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Academic Achievements and Recognition

Abstract

Vellore Institute of Technology, known as VIT University, was established in 1984 at Vellore, Tamil Nadu, India and is observing its Silver Jubilee Year in 2009. In 2008, VIT University attained a ranking of 10th overall in Engineering conducted in a survey by AC Nielsen for the Magazine “India Today”. The rise to this level of academic excellence has been achieved as a result of many factors, of which two primary factors are: (1) A commitment to academic excellence and achievement; and (2) A visionary, dedicated and charismatic leader.

University History and Achievements

VIT University was established¹ in September 1984, as Vellore Engineering College near the town of Vellore and in October 1984 the College started with three programs: (1) Mechanical Engineering; (2) Civil Engineering; and (3) Electronics and Communications Engineering. The college was established under the auspices of the North Arcot Educational and Charitable Trust. Newly started engineering colleges in India have their degrees initially awarded by an already established university with which they are affiliated. Each of the programs had 60 students and the degrees were awarded by the University of Madras. The College started in a mansion in the suburb of Vellore town, that is Abdullahpuran, and moved to the current location in Katpadi in 1985. The Government of Tamil Nadu provided 150 acres for the establishment of Vellore Engineering College to the North Arcot Educational and Charitable Trust. The cornerstone for the new campus was laid on July 5th, 1985 and initial construction was completed a year later. During 1986-1987, Mr. Govindasamy Viswanathan, the founder had to sell some of his personal property to pay the salaries of his faculty and staff as most of the tuition fees had gone for building infrastructure. The college had done well academically and many of the students achieved a high ranking by the University of Madras, which awarded the degrees for the first graduating class in 1988. All three programs were accredited in 1998 by the National Board of Accreditation with an “A” grade. The focus was on offering quality education programs from the start. During the first six years 60 students were admitted in each of the three programs and all of the students were graduating successfully and many of them obtained university ranks.

In 1990, a disaster struck^{2,3} as the state government issued orders to take back the land on which the College was functioning. The College was well-run and quality conscious, but politics entered. The Tamil Nadu Government decided that, because of Mr. Viswanathan’s political affiliation and participation, they would take back the land given for the college. The state government ordered the closure of Vellore Engineering College and started a new government engineering college at Vellore. The second, third, and fourth year students were

transferred to the government engineering college and a few of the faculty members left VIT. The state government prohibited the College authorities and staff from entering the campus. The dispute occurred during the time of admission and the College was closed for a month.

Mr. Viswanathan decided to proceed with a new batch of students, but the Tamil Nadu government did not allot him with the government quota of seats. He appealed to the high court in Madras and got the order to fill all seats, but he had to recruit new faculty to fill the vacancies that occurred. A year later the state government was dissolved and the new Chief Minister withdrew all of the cases filed by the previous government and returned the land to the North Arcot Educational and Charitable Trust. Mr. G. Viswanathan entered and won election to state government in 1991 and his son, Sankar Viswanathan took over his position as the Chairman of the College. The disaster caused a financial crisis which lasted from 1991 to 1993. Financial stability returned to the College in 1994 and the first graduate programs were also established that year.

In 1996 Mr. Viswanathan lost the election and retired from politics. He returned to the College as its Chairman to devote full time to the expansion, stability, enhancement, and promotion of the college. A major expansion in infrastructure at VIT began at this time with the construction of multistoried buildings and the attraction of students throughout India and a few students from abroad. Now that the College was financially stable, more emphasis began on quality so the College could eventually award its own degrees.

Quest for Quality

In 1999 VIT was the first engineering college in India to be ISO-9002 Certified from the Det Norske Veritas of The Netherlands. This led to the establishment of a formal continuous quality improvement system which continues even today. VIT is one of a few colleges or universities that have a stated Quality Policy. The policy states: “We, at VIT University, aspire to establish a system of Quality Assurance, which would on a continuous basis evaluate and monitor the quality of education and training imparted at this University, improve the teaching-learning process and ultimately, develop the University as a Centre of Excellence”. Even now the Quality Policy of the university continues to be implemented..

Mr. Viswanathan applied for Deemed University status in 1999, but it took nearly two years for this to be accomplished. Finally, on June 19, 2001 the order conferring Deemed University status to VIT by the Government of India was issued. This enabled VIT to award its own degrees whereas they were previously awarded under the auspices of the University of Madras. This was a major achievement and a validation of the quality of the educational system followed at VIT.

The quest for quality continued through expansion of graduation programs, recruitment of quality faculty, accreditation and recognition. In 2003 the M. Phil and Ph.D. research programs were established. VIT received the first award for Outstanding Educational Institution by the National Institution for Quality and Reliability in 2004.

Accreditations

In 2005, VIT was the first university in India to have all of its engineering and technology programs accredited¹ by The Institution of Engineering and Technology of the United Kingdom. The energy related programs in the School of Mechanical and Building Sciences were accredited by the Energy Institute of the UK in 2006. In 2007, the name of Vellore Institute of Technology was changed to VIT University under the provisions of an UGC Act. In 2007 the University was ranked¹ nationally for the first time as 14th in the nation in Engineering by “India Today”. VIT University improved its ranking to 10th in the nation in Engineering in 2008 and is in the process of being evaluated for accreditation by ABET, the primary engineering accreditation agency in the USA. The Management Programs at VIT are also seeking accreditation from the AACSB (Association to Advance Collegiate Schools of Business) which is the primary accreditation agency for business programs.

VIT University was the highest ranked private university in Engineering in the 2007 and 2008 evaluations by the “India Today” and thus can be considered as “Number 1” among the private universities in India. The quest for quality and continuous improvement is indicated by the recognition of various accreditation organizations, not only nationally but also internationally.

The Leader

Leadership is of paramount importance in establishing, developing and guiding a university to national and international excellence. The background Mr. Viswanathan has had a major influence on his character and ability to lead. The humble beginnings, his ability to attend and graduate from college under difficult conditions, and his interest and success in politics led him to recognize the need for more higher education opportunities in India to improve the quality of life of its citizens.

Govindasamy Viswanathan was born in Tamil Nadu, India, on December 7th, 1938 as the 6th child out of 11 to Shri Govindaswamy and Shrimathi Rajammal. There was not a regular school^{2,3} for young children in the village of Kothakupam and his first two years of study were at a house where the village children assembled. He went to a regular school the next three years, which was a three kilometer walk each way. He then went to a high school for 6th through 9th levels, which was 5 kilometers away and that was when he first started to learn English. He

obtained a used bicycle during the 9th level to reduce his travel time. He went to Voorhees College, Vellore, then went to Loyola College in Madras (Chennai) and obtained a BA Degree in Economics in 1959 and was the first in his family to graduate from college. He then obtained an MA Degree in Economics from Loyola College in 1961 and a Bachelor of Law Degree in 1963 from the University of Madras. He enjoyed his education and participated in debates in both English and Tamil throughout his college career. He is an eloquent speaker both in Tamil and English, even now.

He practiced law for three years, but he was very much interested in politics and was elected to parliament in 1967. He served for ten years and visited many countries as a Member of Parliament. He later won an election to the state legislature for 1980-84 in Tamil Nadu and this was when the goal of starting a university began. He worked with Prof. N. Lalitha for a plan to establish the college under the auspices of the North Arcot Educational and Charitable Trust. The state government gave permission for 10 different colleges in various districts to be established in 1984, and Vellore Engineering College was one of the first private engineering colleges to be established in Tamil Nadu.

Politics can be harmful as well as helpful, and the near disaster of 1990 was caused by political adversaries. The state government was dissolved and the college restarted its operations. Mr. Viswanathan ran again for state government in 1991, was elected and was appointed as a minister. He delegated the responsibility of the College to his son Mr. Sankar Viswanathan who became the Chairman of the College. After 1993 the College became financially viable and stable and started the major infrastructure development and growth. In 1995, Mr. G. Viswanathan returned as Chairman of the College. He lost the election in 1996 and retired from politics; but this became beneficial to VIT. This permitted him to focus full time on VIT and considerable enrollment growth and new programs were started to develop VIT into a premier institution during the next twelve years.

Mr. Viswanathan had four sons and all have been active in the development of the University. His eldest son, Mr. Sankar Viswanathan, was Chairman of the College when Mr. Viswanathan was elected in 1991 to the state government. When the College became a University, the highest office became Chancellor (similar to President of a U.S. University) and next highest is the Pro-Chancellor Office (similar to Provost or Vice-President). Currently Mr. Sekar Viswanathan, his third son, is a Pro-Chancellor (focuses on academic activities) and his youngest son, Mr. G. V. Selvam is also a Pro-Chancellor (focuses on administration and infrastructure development activities). The second son, Mr. G.V. Sampath has also served in the Pro-Chancellor position and thus all four sons have had experience in the top academic and administrative positions at VIT. Other University administrators such as Deans have also had experience at the highest levels of VIT administration and realize the importance of continuous improvement process, hard work and ethical conduct in a quality education system.

The Future

Mr. Viswanathan has and will continue to promote VIT University in the international arena as well as the national arena. He has observed⁴ that universities in the USA receive substantial funding from a variety of sources, such as philanthropists, industries, alumni, and businesses as well as from government. Universities in Europe and most developing countries rely predominantly on government funding. He has also observed that in the American educational system parents and students are prepared to pay for a quality higher education program. Privatization is one solution for enhancing the quality of higher education in India. VIT University is now seeking to obtain funds from other sources and not relying solely on tuition. Research is being expanded as one approach to obtain funding from industry, business, and government.

The “Branding” of a university is also important in obtaining funds. Universities in the USA utilize athletics as one mode to attract students. The facilities for student athletic activities have increased at VIT, but highly competitive inter-collegiate athletics has not arrived in India. The recruitment of more women, Afro-Americans, Native Americans and ethnic minorities in universities in the USA has increased enrollments as well as increased campus diversity. VIT University is also following this mode by attracting students from all parts of India as well as other countries. VIT is increasing its international recognition with approximately 75 MoU’s (Memorandum of Understanding) with leading institutions across the globe, predominantly in Europe, Asia, Australia and a few in the America’s and Africa.

The focus initially was to achieve a high quality undergraduate educational program and now more emphasis will be on the research activities and graduate education. The high quality undergraduate education has led to a high placement of graduates, more than 95 percent, and their success has promoted VIT’s recognition throughout India.

The enrollment has increased from 2,500 students in 2001 to nearly 14,000 students in 2008. The number of faculty has increased correspondingly from 150 in 2001 to 750 in 2008. During 2008, applications for admission have increased to over 138,000 for the undergraduate engineering programs, but only 2,150 students were accepted.

Many graduates are continuing their education in universities in Europe and America and this has given international recognition to VIT. A large increase in graduate programs at VIT University has also increased international recognition. The establishment of PhD programs, a large increase in faculty, an increase of 600 since 2001, and the awarding of PhD degrees is enhancing the quality of the education at VIT University.

Best Practices of VIT

There are several “Best Practices” developed over a period of time and are being followed at VIT University to assure that it maintains its excellence in its academic programs. Some of the major best practices^{1,5} at VIT University are:

- 1) Continuous improvement in the curriculum in tune with the technological changes and industry requirements.
- 2) Continuous assessment of students’ academic performance throughout the program.
- 3) Developing course files/instructional materials to promote e-learning amongst students.
- 4) Providing remedial instructions for academically weak students and summer term courses.
- 5) Formation of Quality Circles at the class level with faculty and students for continuous quality improvement.
- 6) Encouraging students to take up innovative project works and funding them.
- 7) Mandatory industrial training for a period of 4 to 6 weeks during summer months and the requirement for students to maintain an Industrial Training Diary.
- 8) Continuous training and professional development of faculty through the Academic Staff College of VIT University.
- 9) Organizing guest lectures, conferences, symposia, workshops and seminars in emerging areas of technology as well as on recent trends in the existing technologies by visiting professors, scientists, and practicing engineers from industry.
- 10) Higher emoluments and performance incentives for faculty and staff.

Conclusions

The goals of VIT University are to become a Centre of Excellence and a World Class University. During its first 25 years, VIT University has made significant progress in attaining these goals. VIT University has achieved national recognition as a leader in engineering and is well on its way to become a world class leader. The leadership of Mr. Viswanathan has been critical and paramount in this achievement. It is interesting to note that the University has been led to engineering excellence not by an engineer, but by an economist, lawyer, and politician who recognized the necessity for technological advancement to enhance the quality of life for the people of India.

Bibliography

1. Creese, Robert and M. Adithan, "Engineering Education Excellence: Start-up to Number One," Proceedings of the 2008 American Society for Engineering Education Annual Conference & Exposition, 2008, American Society for Engineering Education.
2. B. Eswaramoorthy, "The Life History of G. Viswanathan", Arivu Pathippagam, Chennai, India, 2008.
3. Kadhambari S. Viswanathan, "My Grandpa", MWN Press, Chennai, India, 2003
4. G. Viswanathan, "Higher Education Development: Strategies and Related Thinking", Beijing, China, 2008.
5. G. Viswanathan, "Co-creation Roadmap for Building Competency, Capacity and Capability: VIT University – A Case Study", Chennai, India, 2008.