RATIO OF STUDENTS' TO TOTAL POPULATION, TEACHERS AND EDUCATIONAL INSTITUTIONS IN INDIAN HIGHER EDUCATION – A COMPARATIVE STUDY (1951-2011)

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ABSTRACT

The present study deals with the higher education particularly ratio of students' enrolment to total population, teachers and higher educational institutions in India after independence i.e. from 1951 to 2011. Statistical analysis of the collected data has shown positive correlation among these three factors. It is observed that, there is 42.76 times increase in students' enrolment, 34.04 times increase in teachers, 46.01 times increase in higher educational institutions and 3.35 times increase in population during 1951-2011. The ratio of students' enrolment to total population, higher educational institutions, number of teachers reflects the success of efforts taken by the agencies like MHRD, UGC and AICTE in enhancing higher education in India.

Keywords*: MHRD, UGC, Stakeholders, Higher Education, Population.*

Introduction:

Ministry of Human Resource Development, Govt. of India has been taking efforts to improve the educational standard of the higher education in India by providing financial and other assistance to the Higher Educational Institutions, Teachers and Students' through University Grants Commission. The UGC was formally established in November 1956 as a statutory body of the Government of India through an Act of Parliament for the coordination, determination and maintenance of standards of university education in India [1]. Government of India also established AICTE for the enhancement of technical higher education in India. Primary role of UGC and AICTE is to regulate the standard and spread quality of higher education. The present study concentrates only on quantitative growth of higher education in the country since 1951. It does not study the qualitative growth of higher education.

All Central Universities and Deemed to be Universities need at least one teacher for every 10 students' for their post-graduate programmes and one for every 25 students' at the undergraduate level in science faculty, as per new regulations of the University Grants Commission. In December, 2011, 634 various types of Universities are functioning in India. Out of the total universities; 43 are Central Universities, 297 are State Universities, 100 are Private Universities, 129 are Deemed Universities and 65 are Institutes of National Importance and Other University Level Institutions which are providing higher education in India [2]. The present study deals with, at what extent the level of higher education is grown up by availing that financial and other assistance by the stakeholders of higher education.

Review of Literature:

Shakeel Ahmad studied on "An Assessment of the Growth and Grants of Higher Education in India" and concluded that, Higher education in India has progressed well in terms of institutions, teachers and students enrolment. There are 467 universities and 25,951 colleges in India in the year 2009 which is an increase of 24 times in the case of universities and 52 times in the case of colleges as compared to the position at the time of independence of our country. The total number of teachers in universities and colleges was 5,88,334 in the year 2009 whereas this figure was 15,000 in the year 1950 which is almost 40 times increase. There has been a considerable improvement in the enrolment ratio from one percent in early 1950s to about 12.0 percent in 2009. This percentage is slightly more than average for developing countries, which is 11.0 percent. But still it is very low compared to 23.2 percent of World percentage. Though there is remarkable progress in terms of growth of universities and colleges in India, but this pace of expansion is not still sufficient keeping in view the size of the population of our country. If we wish to achieve the target of the World average of 23.3 percent, we need to expand the intake capacity by strengthening the infrastructure of the existing universities and colleges on large scale and establishing of new institutions in large numbers [3].

Renu Batra and Shakeel Ahmad studied on "Development of Central Universities in India" and suggested that, in the present scenario, there are two major challenges before our country, one is access to higher education and the other is quality of education. Access is important as there is a considerable demand for skilled manpower, for new knowledge and the development of technological advancements required for better employability and building confidence in the individuals in order to face social and economic realities effectively. Therefore, it is absolutely necessary to strengthen the existing infrastructure and to increase the intake capacity of the existing Central Universities apart from establishing the new Central Universities for increasing the access to higher education. As far as the access to higher education is concerned, the higher education sector has received a greater attention from the Government of India by allocating huge funds for higher education system including the development of the Central Universities. Another important issue is quality of education because students tend to seek quality of education which should led them to secure a sound and comfortable career as the employment opportunity pattern in the country as well as on the international scale has changed. On this count, the Central Universities expect a lot from their managers to enhance the quality of education in their universities by adopting all possible measures to improve the standards of higher education so that these Universities could play a pivotal role in providing the quality higher education which shall help in fulfilling India's dream of becoming a developed nation at the earliest [4].

Girish Jaswal suggested that, there is no denying of the fact that education plays a dominant role in the development of any country in his paper "What Ails Higher Education in India?". Recognizing this fact, our eleventh plan has laid special stress on higher education. The needed reforms in higher education include allowing and encouraging participation by private sector, allowing more autonomy to universities and more allocation of funds. The target is to increase the GER from the present 7% to 15% by the end of plan period. Coming in of private players and the fast rate of expansion calls for a critical look at the present system of regulation, the strict vigil on quality and bringing in reforms in the prevailing system of examination and making curriculum and syllabus in keeping with the reality of the industry [5].

A.M Gurav et.al. suggested that, the management of quality in higher education is not a one-time activity but it is a regular and never ending process in his paper "Management of Quality in Higher Education". Quality education is prerequisite for all educational institutions, so as to make them ream temples of knowledge and not degree / diploma distributing centers. 'Quality is an elusive attribute of values, belief and perception which cannot be quantified [6].

Objectives of the Study:

The main objectives of the present study are -

1. To study the ratio of students' enrolment to total population, teachers and higher educational institutions and its change during the year 1951-2011.
2. To study the growth in students' enrolment, higher educational institutions, teachers and total population after independence.
3. To find out the correlation co-efficient among the students' enrolment to all these three aspects and draw conclusions.

Research Methodology:

For the present study secondary data is used. The data is collected from the annual reports published by the University Grants Commission and MHRD, Government of India. The data collected from secondary sources is tabulated and presented graphically. For the analysis of data Karl Pearson's Correlation Co-efficient method is used. The year 1951 is considered as base year, which gives first census after independence of India.

Results and Discussion:

Since 1951 there is a tremendous growth in overall population. Due to efforts of MHRD, UGC and AICTE the number of higher educational institutions, the students' enrolment, number of teachers also increased in last six decades. The data regarding growth of Students' Enrolment, Number of teachers, No. of Higher Educational Institutions and Total population during 1951 to 2011 shown in Table No.1.

Table 1: Growth of Students' Enrolment, Number of teachers, No. of Higher Educational Institutions and Total population: 1951-2011

S.N	Year	Students' Enrolment (In '000')	No. of Teachers (In 000')	No. of Higher Educational Institutions (In '000')	Population (In Crore)
1	1951	397	24	0.73	36.11
			(1:17)	(1:544)	(1:910)
2	1961	1,050	60	1.60	43.92
			(1:18)	(1:656)	(1:418)
3	1971	1,954	129	3.71	54.82
			(1:15)	(1:527)	(1:280)
4	1981	2,752	193	4.86	68.33
			(1:14)	(1:566)	(1:248)
5	1991	4,925	263	7.54	84.64
			(1:19)	(1:653)	(1:172)
6	2001	8,399	412	13.06	102.87
			(1:20)	(1:643)	(1:122)
7	2011	16,975	817	33.59	121.02
			(1:21)	(1:505)	(1:71)

Source **:** Higher Education in India at a glance, University Grants Commission, New Delhi, Feb. 2012 and Census of India.
(Figures in the brackets indicates ratio of students' enrolment to Teachers, Higher Educational Institutions and Total Population)

From Table 1 it is observed that, in 1951 the total population was 36.11 crore, higher educational institutions were 0.73 thousand, total students' enrolment was 397 thousand and number of teachers were 24 thousand. There is continuous growth in all these factors from 1951 to 2011. Whereas, in 2011 the total population is 121.02 crore, 33.59 thousand higher educational institutions, 16,975 thousand students' are

enrolled in higher education and 817 thousand teachers are appointed [7-9]. All these four factors shows growth in their numbers but there is variation in the growth rate of these aspects. The Fig. 1 shows growth of Population, Higher Educational Institutions, Students' and Teachers during the year 1951-2011.

Fig. 1:Growth of Students' Enrolment, Number of teachers, No. of Higher Educational Institutions and Total population : 1951-2011

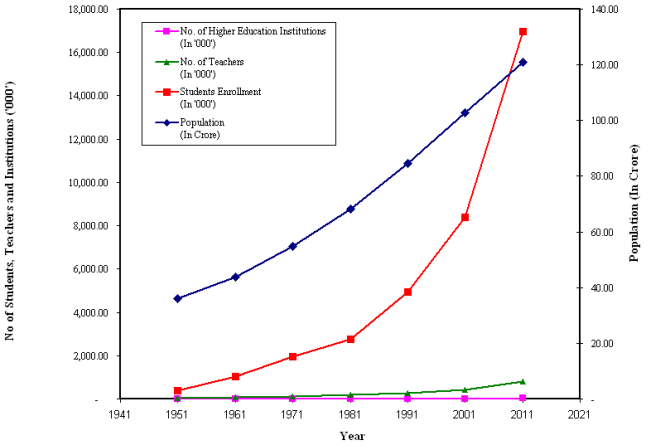

Table 2 shows there is very high growth rate in students' enrolment and higher educational institutions and it is 42.76 times and 46.01 times respectively. Medium growth is observed in total number of teachers i.e. 34.04 times, whereas, very low growth rate is observed in overall population i.e. 3.35 times on the base year 1951 to 2011. The growth rate of overall population is gradual and steady. The growth rate in higher educational institutions, students' enrolment and number of teachers shows gradual increase upto 1991, whereas it was tremendous after 1991.

It is due to the awareness regarding education, facilities provided by the MHRD, UGC and AICTE in higher education and the social awareness about the living standards of the society. This may be due to globalization.

Though there is an increase in students' enrolment upto 1981 census the growth rate of students' enrolment is gradual. After 1981, it is observed that there is geometrical increase in the growth of students' enrolment in each census. This geometrical growth in the students' enrolment is due to the importance of Information Technology, Biotechnology, Technical Education, and Professional Education like Management, Diploma and Degree in Education.

Table 2: Growth in Population, Higher Education Institutions, Teachers and Students' Enrolment in comparison to Base Year i.e. 1951

Sr. No.	Year	Students' Enrolment	No. of Teachers	No. of Higher Education Institutions	Population
1.	1951	1	1	1	1
2.	1961	2.64	2.50	2.19	1.22
3.	1971	4.92	5.37	5.08	1.52
4.	1981	6.93	8.04	6.65	1.89
5.	1991	12.41	10.95	10.32	2.34
6.	2001	21.16	17.16	17.89	2.85
7.	2011	42.76	34.04	46.01	3.35

Source : Compiled by Author.

Fig. 2 shows comparison in growth of Population, Educational Institutions, Teachers and Enrolment of Students' in Higher Education during 1951 to 2011.

Fig. 2

Growth in Population, Institutions, Students and Teachers in comparison to the Base Year i.e. 1951

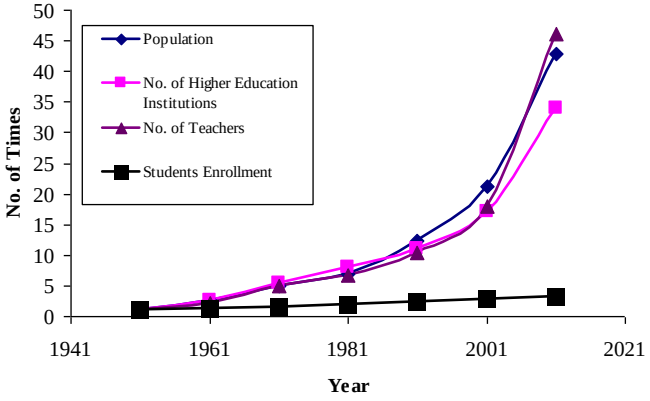

Table 3 shows the variation of correlation co-efficient obtained from Karl Pearson's method.

Table 3: Ratio of Students' to Teachers, Higher Educational Institutions and Total Population (Karl Pearson's Correlation Co-efficient method)

Sr. No.	Particulars	Correlation Co-efficient
1.	Student – Teacher	0.99
2.	Student – Higher Educational Institutions	0.99
3.	Students' – Population	0.93

It is observed that there is high degree positive Correlation Co-efficient in the ratios of students' – teacher, students' – higher educational institutions and students' – total population which is more than 0.93. It is due to the efforts of MHRD, UGC and AICTE for enhancing the higher education in India. As per the new regulation of the UGC the students' – teachers ratio is maintained. This is the achievement of the apex educational bodies.

Conclusions:

1. In the year 1951 ratio of teacher - students' was 1:17, it is increased to 1:21 in 2011, but this ratio shows variation in institute, university, state and in India.
2. Ratio of Higher Educational Institutions including Universities and Colleges to students' in 1951 was 1:544, which is decreased to 1:505 in 2011.
3. In 1951 the ratio of students' enrolment to total population was 1:911, which is rapidly decreased to 1:71 in 2011. It shows a positive step towards the awareness regarding higher education.
4. Very high increase in students' enrolment and higher educational institutions is observed from 2001. It is the result of privatization, liberalization and globalization policy of Government of India.

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