Abstract
Performance of a University depends upon (1) acquisition of talent, students as well as faculty, (2) availability of resources, private resources and government resources, and finally, teaching, research and new product development. This is because excellence achieved by the educational system of a country ultimately contributes to the economic and social development of a country. Governance system of the University is an important contributing factor which could enable achievement of excellence of a University. On the other hand, a governance structure not crafted to take the requirements on its forward path would only create impediments ultimately resulting in deterioration first in the field of education and consequently on the development of a country itself. Governance structure has to be created taking the vision, the mission and the objectives of the University as a suitable governance structure paves the way for achieving the overall objectives of the University. Pandit Deendayal Petroleum University is a new player in the field of education. The University has ambitions of building into a world class university. The study is a case study examining the governance systems of this university in detail by deep diving into the mission, the vision, the objectives of the university and the attempts to create a governance structure to achieve the objectives.

Key words: Vision, Mission, Objectives, Governance System, Excellence in Education.

Introduction
Building appropriate governance structure is one of the important aspects for a new University. It gives direction for growth of a University and the social purpose which it stands for. Today, an Indian University has a variety of governance structures to choose from: for example, the old government structure of the state universities, structure of Central Universities, the new national level government educational institutional structure, Deemed University Structure and Private University Structure, which have come to the education scene in India only recently.

These institutions follow different structures in their governance mechanism and they operate at different levels and their achievements also vary greatly. It is often observed by experts on higher education that performance of organizations on the one hand and their governance structure is closely related. For example, it is often stated that the organizations that have highly professional Boards (of Governors) headed by a President have done much better in the country as compared to politically nominated Executive Council (Syndicate as is called commonly) headed by a Politically appointed Vice Chancellor. This may be one differentiating factors, but the nuances are very many as an appropriate governance structure is an essential condition for achieving the vision of an
educational institution for it is necessary for the governance structure to be modelled to follow the vision, goal, and strategy of the university organization.

This paper has examined, based on a Case Study approach, governance structure used by a new private university established under Public Private Partnership framework in Gujarat, India.

Pandit Deendayal Petroleum University has been developed with the vision of the Government of Gujarat and Industry which came together to build a World Class Higher Education Institution to cater the manpower, research and consultancy needs of Oil and Gas Industry in India particularly and the Indian energy industry at large.

The History and Background

According to the Directorate General of Hydro Carbons, Government of India, Oil and Natural Gas Commission, a government of India undertaking, drilled its first exploratory well in 1958 on Lunej structure near Cambay in Gujarat. This well produced oil and gas. Subsequently, the discoveries of oil in Ankleshwar structure in 1960 gave boost to the exploration activities in the Cambay Basin, which lead to exploratory drilling of more than 2318 wells in Cambay Basin. According to DGH, out of 244 prospects drilled, 97 were oil and gas bearing. The Cambay Basin, a rich Petroleum Province of India, extends from Surat in the south to Barmer Basin in Rajasthan. Several decades of Oil and Gas related activities in Cambay basin have developed Gujarat as the Oil and Gas Industry hub of India.

In 1979, as a part of Government of Gujarat initiative to explore and develop Oil and Gas potential, the Government of Gujarat incorporated oil and gas Exploration Company in Gujarat named Gujarat State Petroleum Corporation Ltd (GSPC). Consequent on the liberalization and privatization programme initiated in 1991, and with the Government of India's decision to privatize the hydrocarbon sector, GSPC acquired several discovered fields in the first and second rounds of bidding process initiated by the Government of India during 1994 and 1995. As per published information, GSPC has today a wide range of hydrocarbon activities. (www.gspc.com)

As the state moved ahead with the development of Oil and Gas Industry, a shortfall in the human talent to further drive this development ahead was felt in the early 2000. This challenge facing the oil and gas sector resulted in serious deliberations amongst the stakeholders, who felt the need to develop a new educational institution of higher learning devoted exclusively to the sector to meet the future manpower challenges.

From the ideation stage to establish the educational institution on the above lines to a more concrete plan came soon in 2003, when during the first Vibrant Gujarat Investors summit, the Government and Industry came together to address the human talent challenge with a vision to create highly trained manpower. The Industry support was led by Dr. Mukesh Ambani, Chairman and Managing Director, Reliance Industries Limited, who agreed to be the Founder and President of the University and guide the University development. During the Summit, an MoU was signed between Government and Industry to develop an Educational Society, namely Gujarat Energy Research and
Management Institute (GERMI) to conceptualize and develop the University.

The Government extended support in the form of (1) allocating the land to the University and (2) extending the support to form of an Endowment in GERMI through Gujarat State Petroleum Corporation (GSPC).

According to PDPU, from 2003 to 2007, it was the conceptualization phase where the University was given a legal entity through a State Legislature Act in April, 2007. The conceptualization phase was critical as it defined the initial development of the University with a long term development perspective. In addition to providing a legal status, the Act defined the powers and functions of the University, Authorities of the University--the Board, the Academic Council, the Finance Committee, the powers and functions of the Senior Management of the University, Financial provisions for the University, and Academic delivery management.

**Vision, Mission, Goals and Strategy**

**The Initial Challenges**

**Infrastructure Development**

Identifying the requisite land, getting the land allotted, and developing an Educational campus on the land were the initial challenges. The University partnered with a reputed Architectural & Construction firm of Ahmedabad to design and develop the first block on the campus. The first block developed was IPMG (Institute of Petroleum Management Gandhinagar) which was later rechristened as School of Petroleum Management.

**Devising Academic Course**

Devising academic courses tailored to the specific needs of Petroleum Industry, with special reference to the Indian Petroleum Industry was the next big challenge, according PDPU sources. This challenge was addressed by partnering with Universities in USA offering similar programs. To provide Indian Industry specific context, partnership with Indian industry was incorporated in the plans.

**Getting Regulatory Approvals**

The University got its legal identity through the State Legislative act, but needed approvals from regulatory agencies like University Grants Commission, AICTE etc. to be able to grant degrees. This process was completed in the next stage.

**Admissions**

The University was new and Petroleum specific programmes were unknown to all prospective applicants in Engineering and Management domain. Creating awareness about the Petroleum Industry, the opportunities it holds for future and the value being offered by the University was another difficult challenge faced by the organization. In other words, it was necessary to educate the prospective candidates as well as the society in general for acceptance, as the programmes offered
were novel in the existing educational basket in India.

While addressing the above challenges, School of Petroleum Management was formed in 2006 and School of Petroleum Technology was formed in 2007. In the second phase of the University, the academics offerings of the University were diversified and the already offered academic programme quality was further strengthened.

The challenges during the second phase were:

**Diversity**

It was felt that University can be a truly learning experience for the students if there is diversity on the campus. The diversity quotient addresses that the learning happens not only within the classrooms but also outside the classrooms. Hence focus was given to get national representation at the University so far as student admission was concerned. One of the important reasons behind starting of the School of Liberal Studies was to promote diversity in addition to broad-based learning.

**Holistic Learning**

As per PDPU, the University was envisaged to develop students into Global Leaders who are not only good at solving problems but can anticipate problems and their possible solutions beforehand. For such an attitude to develop, holistic learning was thought to be necessary. With this vision School of Liberal Studies was started to bring holistic learning and diversity on the campus.

**Developing Expertise**

The University was founded with a clear futuristic vision to address the unique energy challenges facing the nation, current as well as future, as the energy sector has always been in flux in the recent times. With this vision the School of Solar Energy and School of Nuclear Energy were established. As the focus was on developing technologies and expertise in the areas, the programs offered were research based and offered at Masters’ and Doctoral levels.

**Talent Management**

A university is incomplete in the absence of Faculty who can teach, undertake research, mentor students, and contribute to institutional development. Getting good faculty in this phase was critical. Hence, the focus was on attracting the best talent to the University.

In the next phase, the challenges in University development reflected the changing priorities of the University. It reflected that the system which was initially envisaged has developed and with this stability new initiatives can be undertaken to further develop the University.

**Academic Extension**

To undertake applied research in petroleum, solar, and nuclear engineering, it was felt that basic forms of engineering should also be an essential part. With this aim, School of Technology was
developed to do teaching and research in fundamental engineering, and science, and in view of the inter-disciplinary nature of energy studies and research.

Organizational Process & System Development

As the University started growing in size with more and more students joining the institution to pursue various educational programmes as well as research programmes, it was realized that case by case approach can be detrimental for the development of the University. It was therefore necessary to concentrate on development of systems and policies at University level to ensure uniformity in decision making which has implications on all internal stakeholders. The Academic Council, Finance Committee, and Standing Committee played important roles in planning process and system development. And the Board of Governors discussed these in detail and finalized the proposals for process and system development.

Initiating Research

The University realized the importance of initiating research after the academic content was developed and stabilized. Without new knowledge, the University will just become a teaching based institution. To facilitate these, various progressive Human Resources policies were formulated and implemented. To execute these policies, a portion of the University budget was earmarked. A dedicated office of research and sponsored programs was developed to undertake this initiative ahead and also make this as a part of sustainable growth strategy of the University.

Initiating Internationalization

The aim of the University, as mentioned earlier, was to develop global leaders not confined by national boundaries. During the formative years strong partnership was forged with International Universities. A unique program named International Exposure Program was conceptualized and implemented. The objective of the programme was to give the University students exposure to international level academic programmes and research and also plus self confidence in them to pursue their higher studies from these prestigious International Universities. PDPU publication, International Exposure explains in this connection the objectives in unambiguously: “PDPU believes in preparing global leaders who would contribute to the national and global economy and society at large. The main objective of the International Exposure Programme is to prepare students for a dynamic international scenario.” (PDPU, IEP). It further says, “The International Exposure Programme was a unique initiative of Pandit Deendayal Petroleum University with the intent to create and promote a collaborative academic and research platform at some of the finest petroleum Universities in the United States”. After the first exposure programme, on the basis of the student feedback, it says, “The exposure was academically stimulating, and culturally enriching and broadened the perception of the participating students about the oil and gas sector.” (PDPU, IEP)

A dedicated office of international relations was developed to undertake this initiative ahead and also make this as a part of sustainable growth strategy of the University.
Student Development Eco-system

While various initiatives were undertaken to ensure learning during the classrooms hours, the focus on outside classroom learning was missing. Hence at this critical juncture it was a priority. A dedicated office of student activities and leadership was developed to undertake this initiative ahead and also make this as a part of sustainable growth strategy of the University. Various student clubs were formed under guidance of faculty mentors spread across three themes namely: technical, cultural, and sports.

Financial Prudence

While the University was developing, there were various sources of expenditure while limited number of opportunities existed for revenue generation. Hence balancing the expenditure and revenue was call of the time and devising financial strategies for mitigating financial risks was the critical part of this University development juncture.

In the next phase of the University development (which extends till date of writing this note) following challenges are being addressed in University development.

Multi-disciplinary Approach

The University has developed Schools based on their competence and focus areas. The developmental challenge at this juncture is to ensure that these schools do not operate on silo basis but are integrated to each other and ensuring that student of each school is learning from other student of different school but of the same University.

Enhancing Academic Standards

Keeping high standards in academics is not an end point; it is a continuous process as frontiers of knowledge keep on expanding with developments in science and technology. Developments in Information Technology have brought about a revolution in delivery of education in the recent times. Therefore, the university has been emphasizing on revising the curriculum as per the feedbacks received from students and industry from time to time ensuring that there is an appropriate balance of class room learning, off-campus learning, and self-learning, ensuring that theory and practice are well balanced.

Strengthening Research

While there has been stress on using existing laboratories for research work, to contribute to frontiers of research, new high end world class laboratories are being developed through establishment of Centres of Excellence (CoE). Industry and Government have started participating in these CoE research. This also ensures that research is relevant to industry particularly and society in general. PDPU has developed CoEs in Solar Energy, Geothermal Energy, Bio Fuels Energy, Auto motives, Drilling, and Innovation.
Strengthening Internationalization

While the student exposure to international educational and industry environment for shorter duration has been an ongoing activity at PDPU, it is also important to expose the students for longer durations in reputed international universities (for a semester/a year). Hence Semester Exchange partnership programme is being developed with International partner universities. Also to give students an opportunity to know, learn, and interact with International faculty. International partner Universities have also been sending their faculty members for short duration exchange programmes to take-up course work.

Industry Interaction

A University cannot operate in isolation. Industry forms an integral part of the Education Value Chain. The University is developing processes, and faculty champions to foster stronger industry interaction, which will go beyond the conventional interaction for only training and placement activities.

Strengthening Process & System Implementation

The University level process and systems are being developed to provide opportunities for growth and development of the internal stakeholders. Proper execution and continuous monitoring will only yield the desired results of well formulated policy. To ensure implementation of policy decisions, a consultative mechanism has been developed with Directors, Registrar, Deans, Chief Finance Officer, Finance officers, and other Senior Managers of the university.

Financial and Admission Autonomy

The over-regulation in Higher Education sector in India can be a big bottleneck for development of a University; hence the University is working to secure financial and admissions autonomy to reach its vision to be a World Class Institution of Higher Learning.

Optimal Utilization of Resources and Raising Resources

With rapid growth in initial phase, the optimal utilization of resources is critical at this juncture of University development. Resource generation always remains challenging and most critical aspect for University development. Various initiatives under Development Strategies of the University are being undertaken.

To conclude, sustaining the initiatives undertaken and working on above identified challenges over the years with persistence has led PDPU to develop into an Higher Educational Institution of reputation with around 3500 plus students on the campus, 160 full time faculty, and 100 staff members.

We have, in the above paragraphs, discussed development of various systems for developing the university, based on the experience of other institutions of higher learning which are concerned to be islands of excellence in the country.
The Governance Structure

As per the PDPU Act, 2007, the following governance structure has been evolved:

Authorities of University:
(a) The Board
(b) The Academic Council, and
(c) The Finance Committee

Officers of the University:
(a) The President
(b) The Director General
(c) The Directors
(d) The Deans, and
(e) The Registrar

The Board of Governors:
(a) The President, who shall be the Chairman of the Board
(b) The Director General
(c) One Director by rotation to be nominated by the Board
(d) One Dean to be nominated by the Board
(e) The Secretary to Government, Energy and Petrochemicals Department, Government of Gujarat, ex-officio
(f) The Secretary to Government, In-charge of Technical Education, Government of Gujarat, ex-officio
(g) Two Expert academicians, to be nominated by the Board
(h) One of the members of the Society (GERMI) to be nominated by the Society
(i) Two experts representing other disciplines such as finance, legal, management, humanities to be nominated by the Board, and
(j) Three professionals of the oil, gas, energy and allied industries to be nominated by the Board
(k) The Registrar, as Secretary of the Board.

The Academic Council:
The members of the Academic Council consist of:
(a) The Director General as Chairman
(b) Two academicians or professionals nominated by the Board
(c) Two academicians or professionals in the fields of science, technology or management in relation to the domains of gas, oil or energy to be nominated by the Board.
(d) Two Deans, by rotation
(e) Two Directors, by rotation
(f) One professor from each discipline of the University, by rotation
(g) The Registrar as Secretary
DISCUSSION AND ANALYSIS

Governance Structure and Issues in Autonomy

Governance structure is an important matter which has implications in the decision making process in Universities and therefore this subject needs closer examination. According to the participants in the Workshop of Experts that we had conducted in May, 2014 on World Class Universities and the Indian Scenario, the experts were of the view that while investor promoted institutions focus on aspects related to financial returns, the State Universities have to grope with matters connected with political interference in all important matters; even in day to day functioning of the university. PDPU was not established as an investor promoted University nor as a State University; it has followed the Public-Private Participation (PPP) model. As this University was established under the PPP model, the President of the University is a nominee from the private industry (in this case, Mukesh Ambani, Chairman of Reliance Group and a very eminent industrialist in the country), which effectively protects the Director General, its officers and the university itself as an institution from unwanted outside interference in the University affairs. As this is also not an investor promoted Private University, the University need not have to overly worry about rate of financial returns and cut corners so far educational delivery is concerned; it will have to, on the other hand, manage resources for running the system efficiently and for providing healthy growth of the system in the required direction.

Another point is that the nature and composition of the board and performance of the university. According to experts at the Roundtable (Workshop), all educational institutions which have done well in the country have professional boards at the apex to manage affairs of the University. On the other hand, the State Universities have a system of nominated boards through a political process. As a result, they are not free from political influence in their decision making processes, both strategic as well as operational. It is also said that as a result of the political nature of these institutions of higher learning, their (State Universities) autonomy has been seriously compromised. The experts were also of the view that in the investor promoted universities, the boards are generally filled with family members and friends of the investor or the edupreneur (educational entrepreneur) as they are referred to now in the education quarters, where free and open discussions of issues are major casualty. (For a discussion of matters related to Public Agenda and the Role of government with regard to education, please see: The National Centre for Public Policy and Higher Education, “Purposes, Policies, Performance: Higher Education and the Fulfillment of a State’s Public Agenda”, 2003)

PDPU is neither a state university nor an investor promoted university; it has followed the PPP model for establishment. It has, therefore, a professional board at the apex headed by a well-known industrialist. The board has academicians, experts from the industry, and government representatives (ex-officio) as members as stated above. Therefore, the institution is free from political interventions on the one hand and pure profit orientation on the other and for that reason can take decisions of strategy and operational matters independently and professionally based on pure merit of issues on hand.
With regard to functioning of Academic Council in private investor promoted Universities, it is said that they are free to take decisions on curricula and other academic matters, without interference. In other words, generally they can set their own agenda. The experts in the workshop felt that it is precisely for that reason that they are in a position to perform better than the State Universities. State Universities, on the other hand are mainly affiliating Universities and the academic councils in these Universities are generally dominated by teachers from the colleges. Additionally, political influences because of their very nature of existence drive those to sub-optimal decisions so far as academics are concerned.

The Academic Council at PDPU can independently act on decisions with regard to academics akin to private university structure. “What to teach and How to teach” are basically matters left to the faculty members in the constituent schools with some amount of peer review and control from time to time for best possible performance. The Central Advisory Board of Education in their report, Autonomy of Higher Education Institutions (2005), had made the following observations in this connection: “There is a need to grant autonomy to individual institutions for designing curriculum. Universities may provide a broad framework within which individual faculty member both within the University and the colleges should be encouraged to innovate land experiment to transform teaching and learning into a fascinating and rewarding experience.” (CABE, 2005)

Matters pertaining to “Whom to teach” related questions fall, however, under the state purview on the basis of the public agenda of the state, which is largely more or less the same for all the Universities in the country with certain exceptions for investor promoted educational institutions.

Our discussions in the earlier paragraphs emphasized on development of system- development to achieve the desired goals. In the paragraphs ahead, we will examine and analyze working of the system established in the initial years.

The Challenges

The major challenge facing the University is faculty shortage in spite of its serious to recruit faculty from time to time.

Another problem is related to regulations with regard to fees through Fee Regulatory Committee mechanism, which has implications on financial resources. Estimates of costs based on past costs many times do not reflect future costs which put serious constraints on costs. In the recent times, the position has, however, improved.

Yet another challenge could be managing long run growth of the university. Getting excellent students in long run would depend upon reputation based on excellent teaching and significant contributions in research. Another aspect is related to cost of education. Self-financed universities face a handicap here as potential students would use cost of education into their calculus for determining admission. IITs, very well established over a period time would remain a serious competitor in view of their reputation and tuition fees subsidies utilizing government funding. (Planned as well as unplanned grants)
Lessons

1. Do not follow an existing structure followed by other institutions, however successful it has been as structural linkages to governance system and vision, mission, and goals of the institution within the framework of the overall social purpose of the country as well as the educational institution in a context of a particular time framework would-be an essential aspect of the system.

2. Prepare detailed structure and relate to a particular activity as per the vision of the university.

3. Attracting right talent (students as well as faculty talent) is important for building an institution of excellence. The organization should have systems to search internationally to recruit highly talented faculty. Retaining the faculty by providing good remuneration is only one part of solution to the problem; building facilities for research by bringing industry into the picture would be another aspect.

4. Internationalization of student population is another aspect which needs careful planning and organization. This problem may not have an immediate solution, as overall improvement of economic growth, creating social environment and creation of physical infrastructure are the other aspects closely linked to internationalization.

5. Research orientated education, a departure from traditional education, needs careful planning.

To conclude, the case study reported in the paper explains how a new university tried to address these and the other important questions so as to achieve its super ordinate goals as specified in the vision and mission of the university.

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