

**Address to the Students of
Banaras Hindu University
Varanasi
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Birth of BHU: Result of Indomitable Spirit

Creative Leadership

"Don't walk in front of me, I may not follow.

Don't walk behind me, I may not lead.

Just walk beside me, And be my friend"

Dear friends, Whenever I enter into the BHU and see the statue of Pandit Madan Mohan Malavia, I see his Indomitable Spirit radiating all around the campus and the country. Pandit Madhan Mohan Malavia a great visionary leader transformed dream into reality by creating this pioneering educational institution, a great centre of learning. Pandit Madan Mohan Malaviya a great educationist and freedom fighter, conceived and established BHU in 1916 when the British ruled us and we can imagine the challenges faced by Pandit Madan Mohan Malaviya in creating this institution by overcoming the political, financial, social and cultural problems of that time. I consider that Panditji is a man of indomitable spirit and that is how today BHU has become a shining star in the galaxies of the universities in the country. BHU is a unique university for multi-disciplinary study; with its agricultural farms, medical

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college with big hospital, and having the disciplines of science, humanities, engineering including mining. The university is also making pioneering strides in nano-science and technology research. My greetings to all of you.

The education programme at BHU has generated many leaders in different fields. Today, BHU has a mission of generating many creative leaders for the country who will accelerate the process of India transforming into a developed nation well before the year 2020. In this context, I would like to discuss certain traits of leaders.

Qualities of Leadership

I have derived the following special traits of a leader based on my experience. A leader must have the following qualities:

1. Leader must have a vision.
2. Leader must be able to travel into an unexplored path.
3. Leader must know how to manage a success and failure.
4. Leader must have courage to take decision.
5. Leader should have Nobility in management.
6. Every action of the leader should be transparent.

Evolution of Creative Leader

Let me now discuss the linkage between national economic development and creative leadership.

- A nation's Economic development is powered by competitiveness.
- Competitiveness is powered by knowledge power.
- Knowledge power is powered by Technology and innovation.
- Technology and innovation is powered by resource investment.
- Resource investment is powered by return on Investment.
- Return on investment is powered by revenue.
- Revenue is powered by Volume and repeat sales.
- Volume and repeat sales is powered by customer loyalty.
- Customer loyalty is powered by Quality and value of products.
- Quality and value of products is powered by Employee Productivity and innovation.
- Employee Productivity is powered by Employee Loyalty.
- Employee Loyalty is powered by employee satisfaction.
- Employee satisfaction is powered by working environment.

- Working Environment is powered by management stewardship.
- Management stewardship is powered by Creative leadership.

For success in all the missions, it is essential to have creative leaders. Creative leadership means exercising the vision to change the traditional role from the commander to the coach, manager to mentor, from director to delegator and from one who demands respect to one who facilitates self-respect. For a prosperous and developed India, the important thrust will be on the generation of a number of creative leaders from our educational institution.

I worked with number of creative leaders. Let me share with you some experiences.

Religion Transforming into Spirituality: Universal Mind

Religion has two components, theology and spirituality. Even though theology is unique to every religion, the spiritual component spreads the value to be inculcated by human beings for promoting a good human life and welfare of the society, while pursuing the material life. I would like to share an experience how the religion and science came together in a big mission.

It was during early 1960's, the founder of Indian Space Research Programme Prof. Vikram Sarabhai with his team, had located a place technically most suited for space research after considering many alternatives. The place called Thumba in Kerala, was selected for space research as it was near the magnetic equator, ideally suited for ionospheric and electrojet research in upper atmosphere. I was fortunate to work with Prof Vikram Sarabhai for about eight years.

The major challenge for Prof Vikram Sarabhai was to get the place in a specific area. As was normal, Prof. Vikram Sarabhai approached the Kerala Government administrators first. After seeing the profile of the land and the sea coast, the view expressed was that, thousands of fishing folks lived there, the place had an ancient St Mary Magdalene Church, Bishop's House and a school. Hence it would be very difficult to give this land and they were willing to provide land in an alternative area. Similarly the political system also opined that it would be a difficult situation due to the existence of important institutions and the concern for people who were to be relocated. However there was a suggestion to approach the only person who could advise and help. That was the Bishop "Rev Father Peter Bernard Pereira". Prof Vikram Sarabhai, approached the Bishop on a Saturday evening, I still remember. The meeting between the two turned out to be historical. Many of us witnessed the event. Rev Father

exclaimed, "Oh Vikram, you are asking my children's abode, my abode and God's abode. How is it possible?" Both had a unique quality that they could smile even in difficult situations. Rev Father Peter Bernard Pereira asked Prof. Vikram Sarabhai to come to church on Sunday morning at 9.00 AM. Prof. Vikram Sarabhai went to the church again on Sunday with his team. At that time the prayer was progressing with the recitation of Bible by Father Pereira. After the prayer was over, the Bishop invited Prof. Vikram Sarabhai to come to the dais. The Rev Father introduced Prof Vikram Sarabhai to the mass, "Dear children, here is a scientist, Prof. Vikram Sarabhai. What do sciences do? All of us experience, including this church, the light from electricity. I am able to talk to you through the mike which is made possible by technology. The treatment to patients by doctors comes from medical sciences. Science through technology enhances the comfort and quality of human life. What do, I do, as a preacher? I pray for you, for your well being, for your peace. In short, what Vikram is doing and what I am doing, are the same - both science and spirituality seek the Almighty's blessings for human prosperity in body and mind. Dear Children, Prof Vikram says, he would build within a year, near the sea-coast, alternative facilities to what we are having. Now dear children, can we give our abode, can we give my abode, can we give the God's abode for a great scientific mission?" There was a total silence, a pin drop silence. Then

all of them got up and said '**Amen**' which made the whole church reverberate.

That was the church where we had our design centre, where we started rocket assembly and the Bishop's house was our scientists' working place. Later the Thumba Equatorial Rocket Launching Station (TERLS) led to the establishment of Vikram Sarabhai Space Centre (VSSC) and the space activities transformed into multiple space centers throughout the country. Now this church has become an important centre of learning, where thousands of people learn about the dynamic history of the space programme of India and the great minds of a scientist and spiritual leader. Of course, the Thumba citizens got the well equipped facilities, worshiping place and educational centre in an alternate place at the right time.

When I think of this event, I can see how enlightened spiritual and scientific leaders can converge towards giving reverence to the human life. Of course the birth of TERLS and then VSSC gave the country the capability for launch vehicles, spacecraft and space applications that have accelerated social and economic development in India to unprecedented levels.

Today, among us, Prof Vikram Sarabhai is not there, Rev Peter Bernard Pereira is not there, but those who are responsible for creation and making flowers blossom will themselves be a different kind of flower as described in the

Bhagwat Gita: "See the flower, how generously it distributes perfume and honey. It gives to all, gives freely of its love. When its work is done, it falls away quietly. Try to be like the flower, unassuming despite all its qualities". What a beautiful message, to the humanity on the purpose of life reflected the spiritual component. Can we bridge the spiritual component of the religions to bring peace to nations and to the world?

Now let me talk to you about the importance of recognizing the contributions of team members.

Building the team or team work complex technology projects

At this stage I would like to describe my experience while working on the design project of the fourth stage Apogee motor. During Dr. Sarabhai's time, Dr. Muthunayagam was the Design Project Leader for the third stage. Dr. M.R. Kurup was the Design Project Leader for the second stage. Dr. Gowarikar was the Design Project Leader for the first stage. Dr. Gupta was the Design Project Leader for the guidance system. Prof U.R. Rao was the Design Project Leader for the Rohini satellite. I was the Design Project Leader for the fourth stage and the heat shield. The review was carried out by Dr. Vikram Sarabhai. He normally invites for such reviews experts from academic institutions since it was a design phase. For this review he had invited Prof I.G. Sharma, a well

known Guidance and Control System and Simulation Expert, Prof Narashima aerodynamic design and atmospheric sciences, Prof Mahapatra, radar system and Prof K.A.V. Pandalai, aerospace structure. Every project leader gave a presentation on the progress and problems relating to their task. Finally when my turn came, I gave a three minute presentation on the overall status of the project. Later, I asked Shri Sudhakar, System Designer, Shri Sathya, Composite Products Engineer, Shri Abdul Masjid, aerospace mechanism Engineer and Shri Nambudiri, Rocket Motor Designer to give short presentation on the progress of sub-system design. When my team completed the presentation, discussion time came. Many technical and managerial questions were asked. I answered. At that stage there was a question from an experienced scientist. Mr. Kalam, I saw the presentation from your Team one after the other. What you have done? How to answer this question? I was framing the answer. Dr. Vikram Sarabhai said Mr. so and so what Kalam did is indeed project management. That is how I would like to hear from the people who have actually carried out the task. Friends, project management demands that the project team must be able to get things done from different people and different institutions. People who contribute to the project should know that they are very important for the project remembered.

Dear friends, let me now talk to you on how to manage the failure and success.

Success and Failure Management

Three decades ago while I was working at ISRO, I had the best of education which won't come from any university. I will narrate that incident. I was given a task by Prof. Satish Dhawan the then Chairman, ISRO to develop the first satellite launch vehicle SLV-3, to put ROHINI Satellite in orbit. This was one of the largest high technology space programmes undertaken in 1973. The whole space technology community, men and women, were geared up for this task. Thousands of scientists, engineers and technicians worked resulting in the realization of the first SLV-3 launch on 10th August 1979. SLV-3 took off in the early hours and the first stage worked beautifully. But the mission could not achieve its objectives, as the control system in 2nd stage malfunctioned. There was a press conference at Sriharikota, after the event. Prof. Dhawan took me to the press conference. And there he announced that he takes responsibility for not achieving the mission, even though I was the project director and the mission director. When we launched SLV-3 on 18th July 1980, successfully injecting the Rohini Satellite in to the orbit, again there was a press conference and Prof. Dhawan put me in the front to share the success story with the press. What we learn from this event is that the leader gives the credit for success to

those who worked for it, and leader absorbs and owns the responsibility for the failure. This is the leadership. The scientific community in India has the fortune to work with such leaders, which resulted in many accomplishments. This success generated great happiness among all my team members. This is an important lesson for all project managers.

With these qualities of leadership, what is the major challenge for India today? The challenge is to uplift 220 million people who are below poverty line living in rural and even in urban areas, provide value added employment for all eligible people, increasing or doubling the per capita income, make the whole nation literate and provide healthcare for all. In this context, let me describe my visualization of the distinctive profile of India by 2020.

Distinctive Profile of India by 2020

1. A Nation where the rural and urban divide has reduced to a thin line.
2. A Nation where there is an equitable distribution and adequate access to energy and quality water.
3. A Nation where agriculture, industry and service sector work together in symphony.
4. A Nation where education with value system is not denied to any meritorious candidates because of societal or economic discrimination.

5. A Nation, which is the best destination for the most talented scholars, scientists, and investors.
6. A Nation where the best of health care is available to all.
7. A Nation where the governance is responsive, transparent and corruption free.
8. A Nation where poverty has been totally eradicated, illiteracy removed and crimes against women and children are absent and none in the society feels alienated.
9. A Nation that is prosperous, healthy, secure, devoid of terrorism, peaceful and happy and continues with a sustainable growth path.
10. A Nation that is one of the best places to live in and is proud of its leadership.

As members of BHU, I would request you to analyze each one of the competitive profile I have mentioned above and carved out an area where you can make particular contribution based on your core competence.

Conclusion: Mission in Life

Dear friends, when I see you all, I see in you great doctors, great engineers, great social workers, great teachers, great judges, great political leader, even I see some of you may have an opportunity to reach and live in Mars. Let me share

with you, what are the traits needed to accomplish these goals based on my experience.

I have seen three dreams which have taken shape as vision, mission and realization. Firstly, space programme of ISRO (Indian Space Research Organisation), AGNI programme of DRDO (Defence Research and Development Organisation) and PURA (Providing Urban Amenities in Rural Areas) becoming the National Mission. Of course these three programmes succeeded in the midst of many challenges and problems. I have worked in these areas. I want to convey to you what I have learnt from these three programmes based on my personal experience.

- a. Wherever there is a dream in life, that transforms into a vision and vision takes shape as many missions.
- b. The necessity of high level thinking to transform the Vision into Missions.
- c. Acquisition of knowledge from all sources.
- d. Working and working without boundary conditions till the realization of the mission.
- e. Leader absorbs the failure and takes the responsibility and gives the credit for success to his team while executing the Mission.

The experience that I have discussed with you friends, has given me few verses for you to remember in your life.

Mission in life

I am great in thinking and in action.

I firmly believe that I can do any mission.

I will dream to live even in Mars.

It doesn't matter who I am,

I will work, work and work,

All the forces of the universe will also assist me,

I will achieve what I dream,

I will also reach any part of our Galaxy.

My greetings to all the Students, Faculty Members and Staff of BHU success in their mission of developing creative leadership among the youth through their innovative education and learning programmes.

May God bless you.