

CONTRIBUTION OF SCIENCE, ENGINEERING AND TECHNICAL EDUCATION TO THE OVERALL EDUCATION SYSTEM

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Abstract : This Technical knowledge is becoming a crucial part of our living and it contributes a major share to the overall education system and plays a fundamental role in the societal and financial development of our nation. Today the progress made in the field of science and engineering has made life elegant and moreover, has improved the quality of life. These technological fields need the support of highly qualified experts. Therefore, Top Engineering Colleges in Punjab aims to impart the best professional education possible. Candidates should be prepared in advance to become a part of the fast altering and advancing world..

IndexTerms - Science & technology, Technical Education, skilled labor, education system.

I. INTRODUCTION

In a live session on 'Future of Technical Education in India' in 2019 by Prof. Anil D Sahasrabudhe, Chairman, AICTE has addressed that everyone is aware of the importance of technical education. It helps students to develop theoretical and practical knowledge. It improves the quality of living standard by producing trained and experienced manpower. According to him, the participation of students in Smart India Hackathon and solving inter-disciplinary problems and placement records has indeed cleared the vision. Dr. Sahasrabudhe, however, opined that generic skill sets needed for working effectively in an industrial environment – like team work, inter-disciplinary skills and soft skills – need to be imparted to students. Technical education gives all the knowledge and skills people require to compete in this cut throat competition. Science & technology has influenced almost every section of the society that people can't imagine their life without its existence. To fulfill the need of the modern era, the education system should focus on technical and practical knowledge

II. RESEARCH QUESTION AND METHODS

The research question of this contribution follows from the purpose of the study, which is to give an overview of research and to formulate suggestions for further research. This study is based on a qualitative analysis of the research reported at the conference and in the journals. The selection of journals was based on the following inclusions criteria. The journal had to be published in the English language; it should be published with an international scope.

III. TECHNICAL EDUCATION SHOULD BE GIVEN TOP MOST PRIORITY BECAUSE IT PERSUADES THE ASPIRANT TO COME OUT WITH THEIR POTENTIAL

It is need of today's time that not only in India but in the entire world importance of skilled labor is increased we see tremendous demand of technical skilled labor in the international market and that is how priority should be given to the technical education because It builds a level of confidence and sense of self-respect in every individual. If a country has enough of its skilled manpower, it will not depend on other nations or believe in pool resources with developed countries. Engineering benefits only when it is done for the right engineering college, which is highly reputed and provide quality education. Technical Education can meet the growing demands of mounting society and to meet its multiplying demands. With the conservative methods and typecast general education, people acquire nothing to contribute to the progress and opulence of the human society. Technology is impacting every phase of human life. The usage of technology in education will focus towards learner centric education and highlight creative thinking. Keeping in mind the noticeable advantage of application of technology in education, the higher educational institutes are now keen on incorporating technology and education. Technical education has become the buzz word of today.

IV. Technical Education has been radically rising from the past few years

Earlier was the time when people were not aware of what options they would opt in the future but situation is different these days parents as well the candidates are vigilant and keen to know about the options available in the prevalent education system. Previously only hands full of students were able to access this technical education. But in today's scenario, Technical Education is one of the most popular choices of millions of students. The northern most states of India accounts to have more than 50 per cent from the total count of technical education. Last year around millions of student enrolled in 2,297 engineering colleges all across the country. In the present academic year, Punjab alone has around 85 self-financing colleges which were approved by the AICTE. The total number of engineering colleges is adding up every year. This disproportion and quality are at present the serious apprehension of the authority concerned. India has established vast infrastructure facilities with regard to the Technical education. This has provided the country with a niche benefit in the globalized economic environment. The technical education will aid for the growth of a countries economy and also in national expansion. In the past few years the growth rate of technical education is exceptional. There was a huge rate of increase in the total number of institution. This has also increased the intake of

students in the Engineering degree level in the same period. At present the total intake has grown largely than the last year. The manifold boost in the intake and expansion in the total number of technical institution has resulted in a major increase of pressure on the excellence of educations of engineering and technology field. This can be easily seen in the obvious increase of courses being offered in these institutions. The Engineering courses have almost quadrupled recently. Previously there were just three basic branches in the engineering which were commonly known as Civil, Electrical and Mechanical. These courses were on the basis of Soil, Coal and Oil branches. At present these 3 major branches have been stretched and expanded to 41 courses in under graduation alone and more than 100 courses in Post graduation. Some of the latest and very popular areas include Automation and Robotics, food technology, Nanotechnology etc. Ocean Engineering, Environmental Engineering, and Climate Change etc are few other courses in relation to the advancement of the branches in engineering.

V. Importance of Technical Education

Importance of Education cannot be explained as rightly said “An investment in knowledge pays the best interest. Benjamin Franklin”. Education is an imperative feature for each person in a country. It has a very important role which aid in changing the gaze of a nation. No country will get in the path of achievement unless and until every person is educated enough to meet the challenges which might happen. Education is the only means through which a person gets a realization about himself and the future goals. Fundamentally, Education is alienated into three clusters. The first part teaches and educates a person about the concerns of the society, which is commonly known to be as the Social Education. The second will uplifts ones personality through Spiritual Education and the third one deal with the professionalism and is known as the Vocational Education. Technical Education comes beneath the branch of Vocational Education. This deals with different areas like trade, commerce, agriculture and also medicine and engineering..

VI. Universal Certifying principles

Inclusion of certain mandatory certification will be very much helpful to impart quality education. The inclusion of huge number of industry and the addition of IT industries has generated a huge demand for quality and skilled engineers in large quality. As a matter of fact, the specialized services from skilled engineering professionals are required highly for the development and implementation of ideas. The main factor which acts as the mile stone's for success in similar practical oriented courses are the infrastructure and knowledge of teachers. By getting official approval by national agencies like NBA and NAAC will definitely helps in ensuring quality of these educational institutions. At present the standards and procedures are not as rigorous as that of international agencies like ABET, IET etc. Consequently a widespread authorization system has to be changed for setting up unvarying global standards for the promotion of global community

VII. Moral structure - The indistinguishable element

The issue is very crucial but it needs to be addressed that the management and administration of all educational institutions along with approval bodies and Councils must make certain the system has been installed this feature in position. A professional course is proposed for crafting professionals, whose awareness and performance possibly will be trusted at face value. Ethics and proper principles like self-discipline, commitment, disposition and candor are as important as intellectual luminosity. It is inconsistent that ethics, which are supposed to be part of the personality and line of work, is persisted and passed on through additional special lectures and add-on courses. This is even followed for the most experienced engineers even now. Students are clearly unaware of such standards and imparting it is more intricate as compared to passing on knowledge. It has to be taken in from excellent teachers and senior colleagues who are supposed to serve as role models.

VIII. Facilitation for the underprivileged category

The reality which we cannot deny is that India being an agricultural country, around 70 % of the nation's population is in the rural areas. Most of these areas are deprived from the advanced facilities available in the urban settings. This results in the lower rate of reach of students in to the Technical Education. This divide of rural and urban must be eliminated by facilitation. The education system must give serious attention to the language and communication skills along with various cultural and practice in these areas through molding methods.

IX. Major challenges in Technical education

Some of the most important challenges faced in the field of Technical education include accomplishment of a knowledge based modernizing engineering surroundings in the institutions. This includes creating technology savoir-faire campuses, using Information communiqué Technology to enhance teaching effectiveness. This will also help to develop a knowledge centric learning environment. Developing a research centric tradition at all level of education is another major issue. There should be a proper system which will tie together the power of brainpower and the power connectivity to promote talent of engineering students. Another major concern faced in the technical education sector is developing teacher's competence for improved teaching and artistic research. The institutions which offer technical education must be capable of offering the right mix of knowledge, skills and competencies as to deal with the presently rigid core specialties and also increase autonomy.

X. The prospect of Technical education

The prospect of technical education must be in synchronization by providing identical importance to science, engineering and technology. The vision of the technical education must be to develop rational thinking, academic analysis and to do research pertaining to engineering development. Practical utility of the academic knowledge is necessary for technical education and institutions must give priority to industrial training and entrepreneurship development. Students must be job-supplier relatively than job-seekers.

XI. CONCLUSION- In nutshell we can say that Technical Education in India is at the doorstep and could do with key improvements as for structuring a dependable and consistent qualified and professional employee which has to put together the country for the wellbeing of future generations. The Government should establish National Technology Watch Groups consisting of eminent engineers, scientists, technologists and educationist from institutions, research organizations, industries and administrators. They will be constantly on the lookout for new and emerging technologies, recent technological developments and innovations in other developed countries, evaluate their relevance and feasibility in the national context and their potential for adoption. On their advice the Government should procure the technology transfer and/or international collaboration. Finally, the information should be disseminated to the institutions, industries and other interested organizations

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