

# Contemporary Issues and Challenges on Higher Education in India: A Research Output

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## Abstract:

*Education is the backbone of every country. A country will not be able to survive in the competitive world, if its education system is not capable of contributing for its development. Indian education system is widely criticized in multi-dimensions for its failure to create required employability in its students according to the industry requirements and its inability to contribute to inclusive growth in the nation as a whole. This paper attempts to highlight the issues and provide some solutions to resolve them. An analysis of 1232 publications published by scientists on Higher Education in India during 2009-2018 and indexed by Web of Science online Database indicates that the publication output in the Local Research Publication. The highest numbers of papers were published during the year 2018 with 213 records and the following year 2015 with 161 records there were contributions. The least number of papers was recorded during 2009 with 49 records. Overall, 4932 authors contributed 596 publications in the journal and Institutions with 2060 records of the articles.*

**Key words:** Higher Education, Challenges, Education system, Government, Issues

## 1. Introduction:

It is generally hyped that India has a strong educational structure with premier education. The different yardsticks such as new courses, changing curriculum, dynamic methodologies and teacher training facilitate in delivery of quality content. E-learning, student-friendly learning, increased adoption of extra and co-curricular activities, etc. in India attract students from other countries such as China, Canada, South Africa, Germany, Canada, USA, UK and Australia<sup>1</sup>. However, if one sees the employability of the output, the status of unemployment and underemployment, the results are not encouraging. It is grieved that there is lack of quality education for the poor, and only a small fraction of students, around one tenth from schools, go for higher studies. It is criticized widely that many students study through memorization, and every programme is planned exam-oriented and not learning-oriented. Hence, India's education system is a stumbling block in achieving its objectives of economic development.

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<sup>1</sup> [www.indianexpress.com](http://www.indianexpress.com)

Often delivered at universities, academies, colleges, seminaries, and institutes of technology, higher education is also available through certain college-level institutions, including vocational schools, trade schools, and other career colleges that award academic degrees or professional certifications. Tertiary education at non-degree level is sometimes referred to as further education or continuing education as distinct from higher education.

## 2. Define higher Education:

Many people are confused about Higher Education, because there have been a lot changes recently, including institutions changing their names and titles. This image cannot currently be displayed. Higher Education (HE) is non-compulsory education provided by universities. At University, you can study a course subject choice, for example Secondary school, Further Education (College) and Higher Education (University).

## 3. Objectives:

- i. To understand the status of Indian Education System.
- ii. To evaluate the issues and challenges to Indian Education System.
- iii. To identify and analyze the rate of growth of research productivity.
- iv. To examine the Year wise distribution of publications.
- v. To note the Document wise distribution of publications.
- vi. To identify the word wise distribution of publications.

## 4. Methodology:

The study entitled "Contemporary issues and challenges on higher education in India: A research output". Bibliometric Study is a study encompassing records output on Science from Web of Science (WOS). The present study aims at analyzing the research output of Researchers in the field of Higher education in India. The growth rates of output in terms of research productivity are analyzed from 2009 to 2018. The authorship pattern and author productivity are examined to identify the pattern of research contribution in the field of Higher education in India. It is also analytical in nature in strengthening the empirical validity due to application of suitable statistical tools.

## 5. Analysis and interpretations:

Research is seen as a primary and a vital function of a university and, therefore, of the higher education systems world-wide. There is often a conflict between pure and applied research, particularly in science. Though pure science may require no justification outside itself and its usefulness has no bearing on its validation, it is now widely accepted that the fruits of technology follow careful nurture of basic sciences. It is commonly held that pure science, applied science, engineering and technology follow one another in linear sequence. Therefore, pure science is not only important by itself; it also has an important role in laying the foundation for applied research that leads to innovation. Despite equal importance of both basic and applied research and blurring of the boundaries between them, various distinctions have been made between basic and applied research. The defines pure basic research as experimental and

theoretical work undertaken to acquire knowledge without looking for long-term benefits; strategic basic research is defined as experimental and theoretical work undertaken to acquire knowledge in the expectation of useful discoveries; applied research refers to original work undertaken to acquire knowledge with a specific application in view; and experimental development is the systematic work, using existing knowledge gained from research or practical experience, directed to producing new materials, products or devices.

### 5.1 Research manpower and doctoral education:

In terms of the number of researchers and technicians engaged in R & Activities', India has merely 119 researchers, whereas Japan has 5287 and the US has 4484 researchers per million of population<sup>2</sup>. Even in absolute terms, the number of researchers in India is much smaller compared to the US, China, Japan, Russia, and Germany. The number of technicians in India is however not as small. It suggests that R & Developments in India have more technicians per researcher compared to most of the other countries the numbers of doctoral degrees awarded in science and engineering in India is little over 6000 doctorates, 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<sup>3</sup>. In comparison, there has been a modest increase in India. The National Science Foundation (NSF)<sup>4</sup> - Science and Engineering Indicators – 2002 show that in the US, about 4 % of the science and engineering graduates finish their doctorates. This figure is about 7 % for Europe. In India this is not even 0.4 %.

### 5.2 Distribution of records:

#### 5.2.1 Year wise distribution of records<sup>5</sup>:

The year wise distribution of records in Higher Education at Indian level for the study period 2009 to 2018 (Ten Years). In the year 2006 has only 49 (4.0%) records with 43 TLCS and 1482 TGCS, the following year 2007 has 63 records with 44 Total local Citation Scores and 1482 records are Total Global Citations score.

#### 5.2.2 Author wise distribution of the publications:

The Top 10 author wise distributions of publications during the study period 2006-2015 in the field of Higher education in India. The Total number of author publication in these records with 4932. The highest Productivity of publications goes to Gupta R<sup>6</sup> with 23 records and followed by the Kumar S<sup>7</sup> with 19 records, Kumar A and Singh A<sup>8</sup> with 17 records, Gupta S and Reddy KS<sup>9</sup> with 16 records and the total Journal of the publication is 596 records. Among this the Journal

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<sup>2</sup> Markanandan KC. Spirit of the Constitution. New Delhi: Indian Institute of Public Administration; 1996.

<sup>3</sup> <https://www.ugc.ac.in/page/reports.aspx>

<sup>4</sup> <https://www.nsf.gov/about/history/annual-report.jsp>

<sup>5</sup> <https://www.nsf.gov/about/history/annual-report.jsp>

<sup>6</sup> <https://scholar.google.co.in/citations?user=c-nkogMAAAAJ&hl=en>

<sup>7</sup> <https://doi.org/10.1111/dme.13125>

<sup>8</sup> <https://scholar.google.co.in/citations?user=yhJ8H8AAAAAJ&hl=en>

<sup>9</sup> <https://home.iitm.ac.in/ksreddy/>

“PLOS ONE”<sup>10</sup> with 51 records with first rank of the scattering and TGCS<sup>11</sup> with 318 records. The next Journal follows as “Current science” with 37 records with second rank of the scattering and TGCS 26 records as well as follows the publications.

### 5.2.3 Document wise distribution of publications:

The study reveals that the major source of publications covered by Web of science on Higher Education in India in Journal articles as 1123 records while review comprises of 59 records and Letters comprises 20 records and review and book chapter comprises the least one record. It is noted that out of the 2060 records of the publication, All India Institute Medical Science the highest number of research publications 71 records and Publication Health Federation India has second highest number of research publications 49 records and Postgraduate Institute Medical Education & Research has third highest number of research publications with records 43 records stands third and others.

### 5.2.4 Institution with Subdivision wise distribution of the publications:

It is observed that out of the 3386 records of the publication, Publication Health Federation India the highest number of research publications 27 records and Harvard University, School Publication Health has second highest number of research publications 16 records stands third and others.

**Table 1: Country wise research productivity**

Country	Records	Percent
India	1201	97.5
USA	250	20.3
UK	128	10.4
Australia	76	6.2
Canada	59	4.8
Peoples R China	43	3.5
Germany	29	2.4
Japan	27	2.2
Brazil	26	2.1
Sweden	24	1.9

Source: <https://digitalcommons.unl.edu/libpilprac/4107>

The above table analysis indicates Country wise research productivity. It is noted that out of the 112 records of the publication.

### 5.3 Indian Educational System – A Review:

India is known for its educational excellence. Indian Education has recently gained global recognition with its distinguished diversity character. Different curriculum bodies govern the school education system in India. They are-

- The National Council of Educational Research and Training
- The State government Boards

<sup>10</sup> <https://journals.plos.org/posone/>

<sup>11</sup> <https://journal.polos.org/polosone/article?id=101371/journal.pone.oo62364>

- Central Board of Secondary Education
- The Council of Indian School Certificate Examination
- The National Institute of Open Schooling
- Islamic Madrasah School Boards
- Autonomous schools like Woodstock School, Sri Aurobindo International Centre of Education, Auroville, Patha Bhavan and Ananda Marga Gurukula.
- International schools, under the International Baccalaureate, or the Cambridge. There are 34 boards of secondary and senior secondary education in India (Studylib, 2017)<sup>12</sup>. More than 95% of the schools in India are affiliated to State Boards.

### 5.3.1 Private and Government schools:

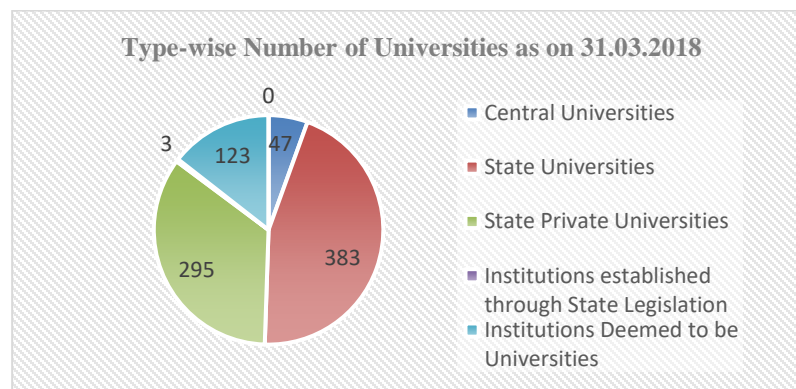
There are schools owned by Government as well as private parties (aided and self-financed). In 2016, 19% of Indian children were privately educated. This figure jumped to 38% in 2016 (MHRD., 2018). Private schooling has been growing continuously and found desirable by the people, irrespective of their socio-economic status.

### 5.3.2 International schools:

In January 2018, the International Schools Consultancy listed India as having 410 international schools. More than 95% of the international schools offer a dual curriculum (international and a national curriculum like CBSE, ICSE or State board).

### 5.3.3 Higher education

Figure No1: Type-wise Number of Universities



Source: University Grants Commission annual report 2017-2018

India has about 47 central universities, 383 state universities and 295 private universities and 23 Institutions Deemed to be Universities. Other institutions include 33,623 colleges, including 1,800 exclusive women's colleges, and 12,748 institutions offering Diploma Courses (India, 2018). The University Grants Commission coordinates, determines and maintains the standards of higher education at various levels. The bodies responsible for the different professional programmes are- All India Council for Technical Education, Indian Council for Agriculture

<sup>12</sup> <https://www.researchgate.net/publication/331148929>.

Research, Distance Education Council, National Council for Teacher Education, Bar Council of India, Medical Council of India, Indian Nursing Council, Central Council of Homeopathy, Pharmacy Council of India, Central Council of Indian Medicine and Dentist Council of India.

#### **5.3.4 Open and distance learning:**

At the school level, National Institute of Open Schooling provides opportunities for continuing education to those who missed completing school education. 14 lakh students are enrolled at the secondary and higher secondary level through open and distance learning. In 2017, various state governments also introduced State Open School to provide distance education. At higher education level, Indira Gandhi National Open University (IGNOU) co-ordinates distance learning. It has a cumulative enrolment of 15 lakh, serviced through 53 regional centers. The Distance Education Council an authority of IGNOU is co-coordinating 13 State Open Universities and 119 institutions of correspondence courses in conventional universities.

#### **5.3.5 Vocational education:**

All India Council of Technical Education reported in 2013 that there were more than 4,599 vocational institutions that offer degrees, diploma and post-diploma in architecture, engineering, hotel management, infrastructure, pharmacy, technology, town services and others. Total annual intake capacity for technical diplomas and degrees exceeded 34 lakhs. In 2016, 10 public and 10 private educational institutions were made world-class. Rs 1,000crore budget was provided for higher education. Rs 1,700 crore was provided for 1500 multi-skill development centers. 62 new Navodaya-Vidyalaya were created to provide quality education. A digital literacy scheme was launched for covering six crore additional rural households. The National Skill Development Mission was initiated to impart training to 76 lakh youth (India Today, 2017). Entrepreneurship training was provided across schools and colleges along with massive online courses. Sarva Shiksha Abhiyan was introduced to increase focus on quality of education.

#### **5.4 Issues and Challenges:**

An Analysis India has been a multi-cultural, multi-religious, and multi-linguistic society. Every State has a different and distinct identity. Dealing with various aspirations of such people in a democratic country is indeed a challenge to the Govt of India. The various issues are outlined here:

##### **5.4.1 Lack of quality education:**

In the top 100 universities list by 'Times Higher Education World Reputation Rankings', none of the Indian universities could be found in the list. In the 2017 rankings by the HRD ministry, only 2,995 institutions (6%) participated from around 51,000-strong higher educational institutions in India. There is severe regional imbalance too. In the overall rankings, of the 100 best institutions, 67 are from just eight states. Among the best 100 universities, 40 are in three states. Among the best 100 colleges, 77 are from just five states (Nanda, Prashant K. 2017).

##### **5.4.2 Corruption in education:**

Corruption in Indian education system has been eroding the quality of education. It is one of the major contributors to domestic black money. Payment to Management at dark rooms and seeking admissions is increasing. 'Get full salary in the account, pay back part to Management by blank signed cheques' is also a practice in some private schools.

#### **5.4.3 No proper value education:**

Value education is not offered in the schools and colleges. If offered, religion and hatred are spread in the name of value education. Many of the doctors, lawyers, CAs, politicians and Govt servants who are supposed to be the saviors of the society, suffer from serious charges of corruption. Old-age homes are increasing. Suicides are increasing. The meaning of love is eventually changing. The education-led technology, inventions and innovations are being misused.

#### **5.4.4 Poor Women's education:**

Women have a much lower literacy rate than men. Conservative cultural attitudes prevent girls from attending schools. Despite Govt's attempts to provide incentives viz. midday meals, free books and uniforms, girls' attendance is poor. Though the minimum age for marriage is eighteen, many girls get married much earlier. Therefore, at the secondary level, female drop-out rate is high.

#### **5.4.5 Lack of Facilities:**

As per 2016 Annual Survey of Education Report, 3.5% schools in India had no toilet facility while only 68.7% schools had useable toilet facility. 75.5% of the schools surveyed had library in 2016, a decrease from 78.1% in 2014. Percentage of schools with separate girls' toilet has increased from 32.9% in 2010 to 61.9% in 2016. 74.1% schools had drinking water facility and 64.5% of the schools had playground.

#### **5.4.6 Curriculum issues:**

There are many different curriculum systems that confuse the students who wish to achieve the same objective such as Engineering, Medical and Business Administration. At the higher education level, there is no uniformity in the syllabuses taught for the same programme. Syllabus revision is done quite often without considering the contemporary requirements of industries. There is lack of diversity in the subjects one can take in colleges. Flexibility to cross over streams is also lacking.

#### **5.4.7 Public school workforce absenteeism:**

Teacher absenteeism in India is exorbitant. World Bank estimates show the cost in salaries paid to absent teachers is US \$2 billion every year. In a study by Kremer, etc., they found 25% of private sector teachers and 40% of public sector medical workers were absent during the survey. Absence rates among them ranged from 14.6% in Maharashtra to 41.9% in Jharkhand.

#### **5.4.8 Wrong societal outlook:**

For Governments, more scoring is success. English is becoming the measure of intellect. Hence, parents of today take least interest in vernacular medium of education. Due to the perceived notion of inferior quality, Govt schools are becoming the last choice for many. Education-seeking migration has become a matter of pride for many families. Most of the school students spend majority of their learning time in preparing for competitive exams. Coaching classes too flourish due to this unwarranted competition, leading to a class-divide.

## **6. Solutions: A Way Forward:**

Give more significance to primary and secondary education Primary education is the backbone of education system of a country. If the teachers at primary and secondary level are unskilled, not qualified and less-paid, all further studies will be in stake. Hence, more attention is required on primary education rather than higher education. Presently, higher education institutions compete to get quality students. The weaker and less reputed colleges end-up with poor students. This affects consecutively the employability of youth, and creates a class-divide.

### **6.1 Give importance to technology in education**

India has to embrace computer and high-speed internet technology. Our educational delivery mechanisms should take the wealth of human capital to the masses. The models of brick-and-mortar schools, colleges and universities will have to be integrated and interlinked with ICT. The Governments should invest more in technological infrastructure that will ease the knowledge accessibility.

### **6.2 Encourage innovation and creativity:**

The system should reward those who deserves highest academic honor. The crammers should not be rewarded. Our testing and marking systems need to be built to recognize original contributions, creativity, problem solving and innovation. Ranks should be awarded accordingly.

### **6.3 Personalize the education:**

Indian education system is built on the assumption that if a thing is good for one child, it is good for all. But, one massive education system cannot be suitable to all. Some people are visual learners, others are auditory learners. Some kids learn faster, some do slow. The syllabus should be designed in such a way that every learner's latent ability is identified and motivated. Hasty and fast learning should be discouraged.

### **6.4 Train the trainers continuously**

A teacher is an entrepreneur and creator. The performance of a teacher should not be restricted to classroom. It needs to be opened up for the world to see with internet. There has to be leaders in teaching positions, not salaried people holding their mantle. Hence, regular training is a necessity.

### **6.5 Change the aptitude to teach:**



Teaching jobs are widely regarded as safe, well-paid and risk-free jobs. Most of the teachers do not want to change. As they become experienced, they get septic, and not even think of the nature and need of the students. Understanding the present generation is the necessity. Guidelines should be made in this direction.

#### **6.6 Provide quality education with character:**

Education without character is abortion and will create divisions in the society. A country that lowers the quality of education and allows score competition in exams will collapse. The mystified doctors, less skilled engineers, cowardly judges, money minded accountants, greedy businessmen, inhuman preachers and ignorant teachers cannot serve for the economy's growth. They will soon and surely doom the society with their unethical practices which no one can resist.

#### **6.7 Deal with corruption strictly:**

Corrupt politicians supported by corrupt followers and corrupt police force are increasing. Frauds, burglaries, rape and sexual harassment cases are rising. Govt recruited bank managers work against the Govt's development policies. Printing of fake notes, introduction of plastic rice, egg, cabbage, etc. are becoming uncontrollable. Adulteration is everywhere and in everything. Fruits become ripe with chemicals. Even the small kids' products are adulterated. The Govt should deal with such unscrupulous people severely.

#### **6.8 Make education affordable to all:**

If we have to see our country as a knowledge economy, we need to offer quality education to all and not rationing of education. Admissions in educational institutions should not be on caste or religion basis. Financial support to students based on caste and religion should be immediately stopped. It is seen that people earning good amount of income enjoy Govt incentives and they become inactive comparatively due to the caste/religion benefits. Baseless reservations create a societal division, and lead to brain drain. Reservation will vanish if the scarcity in education is avoided.

#### **6.9 Nationalize education sector:**

Education in India has been regulated on a not-for profit basis. This encourages corrupt people, money launderers and politicians to use education institutions to hide their black money, and earn heavy income from education business through clever structuring. Govt cannot regulate them. Hence, it is high time to nationalize private educational institutions in tune with federal structure and compensate the investors sufficiently. Education up to tenth should be made free of cost.

#### **Conclusion:**

Education is a country's lifeline, and it has to be given more importance than defense in any country. There is a dire need for revolutionary changes in the India's education system, not only in the syllabus and pedagogy, but also in the attitude towards the test and marks system. India

can use its vast human resources productively if the learning system is made effective. If the Govt schools are failing, it is primarily because of non-availability or absence of teachers, no headmasters for governance, lack of initiatives by teachers, lack of guidance to students, lack of infrastructure, increased involvement of politicians and more bureaucratic control. Indifferent parents including Govt school teachers, MPs, MLAs and ministers send their wards to private schools. It is a shameful situation. The government will have to work on it seriously. The system of education should be learner-centric rather than mark-centric. Children must be allowed to choose subjects according to their interests. They should be encouraged to research on their own from library books and the Internet and share them in the class. This will help them to develop self-confidence, self-dependence and openness to criticism. Though the number of students and programmes increases every year, India has failed to produce world class universities both in the private sector or the public sector. A vibrant nation is created by the energetic youth and active media. The youth and media can be positive only if the politicians are honest and responsible.

But year wise distribution of records in Higher Education at Indian level for the study period 2009 to 2018 (Ten Years). The highest numbers of papers were published during the year 2018 with 213 records and the following year 2015 with 161 records there were contributions. The study found that the total research output of the Higher education in India for the study period (2009-2018) published in 596 journals. As the major portion of the research productivity 10 journals that are coincide with the ranking of journals according to the theory of Bradford's Law of scattering of journals in research productivity. It is noted that out of the 2060 records of the publication, All India Institute Medical Science the highest number of research publications 71 records and Publication Health Federation India has second highest number of research publications 49 records and Postgraduate Institute Medical Education & Research has third highest number of research publications with records 43 records stands third and others. The trend towards collaborative research is gaining day-by-day. Every work of researchers depends purely on the library because it contains more springs forth information.

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