode resulting in bloodshed. Even in the centres of learning such conflicts are induced by political parties.

Our educational system lays great stress on gathering information and competence. It also encourages competition and egotism and our students often have no understanding even knowledge about the social situation.

We have ignored or forgotten the importance of values. Gandhian values have eternal relevance for humanity. His insistence on Truth (*Satyagraha*) and non-violence and communal harmony between different religions and caste groups are the most important human values for the day. Gandhiji has also cautioned us against seven cardinal sins:-

1. Politics without Principle
2. Wealth without Work
3. Pleasure without Conscience
4. Knowledge without Character
5. Commerce without Morality
6. Science without Humanity
7. Worship without Sacrifice.

His *Ekadasa vratas* are also important-viz., Non-violence, Truth, Non-stealing, *Bramacharya*, Non-avarice, Bread labour, Control of palette, Religions harmony, Fearlessness, *Swadeshi* and abjuration of untouchability. I would cap this with Gandhiji's quotation.

Human Values_IIT...tion_c

“ All my actions have their rise in my inalienable love of mankind. I have known no distinction between relatives and strangers, countrymen and foreigners white and coloured, Hindus and Indians of other faiths. All men are brothers and Sarvodaya (welfare of all) should be our goal.

Swami Vivekananda has also said something very valuable and forceful about our culture, about our heritage, education etc. Some selected passages from Swami Vivekananda and a Gandhian Reader properly edited should be made compulsory reading for School/University students.

Q-2. Strategies to inculcate human values?

Mahatma Gandhi, the Man of the 20th Century and Swami Vivekananda have given us the values. We have to popularise Gandhian ideals and Swamiji's teachings. We could have seminars and work-shops on these subject on a regular basis. That apart, for the students both at school and college levels study of Gandhian ideals should be made compulsory.

Q-3. How to develop genuine urge for human values?

Q-4. How can your organisation help in the endeavour?

Young students should be taken round institutions where Gandhian ideals are still practised.

Rural Service should be made part of their curriculum. It could be one semester at graduate level. With proper text books, questionnaires of survey etc. The students should stay in villages for a month to have a feel of the rural life. They should study the problems of the villages and offer solutions.

Gandhigram could host limited number of students for exposure visit. They could get a first hand experience of our various rural industries and welfare and extension activities. They can also visit/stay in the villages where we have activities. They could just feel the village life for themselves.

The Paradox of our Times

is that we have taller buildings
but shorter tempers.
Wider free ways
but narrower view points.
We spend more
but we have less.
We have bigger houses
but smaller families.
More conveniences
but less time.
We have more degrees
but less sense.
More knowledge
but less judgement.

More experts More problems More medicines
but less wellness.

We have multiplied our possessions
but reduced our values.

We talk too much, love too seldom
and hate too often.

We have learnt how to make a living
but not life.

We have added years to life
but not life to years.

We have been all the way to the moon and back
but have trouble crossing the street
to meet the new neighbour.

We have conquered outer space,
but not inner space.

We have cleaned up the air,
but polluted our soul.

We have split the atom
but not our prejudice.

We have higher incomes
but lower morals.

We have become long on quantity
but short on quality.

These are the times of tall men,
and short character.

Steep profits
and shallow relationships.

These are the times of world peace,
but domestic warfare.

More leisure; but less fun;
More kinds of food but less nutrition.

These are the days of two incomes,
but more divorces
of fancier houses,
but broken houses.

It is a time when there is
much in the show window
and nothing in the stock room.

A time when technology
can bring this letter to you,
and a time when you can choose
either to make a difference
..... or just hit, delete.

- His Holiness the Dalai Lama

CHAPTER - XIII

Shri Rishi Prabhakar

Rishi Samskruti Vidya Kendra (R)

Head office: Bangalore.

Q-1. Framework for human values?

Our Rishis founded programmes in consciousness to elevate men from being egocentric to universal centeric SSY (Sidhya Samadhi Yoga) programme offer such a step by step process for higher evolution. Effects of each step can be statistically verified (see reversal of Heart diseases- statistics in "SSY and HRD programme" Booklet and other validations in "SSY and Health" Book). Now these programmes are being adopted by Doctors, in Industry to improve productivity, in schools to improve memory.

As man reaches deeper levels of silence (known as *Laya Samadhi*, *Nitya Samadhi*, *Bhava Samadhi* etc.) his ability to offer himself/herself to others without any expectation, manifests. This outer shift in universality comes out of greater inner satisfaction through deeper levels of silence.

Silence of mind, clarity of intellect and selflessness are universal human values which can be systematically and scientifically developed as demonstrated through SSY Programmes. No beliefs in a person or text book is required. Inner experience of silence, clarity and love is self verifiable.

Q-2. Strategies to inculcate human values?

- The strategy must yield verifiable positive changes in students.
- The change must be profound enough to attract the attention of friends, colleagues and neighbours to enroll them automatically.
- It must not involve blind beliefs and non demonstratable claims. It must have coherent theory to support the practice.
- It must not involve too much time daily for practice and also learning
- Teachers must also be trained as scientists and understand scientific methodology. Teacher of this strategy/method should preferably be an Engineer to teach Engineering students. Then students will listen carefully.

Q-3. How to develop genuine urge for human values?

Once they start experiencing changes in themselves and in their network- they will automatically stick to it life long.

Q-4. How can your organisation help in the endeavour?

Please see the syllabus we have developed for "Personality Development". We can provide teachers and also train some professors from institutions as teachers of SSY programmes.

CHAPTER - XIV

Dr. Pranav Pandya

Dev Sanskriti Vishwavidyalaya, Shantikunj,
Haridwar, Uttranchal

Q-1. Framework for human values?

Scientific framework of human reality in general could be seen in terms of physical structure with consciousness. However, human reality is seen both in terms of limitations like physical structure and possibilities leading towards significant achievements due to hidden potentialities, intellect, emotional aspects, sensitivity, power, vision, parapsychological aspects etc. What seems to be significant in the proper combination of the two and focus more on consciousness are: (i) the physical consciousness which is manifested in the activities of hormones and enzymes etc. (ii) the awakened consciousness which is active in the form of bio-electricity, (iii) the psychic consciousness which gives rise to bio-magnetism; (iv) the intuitive consciousness and (v) the beatitudinous consciousness which subtly exists in the Reticular Activating System and in the Cortical Nuclei. Thus even the levels of consciousness are full of scientific explanation and not subjective in nature.

Human happiness on the other hand, is integration of immense satisfaction arising out of physical, mental & spiritual aspects of one's development. Meaning thereby that comfort, pleasure due to physical attainments fulfillment of worldly demands are superficial to happiness without the core and inner satisfaction derived on the basis of spiritual gains and attainments.

I believe that the indicated framework is irrespective of caste, creed, region or religion and form the foundation of core human values like humility, continence, service, generosity, benevolence, honesty, love, respect etc. cherished universally.

Q-2. Strategies to inculcate human values?

Human Values are the inner most layer of personality. Arousal and activation of values require a different kind of spiritual treatment commonly known as "Sanskaras" i.e. sacred rites performed and pathways shown at different phases of human life beginning from the stage of conceiving or at the stage of pregnancy or even before i.e. at the point of thinking for having a child. It is deep-rooted philosophy, which could be initiated among people in general to inculcate value system. Further it is the lessons on spiritual dimensions i.e. relating to art of living which could enlighten human being to move on righteous path and imbibe values.

The education system is required to be more sensitive and proactive in accepting spiritual dimensions in their existing curriculum. The educational system i.e. the curriculum, the text material, the teacher, the teaching methodology and

above all the students are required to be remodeled by including the ancestral frame and practices relating to value acquisition right from the earliest opportunities. Role of parents in this regard is quite significant since the source of origin of values begins from there. Thus education to the parents is equally important towards inculcation of value system through educational intervention.

Q-3. How to develop genuine urge for human values?

Let the young students learn to be enterprising, becoming masters of their own rather than looking forward to be servant of others and develop competencies alongwith commitment and culture. Focus on application of knowledge and helping them to understand the essence of becoming more and more functional in the diverse situation using their youth, vigour and vitality could be way out to help them to be life long aspirants for imbibing values in their lives.

Q-4. How can your organisation help in the endeavour?

We can help in devising suitable strategies and plans besides providing platform to practice and sharpen value system through our activities. It is possible to design and organize specialized teaching and training programmes (both for students and teachers) through our Dev Sanskriti Viswavidyalaya, an emerging University of difference fully dedicated towards promotion of Indian culture all over the world.

CHAPTER - XV

Shri Pattabhiram

Sadhana Sangam, Bangalore.

Q-1. Framework for human values?

The right understanding of one's own self bereft of the outer encrustations can be provided by '*Panch-Kosha-Vivek*'. Patanjali in the famous Yoga-Sutra presents a universal and systematic understanding of the human mind and human happiness. It also provides a step-by-step methodology to acquire the right understanding of one's real self and its indispensable interconnectedness with the rest of the universe. Realizing this harmony and interconnectedness in thought and action is the way to sustainable human happiness. Then, it is imperative to be aware of the 'cosmic purpose' for evolution of all human beings to realize this harmony or oneness. Thus, the whole universe, as it were, is set to help human beings in the realization of this universal goal, if only we become adequately aware of it and work towards this goal. There is no outside obstacle except one's own ignorance.

Q-2. Strategies to inculcate human values?

However, the above-mentioned framework needs to be communicated to the modern youth in a manner, that appeals to their immediate concerns and problems. Unless, the whole discussion is presented scientifically and pertains to their immediate aspirations and problems, it will not be grasped seriously.

It may be a good strategy to initiate the discussion through the theme of 'Personality Development' which each student will be keen to know and bring in the notion of Holistic Personality or Integral Human Personality. Or, the question of what they imply by a 'good career', a 'good life' etc and gradually lead them into the domain of sustained and collective happiness.

Teachers who are adequately exposed to modern science and technology and are also with deep conviction for Human Values will prove to be more effective rather than those with traditional or religious leanings. Teachers as role models and closer contact with students is very helpful.

Q-3. How to develop genuine urge for human values?

The best way to enthuse students to develop a genuine urge is to show to them convincingly the outcome of the prevailing materialistic paradigm and its inevitable misery augmenting nature and simultaneously by establishing the

correlation between universal human values resulting from right understanding and sustained human happiness. The need to look at things from whole to parts rather than getting bogged down to parts is also important to change their worldview. Further, developing confidence that the holistic worldview is feasible in present times is also essential.

Q-4. How can your organisation help in the endeavour?

We shall be very happy to participate in this effort in whatever way it is desired. Already, we have been informally interacting with IIT students and faculty.



CHAPTER - XVI

Dr. Harish Chandra

Dayananda Institute of Vedic Studies, Secunderabad, Hyderabad 500 094

Q-1. Framework for human values?

A human being or for that matter any living being is different from the non-living beings. Contrary to a thing such as a chair or even a complex machine known as an automobile, once a living being is dead we cannot bring it back to life like we are able to repair the chair and the automobile that might have suffered a breakdown. Death of a living being is an irreversible process. This definitely suggests existence of an entity that has its intrinsic attribute as consciousness. This entity is called soul. Thus, human reality is the union of the individual soul with its body, giving rise to the birth of an individual and separation therefrom is death.

The soul possessing consciousness makes one feel the pleasure and pain. The universal fact number one is that all living species begin to feel the pain of hunger at one time or another. The pain being universally present, there exists too the means to alleviate the pain of hunger. One has to make some effort to obtain the food. The similarity between the human beings and other species broadly ends here. The fact number two, applicable only to human beings, is that they instinctively desire to upgrade their state of happiness. Thus it can be argued that if everyone feels the pain of hunger then the means to alleviate the universal pain (in the form of food) is available and therefore, the means to attain the highest level of happiness, called bliss or *ananda*, must be attainable for the human beings. In absence of *ananda*, every human being remains an unfulfilled individual and instinctively desires something that he/she doesn't have in the hope that it will bring that elusive 'happiness'. The source of that *ananda* is God who is characterised as *sachhidananda* too because *ananda* is his intrinsic attribute, in addition to *sat*(existence) and *chit* (consciousness) while the human beings have the intrinsic attributes of *sat* and *chit* only.

In the light of the above observations, the scientific framework needed to explain the events seen in the world must include three primary entities, viz.

Matter with its attribute of *sat*
Soul with its attributes of *sat* and *chit*
God with its attributes of *sat*, *chit* and *ananda*

Existence of the above three entities can be argued from the Law of Causation as well. The above three entities and the Law of Causation can explain many intricacies of life. This can help us establish a universally acceptable thought process and a moral code of conduct too. This will help the youth appreciate the desirability of human values.

Q-2. Strategies to inculcate human values?

Unfortunately the present education system is not based on a unified theory for both matter and non-matter, the latter including both the finite spirit of soul and the infinite spirit of God. Thus the education has been very skewed so much so that the children begin to think that only the studies pertaining to matter can be rational and scientific while the ideas pertaining to non-matter can even be dogmatic. In such a situation a number of religions have flourished in last couple of thousand years, causing a large number of conflicts and wars. Today India stands at the crossroad with tremendous divide on communal lines and an unacceptably high rate of corruption.

One strategy that the country has followed hitherto can be characterized as that of LCM (lowest common multiplier) among different religious groups. We have tried to show respect to every religious group by overlooking and tolerating even the dogmatic ideas. This approach alienates the intellectual and positive thinker who sees no reason in showing respect to nonsensical ideas. Now is the time to try the approach of HCF (highest common factor). We simply list the human values that are acceptable to all reasonable minded people such as those admitted into IITs. Let this new breed of people determine and judge what the true sets of human values should be.

Present scientific temper prevailing among the humanity will be to our advantage. Take the simple instance of smoking. The act of smoking is not regarded as a universally acceptable norm for human behaviour and thus it's getting cornered with more and more intense force. Any act that is not acceptable to a sizeable number of reasonable minded human beings will come under closer scrutiny and will not find its place in humanism-the future religion of the mankind that will have only universally acceptable human values and will be void of any dogmatic ideas.

Generally speaking the education of human values must begin in childhood itself. But India is a very religious country. A child being educated on the proposed lines of scientific temper will very likely feel mentally fragmented because of the two sets of thought process that he will come across-one set of thought process entering into his mind informally through the religion that he is attached to and another set of the present scientific temper. This can cause a great deal of psychological conflict in his mind and that should be avoided. Thus, the youth entering into IITs are the best suited for the proposed set of thought process based on above scientific temper which will not have any bias toward any religion except reason.

A one- semester course with 13-15 lectures of one hour each may be initiated. To begin with it can be offered as an informal lecture in the evening hours purely on optional basis. Response and feedback may be utilised to make necessary changes. Like in case of any study, the effectiveness of instruction can increase multifold if practical lessons too can be imparted-an aspect that is covered under the next heading.

Q-3. How to develop genuine urge for human values?

Let the youth be the judge. Let the students see for themselves what the life with human values and without human values can be. Let him experiment it. The laboratory in this case is the student himself-the most complex system known as a human being. The proposed course should include the practices that will help him realize himself by direct cognition. Without direct cognition no scientist can accept a reality and that would apply to the human reality too. Let a human being see his own self temporarily de-linked from its body and mind as it happens when we are in sound sleep. The students should be given the practice sessions to practice this kind of experiments upon themselves through a set of carefully designed mental exercises. Ancient Indian yoga practices can be followed. Indeed Kapila, the author of Philosophy of Samkhya, says that the finest wisdom that a human being should acquire is know that he is an entity different from his body and mind- and not merely in words but through direct cognition. State of sound sleep is very unique that we continue to exist and are de-linked from our body and mind albeit in an unconscious mode. Yoga practices (and not the yogasanas) help us achieve that state in conscious mode. Theory and practice together will be the most effective way of instruction-a sure way of ensuring that the knowledge will be carried through the life. After all who wouldn't like to do what is absolutely good for him. In other words, who wouldn't like to upgrade his own level of happiness. Isn't it true that the proof of the pudding is in its taste? Theory and practice together will be very desirable, useful and effective.

Q-4. How can your organisation help in the endeavour?

I can design, develop, conduct and evaluate the proposed course including its practice content. The proposed course, tentatively titled "A Rational Approach toward Human Values", can be offered on optional basis to the interested students in an informal level, say with an evening lecture followed by a practice session next morning. The corresponding lecture notes can be prepared while the course is conducted first time, lecture notes can become a reference book later. I have conducted a condensed version of this course with four lecture topics and that many practice sessions for more than 50 batches of participants in India and other countries. Participants have been both male and female in wide range of age groups, and from different caste, religion and nationality. The feedback has been excellent. A number of corporate bodies and their executives have benefited. My engineering background with a B.Tech. (IIT Kanpur) and Ph.D. (Princeton) should enable me use a language that the engineering students will understand with greater ease. My two-decade long research career of a combustion scientist in institutions of world standards should ensure a rational and scientific approach void of dogmatic ideas. Should there be sufficient interest, I will be pleased to submit a detailed proposal in this regard.

CHAPTER - XVII

Shri R.C. Sekhar

Management Consultant, Professor Emeritus, T.A. Pai Management Institute
Manipal

Q-1. Framework for human values?

The question is loaded with several words which have totally different meanings for different persons that it is necessary to guard against a total confusion in the discussion like the Tower of Babel. The critical words are 'scientific' 'happiness' 'dogmas' and even 'values'

Since the tenor of the questionnaires are identical to the famous international conference in the MIT in 1957 and which got published as the book, 'New Knowledge in Human Values' ed Abraham Maslow, Regency Getway Inc South Bend Indiana (1959), I am following the several faces of discussion of the conference. The participants had prominent and even traditional philosophers from Japan, India, Europe and all over the world.

The first caveat is that any theory to be a universally acceptable framework in my opinion futile exercise. One can have a universally acceptable code of behaviour, but the reasons for which the intellectuals would follow it may be quite different from the reasons for which the people at large who see no point in conceptualizing its origins and logic. AS R.M. Hare points out, a discussion in philosophy may be quite a wrong end to start a discussion on values though it is very tempting to do so for those who are used to teaching physics or engineering. (see discussion at page 14 of my book Ethical Choices in Business, Sage Publishers). Somewhere down the line they would start drifting to pseudo-science or use such mystical language that one cannot understand what they are saying and distinguish between charlatans and true thinkers. Such could be the description of many 'Vedic scientists' of India. They are the despair of the likes of Stephen Hawking (A Brief History of Time) or even the Indian astrophysicist Chandrasekhar; as were some of the early philosophers of Greece and Rome of the American philosopher John Dewey (Reconstruction of Philosophy).

Secondly, if a 'scientific framework' would mean the manner in which say Newton propounded his theories from observation in what is known as 'positivist approach in science', it is again a futile exercise even for the 'intellectual elite'. Goethe recoiled from the amorality of this 'scientific approach' in his famous character Dr. Faust.

Be that as it may, the international conference at the MIT in 1957 described earlier in the note saw broadly three frameworks that could be used with refinements and as hybrid mixtures:

- Human Values_IITD_JV mention_c
- a) The naturalist Framework. This proceeded from what we see and feel and extrapolate the results. Values are instruments of social evolution. They are compelled by their logic to assume certain 'outcomes as desirable and certain outcomes as undesirable' and values are those which maximise the desirable outcomes. Are the ten commandments correct values or for that matter the 'black magic mantras of Yajurveda?' Do they become value because of the 'dogma' spoken by God. The answer strangely could be yes if thereby the outcomes we desire are established! It would be quite easy to justify anything in this logic slavery, caste system or gender discrimination.
- b) The Humanist Framework: The main difference between the naturalists and the humanists is that the latter have found a unifying principle in the human self. The naturalists deal habitually with phenomena without consciousness, self-awareness and reason. Maslow who pleaded for self-realisation and self-actualisation comes under the category. The goals of self-actualisation can be guessed 'scientifically' by observing self-actualising people. Humanists grapple with the problem with contrary tendencies in human nature. The humanist also include elements of transcendence in their image of human existence. This is an integrated vision and a typical example of this is Aurobindo.
- c) The Ontological Framework: Thus looks for the 'essence of man' and sees as values as aiding in achieving it. How does Science come into the picture? Says Paul Tillich 'This occurs in two ways, the intuitive and experiential. Intuitively man sees the contrast between what he is essentially and what he is actually. But the intuitive side is open to error and must be subjected to the continuous criticism of experience, not only the individual experience but the experiences of mankind as they are embodied in ethical tradition. They are the manifestations of wisdom, the wisdom of mankind acquired in positive and negative experiences.. One cannot escape the existentialist risk in the knowing of values'. The Japanese philosopher Suzuki who was part of this conference belonged to the Ontological School and so did Gautama Budha. Sorokin the jewish philosopher who was hounded out of Germany by Adolf Hitler and who attended the conference held that the greatest wisdom which mankind has learnt by negative experience is the central message of Love. My answers to your subsequent questions relies largely on my faith in the ethical tradition of mankind and not on philosophical analysis which can be deceptive as would be clear in this note.

One may notice that none of the framework can neatly fit in to the scientific rational method as we understand from 19th century Physics.

Personally I hold a view somewhat of a mixture of (b) and (c) and find Sankaracharya's Advaita quite congenial philosophically to my position of values, though I would greatly disagree with Sankara in his own personal exposition of ethical values. One may also notice that the position of Paul Tillich is totally congenial to 'democracy and pluralism' which was quite against the ethical position held by Sankara but was consistent with the ethical position held by Ramanujacharya. I have spoken about this in several lectures but the ultimate

outcome of this approach is available in my lecture at the Cambridge University. I am enclosing a copy of my Cambridge University lecture.

Q-2. Strategies to inculcate human values?

The first point I would like to make is that one should not start with the assumption that human values do not exist in modern youth and intellectuals. It is not factually true.

The most practical strategy is already in place is the 'socialising processes' already exist in Indian society which has ethical traditions encapsulated in family behaviour, mythology, stories, the current literature, music and arts. The Indian Constitution and its impact is another new ethical tradition. In my teaching, I start with this repertoire and enable the students and the intellectuals to assess for themselves if these ethical traditions themselves enable the sustenance in ethical living. At this stage it is not necessary to conceptualise on ethical theory, even the applied ones not to speak of the near metaphysical discussions in response to the first question. The case study approach can enable one to do it in a practical way.

After this is done, the student would be enabled to see how far the four basic applied ethical concepts could be used together or alternatively according to their choice:

- 1) The greatest good for the greatest number quoting Indian and Western theorists
- 2) The Golden Rule that never do unto others what you would not want to do be done to yourself-the Indian and Western version
- 3) The instrument of participative democratic decisions typically using John Rawls
- 4) The concept of being virtuous as in Aristotle or *sthitaprajna* typically in the Gita.

The student should be enabled to see the problem of power and evil and the realistic situation around them and appreciate that values also involve understanding alternate points of view and have a dispassionate democratic discourse. The students should learn to handle ambiguity and be bold enough to be critical of any God of the present day. The greatest of value to be imbibed is the search for Truth and not a bogus Loyalty.

One of the important self-discovery the student will make is that the beliefs in values are more or less universal and need little persuasion to accept them. But every one would see that the pursuit of these values is in reality leading to failures to achieve both individually and socially the very ethical values which mankind has thought important. Nowhere is it so patent as in the operation of the anonymous free market mechanisms. It would be clear to them that collective failure is not only due to the 'lack of individual values' but inadequate collective institutional mechanisms.

The next step in learning is how to institutionalize these values in their limited command area.

They would then learn to handle the issues of values in different functional areas and not see them as the exclusive preserve of the saints. Saints anyway have not found a way to handle the problem of values in the present context.

In all this the greatest role would be played by example of the teacher who can be transparent and explain why he was following a particular path. Mouthing uncompromising values and in practice not following them is far worse than expounding the scope of compromise and following it honestly.

Lastly, absolute ethical rhetoric against all breach is less important than creating an awareness of the priorities in the breach. In essence it is the approach of Aristotle and the Gita philosophy of *sthitaprajna*. By repeated case analysis one should show how this ambiguous philosophical stand should not be vulgarised. Therein lies the teacher's skill.

Q-3. How to develop genuine urge for human values?

The greatest disservice one can do to a young aspirant is to make him or her a humorless sea green incorruptible. Sustained living is possible only if the aspirant takes life with gusto and humour. That is why a continuous encounter with literature, music and arts would enable a person to sustain himself (herself).

Many value-based organisations are now attempting to do so. Values must be imbibed without making a fetish of it. Organisations which make a fetish of it and have no continuous dialogue with life may ultimately collapse (Instances are given in my book *Ethical Choices in Business* p 135)

Needless to add that the most important step towards establishing values is not only to cultivate values for individuals but also develop structural remedies in sound property rights, sound contracts, implement sound signals and penalties against breach of values etc. Ignoring them would be as disastrous as ignoring individual sensitisation to values.

Lastly, look forward to a better society in the future and not constantly look back to the past.

Q-4. How can your organisation help in the endeavour?

TAPMI where I teach is systematically following the methods espoused in this note and gets involved in workshops training programmes, programmes for making codes of conduct etc.

Chapter - XVIII

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Q-1. Framework for human values?

A scientific framework to understand human reality and happiness is limited to observation and study of human behaviour and its interpretation by the object itself (i.e. the human himself or herself).

There are however seven basic issues the study must answer if it has to contribute to an understanding. These relate to meanings. That is meaning of:

1. The prime reality-the real Reality
2. The whole-the external reality (the world and human)
3. The human being-meaning of life
4. The End- Death (is there a continuity?)
5. Knowledge- the possibility of knowing
6. Values-the right and wrong
7. History

A scientific framework that can provide 'meaning' and not mere 'facts' is what can contribute to an understanding of human reality and happiness.

Perhaps, the best way forward would be to begin with a common acceptable set of assumptions on each of the seven issues that can give us a premises to work together.

I have found that an 'end' based definition of these issues (i.e. what I hope to see) rather than an 'origin' based definition (Q. What I think existed) is always uniting people. We tend to agree better on a common future rather than on a common past!!

Q-2. Strategies to inculcate human values?

There are a few basic statements I believe about values:-

1. Values that matter are values that are translated into behaviour
2. Value that matter are those that make people behave in a way that they make the world a better place for all (including nature)
3. Values that matter are those that are linked to a vision of the future (a vision that includes all)

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A practical strategy would be to first, develop a vision that is more than just me, my family, my race, my region, my state, my county, my continent and my world. A 'me-centric' vision can have no value beyond myself. Second develop the behavior necessary of all to move towards such a vision. Third, translate these agreed behaviors into concrete actions in selected communities, which are far from the vision (e.g. in communities of the needy, the poor and marginalized)

The educational system should answer the question of its contribution to the common good if it is to be value-based.

Q-3. How to develop genuine urge for human values?

If we could help young students (and others too) to see that their behaviour could make the world a better place (and not just their competence could contribute to a better world) we should have succeeded.

We live in a world where performance is rewarded and character is ignored. This has to be changed. Perhaps, our educational institutions should recognize character- contributions rather than competence-achievements.

Q-4. How can your organisation help in the endeavour?

We would be open to facilitate a continued dialogue and channel these interested to areas of social involvement.

CHAPTER - XIX

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Q-1. Framework for human values?

Scientific framework works as system in operation, whose popular feature is cohesive performance of experimental confirmity reduced in measurement or calculative possibilities of observable evidence of physical phenomenon, stated in various theories and laws, expressed in/thru mathematical models, followed by reductive procedure efficient to explain in cause-effect term and deductive method for satisfying the inferences in shape and form of result, consequence and conclusion; but with dogma that the theories and laws found true and correct could be found false and wrong tommorow.

So far applicability of above scientific framework to understand the human realities and happiness without dogmas i.e. in their existential form with objective that such understanding be the universal foundation for inculcating the human values in engineering student-the target group, is concerned, it will be a totally futile exercise as the conclusions drawn through above framework are full of contradiction and paradoxical. For example-

- Human beings are mortal/perishable, which contradicts his own choice, like, hope and desires for immortality.
- Human conscience/feeling is product-of chemical behavior, effect and reaction at molecular level, which contradicts this assumption of non-physical and material.
- Human behavior is unpredictable and uncertain with time, as influenced by physical condition and circumstances, a complex description of refraction and reaction, which contradicts the human favor for certainty and determinity.
- Human evolution is an endless phenomenon of random selection and mutation, which is yet to be awarded with universal verdict, which contradicts the creation the creationists viewpoint.
- Human happiness and values are subjective, so its universality is denied, which contradict the objectivity and sameness.
- System is a forceful control in reference to physical chaotic activities and fearful control in reference to human arbitrary behaviors, which contradicts weight-lessness (in Hindi *Shunyakarshan*).
- Mind and consciousness are out of direct sensory of scientific perview as being non perceivable, which contradicts brain and senses.

Many more illustrations can be put forth, so at this juncture our kind offer and suggestions are as follows. Please mean them with kindest feeling that ultimately human effort has revealed The Existence, The Life and The Humanity (which differs from 'its' qualities) "As It is" in objective manner as revealed in *Madhyasth Darshan* (co-existentialism) by me, Because man has to use and apply his own faculties to know him/own self.

I and my associates are prepared to discuss in detail (which is not possible here due to space-time limitation while answering the questions), so that possible and required framework could be designed for foundation of universal human values.

Q-2. Strategies to inculcate human values?

Practical strategies to inculcate human values among modern youth and intellectuals are suggested in two chapters of *Madhyasth Darshan* namely *Abhyas* and *Karm Darshan*. In fusing them two, a system has been evolved which is called as "*Parivar Mulak Swaraj Vyavastha (PMSV)*", some practical strategies are as under.

- Identification of all ten activities/performances of life, five forces as faculties and its five curriculums
- Application of these to understand human realities and values.
- Verification of self evolution through permutation and combination of nine factors, which consists three means, three stalis and three causal rolls

In brief to be In, With and For PMSV are all about practical strategies. Their written text are available with us and can be integrated into the present education system by way of incorporating them in syllabus of various disciplines for reference. They are as under:

- Teach consciousness in science.
- Teach action/performance (in Hindi *Kriya*) in philosophy
- Teach policies for proper vitality, safety and security of natural and human sources in economics
- Teach policies for conservation and empowerment of humanity in policies.
- Teach human way of life and culture in sociology
- Teach human and humanity in geography and history
- Teach elemental realities in literature
- Teach mental impression (in Hindi *Samskar*) in psychology

Q-3. How to develop genuine urge for human values?

Perpetual fulfilment of being a proven person is only source for becoming life long aspirants for imbibing universal value in their lives, so every person/individual has to be proven identity in his five fold function, imbibed in PMSV. Those five fold functions are Justice, Education, Health, Production and Distribution. Perpetual fulfilment of being proven person will be mark in-

- Personality/individuality in accordance with intelligence
- Honour for greatness (exalted stage of evolution) in accordance with self confidence
- Social(with humanity) in accordance with self sufficiency in production

Q-4. How can your organisation help in the endeavour?

Performance wise roll of our organisation in this endeavour will be as follows:

- Our organisation can provide study material
- Our organisation can provide persons for conducting class room lectures
- Our organisation can conduct work-shop programme for guidance for teachers and students
- Our organisation will actively participate in case your centre takes the task to manifest the validity of PMSV.

We want to participate in this debate. Please write back the developments in this respect.

Appendix B

THE ORDER

(ALTERNATIVE WORLD ORDER)

Why the Order?

Why is there the need for the Order-the alternative or the new world order as the intellectual class calls it-in the world? Simply because there is Disorder and disorder is destructive to life and threatens its existence. Therefore, the life does not accept it and aims at removing it: in other words, Order is the natural urge of life. The Order is the Law of the life, the world and the universe, it maintains and sustains it, it is this eternal law which has been described as the Dharma in the Vedas.

Does it mean that Disorder is a recent development? No. It has been there from the very beginning, in a deepest sense it appeared with the emergence of man: man as a separate entity in the form of ego and desire rebelled against the established law of Nature and that was the genesis of disorder. But today because of various factors put together it has assumed such dangerous proportions that it is threatening the very survival of life on the planet. Now, therefore, it has become a question of life and death, that is, if life is to be there on earth tomorrow, the Order will have to be established have today. It is no longer an ideal, it has become a compulsion, a necessity for existence.

The prominent forms of disorder that have afflicted the entire body of humanity are economic exploitation, social injustice, power-oppression, religious bigotry, political corruption, moral degeneration and the latest monster, terrorism whose *Brahmastra* is the Human Bomb against which we have no defence-this is the 21st century weapon which has rendered futile all our 20th century achievements and the security measures. Whatever be the form of external manifestation the central fact is that the root of disorder and the cause of this cancer is inside man and its growth has become so all-encompassing and pervasive that it has not only covered every department of human life but also distorted the sub-human world and poisoned all the systems of Nature. The earth is a cancer patient today.

What is the Order?

Then what is order? To find the answer look around and see the working of Nature: the working of the Nature is Order. If the Nature is synonymous with Order, man is synonymous with Disorder. Then should we go back to sub-human level of life to find and restore order in our world? No, we should go forward to super-human level. On both the sides – below and above – of man there is Order: The side below human is called Nature and the above side is called Divine – these are nothing but the ranges of Life only which covers the vast expanse from beginningless or endless in which the area of human range is very small like that

in the electromagnetic (light) spectrum – it is only in between, that is, the human range, that there is disorder. The *Ganga* of life cannot turn back to the source of Himalayas, it must proceed on and find its release and fulfillment in the boundless waters of the Indian Ocean beyond the barriers of its banks: to re-establish Order in life and the world we shall have to transcend the human borders and enter the portal of divinity through a quantum jump in our consciousness.

What is the Order in practical terms? Under the Fatherhood of God and the Motherhood of Earth and Nature the Brotherhood of Man is the Order. This is a perfectly scientific formulation of life. For the healthy and natural growth of a tree you need soil with water, manure and nutrients for the underground development of the shoots. If any of the two components : underground and overground, mother or father, inner subject or outer object, invisible spirit or invisible matter, soul or body is deficient, the life suffers the consequences of its growth remains defective, stunted and unhealthy, and that is the disorder – without, of course, caring to remove the cause of the disorder—all sorts of laws: political, economic, social, moral, religious and even so-called scientific laws to set order in life and the society and even you develop a lot of law-enforcing agencies and mechanism : police, judiciary, military, governments, bombs, atom bombs and what not—whatever your ingenuity can think of under the sun—for that. But what is the result? The condition of the patient is getting bad to worse with the administration of the each dose of the medicine. And today the human world is at death-bed.

The natural law of life is Love and man-made law can never be sufficient substitute for love. All your laws have failed and will fail and the love never does fail. Here is simple illustration. What law governs your family life? Simply it is the feeling of oneness, the love which keeps the units intact and running its affairs most smoothly, harmoniously and spontaneously. Is there any organization more powerful, universal and better managed than the family in the world? Also it is the fundamental and organic unit of social life. But when you step out of your home what happens to you? You enter an alien world. The soul of life, the love is left behind and you put on the cloak of law. You water a plant whose roots you have cut, it will never become green and bear fruit. The law comes when love is gone but is never serves life. The Love is Order.

What is the Order of the new World Order in more earthly categories where it becomes operative on the ground? The Vedic Rishis have given us a formula for this as the world is our Family and the earth is our Home where Love replaces law as the governing principle of life. The love is an integrating principle wherein all the so-called contradictions of life and the world are harmoniously blended and the contraries are converted into complementarities. The two basic requirements of human being for his fullest flowering and development are:

- (i) As an individual he needs freedom for the manifestation of his uniqueness which is the basis of creativity and diversity in the world; and
- (ii) As a member of the community and integral part of humanity he needs harmonious relationship with the society for the realization of his oneness with the whole and this is the source of unity and universality in our world.

And a family being based on love as it is fulfils both of these requirements of man simultaneously – and the world family would fulfill mankind.

In actual functioning of the society how would the Law of Love operate? Let us realize that first of all it would give a scientific attitude and approach to the working of society in all the areas and spheres of its action and remove the absurdity and non-sensicality we have been pursuing for uncountable aeons.

To begin with it would give spirituality a new orientation – new role and new dimension: the spirituality, as science of the spirit, would undertake to remould the entire life of the world in the light of higher dimensions of consciousness. The research and development in spirituality, like that in the field of physical sciences, would go simultaneously : the research would discover new dimensions and principles of consciousness and their application through appropriate technologies in the earthly life of man would ensure corresponding development of the world. The spirituality in its fundamental sense is Science and the Vedas have termed it as *Para Vidya*-the science dealing with eternal and infinite verities and the eminent scientist of the 20th century like Erwin Schrodinger, Werner Heisenberg, Arthur Eddington and Ken Wilber have come to the same conclusion that subjective field can no longer be excluded from the study of science because fundamentally existence is one and science one, it cannot be justifiably divided into subjective and objective. To quote Schrodinger, "Subject and object are only one. The barrier between them cannot be said to have broken down as a result of recent experience in the physical sciences, for this barrier does not exist " The quantum physics has complete without the participation of the observer(subject) in the process. The pure objectivity advocated by science is a myth. There is only one science and that is the Science of Life based on the formula of *Yat Pinde Tat Brahamnde* - as is the microcosm, so is the macrocosm ; physically it can be described as the essential identity of atom and the universe and spiritually as the oneness of Atman and Brahman.

In this scientific perspective religion is a means and not an end and one religion is as good as any other. The religious are different paths to the same goal of discovering the inner most spiritual truth of man, the spiritual atom-the Atman described variously in different languages and contexts: *Atma*, *Ruh*, soul, divine, God etc. This spiritual atom or Atman is the highest form of conscious Energy with unlimited range transcending the sphere of time-space-continuum- and therefore, characterised by the qualities of eternity, infinity and immortality. It is in this consciousness that all the values of life: love, compassion, non-violence, humility, service, selflessness, fearlessness, harmony, freedom, honesty, forgiveness, detachment, divinity, purity, truth, etc. are generated. It is for this reason that the people who have reached this level following any religious tradition have been found to possess the same divine qualities,—and have been called as saints and revered the world over by men as divines. It is because of this quality and character that these divine persons have left a most lasting impact in moulding the lives of men and shaping the destiny of the world all along the history.

This is the fertile soil from which springs the finest crop of culture and grow the brightest flowers of morality which give health and harmony, beauty and order

to the society from within which ultimately unfolds into the culmination of World Family.

The education is not meant to make man a bread earning machine by packing a lot of information into his brain and a monster by teaching him a lot of skills to destroy his fellow-beings, world and the nature in various ways. It is, rather, a sublime art of converting a raw material of nature that man by birth is into a finished and finest product of divinity in which is reflected the image of his Creator. Thus the education is an organic process of unfolding and flowering, of growing a seed into a tree by bringing out all that is hidden and embedded in him so that he could turn earth into a garden-house of God by making the most creative use of all that mother nature has made available to him.

The politics is a mechanism not to rule but to serve. Ruled are others and enemies, one's own people and family are loved and served. Ruling is a concept for a barbarian society to keep wild animals and beasts under control using various forms of deterrence. We are accustomed and familiar with this form of politics. But in a civilized society that we envisage for a new world order political power and authority is an opportunity and privilege to live and the work for the upliftment and progress of one's fellow-beings: society and the world at large. The humility and gratitude are the hall-marks of true service. This politics ensures peace, co-operation and harmony in the world. The historical Rama Rajya gives us the glimpse of a new political order where Rama, the head of the government, is the humblest servant of his people and the affectionate father of his nation because he is guided by the spiritual values of his master Vashistha. When the power surrenders to the master wisdom, it becomes humble and noble and serves the weak and the lowliest. That is the alternative political order.

The economic Power is the Supreme Empress of the earth in today's world dispensation and every human activity is geared to serve her whims. "The power is a good servant but a bad master" and her majesty has become a 'devil' master. She is squeezing blood out of his bones and man is becoming a bare skeleton on the verge of collapse, —he has no strength of his own. Paradoxically, greater the economic development and prosperity man is achieving using the mechanism of science and technology, weaker and more devitalized he is becoming, - and this negative trend is the greatest threat to his survival because this Devil is exploiting and exhausting everything on earth: man, sub-human world, natural resources and the earth mother herself.

Then what is the alternative way? In "Power is a divine servant and wealth is a sacred means" is the formula for the reversal of the order. There must be a master of the power and an end to be served by a wealth. And both these roles can be played by the man only. But which man? What is the qualification of that man? Obviously, not this petty slave crowding the streets of marketplace whose hunger and thirst are insatiable, — this black hole can never be lightened up. It is the one man who is the master of himself and in-himself who can be the master of all he surveys: earth and nature, money and matter, wealth and power and can put them to the use which brings the best out of everything and fulfils humanity into divinity and flowers life into immortality. This is the divine order of things in which all relations are symbiotic and the Earth as a single Being is a cosmic

entity: As the Being manifests, everything here unfolds. The planetary life is not a closed circuit or a mechanical repetition, it is an endless growth.

Where we are the integral parts of an organic whole, how can there be economic exploitation and how can the social injustice be sustained? Can the hands exploit the feet or the eyes do injustice to nose or ears? Impossible. All the organs perform their natural functions efficiently and co-ordinate in the smooth running of the life. That is the natural and scientific Order of life.

Why we failed in History

Now the all important question is why this Order could not be established in our life and the world in all the history? One central reason is that the Integral Consciousness, the consciousness of the oneness of earth-life which is the Force responsible for the manifestation and establishment of oneness in the world had yet not evolved. In the absence of it we lived a fragmented life in a divided world with conflicting situations where every solution led to greater problems until we reached a terminating point represented by today. Let us elaborate it:

At the very outset the life was divided into two halves of subjective and objective. The subjective half supported by religions dealt with spirituality and raised man to the sublime heights of heavens and equalled him to gods in quality but uprooted him from the ground. This spirituality gave man the vision of the divines so that he could enjoy the bliss in the soul but made him a crippled creature on earth by turning his limbs dysfunctional and body a burden and liability on him. Ultimately when this process reached a saturation point, it could not sustain itself as life could not be maintained on one leg and supported by half-truth. The extremism of other-worldly spirituality proved to be its own undoing and the pendulum of life turned in the opposite direction.

As a reaction to the spiritual extremism and one-sidedness, the material and physical exclusiveness and one-sidedness took birth and one extremism was replaced by another and one half-truth substituted another half-truth. And it made absolutely no difference to the fate of poor 'sick man'. Does it make any difference to the miseries of a lame person whether his right leg is broken or the left one? When the subjective exclusiveness of religion did not allow the objective faculties to function and these starved, the reason rebelled against faith and turned to the physical world of Nature for its study and investigation, — the life took 180° turn. This was the genesis of science and the advent of modern age. But, unfortunately, the science was not scientific as it was the result of reaction, — a reaction being the reverse side of an action carries and continues the same evil with opposite face. And the modern science has proved it. If traditional spirituality rejected the observation of the objective world, the modern science is prejudiced against the subjective experience, — this is the unscientificity of science. And the modern world is suffering from the consequences of this unscientificity in the form of mechanization of man, devitalization of life, value-degeneration and quality-deterioration leading to the erosion of the foundations of society;— thus this tenuous structure is surely heading towards ultimate collapse. If bodiless and impractical spirituality has disembodied life and dissolved man into ethereal abstraction, the soulless science has reduced man into a robot and life into a

mechanical function. Both ways man is a loser and paradoxically his skills and achievements, all his doings lead to his own undoing.

Practically speaking, if, on the one hand, all the spiritual authorities and agencies have proved ineffective in establishing Order-which, in the first place, they never claimed and committed themselves to –in the world, on the other, the governments and the mundane masters with all their politico-economic power paraphernalia and military might too have utterly failed in bringing about a semblance of Order in human society. The third agency which is less organized and less equipped but most vociferous is the network of Non-governmental Organisations (N.G.O.s) The N.G.O.s are idealistic social bodies, with a limited vision and scope for action, they are confined to doing patch-work in various fields in the existing system, generally their concern is economic well-being and social upliftment of the people. But their greatest weakness and limitation is that mostly they are devoid of strong spiritual foundation and vision on the one hand and lack the powerful political thrust and commitment which could enable them to have a role in the policy-making and destiny-shaping of the country on the other. By the very nature of their being they assume a secondary role and mainly end up as mere 'protesting' agencies against certain government policies and provisions and social practices. They seldom come up with alternative proposals and prescriptions, even if sometimes they do stand for it in principle, they never measure up to it in practice because of three main reasons: lack of required stature of leadership, poor mass-base and incorrect approach and absence of commitment. Thus we realize that though the intentions of the N.G.O. s are good and their direction is right but they are not strong and great enough to effect the required change.

It leads us to the conclusion that our history is a story of human failures. But even failures teach us a lot and make us grow and progress. And the 20th century has proved to be a spring-board for us and gave a powerful thrust to human endeavour on which a 21st century future can be built.

Some of the most powerful pillars on which stands the 20th century edifice are Karl Marx, Mahatma Gandhi, Albert Einstein and Sri Aurobindo who made historic contributions in their specific fields.

Karl Marx in collaboration with Lenin gave a first glimpse of the new world order based on socio-economic justice and universal brotherhood but unfortunately before the close of the century the grand experiment proved to be a dream because of certain in-built deficiencies in the system. Some of these were:

- (i) This order was based on law, not on love, that is , it was forced and imposed, from above and had not spontaneously grown from within; —one may say it was a pre-mature exercise.
- (ii) It did not take into account the fathomless depths of human psychology and large underground portions of human personality remained unattended: it covered the material hungers but spiritual needs were ignored, the surface was taken for the whole man.

- (iii) The whole life was planned and programmed. "The freedom of the individual is an essential ingredient of a creative and health life", this basic fact was overlooked, rather, denied.

It was for these reasons that this great movement could not be sustained for long, it exhausted its élan vital on the way and could not reach its intended destination.

Mahatma Gandhi gave a human face and moral force to his movement of world transformation by focusing his attention on changing the human heart, the core of the human being through the application of the twin-principles of Satya and Ahimsa. You must realize that Gandhi was not merely the leader of India's national freedom struggle, in truest sense he was the leader of a new world movement. India for him was an experimental ground and a test case:

Gram Swaraj (Village Republics)—building politico-economic structure organically from base upwards or from centre towards periphery, the concentric circles covering the entire globe i.e., spherically with village at the centre—, Rama Rajya—the governance by moral force, the top man servant of the bottom people—and Trusteeship—the wealth in your pocket is the property of the needy, you are just their cashier—are the central columns of the new world order Gandhi envisioned. But unfortunately destiny did not allow him the time to work on his project. Besides this, Gandhiji needed to develop a Force of Consciousness with the help of which the heart of humanity could be changed, the human nature could be transformed from selfishness to selflessness, humanity to divinity.

Albert Einstein, the scientist of the century, gave world the formula of generating an ocean of Energy but he did not teach them how to make use of it. He did not realize that he was giving the boon to Bhasmasur who would destroy himself, —and for this inadvertence be later regretted. Einstein gave man the energy, the means but not the intelligence and the wisdom to guide him, and the result is before us all to see and suffer: we have turned the blessing into a curse. The children of Einstein will have to make good for this deficiency, if his labours have to deliver goods and an order of sanity is to be established in the world.

Sri Aurobindo, on the other hand, gave a formula, which he termed as the Supermind, for the transformation of the human world into its divine counterpart and the establishment of the original Order in the world and earth-life. But for the application of this formula and the desired results to be achieved an appropriate technology remains to be developed. And this research and development is the task of our generation with which we enter the third millennium.

The formula for the Order

Today the human history, rather the history of the planetary life itself stands at cross-roads: on the one hand there is actual danger—caused by internal as well as external factors—of total annihilation and on the other, there is real possibility for the emergence of a new and trans-human form of life,—besides Yogis and Rishis, a host of western thinkers and scientists including Gerald Heard, Gaston Berger, Arthur Koesler, Pierre Teilhard de Chardian and Julian Huxley vouch for it. Now the fate and future of mankind is in our hands, the history has given us the

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role of an all-time arbiter: with our negative and wrong decision we can destroy the labours and achievements of entire human history and with the positive and right one we can not only culminate the past but make a new and endless beginning. Obviously, when we are conscious and aware of the supreme responsibility, it is only the right decision that will be made.

What is the right decision? Accepting what our great fore-fathers and history have done and achieved as our proud heritage to commit ourselves to accomplish what they have left undone and entrusted to us is the only right and responsible decision. What has the history entrusted to us, for what our fore-fathers have done the spade-work and what has the time-spirit made imperative for us to do? In one word, it is the establishment of the Order in the world and the planetary life.

How to do it, what is the action for it? Just a jump, a leap, a mutative change—nothing less would do and nothing more is needed—A Big Step across the 'event horizon' or the 'transition zone' or the 'frequency barrier' as the modern science describes it, —and the Destination is there. A quantum jump that takes you from the mortal world of Homo Sapiens to the immortal world of Homo Noeticum, from the relative and fragmented world of symbolic dualistic frame of lower energy potential to the absolute world of wholeness and intrinsic value of non-dual frame of reference of mind spectrum which is the ocean of higher quantum energy potential. A mutative and dimensional change which abolishes the divided and partial consciousness of the mind and manifests a new and integral consciousness of the Supermind—a consciousness-force with eternity -infinity-continuum as its dimensions and spherical as its nature—and transforms man into the divine;— here you must fundamentally realize that man, a creature with divided consciousness, is the question and the problem and the divine, an emerging being with holistic consciousness is the answer and the solution. The two are two different levels and dimensions of consciousness, and can absolutely never be together: at the human level there can never be the solution since it is the mind with its division that has created the problems, rather, the mind itself is the problem and at the divine level, the level of integral consciousness which is absolutely free from all division and possibility of fragmentation, there can never be the problem. The classical folly man has been committing throughout his history – and this fact proves the unscientificity and absurdity of his approach in regard to himself and his life even in this age of super-science –is that he has been trying to remove the problem whereas retaining his mind or himself, poor fellow not realizing that the two (problem and the mind-man) are identical, one and the same. So the separation of man and problem is impossible: together they are existing and together they will go. But man was not ready to accept this condition: to the solution that was to be achieved at his own cost, he preferred the problem with which he could at least co-exist. And hence the problem sustained itself. When man understands that the problem will not go without taking him alongwith it and he is ready to go away because—

- (i) he can no longer put up with the problem, the contradiction in his life, and
- (ii) he realizes that with his going away nothing, in fact, is lost to him, rather his life gains tremendously in terms of quality-health, happiness and beauty—

and the substance-divinity, immortality and Truth, then are fulfilled the conditions for his transformation.

Fulfilling the evolutionary necessity in planetary life we must rise to the occasion and raise ourselves to another, trans-human level of consciousness and life by breaking the barrier standing between the human and the divine,—and the breakthrough is to be achieved in life, not in spirit. In spirit we had achieved it long back when we realized soul's oneness with God and the Atman's identity with Brahman. But that did not help matters upon the earth, it remained dark and blind as it had been earlier. What we mean to achieve is another and bigger break-through: the break-through in life upon the earth by removing the curse of mortality imposed on it by time-space-continuum and releasing it into the glory of immortality and divinity bestowed by eternity-infinity-continuum. And let me tell you here very categorically, Sirs, that this transformation and mutation is not only possible but inevitable, none and nothing on earth can obstruct and stop it since in it lies the realization of the earth's destiny and fulfillment of the planetary life. Thus this divine culmination is inherent in the very nature of things, it is perfectly logical and in scientific order,—to stop short of it would be illogical and unscientific. Here you enter the World of Order.

Now the sky-high earthly question is : can eternity-infinity-continuum dimension of consciousness actually be established in the world of nature which is made up of the substance of matter? Yes, most certainly and naturally-rather, inevitably as stated above-it can be done, and it shall be done, since matter is not the anti-thesis of spirit, it is just the asleep form of the spirit, which can be woken up, —once the evolutionary necessity for it has been created as has been done now. What is the force that can achieve this final breakthrough? It is the divine energy resulting from the explosion of the spiritual atom, the Atman which can perform this 'miracle'. And I am honoured to announce that the greatest gift of the 20th century Spiritual Research is the release of this divine Energy which has literally unlimited potential and range of effective action equipped with which we enter the third millennium. It is the action and application of this energy that will create a New World of Order.

How to apply or make use of this conscious energy for the desired results to be achieved? All the barriers and boundaries built into the psychological structure and constitution of man must to be so completely removed and washed off that the very 'entity' of the human is abolished. This operation makes you—individually as well as collectively—a fit medium for the manifestation of a New Consciousness which would give birth to a new Being, a new Life and a new World of divine Order and the Truth.

Finally this is the Hour of the creation of the World of God in the post-human stage of the planetary life which re-establishes the Order upon the Earth with was prevalent in the pre-human stage but with one fundamental difference: that was the Order devoid of consciousness and this is the Order full of Consciousness, therefore, that was called as natural Order and this one is termed as the divine Order.

The Key-Creators

In the end I would like to add that as man is the bridge between Nature and God, during this period of transition in life from human to divine the best specimen of mankind among the human race must come forward and take the lead in this super-historic venture of creating a new planetary future. I identify three categories of people who are most suitable for this purpose: the scientists, the women and the youth who can be equated with trinity of Father, Mother and the son. The scientists –representing the integral science of life—are by nature the people who are interested in discovering the ever new truths and pushing the frontiers of human knowledge and consciousness forward, and thus they carry the ship of humanity to ever greater heights of realization: they are the people who are not the slaves of the past peaks, they are the birds who fly on the wings of their imagination and are guided by the stars to make their dreams a reality, the earth's gravitational pull is not for them to be ruled by, they transcend it and charter their own course as the architects of earth's destiny. The woman as mother is the creatrix, she can create whatever she conceives, word 'impossible' is an affront to her motherhood. She has created man, why cannot she create gods? She is the source of creation and there is no end and limit to it. Let her unfold her deeper depths and greater glories would spring up from her womb into the sky of the future. Her creative potential are virtually measureless and boundless as she is the Mother, the soul of the Earth herself. The youth is synonymous with future,—he is the seed, the encapsulated from the future : the living and growing future is he. They say, the child is the father of man and I say man is the father of God and the Youth the creator of the future. Let him open up and flower in a most fundamental way and the Future we have envisioned and outlined above will fructify and take birth out of him. The human youth of today will create the Divine World of tomorrow of transforming the raw (rotten) material of Disorder into the finest flower of the Order.

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National Workshop on Integrating Human Values in Technical Education

Questionnaire

- Q-1. What in your kind opinion, would be the scientific framework to understand human reality and human happiness which can be universally acceptable and free from dogmas, which can form the foundation of universal values?
- Q-2. What are the practical strategies to inculcate human values among modern youth and intellectuals and how these could be integrated in the present education system?

Q-3. What is the most effective way of enthusing young students to develop a genuine urge to become life-long aspirants for imbibing universal human values in their lives?

Q-4. What role can your organization play in this endeavour?