

Sant Gadge Baba Amravati University
35th Convocation
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Convocation Address

By

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His Excellency, Shri ChennamaneniVidyasagar Rao, Hon'ble Governor of Maharashtra and Chancellor, SantGadge Baba Amravati University, DrMurlidharChandekar, Vice Chancellor, Dr Ajay Deshmukh, Registrar, The Senate, the Management and Academic Councils, Deans, faculty and staff, distinguished guests, my dear students who are receiving their degrees today, Ladies and Gentlemen.

I deem it a privilege to be invited to address the 35th Convocation of SantGadge Baba Amravati University. I would like to thank the Chancellor, the Vice Chancellor and other Members of this University for this unique honor done to me. I take this opportunity to greet each and every one of you who is present today on this campus for this august occasion.

Amravati in Sanskrit literally translates to 'abode of immortals' though this city gets its name from its ancient Ambadevi temple. Though the exact construction

date of the temple is unknown, a mention of Amravati can be found on a stone inscription on the base of a marble statue of Jain God Adinath dating back to 1097. Amravati is the Cultural Capital of Vidarbha because of its excellent educational facilities and cultural heritage. Amravati's most famous historical landmarks are its temples - Shree Ambadevi Temple, Balakrishna Temple, Someshwar temple, Jain Shwetamber temple to name a few. The city's famous Hanuman VyayamPrasarak Mandal is one of the largest sports complexes in India established in 1914. Its members are known to have participated in the Indian Independence Movement. This Mandal renowned for its facilities for different kinds of sports has now diversified to include Ayurveda, education in tribal areas, engineering and Technology. Amravati has played crucial role in India's freedom struggle. The head office of the Civil Disobedience Movement was housed in Amravati and freedom fighters such as Rao Bahadur, DadasahebKhaparde, MoropantVishwanath Joshi are from this city. Amravati is fast growing as an industrial center with the attendant rapid infrastructural development.

SantGadge Baba Amravati University is named after SantGadgeMaharaj, a revered Saint and a Social reformer who promoted social justice and initiated reforms. To this day,SantGadgeMaharaj is considered as a source of inspiration by many. The University's mission, to contribute to the society, through the

pursuit of education, learning and research at the highest levels of excellence is a befitting tribute to the legacy of SantGadgeMaharaj. With 382 affiliated colleges, 3.50 lacs students and a sprawling lush green campus of 480 acres, SGBAU is one of the largest Universities in the country. It caters to the educational needs of five districts of the Vidarbha region, offering various undergraduate and postgraduate courses in faculties of Arts, Science, Technology, Business Administration & Management, Medicine, Fine Arts, Law, Commerce and Engineering. The vision of the University is student centric and the focus is to create a Human Resource capable of converting challenges into opportunities through imparting training to youth in various aspects of professional development and in the process creating ideal citizens, academic leaders and global entrepreneurs. The huge infrastructure and highly qualified, motivated and dedicated teaching and non-teaching staff are the workforce toiling tirelessly to fulfill the 'Ten Commandments of SantGadge Baba, i.e. upliftment of the common by way of education.

SGBAU aims to become a premier institution of higher education and research in India with the potential use of ICT extending educational facilities to the remotest place in the region so that no one is deprived of education. Through proposed specialized colleges imparting education in Animation, Fine Arts, performing arts and Bachelor level vocational education, SGBAU is taking

forward the 'Make in India' initiative of our Hon'ble Prime Minister Shri Narendra Modi to produce skilled workforce.

My dear friends, the rich ambience and heritage of this place to which you belong to, is an enduring source of inspiration for all of you. As you prepare yourself to enter a world that beckons you with exciting and challenging opportunities, you should also be prepared to face the rigors and uncertainties all the way. Beat the fatigue with the fountain of talent and creativity that is within you. Never lose sight of your goals and aspirations, whatever may be the obstacles. "A block of granite which is an obstacle in the path of the weak becomes stepping stone to success in the path of the strong".

I would like to use this occasion to dwell on the importance and the key role that universities play in the progress of any nation. The challenges that universities face in the wake of globalization is enormous, and what acquires importance in this context, is the quality of education that is imparted by these centres of learning. The pursuit of academic and intellectual excellence is central to, and at the heart of all university education. I consider that wide-spectrum institutions like Sant Gadge Baba Amravati University have a unique role to play for our present and future society. This uniqueness springs from the experience and expertise in a wide range of disciplines spanning diverse branches of learning including sciences, technology, management, law, arts, culture and

humanities. Such an environment is suitable for cross fertilization of ideas among diverse disciplines. All modern endeavours and new progress are critically dependent on such cross fertilization of disciplines. As modern branches of knowledge are rapidly expanding, there is growing realization of the need for such interactive studies to achieve rapid progress.

Having seen the variety of courses in which education is imparted in your University, it is quite obvious you are in an advantageous position to bring in a holistic approach to the pedagogy. In this context, I would like to bring the case for a strong emphasis on Liberal Education. It is needless to go into the details to this erudite audience about the role of liberal education to develop the freedom to think critically and independently, to cultivate one's mind to its full potential and to liberate oneself from prejudice, superstition, and dogma. To foster these qualities, appropriate choice of curriculum is critical. It is important to note that Science and Mathematics are essential components of any such project, because they provide the students the ability to develop methods of inquiry that are indispensable for the full development of the human mind and its powers to reason independently. More explicitly, in pure mathematics and theoretical physics, one learns how to reason from clearly defined premises. In experimental sciences, one learns the method of induction i.e. how to make proper inferences from evidence. The great works of Indian philosophy and

scriptures provide interesting examples of how the mind liberates itself from prejudice by the rigorous application to questions as to how we know and how we should act. In short, a liberal education will prepare you to be a thinking citizen for a lifetime.

I would like to digress a little at this juncture and examine some unique traits of humans that can offer insights into why certain leaders succeed spectacularly in their chosen ventures. I consider this step appropriate for you youngsters because of the several opportunities that have opened up in the recent past in the form of start-ups and entrepreneurships within an ecosystem that fosters the development of high level of professional competence, creativity and innovation. I recently came across some analysis by author Walter Isaacson about certain attributes that connect today's geniuses with the influential innovators of the past and I reproduce some important features of the same. Going further and comparing, I take the names of Steve Jobs, Founder of Apple and Leonardo Da Vinci, a genius of the Renaissance period. One thing that is common to these two creative geniuses born in different times is their demonstrated ability to marry art and science to create innovations of high impact. To these people, beauty, design and engineering were all the same. One of Da Vinci's most famous works, the Vitruvian Man, is partly a self-portrait with beautiful curls and perfect shading. Leonardos drawing has the exact proportion

of the body correct and he made 230 measurements before drawing- so it's a work of staggering scientific sophistication; meanwhile, his peers made line drawings. According to Isaacson, one lesson to be learnt from Da Vinci is to embrace many fields of knowledge and passion. "Often, we fail to be creative because we think too narrowly. Leonardo would just wonder, 'What does a woodpecker's tongue look like?' and he wanted to know, not because it would help him build a flying machine or paint a better painting, but out of curiosity. All of that eventually leads to a spiritual feel for patterns of nature. But even if it doesn't lead you to someday paint the 'Mona Lisa', it can still lead to a more enriching life". It is thus obvious that Leonardo mastered the art of how to balance the business of being perfect with also being productive.

Now coming to several centuries later, I would like to bring in the importance of knowledge related to arts, crafts, architecture and aesthetics as a part of engineering education. It is often commented that India produces very competent engineers, but falls short of being great innovators. Steve Jobs, famous for his innovative ideas was asked a question on what makes Apple products successful; according to him the secret was to bring top notch aesthetics with top notch engineering. He himself is known to have said about why the Macintosh computer revolutionized computing and I quote: "I think part of what made the Macintosh great was that the people working on it were

musicians and poets and artists and zoologists and historians, who also happen to be the best computer scientists in the world". With an ecosystem which is conducive to bring the best of engineers with expertise drawn from arts and humanities, one could really transform the outcomes of an engineering education through the creation of top notch innovators. I am sure your University could be a leader in adopting these kinds of strategies not only in the context of engineering but also at a future time in marrying Science education with arts, humanities and other fields.

Let us now examine the factors relating to bringing the benefits of science and technology to improve the quality of life of a society. Science is dynamic and is deeply embedded in society, as society has changed, so too has science. Needless to emphasise, advances are taking place at mind-boggling pace in several new scientific areas. Modern society is empowered by Science, for example, the future of Indian market lies in the deployment of new and emerging technologies like Big Data Analytics and Machine Intelligence (MI) encompassing Artificial Intelligence, Machine Learning, 3-D Printing and Cloud Computing. As a specific case, in today's technology driven world, the data that we generate every microsecond is growing at a rapid velocity and the existing data governance is unable to cope up with this growing requirement. Big data analytics, is one of the fastest growing of all technologies which is providing a

platform for this unstructured data using cloud computing. The cloud computing models provide scalable analytics solution for the ever exploding growth of unstructured data offering agile and efficient way for accessing and analysing the same. The revenue for big data is not only from retailers but also from the most unexpected industries like telecommunications, insurance, health care and real estate where it can be used for its productivity and accuracy. The future is looking bright for big data, with it being valued at \$122 billion in 2015 which is projected to be increased to \$187 billion by 2019. The analytics market in India is expected to see a growth from \$2 billion in 2015 scaling to \$16 billion by 2025; with the potential of being in the top three prominent members of the global big data market in the next three years.

Another dimension of the disruptive influence of information technology is the advent of MI. Every field from the military to medicine to manufacturing has benefited from the advancement in MI. Computers are learning to think, read and write and also picking up human sensory functions like the ability to hear and see; MI technologies can also be used to augment human ability to handle complex military tasks more quickly.

MI technologies cut across a vast array of problems, enabling automated assistant like Siri, Cortana or Google assistant on our mobiles, helping us to shop online, facial recognition on social media apps like Facebook etc. 3-D printing is

revolutionising the medical industry right from drug manufacturing to surgical care to manufacturing of medical devices. Another area where MI is making a big impact is in the field of education where machine assisted solutions can be used to custom tailor education according to the students need and level of learning. There are a wide variety of tools available and it is imperative to choose the most suitable, effective, efficient and progressive technologies, the implementation of which will benefit the education system.

The effect of MI is changing the economics of virtually every industry. The need for MI by so many industries has created an environment for start-ups to flourish in this area leading to some of the world's largest tech companies to fund start-ups, fuelling their growth.

A few words about the role of machine intelligence in the context of India's future strategy on information technology; India, I may mention has always played "back office to the world" role in many sectors of IT. In this context, it is important to recognize that vast majority of persons who use MI are not researchers but practitioners. This means that there could be a global demand for the practitioners of MI among the industries who will not be looking for researchers with the attendant need to pay fancy salaries. MI technology has enormous potential to shape India's economics in the future as it is fast becoming the new face of doing business. With these recent advances in MI, it is

imperative for policymakers of our country to deliberate on a policy to drive MI innovation, adaption and proliferation for India to maximally benefit from its advancement.

Further, the area of Deep Learning is ripe for India to make its mark. India has the necessary ecosystem to play a significant role in plugging some of the theoretical gaps in the current machine learning theory. Development of these capabilities would immediately place the developers at the research forefront. This type of research would call for not just knowledge of contemporary machine learning techniques but also expertise in statistical learning theories and other such traditional aspects of machine learning. With the penchant to pursue the learning of traditional Mathematics and Statistics among Indians, these students can be easily trained to undertake such research which in turn could potentially place India among the leaders in Machine learning research. My young friends, the above discussion gives you a flavour of the emerging and exciting opportunities for taking up challenging professional careers, which can be rewarding both intellectually and financially. There are several similar opportunities which would include nanotechnology, material sciences and robotics.

My dear young friends, in today's world, you will have opportunities to go on to live and work in a range of cultures. We must equip you for this life by teaching,

offering other types of experiences, meeting your contemporaries elsewhere and so on. The question of bringing about transformation in Indian universities so that they become really examples of international diversity is going to be quite challenging. As a first step, we could experiment with bringing in several diverse cultures that this country offers within the ambience of a university environment so that a broader national outlook is made possible. I am saying this because Universities like yours have certainly enormous potential in the era of globalization. The question is whether we can boldly take up those opportunities and make a virtue of the same.

Turning our attention further towards strengthening the role of science and technology (S&T) as an important component of the knowledge society, the present government has ambitious plans to step up investments to promote education and research with special focus on providing impetus to social, industrial and strategic sectors. Our Hon'ble Prime Minister Shri Narendra Modi Ji's direction to the various departments of his government to fully utilize the capabilities of Indian Space endeavors to effect transformational development of the country is a case point. It is thus, timely, that we start examining every issue that could impact positively the role of S&T in National development.

Recently our Hon'ble Prime Minister announced the decision of Government of India undertaking the Human Space Flight Program "Gaganyaan", carrying an

Indian on board with a timeline for the first flight to be realized by 2022- the 75th year of Indian Independence. This is an extraordinary challenge from the standpoints of science, technology, life sciences, long term presence of humans in space, international linkages as well as managing a resource intense program involving finances, establishment of infrastructure and creation of appropriate human resources. This decision of our government certainly reflects the confidence of the country and its people to undertake challenges that take us to the frontiers of complexity in human endeavor. The premise for this kind of decision is to be seen in context of India's economic progress; India is soon moving into the position as the fifth largest economic power and with the potential to become third largest economy by 2032, the success of India's Space program as a reflection of its endorsement of high degree of professionalism and the country's determination to be on par with the most advanced, intricate and challenging human accomplishments achieved anywhere and with the ambition of even charging ahead.

I would like to conclude this address by emphasizing that as inheritors of a society which blossomed up great values for life and a deep concern for human development, you should intensely aspire for deepening and broadening your knowledge, learn to experience the power of collective team work, and always be guided by higher values which you believe in.

नचोरहार्यनचराजहार्यनभात्रूभाज्यंनचभारकारि

व्ययंकृतेवर्धतएवनित्यंविद्याधनंसर्वधनप्रधानम

The wealth of knowledge is the greatest of all forms of wealth-it cannot be stolen like money or possessions;it cannot be taken away or annexed like land;nor can it be divided among brothers like inherited property-it is never a burden.

The wealth that is knowledge grows and increases even as it is disturbed.”

In all that lies before you, may God grant you wisdom, success and true sense of fulfilment of your cherished ideals and goals.

Thank you.
