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**ROLE OF RESEARCH WORK ON HIGHER EDUCATION IN INDIA**

**ABSTRACT**

This paper represents the great impact the higher education of India is a well-acknowledged fact that Research work dramas an important role in the financial growth of a country. The Research work signifies to an original work, which is expected to in a methodical way to increase one's stock of knowledge. In the background of education, it would refer to determining educational problems in a methodical and orderly way. The research work division then India is a cheered one, while the respected governments and institutions of national importance are excelling in research work, the average and deprived ones are lacking in the same. The challenges of Indian Administration have taken a number of steps to promote research work. The meaning of research work growths from its promotion of original thinking; finding solutions to impending problems in a methodical, scientific and well-determined way, promoting further studies in the area of interest and keeping abreast with the latest developments in the selected field of study of education. The number of constraints characterizes the Indian system of education challenges and research is one of the main ones. Carrying out Research work in India has a number of challenges such as the absence of intellectual stimulation, importance on rote learning, lack of scientific theory and base, inadequate data, lack of scientific knowledge of education, and training in Research Methodology. In the challenges of the globalized world, it is imperative to have knowledge-driven growth of education powered by the improvement. A number of steps could be practical to foster research work such as industry-academia partnership, the growth of vocational skills education, and provision of more funds and inclusion of research as a criterion for faculty promotion. India has a well-acclaimed Brain Power and advancement Research an work will only help India move up the worldwide knowledgeable ranking. The relatively small reform of the early 1980s of allowing private colleges in some states activated a vast growth of expert education, almost all privately provided. We should not undervalue just how impressive this growth has been, but the excellence problem India now faces is a direct significance of its importance on the number over excellence. Thus, this paper attempt to explore the role of research works in higher education of India and challenges and prospects.

*Keywords: Education Research, Industry-Academia Collaboration, Research Bodies, challenges, prospects*

## **INTRODUCTION**

The higher education in India suffers from many universal lacks. As a result, it continues to provide graduates that are unemployable despite emerging shortages of skilled labor in a growing number of sectors. The standards of academic research are low and declining. Some of the problems of the Indian higher education, such as the unwieldy connecting system, inflexible academic structure, uneven capacity across various subjects, eroding the autonomy of academic institutions, and the low level of public funding are well known. Many other concerns relating to the dysfunctional regulatory environment, the accreditation system that has low coverage and no consequences, the absence of incentives for performing well, and the unjust public funding policies are not well recognized. Driven by populism and in the absence of good data, there is little informed public debate on higher education in India. Higher education in India has expanded rapidly over the past two decades. This growth has been mainly driven by private sector initiatives. There are genuine concerns about many of them being substandard and exploitative. Due to the government's ambivalence on the role of the private sector in higher education, the growth has been chaotic and unplanned. The regulatory system has failed to maintain standards or check exploitation. Instead, it resulted in erecting formidable entry barriers that generate undesirable rents. Voluntary accreditation seems to have no takers from amongst private providers and apparently serves little purpose for any of its stakeholders. Despite, its impressive growth, higher education in India could maintain only a very small base of quality institutions at the top. Standards of the majority of the institutions are poor and declining. There are a large number of small and non-viable institutions. Entry to the small number of quality institutions is very competitive giving rise to high stake entrance tests and a flourishing private tuition industry. The stakes are so high that quota-based reservation of seats in such institutions in the name of affirmative action has come to occupy center stage in electoral politics. Despite some merit, it has resulted in fragmentation of merit space and further intensified competition for the limited capacity in quality institutions. While public funding declined, enrolments in higher education institutions grew to meet the surge in demand. This further deteriorated academic standards. As a result, the institutions were forced to raise their tuition fees to sustain themselves. The emergence of private providers and an increase in tuition fees in public institutions without any substantial program for students' financial aid has made higher education beyond the reach of the poor. The paper discusses feasible strategies to overcome this and make higher education affordable and accessible to all. This paper takes a comprehensive look at the various facets of higher education in India. It adopts a systems approach for achieving policy coherence and multi-level coordination required to address genuine concerns in the Indian higher

education on a long-term basis and uses the experiences of other countries to suggest measures to tackle its various systemic deficiencies.

### **THE HIGHER EDUCATION SYSTEM IN INDIA**

Education in ancient India was highly advanced as evident from the centers of learning that existed in the Buddhist monasteries of the 7<sup>th</sup> century BC up to the 3<sup>rd</sup> century AD Nalanda (Perkin, 2006). In these centers, a gathering of scholar's guru Kula used to be engaged in intellectual debates parish ads in residential campuses. A few of these centers were large and had several faculties. Historians speculate that these centers had a remarkable resemblance to the European medieval universities that came up much later. The ancient education system in India slowly got extinguished following invasions and disorder in the country. Till the eighteenth century, India had three distinct traditions of advanced scholarship in the Hindu gurukulas, the Buddhist viharas, and the Quranic madarasas, before the British set up a network of schools to impart western education in English medium (Perkin, 2006) The first such college to impart western education was founded in 1818 at Sera pore near Calcutta. Over the next forty years, many such colleges were recognized in different parts of the country at Agra, Bombay, Madras, Nagpur, Patna, Calcutta, and Nagapattinam. In 1857, three federal examining universities on the pattern of London University was set up at Calcutta, Bombay, and Madras. The existing 27 colleges were affiliated to these three universities. Later, more universities were Standard. At the time of independence in 1947, there were 19 universities and several hundred affiliated colleges "CABE, 2005". The higher education system in India grew rapidly after independence. By 1980, there were 132 universities and 4738 colleges in the country enrolling around five percent of the eligible age group in higher education. Today, while in terms of enrolment, India is the third largest higher education system in the world "after China and the USA" with 17973 institutions (348 universities and 17625 colleges) is the largest higher education system in the world in terms of a number of institutions. The number of institutions more than four times the number of institutions in both the United States and entire Europe. Higher education in China has the highest enrolment in the world (nearly 23 million) is organized in only about 2,500 institutions. Whereas, the average enrolment in a higher education institution in India is only about 500-600 students, a higher education institution in the United States and Europe would have 3000-4000. Students and in China this would be about 8000-9000 students. This makes the system of higher education in India as a highly fragmented system that is far more difficult to manage than any other system of higher education in the world. Research work dramas an important role in the financial growth of any nation. In fact, the research and growth form the foundation of future competitiveness of an economy. Inopportunately, the research in India is presentation a descending tendency. In this Paper, an attempt has been made to debate the idea of research, inspect the position of research, and briefly touch on the research division in India, look into the challenges and effort to predict the future.

## **THE RESEARCH EDUCATION IN INDIA**

The Research Education is a major mover of society. In order to favorably utilize our demographic possible, the excellence of teaching together with access and equity gathers meaning. India has the third largest system of higher education. The overall situation is that quality does not match the global standards and there is increased scope and urgency for improving the quality of our country's educational institutions. The research work scenario in India represents an applauded picture. While some leading world-class institutions as if the IITs and the IIMs are achieving what was well planned in their objectives others represent a miserable picture in terms of quality and quantity of research. The first Prime Minister of independent India, Shari Jawaharlal Nehru, believed in the importance of science and education, which would facilitate a path of innovations, which in turn would help in the process of development. Generally, India has evolved a large number of high-quality research institutions, which would provide valuable advice to the policymakers. The institutional framework for research and development can be separated into two broad categories: defense and civilian. The five apex bodies, which are responsible for research and development work.

It is necessary to design a framework that will take into account the entire life cycle of ideas, beginning from discovery and creation to commercial application and value addition. This calls for a holistic approach to public funding in Research and Development. India attracts more Research and Development facilities from the US multinationals in the "Fortune 500" than any other nation. This could be primarily attributed to the large number of science and engineering Ph.Ds. available in the country. The government wants to increase the spending on Research and Development under the twelfth five-year plan "2012-2017" from 0.9% to 2%. However, when a comparison is made with other countries India presents a poor picture. In our country, there are 119 researchers per million population as against 5287 in Japan and 4484 in the United States. She has a little over 6000 Doctorates in Science as compared to 9000 in China and 25,000 in the United States. Most of the Indian colleges and universities lack high-end research facilities. The number of Ph.D. produced every year is very low. The Government of India has taken several steps to promote the Research and Development sector in India, as mentioned in the Union Budget of 2014-15. Two additional Research Institutes of excellence were set up in Assam and Jharkhand with an initial sum of Rupees 100 cores. In addition, the government plans to establish a national level research and referral institute for higher dental studies.

## **THE IMPORTANCE OF RESEARCH WORK**

The Importance of Research work let us discuss the significance of Research one, our knowledge is limited and a number of problems need to be solved in different fields of study. Very often, we identify a vacuum in our knowledge and try to address it by asking related questions. Research through

methodical study makes available a variety of methods, which help in finding solutions. Two, research is regarded as an objective, methodical, well-determined scientific method of investigation. Through research, a stock of the current scenario can be taken and this will guide the organizations in their decision making of the future. Three, we carry out our mundane daily tasks based on our common sense. However, this may not be the correct approach. We will have to find out what is the best under the current situations and research serves this task the best. Four, another angle of research is that it helps to gather information. The findings can be recorded and then analyzed to judge the validity of the information. Five, Research is a systematic investigator into and study of materials and sources. It helps to pursue your interests, learn something new, hone your problem-solving skills and come out with results that can contribute to the enhancement of knowledge. Six, Practice of research adds depth to research papers as students are kept abreast of the latest information. Through learning from real-world case studies and by seeking the guidance of faculty members, help students secure up to date information. In this world of Information and Communication Technology lack of infrastructure and poor quality of digital content are grounds for concern. For making a healthy ICT environment, digitized Ph.Ds. thesis, E-journals, research journals, E-books etc. have to be developed. Seven, it is vital that educational institutions establish a Research Consultancy culture involving faculty, students, professionals, and industry to work on a few technologies and facilitate discovery. Research work should be the core area instrumental for the interface between the academic and corporate world. It must provide a hypothetical agenda that enables review and modification of current practices and thinking. It empowers the faculty with in-depth knowledge and instills a sense of curiosity among them. In addition, it advances the consultancy capabilities of the faculty.

### **THE CHALLENGES FOR RESEARCH WORK IN INDIA**

The Indian organization of higher education has been facing a number of challenges. It needs main reserves to make human resources creative, by connection the older general corrections of humanities, social sciences, natural sciences, and commerce, with their applications in the new economy and having adequate field base experience to enhance knowledge with skills and develop appropriate attitudes. There are several basic problems facing Indian higher education at present. They include inadequate infrastructural facilities; faculty crunch; low enrolment ratio; over-crowded classrooms; widespread geographical income, gender, and ethnic imbalances etc. India has a low base of researchers and the academic sector contributes less than 14 present of the total number of investigators. The immediate need in this context would be, to encourage industry-academia collaborations, promote collaborations between the universities and the public authorities as between the government and Research and Development laboratories and increase the number and quality of doctoral students. The Indian education system promotes rote learning and students only use

prescribed materials. This trend continues even when pursuing higher education. The examinations are more a test of memory power rather than creativity. When the stage comes to pursue further studies and present research papers, they portray a dismal picture hampering the research process associated with higher education. As the students are disadvantaged of intellectual stimulation fostered by research, they fall short of invaluable knowledge and skills, which are not only important in their careers but also in other areas of life. Even the number of students pursuing research is incomplete by want of time and support. One of the main impediments is lack of scientific theory. Many of the researchers are incapable of carrying out sound empirical work; data is often inadequate and even when available not availed of; in addition, the problem of bureaucratic inertia is always plaguing the system. Often there is a lack of scientific knowledge and training in Research Methodology. Many of our researchers and guides are not competent enough to carry out sound empirical work. The following factors can be said to be encouraging good research.

- Conducive academic environment of the institutions and universities.
- A well-stocked library and Reference section covering books, e-books, journals, online library.
- Provision of the adequate infrastructural facility.
- The existence of Research laboratories having the latest equipment.
- Availability of adequate finance for purchase of funds.

## **RESEARCH WORK IN INDIA**

One of the great economists and Nobel Prize laureate, Milton Friedman “Consultant to Ministry of Finance Government of India -1955”, said, “The great untapped resource of technical and scientific knowledge available to India for the taking is the economic equivalent of the untapped commitment available to the US 150 years back”. In the increasingly competitive global economy, it is necessary to have knowledge-driven growth powered by innovations. The key to continued success for India is building up of a higher education system which is superior in quality and which encourages research. Very often, it is the industry, which is the beneficiary of several research efforts and therefore interactions between industry and research establishments are important. In the current age where issues of research are often of global nature active interaction with international institutions of repute must be encouraged. Vocational skills should be emphasized. Vocational training will play a crucial role in preparing the workforce to be productively used to propel the growth process of the economy. There is emerging interest in linking skills and higher education sector. While creating an enabling environment, note should be made of reducing the teaching hours, greater financial support and providing access to better infrastructure. Awarding of fellowships and encouraging industry collaborations will promote research. Research work can be promoted by following certain guidelines such as inclusion of research as a criterion for faculty for the purpose of promotion, “a system laid



down by UGC and is currently been followed by affiliated colleges and universities”, institution of awards for distinguished researchers with substantial financial incentives; generation of greater funding; improvement of infrastructure; and possible reduction of teaching hours so that more time can be devoted to research. India has all the potential of being a research hub given her long tradition of teaching and renowned Brain Power. The impediments have to tackle so as to ease the path to economic prosperity.

Total No. of Universities in the Country as on 01.02.2020 (UGC)

Total No. Universities

- State Universities- **409**
- Deemed to be Universities- **127**
- Central Universities- **50**
- Private Universities- **349**

Total- **935**

### **THE OBJECTIVES OF THE STUDY**

The study is grounded in the following objectives

- To understand the meaning of research particularly research in education.
- To get preliminary information on the research scene in India.
- To discuss the challenges facing research and throw light on what augurs for the future.

### **METHODOLOGY NATURE OF STUDY**

- The study is mainly descriptive in nature. Secondary data are used for the purpose of the study
- Secondary Data.
- Secondary data was collected from websites, various articles, and journals.

### **LIMITATION OF THE STUDY**

- Lack of primary data.
- Time-consuming.
- As the research mainly depends on secondary data, it may not be a hundred percent accurate.
- The study is restricted to India only.

### **CHALLENGES FACED BY EDUCATION SYSTEM IN INDIA**

- Enrolment ratio less than 20 percent.
- Disparities on access to education based on, Caste, religion, class, gender etc.
- Lack of relevant teachings.
- One teacher for 98000 schools.
- Only 722 universities for higher education should be at least 1500.

- No reliable data available regarding education status.
- No review of education policy in the last 50 years.
- Increase in self-financed private institutes.

## **HIGHER EDUCATION IN INDIA REFORMS DIRECTION**

### **□ Move to a Learning Society**

As we move towards a learning society, every human activity will require contributions from experts, and this will place the entire sector of higher education in sharp focus. Although the priorities, which are being assigned today to the task of Education for All, will continue to be preponderant, the country will have to prepare itself to invest more and more on higher education and, simultaneously, measures will have to be taken to refine, diversify and upgrade higher education and research programmes.

### **□ Incentives to Teachers and Researchers**

Industry and students are expecting specialized courses to be offered so that they get the latest and best in education and they are industry ready and employable. Vocational and Diploma courses need to be made more attractive to facilitate specialized programs being offered to students. Incentives should be provided to teachers and researchers to make these professions more attractive to the younger generation.

### **□ Innovative Practices should be involved**

The new technologies offer vast opportunities for progress in all occupations. It offers opportunities for economic growth, improved health, better service delivery, improved learning, and socio-cultural advances. Though efforts are required to improve the country's innovative capacity, yet the efforts should be to build on the existing strengths in light of new understanding of the research innovation-growth linkage.

### **□ To mobilize resources**

The decline in public funding in the last two plan periods has resulted in serious effects on standards due to increasing costs on non-salary items and emoluments of staff, on the one hand, and declining resources, on the other. Effective measures will have to be adopted to mobilize resources for higher education. There is also a need to relate the fee structure to the student's capacity to pay for the cost. So that, students at lower economic levels can be given highly subsidized and fully subsidized education

### **□ Stipends to Research Fellows**

The number of Ph.Ds. from Indian Universities should increase with proper standards. This should be seen in the context of an extremely low fraction of Ph. Ds in India in relation to M.Sc. and B Tech., as compared to what it is in USA, UK, Germany, Japan etc. Meritorious doctoral students should be recognized through teaching assistantships with stipends over and above the research fellowships



Identifying talented, meritorious students and encouraging them through recognition is very important to attract students into research and teaching.

□ **Status of Academic Research Studies**

If we see the number of researchers engaged in Research and Development activities as compared to other countries we find that we have merely 119 researchers, whereas Japan has 5287 and US has 4484 researchers per million of the population. Even in absolute terms, a number of researchers in India are much smaller compared to the US, China, Japan, Russia, and Germany. Numbers of doctoral degrees awarded in all subjects are 16, 602 out of which 6774 are in Arts and 5408 in science and rest in others (professional subjects). India has a little over 6000 doctorates in Science and engineering, compared to 9000 in China and 25000 in the US. It increased rapidly from a little over 1000 in 1990 to over 9000 in recent years in China. In comparison, there has been a modest increase in India. National Science Foundation (NSF) Science and Engineering Indicators (2002) show that in the US, about 4 percent of the science and engineering graduates finish their doctorates. This figure is about 7 percent for Europe. In India, this is not even 0.4 percent. Data on doctorates particularly in science, engineering, and medicine suggests that only a few institutions have a real research focus. In engineering, there were merely 650 doctorates awarded in 2001-02. Of these 80 percent were from just 20-top universities. In science, 65 percent of the doctorates awarded were from the top-30 universities.<sup>1</sup>

□ **Public-Private Partnership**

PPP is most essential to bring in quality in the higher education system. Governments can ensure PPP through an appropriate policy. University Grants Commission and Ministry of HRD should play a major role in developing a purposeful interface between the Universities, Industries and National Research Laboratories (NRLs) as a step towards PPP. Funding to NRLs by the government should ensure the involvement of institutions of higher education engaged in research activities to facilitate the availability of the latest sophisticated equipment. There has been some effort by both the government and the private education institutions to develop the teaching staff at various levels. However, this needs to be intensified with appropriate attention to all the aspects related in order to prepare quality and a sufficient number of educational staff. Such efforts need a very serious structuring for the research base institutions. We have to be optimistic that the private-public partnership and the Industry interface will take place in the field of education at all levels, and particularly in the backward regions, which is the need of the hour. To achieve excellence, we thus

need to create a real partnership between government, educators and industry Partnerships that can provide our high-tech industries with skilled workers who meet the standards of their industry.<sup>2</sup>

□ **To increase the Number of Universities**

We need more universities because we are more in number and a preset number of universities is too less. On 13<sup>th</sup> June 2005 Government of India constituted a high-level advisory body known as the National Knowledge Commission (NKC) to advise the PM about the state of education in India and measures needed to reform this sector. It was headed by Sam Pitroda and submitted its report in November 2007. NKC has recommended setting up of 1500 universities by 2015 so that gross enrolment ratio increases to 15 percent. It has also called for establishing an Independent Regulatory Authority for Higher Education (IRAHE) to monitor the quality of overall higher education in India.

□ **Examination Reforms**

Examination reforms, gradually shifting from the terminal, annual and semester examinations to the regular and continuous assessment of student's performance in learning should be implemented.

□ **High-tech Libraries**

Our university libraries have a very good collection of books, but they are all in mess. A library must be online and conducive for serious study. Indian universities should concentrate more on providing quality education, which is comparable to that of international standards.

## **CONCLUSION**

Research work, we have appreciated dramas a significant role in the economic development of a country, more so in case of a developing country like India. We face a number of constraints, in the form of ill-stocked libraries, absence of well-equipped workshops, lack of adequate finance, government intervention etc. In view of the fact that we possess a universally acknowledged Brain Power, the need of the hour is for innovations and inventions. India prides itself in producing Nobel Laureates of Indian origin. The innate talents of our researchers have to be nurtured and fostered to make a mark in the international arena. All this calls for greater financial support, right policy mix together with working on finding solutions to the impairing problems plaguing the Indian society, if we have to be seen as a major player in the global world.

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