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RASHTRIYA UCHCHATAR SHIKSHA ABHIYAN (RUSA) AND ACCESS TO HIGHER EDUCATION

Dr. Ummed Singh[1] and Aryan Chanda[2]

[1]Assistant Professor, Department of Economics, University of Rajasthan, Jaipur.

[2]Master's student, Department of Economics, University of Rajasthan, Jaipur.

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ABSTRACT

The paper attempts to study the accessibility to higher education in the context of the Rashtriya Uchchatar Shiksha Abhiyan (RUSA) Scheme in India. With an increasing demand for higher education, particularly among marginalized and underrepresented communities, the RUSA scheme stands out as a significant initiative aimed at improving accessibility and equity in higher education. Beginning by overview of higher education in India, the paper sheds light on disparities in access and participation. The paper evaluates the effect of RUSA interventions during its first initial phase (RUSA 1.0) on indicators of accessibility such as enrollment rates, average enrollment per college, college density, and pupil-teacher ratio. To analyze the extent of variation and asymmetry in key indicators related to higher education the statistical measures such as the coefficient of variation and skewness have been applied and to analyze the equality of means across these indicators, the paper used the ANOVA and Welch's F-tests.

Key words: RUSA, Gross Enrollment Ratio, ANOVA and Welch's F-tests

Introduction

India has one of the largest higher education systems in the world with 993 Universities,39,931 colleges and 10,725 Stand Alone Institutions. Around 94% of students pursuing higher education are registered in State universities. Before the implementation of RUSA, the central government primarily emphasized premier institutions like IITs, IIMs, and central universities, often neglecting state institutions, which were heavily dependent on financial support from state governments. Central government's fund allocations were mainly directed towards the establishment of more Indian Institutes of Technology (IITs), Indian Institutes of Management, and Central universities. Approximately 150 centrally-funded institutions, serving less than 6%

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of the total student population, commanded the lion's share of funding disbursed by central government. State government institutions were facing a significant challenge due to a shortage of funds, which posed a considerable obstacle to expanding access to higher education, especially for marginalized sections of society and remote areas. Compounding the issue, investment from state governments declined over the years, as higher education remains a low-priority sector. Despite serving as the cornerstone of higher education in India, state institutions got inadequate attention and resources.

Significant reforms within the higher education sector gained momentum with the implementation of the Rashtriya Uchchatar Shiksha Abhiyan (RUSA) by the Ministry of Human Resource Development, Government of India, in 2013. This initiative aimed at revitalizing state higher education institutions in India, elevating them to the status of centers of excellence and promoting affordable education for all. In fact, RUSA was launched with the main objective of improving the access, equity, and quality in higher education institutions in the country. One of its key components of this scheme is to provide financial assistance to state universities and colleges to enhance their infrastructure, faculty development, and institutional capacity. By doing so, RUSA aims to bridge the gap in educational opportunities and ensure that students from all backgrounds have access to quality higher education in the country.

To achieve these objectives, RUSA scheme has the provision of providing financial support to establish new universities and clusters by upgrading existing colleges, establishing new model degree colleges and professional colleges and offering infrastructural support to universities and colleges. Additionally, it provides assistance for faculty recruitment, faculty improvement programs, leadership development for educational administrators, and skill training and vocational education to students. Its efforts are geared towards the overall development of the states' higher education system. A notable difference between RUSA funding and the previous model lies in its method of planning. Unlike the earlier top-down approach, RUSA does not allocate funds to institutions centrally; instead, it empowers institutions to devise their own plans i.e., funding flows from the bottom to the top. Prior to RUSA scheme the institutions often encountered challenges where they formulated plans but did not receive the full amount or faced delays, resulting in underutilization of funds.

However, under RUSA all stakeholders are informed about the allocated funds enabling them to plan effectively. Thus, strategic planning becomes an integral aspect of RUSA in which all three key stakeholders—the institution, the State and the Centre—play their respective roles. Institutions create their 'Institutional Developmental Plan' and submit it to the State Nodal body for further action. From 2015-16 to 2019-20, the Department of Higher Education, Government of India, experienced a noteworthy Compound Annual Growth Rate (CAGR) of 10.8 percent in expenditure. There has been an increased allocation towards schemes aimed at enhancing

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quality, such as RUSA, EQUIP, and EAP, along with specific initiatives focusing on faculty development, research, innovation, digital learning, and more. While grants and support to institutes of national importance and autonomous colleges still claim the largest share of funding, there has been a slight decline in percentage allocation over time, dropping from 68 percent in FY 18 to 56 percent in FY 20.

Data Analysis and Discussion

Over the last decade, there has been a significant focus on increasing access and make higher education accessible to each section of the society. The table 1 and 2 provides the overview of access to higher education for the 2014-15 to 2018-19 period through presenting the state-wise population and enrolment in the age group of 18-23 years. The rising population (table 1) indicates a growing demand for education, expanding educational infrastructure and resources to accommodate this demand. It entails the allocation of adequate resources for the regions with higher student enrollments to ensure equal access. The mean, standard error, standard deviation, and skewness values provide statistical insights into the distribution and variability of the enrollment data across the years. These regional variations in enrollment figures can help in targeting interventions and policies to address disparities and improve educational outcomes.

Table 1: State-wise Population in the age group of 18-23 years

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
All-India	141045558	141290793	141537252	141829528	142078501
Andhra Pradesh	5655372	5601939	5548693	5495217	5441669
Arunachal Pradesh	163087	162040	160988	159922	158845
Assam	3680475	3696944	3713244	3729138	3744693
Bihar	11004460	11202454	11403681	11607454	11814017
Chhattisgarh	3062881	3084628	3106323	3127770	3149023
Goa	167756	171060	173315	177298	181439
Gujarat	7168479	7185240	7201594	7217084	7231855
Haryana	3185493	3185459	3185213	3184553	3183546
Himachal Pradesh	753727	744639	735616	726614	717648
Jharkhand	3712100	3751369	3790851	3830303	3869791
Karnataka	7191845	7122040	7052447	6982633	6912759
Kerala	3080703	3051307	3021991	2992566	2963104
Madhya Pradesh	8728206	8787661	8846960	8905538	8963556
Maharashtra	13375090	13340997	13306153	13269732	13232016
Manipur	292609	290731	288846	329418	327201
Meghalaya	346557	344333	342100	339836	337549
Mizoram	131397	130552	129705	128848	127979
Nagaland	249167	247565	245957	244329	242681
Odisha	4670851	4655573	4640028	4623929	4607379

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Puducherry	146637	151524	155259	160906	166793
Punjab	3291045	3248003	3205329	3162828	3120572
Rajasthan	8595816	8706717	8818503	8930612	9043202
Sikkim	79160	78651	78139	77623	77099
Tamil Nadu	7415342	7300716	7187371	7074857	6963333
Telangana	4095944	4057244	4018607	3979862	3941066
Tripura	441375	438541	435697	432816	429900
Uttar Pradesh	24308393	24505255	24702585	24898805	25094366
Uttarakhand	1226154	1218827	1211463	1203988	1196426
West Bengal	10925358	10908527	10891236	10872798	10853436
Andaman & Nicobar Islands	45950	46909	47603	48639	49667
Chandigarh	166661	173634	179685	187731	195852
Dadra and Nagar Haveli	58077	59847	61090	63252	65406
Daman and Diu	52304	54430	56683	59187	61686
Delhi	2207522	2237479	2267692	2298017	2328493
Jammu and Kashmir	1362550	1340857	1319420	1298156	1277094
Mean	4029672.66	4036676.91	4043716.20	4052064.54	4059175.46
Standard Deviation	5137040.98	5166540.02	5196815.88	5226401.46	5257344.54
CV (%)	**127.48**	**127.99**	**128.52**	**128.98**	**129.52**
Skewness	2.14	2.16	2.18	2.20	2.22

Source: AISHE reports

Table 2: Enrolment in Age Group 18-23 years

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
All-India	34211637	34584781	35705905	36642378	37399388
Andhra Pradesh	1767086	1724538	1799433	1697282	1760830
Arunachal Pradesh	46116	46452	46564	47464	47168
Assam	546265	570955	640270	678344	700163
Bihar	1529851	1602860	1645518	1514595	1607008
Chhattisgarh	447915	466030	500046	574861	586924
Goa	46457	47266	48669	49641	54680
Gujarat	1435209	1487129	1458104	1453255	1478052
Haryana	877713	831659	925290	913443	928893
Himachal Pradesh	234917	241705	270210	275708	283860
Jharkhand	572273	581643	671037	688722	739484
Karnataka	1896905	1857946	1871294	1943856	1988494
Kerala	884451	939155	1033143	1082917	1095842
Madhya Pradesh	1712419	1725182	1773253	1885479	1929344
Maharashtra	3736155	3987312	4016309	4131757	4230326
Manipur	105128	99340	101062	104680	110377
Meghalaya	71171	71567	80292	83822	86931
Mizoram	30564	31463	31719	29495	32838
Nagaland	38970	36892	40762	43557	45462

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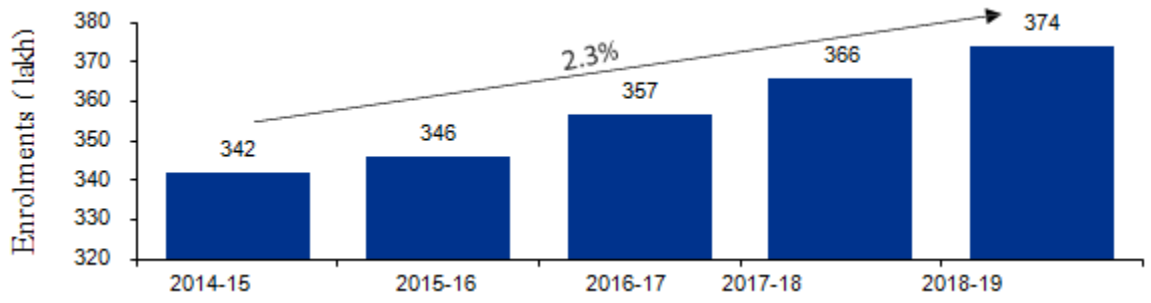
Odisha	826820	914675	972285	1015777	1019192
Puducherry	67381	65412	66918	73061	77342
Punjab	892820	878479	917550	959536	919576
Rajasthan	1720390	1761460	1808451	1936204	2084413
Sikkim	24023	29550	29110	29000	41572
Tamil Nadu	3352881	3235354	3371351	3440945	3414196
Telangana	1479088	1474235	1438737	1419307	1426461
Tripura	74054	74035	83244	91681	82703
Uttar Pradesh	6066920	6003076	6157971	6455375	6469367
Uttarakhand	415768	405386	404686	437150	468255
West Bengal	1900939	1926500	2015996	2035981	2097410
Andaman and Nicobar Islands	10669	11024	10857	10600	11511
Chandigarh	93469	99992	100849	105829	99009
Dadra and Nagar Haveli	4848	5454	5626	5776	6102
Daman and Diu	3000	3122	3119	3090	3403
Delhi	960834	1014876	1027806	1064406	1077556
Jammu and Kashmir	337888	332556	337850	359230	394099
Mean	**1900638.72**	**1921362.81**	**1983646.83**	**2035672.33**	**2077728.64**
Standard Deviation	**5683004.94**	**5742700.06**	**5925903.62**	**6083698.51**	**6206057.52**
CV (%)	**299.01**	**298.89**	**298.74**	**298.85**	**298.69**
Skewness	**5.56**	**5.56**	**5.57**	**5.56**	**5.57**

Source: AISHE reports

The Gross Enrollment Ratio (GER) serves as a crucial indicator for assessing access to higher education, educational opportunities, and inclusiveness. That is why the government have made efforts to expand the access by opening new higher education institutions and upgrading the existing ones and increasing the existing capacity of the institutions which have resulted in almost doubling of the GER, with an increase from19.4 in 2010-11 to 26.3 in 2018-19. The Gross Enrollment Ratio (GER) in higher education in India has experienced significant growth over the past six years. The enrollment has increased at a Compound Annual Growth Rate (CAGR) of over 2.3%, rising from 34.2 million (342 lakhs) in 2014-15 to 37.4 million (374 lakhs) in 2018-19 (fig.1)

Fig.1 Enrolment of students in Higher Education in India



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During the 2014-15 to 2018-19, the CAGR of universities in India was 6.9 percent, whereas for colleges it was 0.9 per cent. The growth of higher education institutions in India has been propelled by government reforms aimed at promoting private investments in the sector. During the 2014-15 to 2018-19, there has been a significant increase in the Gross Enrolment Ratio (GER) for higher education in India, with overall enrolment growing at a CAGR of over 2.3 percent, rising from 342 lakhs in 2014-15 to 374 lakhs in 2018-19. Despite this growth, the rate of higher education uptake in India remains considerably lower than in countries like China (44 percent) and Brazil (50 percent) as of 2019.

Table 3: State-wise Gross Enrolment Ratio

State/UT	2014-15	2015-16	2016-17	2017-18	2018-19
Andhra Pradesh	31.20	30.78	32.40	30.90	32.40
Arunachal Pradesh	28.30	28.67	28.90	29.70	29.70
Assam	14.80	15.44	17.20	18.20	18.70
Bihar	13.90	14.31	14.40	13.00	13.60
Chhattisgarh	14.60	15.11	16.10	18.40	18.60
Goa	27.70	27.63	28.10	28.00	30.10
Gujarat	20.00	20.70	20.20	20.10	20.40
Haryana	27.60	26.11	29.00	28.70	29.20
Himachal Pradesh	31.20	32.46	36.70	37.90	39.60
Jharkhand	15.40	15.50	17.70	18.00	19.10
Karnataka	26.40	26.09	26.50	27.80	28.80
Kerala	28.70	30.78	34.20	36.20	37.00
Madhya Pradesh	19.60	19.63	20.00	21.20	21.50
Maharashtra	27.90	29.89	30.20	31.10	32.00
Manipur	35.90	34.17	35.00	31.80	33.70
Meghalaya	20.50	20.78	23.50	24.70	25.80
Mizoram	23.30	24.10	24.50	22.90	25.70
Nagaland	15.60	14.90	16.60	17.80	18.70
Odisha	17.70	19.65	21.00	22.00	22.10
Puducherry	46.00	43.17	43.10	45.40	46.40
Punjab	27.10	27.05	28.60	30.30	29.50
Rajasthan	20.00	20.23	20.50	21.70	23.00
Sikkim	30.30	37.57	37.30	37.40	53.90
Tamil Nadu	45.20	44.32	46.90	48.60	49.00
Telangana	36.10	36.34	35.80	35.70	36.20
Tripura	16.80	16.88	19.10	21.20	19.20
Uttar Pradesh	25.00	24.50	24.90	25.90	25.80

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Uttarakhand	33.90	33.26	33.40	36.30	39.10
West Bengal	17.40	17.66	18.50	18.70	19.30
Andaman and Nicobar Islands	23.20	23.50	22.80	21.80	23.20
Chandigarh	56.10	57.59	56.10	56.40	50.60
Dadra and Nagar Haveli	8.30	9.11	9.20	9.10	9.30
Daman and Diu	5.70	5.74	5.50	5.20	5.50
Delhi	43.50	45.36	45.30	46.30	46.30
Jammu and Kashmir	24.80	24.80	25.60	27.70	30.90
Lakshadweep	4.00	7.06	7.30	7.60	7.40
All India	24.30	24.48	25.20	25.80	26.30
Mean	**24.58**	**25.10**	**25.58**	**26.45**	**27.05**
Standard Deviation	**11.19**	**11.38**	**11.29**	**11.21**	**11.42**
CV (%)	**45.52**	**45.34**	**44.14**	**42.38**	**42.22**
Skewness	**0.80**	**0.58**	**0.65**	**0.48**	**0.46**

Source: AISHE reports

India has made significant strides in its Gross Enrollment Ratio (GER) for higher education in recent years. The GER for higher education rose from 19 percent in 2014 to 26.3 percent in 2018-19. However, there has been a notable decline in student participation following the completion of post-secondary education. As of 2018-19, nearly three-quarters of the population in the 18 to 23-year age bracket were not enrolled in post-secondary education. India's GER is substantially lower compared to its counterparts, such as Brazil (50.5 in 2016), Russia (81.8 in 2016), and China (51 in 2017).

Fig. 2 Trend in GER

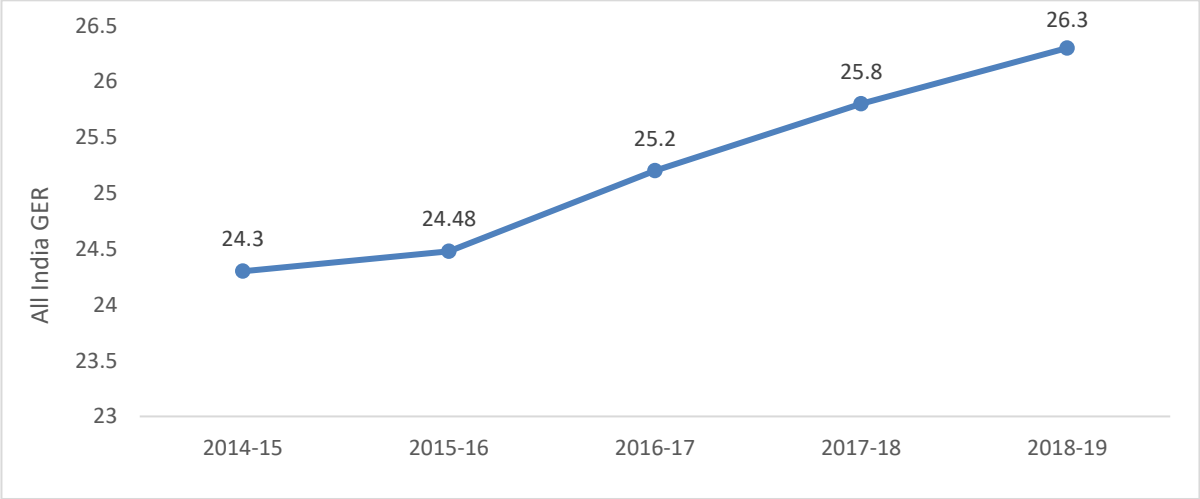

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Table 4: Gross Enrolment Ratios (GER) in Higher Education in India

Year	ALL			SC			ST		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
2014-15	24.3	25.3	23.2	19.1	20.0	18.2	13.7	15.2	12.3
2015-16	24.5	25.4	23.5	19.9	20.8	19.0	14.2	15.6	12.9
2016-17	25.2	26.0	24.5	21.1	21.8	20.2	15.4	16.7	14.2
2017-18	25.8	26.3	25.4	21.8	22.2	21.4	15.9	17.0	14.9
2018-19	26.3	26.3	26.4	23.0	22.7	23.3	17.2	17.9	16.5

Source: Ministry of Education, Govt. of India

Table 5: Gross Enrolment Ratio by Social Groups

Year	Overall Higher Education GER		SC Higher Education GER			ST Higher Education GER		
	Overall	Female	Overall	male	Female	Overall	male	Female
2018-19	26.3	26.4	23	22.7	23.3	17.2	17.9	16.5
2014-15	21.5	20.1	19.1	20	18.2	13.7	15.2	12.3
%Increase	22.3	31.3	20.4	13.5	28.0	25.5	17.8	34.1

Source: Ministry of Education, Govt. of India

The table 4 and 5 provide data on the GER in higher education for different social groups over the years 2014-15 and 2018-19. The overall GER for higher education has increased from 21.5 in 2014-15 to 26.3 in 2018-19, marking a substantial increase of 22.3%. This indicates a significant improvement in the enrollment rate for higher education across all demographic groups during this period. The GER for SC students in higher education has increased from 19.1 in 2014-15 to 23 in 2018-19, representing a notable increase of 20.4%. This suggests an improvement in access to higher education for SC students over the years, although the rate of increase is slightly lower compared to the overall increase. The GER for ST students in higher education has increased from 13.7% in 2014-15 to 17.2% in 2018-19, registering a significant rise of 25.5%. Similarly, to SC students, this indicates progress in access to higher education. In terms of gender, there has been an improvement in GER for both male and female students across all demographic groups.

However, it's noteworthy that in both SC and ST categories, the GER for females is higher than for males, indicating a positive trend towards bridging the gender gap in access to higher education among these marginalized groups. The data suggests a positive trend in improving access to higher education for marginalized groups, particularly SC and ST students, as indicated by the notable increases in GER over the specified period. Furthermore, the higher GER for

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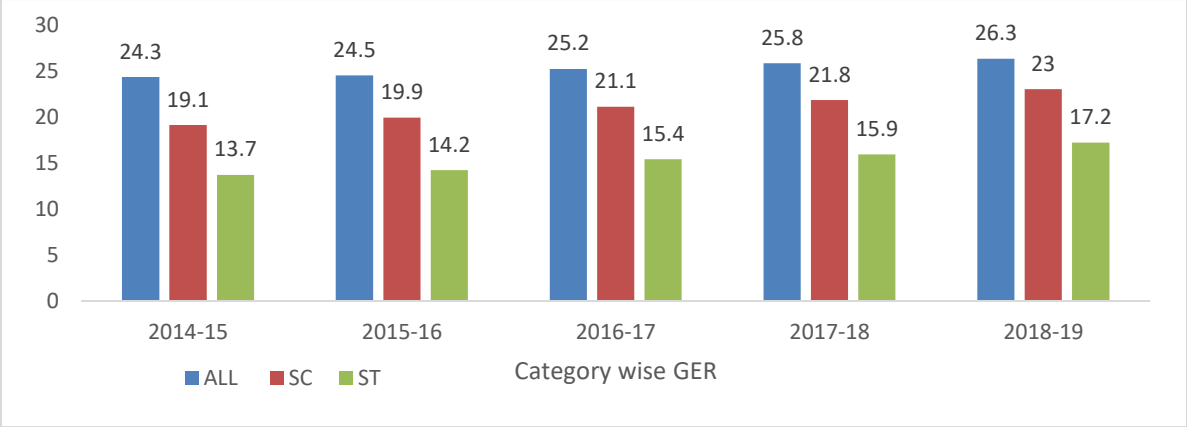
females compared to males within these groups reflects progress towards gender equity in higher education enrollment.

The promoting diversity and inclusivity within higher education institutions is essential for fostering a conducive learning environment. This includes implementing affirmative action policies to increase representation from marginalized communities, promoting cultural sensitivity and awareness, and mainstreaming disability-inclusive practices. Creating a welcoming and inclusive campus culture is crucial for nurturing talent and promoting social cohesion.

Fig. 3 Gross enrolment ratio by social groups



While India has experienced notable growth in GER in recent years, this progress has been sluggish compared to both its own requirements and other similar nations like China. Between 2010-11 and 2016-17, India's GER increased by only 6 percentage points, from 19.4 to 25.2 percent, whereas China's grew by 17 percentage points, rising from 25 to 42 percent during the same period. The limited access to higher education in India can be attributed to various factors, including the high cost of education, inadequate facilities, and a scarcity of quality institutions in certain regions of the country. To address the challenge of low student enrollment in higher education, the government has initiated a mission-oriented program known as Rashtriya Uchchatar Shiksha Abhiyan (RUSA), which aimed to achieve a 32 percent Gross Enrollment Ratio (GER) in higher education by 2022.

The clustering of institutions in specific regions has also contributed to the expansion of regional inequalities in enrollment The disparity in the number of colleges per lakh population is stark across different states in India. For instance, Bihar has as few as 7 colleges per lakh population, while Karnataka and Telangana boast 53 and 50 colleges respectively (as indicated in Table 6). Despite Uttar Pradesh, Bihar, and Madhya Pradesh collectively harboring 35 percent of the 18-

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23-year-old demographic (which comprises the college-going population), they possess a disproportionately low number of colleges per lakh population. Conversely, states like Karnataka, Andhra Pradesh, Telangana, Kerala, and Puducherry exhibit a high density of colleges, despite accounting for only 14 percent of the total share of the 18-23-year-old population in India.

Wide inter-state disparities are observed in concentration of colleges vis-a-vis population in the age group 18-23. Andhra Pradesh, Telangana, and Karnataka states consistently have high college densities (table 6) throughout the period with slight fluctuations. Telangana started with the highest density of 60 colleges in 2014-15 but experienced a decline over the years. Bihar, Jharkhand, and Delhi states have relatively low college densities, with minimal changes observed over the years. States like Arunachal Pradesh, Manipur, Nagaland, Sikkim, Mizoram, and

Table:6 State-wise College Density (2014-15 to2018-19)

State/UT	2014-15	2015-16	2016-17	2017-18	2018-19
Andhra Pradesh	47	45.20	48	48	49
Arunachal Pradesh	17	17.28	19	19	23
Assam	15	14.58	15	14	15
Bihar	7	6.64	7	7	7
Chhattisgarh	23	22.89	23	24	24
Goa	33	32.15	32	32	31
Gujarat	28	28.10	29	30	31
Haryana	35	34.94	36	30	33
Himachal Pradesh	43	46.73	51	45	47
Jharkhand	8	8.74	8	8	8
Karnataka	49	49.92	53	51	53
Kerala	41	42.67	44	44	45
Madhya Pradesh	26	25.72	25	24	24
Maharashtra	35	34.25	32	33	33
Manipur	29	29.92	30	26	28
Meghalaya	18	18.30	18	18	19
Mizoram	22	22.21	23	23	25
Nagaland	26	26.26	26	27	28
Odisha	23	23.11	23	23	23
Puducherry	57	55.44	49	47	46
Punjab	31	32.33	33	33	34
Rajasthan	34	35.03	36	33	35
Sikkim	18	20.34	22	22	25
Tamil Nadu	33	32.44	33	35	35
Telangana	60	60.48	59	51	50
Tripura	11	11.63	12	12	12
Uttar Pradesh	25	26.49	29	28	28

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Uttarakhand	35	36.02	39	37	37
West Bengal	10	9.92	11	12	13
Chandigarh	16	14.40	14	13	13
Dadra and Nagar Haveli	15	13.37	13	13	12
Daman and Diu	15	14.70	14	15	16
Delhi	9	8.54	8	8	8
Jammu and Kashmir	24	24.54	24	23	23
Mean	***27***	***28***	***28***	***28***	***28***
Standard Deviation	***13.68***	***13.84***	***13.97***	***12.83***	***12.93***
CV (%)	**50.67**	**49.43**	**49.89**	**45.82**	**46.18**
Skewness	***0.65***	***0.59***	***0.50***	***0.36***	***0.28***

Source: AISHE reports

Meghalaya experienced fluctuations in college density over the years, but the changes were not drastic. The standard deviation and standard error values indicate the dispersion and precision of the data, respectively. The relatively low values indicates that the data points are not widely spread from the mean, and the means are fairly representative. The data shows a general trend of increasing college density across states over this period (2014-19) with some states experiencing more significant changes compared to others.

In hilly regions, states often exhibit low institutional density, yet their GERs vary widely, ranging from high to low. This discrepancy may arise because higher education accessibility is not solely reliant on the physical presence of institutions but is also influenced by socio-economic factors such as parental income and willingness to migrate. Conversely, states with high population density present a different scenario. Despite an average institutional availability per 1000 square kilometers, access may still be inadequate due to the substantial population size and potential lack of institutional capacity. For instance, in Bihar, Jharkhand, Odisha, and Rajasthan, both institutional density and GER are notably low. Access to higher education varies significantly across the states. The comparatively progressive southern states exhibit higher GERs and greater availability of educational institutions.

Significant disparities exist among states in terms of the quality of higher education institutions (HEIs), as evidenced by both NIRF rankings and the proportion of NAAC A/A+ accredited institutions within each state. Notably, approximately 60 percent of the top 200 colleges in the NIRF rankings are concentrated in just five states: Tamil Nadu, Maharashtra, Karnataka, Andhra Pradesh, and Telangana. Conversely, more populous states like Bihar, Madhya Pradesh, and Jharkhand have a limited presence of high-quality institutions. Delhi alone accounts for nearly 28 of the top 100 ranked NIRF colleges, while Tamil Nadu boasts around 34 of them. According to NAAC, less than 10 percent of colleges in Bihar and Jharkhand hold NAAC A/A+ accreditation, in contrast to states like Kerala, Punjab, and Tamil Nadu, where 51 percent, 44 percent, and 39

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percent of institutions respectively are accredited at this level. Consequently, there exists a substantial disparity in the quality of HEIs across the country. It appears that the market-driven expansion of higher education favors the concentration of institutions in specific regions, which contradicts the goal of ensuring equity

The mean average enrollment per college (table 7) across all states and territories fluctuates over the selected period, with a slight overall decrease from 848.37 in 2014-15 to 820.94 in 2018-19. The standard error values indicate the precision of the mean, suggesting that the calculated means are relatively accurate representations of the data. The decreasing trend in standard deviation indicates a slight reduction in the variability of average enrollments across the years.

Table 7: Average Enrolment per college (Age Group 18-23 years)

State/UT	2014-15	2015-16	2016-17	2017-18	2018-19
Andhra Pradesh	516.00	493.54	469.00	493.00	524.00
Arunachal Pradesh	1538.00	1355.58	695.00	810.00	551.00
Assam	908.00	942.36	917.00	983.00	971.00
Bihar	2081.00	2142.18	1801.00	1686.00	1616.00
Chhattisgarh	511.00	526.53	531.00	550.00	565.00
Goa	526.00	560.40	594.00	640.00	700.00
Gujarat	611.00	584.71	536.00	519.00	513.00
Haryana	683.00	646.15	514.00	611.00	610.00
Himachal Pradesh	549.00	519.86	471.00	553.00	558.00
Jharkhand	2025.00	1715.69	1786.00	1786.00	1875.00
Karnataka	434.00	437.82	381.00	416.00	426.00
Kerala	517.00	521.41	510.00	554.00	568.00
Madhya Pradesh	576.00	589.11	575.00	646.00	734.00
Maharashtra	591.00	628.22	646.00	678.00	681.00
Manipur	1105.00	1070.22	1002.00	1156.00	1039.00
Meghalaya	960.00	1087.23	938.00	1087.00	1039.00
Mizoram	669.00	652.90	658.00	612.00	603.00
Nagaland	418.00	415.97	463.00	484.00	497.00
Odisha	606.00	661.01	682.00	685.00	682.00
Puducherry	566.00	541.66	549.00	569.00	600.00
Punjab	668.00	632.90	580.00	576.00	546.00
Rajasthan	562.00	550.53	443.00	526.00	521.00
Sikkim	537.00	580.07	586.00	737.00	751.00
Tamil Nadu	854.00	895.29	922.00	919.00	924.00
Telangana	580.00	574.14	483.00	558.00	554.00
Tripura	1134.00	1097.06	1207.00	1156.00	1153.00
Uttar Pradesh	1011.00	920.50	776.00	816.00	743.00
Uttarakhand	726.00	683.65	508.00	621.00	641.00
West Bengal	1455.00	1427.31	1323.00	1170.00	1170.00
Andaman and Nicobar	818.00	887.86	904.00	928.00	914.00

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Islands					
Chandigarh	1741.00	1870.56	1964.00	2052.00	2034.00
Dadra and Nagar Haveli	662.00	747.43	668.00	690.00	729.00
Daman and Diu	366.00	382.13	382.00	336.00	340.00
Delhi	1506.00	1526.80	1501.00	1531.00	1562.00
Jammu and Kashmir	683.00	644.06	646.00	720.00	799.00
Mean	***848.37***	***843.22***	***788.89***	***824.40***	***820.94***
Standard Deviation	***455.04***	***439.38***	***420.72***	***407.12***	***404.77***
CV (%)	**53.64**	**52.11**	**53.33**	**49.38**	**49.31**
Skewness	***1.48***	***1.49***	***1.59***	***1.57***	***1.66***

Source: AISHE reports

Andhra Pradesh, Arunachal Pradesh, and Assam states show fluctuations in average enrollment over the years, with some experiencing significant changes. Arunachal Pradesh, for instance, saw a substantial decrease from 1538 in 2014-15 to 551 in 2018-19 (table 7). Bihar, Jharkhand, and West Bengal states have relatively high average enrollments per college throughout the period, although there are fluctuations. Chhattisgarh, Goa, and Gujarat: These states show relatively stable average enrollments per college over the years. Haryana, Himachal Pradesh, Karnataka, Kerala, and Madhya Pradesh states exhibit fluctuations, with some showing decreases in average enrollment over the years

The data suggests that while there are variations in average enrollment per college across different states and territories, the distributions tend to be positively skewed, with a few colleges having significantly higher enrollments compared to others. States with higher average enrollments per college may need to focus on infrastructure and resources to accommodate a larger student population effectively. Similar disparities are evident concerning the number of enrollments per college. The average enrollment in colleges varies significantly, ranging from as low as 426 in Karnataka to 2034 in Chandigarh. States like Karnataka, Andhra Pradesh, Kerala, and Telangana, which contribute a larger percentage of total colleges in India, exhibit lower enrollment numbers per institute, with figures falling below 600, significantly lower than the national average of 698 per college.

As per the AISHE Report 2018-19, albeit student enrollment in higher education institutions rose from 32.3 million in 2013-14 to 36.6 million in 2017-18, there has been a decrease in the total number of teachers from 1367535 to 1284755 over the same period. In 2018-19, the pupil-teacher ratio in higher education was 26 which means that for every 26 students, there was one teacher available. Bihar and Jharkhand exhibited the highest ratios of teachers to students, while Karnataka, Andhra Pradesh, Kerala, and Lakshadweep had lower ratios. Comparatively, smaller states and Union Territories such as Tripura, Jammu and Kashmir, and Dadra and Nagar Haveli

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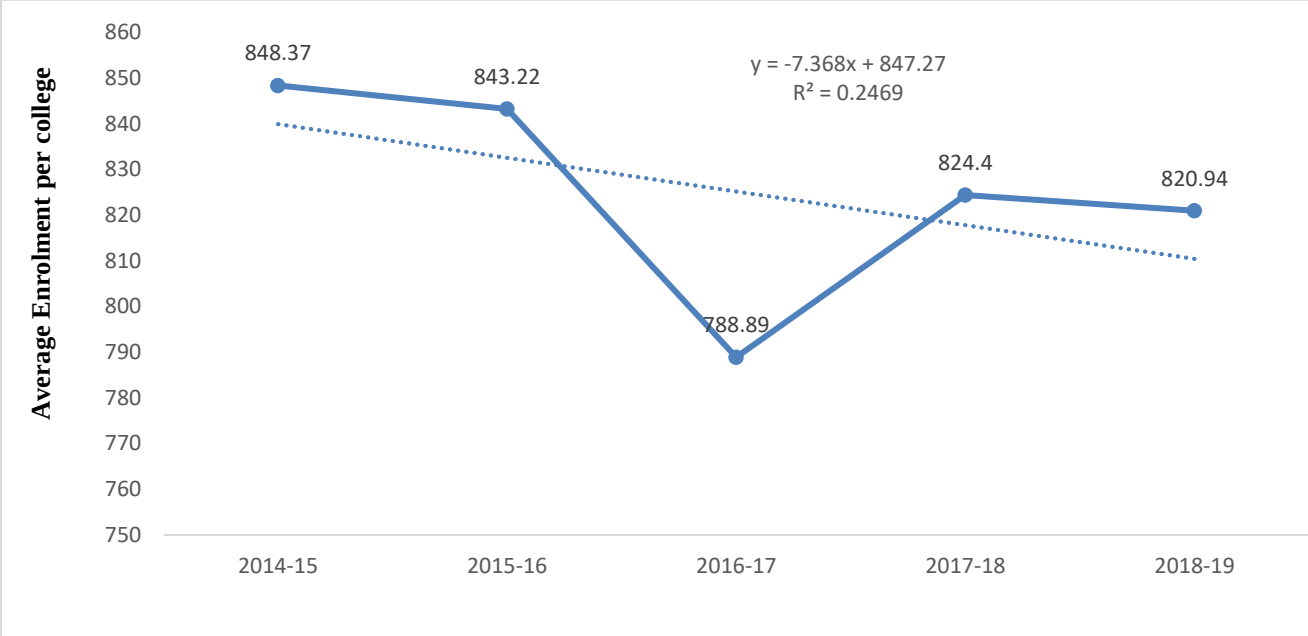
had favorable pupil-teacher ratios when juxtaposed with larger states like West Bengal and Rajasthan. The faculty shortage adversely impacts the quality of education and research.

Fig. 4 Trend in average enrolment per college



A high pupil-teacher ratio puts the strain on teachers as they are tasked with instructing numerous students, resulting in insufficient time allocated to each student and teachers finds themselves unable to engage in research pursuits. It has been observed that the shortage of faculty is being addressed by relying heavily on ad hoc or part-time faculty. Nevertheless, institutions with a substantial reliance on ad hoc or part-time faculty tend to exhibit poor performance in terms of teaching quality.

In RUSA aims to address the problem of vacant teaching position and attempt to ensure that faculty positions in institutions reach a minimum of 85% of the sanctioned faculty strength. States are obligated to fill all vacant sanctioned posts and can access funds under RUSA to create additional positions. The objective is to achieve a pupil-teacher ratio of 20:1, thereby fostering quality education and research.

While some regions have made significant strides in expanding access and improving quality, others continue to grapple with issues such as inadequate infrastructure, faculty shortages, and administrative bottlenecks. The proactive measures are required to address regional disparities in higher education access and infrastructure. This may involve targeted investment in underserved areas, incentivizing institutions to establish campuses in remote regions, and promoting distance

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education and online learning modalities. Building robust transportation and communication networks can also facilitate mobility and connectivity for students from remote areas.

RUSA Scheme a key intervention by the Government of India, addresses these challenges. Envisioned as a comprehensive reform initiative, RUSA aims to enhance access, equity, and quality in higher education through a range of strategies, including infrastructure development, faculty improvement, academic reforms, and governance enhancements. By providing financial assistance to states and union territories RUSA seeks to catalyze institutional reforms and promote innovation in higher education delivery.

Table 8: Pupil Teacher Ratio (PTR)

State/UT	2014-15	2015-16	2016-17	2017-18	2018-19
Andhra Pradesh	17	16	18	19	18
Arunachal Pradesh	49	43	41	43	31
Assam	25	25	30	34	31
Bihar	50	54	70	67	61
Chhattisgarh	24	23	27	29	28
Goa	17	18	18	17	16
Gujarat	28	27	28	27	26
Haryana	18	18	26	29	26
Himachal Pradesh	21	22	27	27	27
Jharkhand	58	52	61	59	60
Karnataka	14	14	15	16	15
Kerala	17	16	19	20	18
Madhya Pradesh	24	24	28	35	33
Maharashtra	23	24	27	27	27
Manipur	21	21	23	31	22
Meghalaya	20	24	27	30	26
Mizoram	18	19	19	17	18
Nagaland	19	17	19	19	19
Odisha	20	21	26	28	27
Puducherry	10	10	12	13	13
Punjab	17	16	18	21	18
Rajasthan	23	26	27	32	29
Sikkim	17	21	22	20	27
Tamil Nadu	16	15	18	18	17
Telangana	16	16	17	19	18
Tripura	31	30	35	37	33
Uttar Pradesh	39	34	42	60	46
Uttarakhand	23	22	26	28	27
West Bengal	38	36	42	37	35
Andaman & Nicobar Islands	30	34	32	29	25
Chandigarh	29	31	31	31	28

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Dadra and Nagar Haveli	25	27	29	28	29
Daman and Diu	16	16	16	14	14
Delhi	49	51	57	61	52
Jammu and Kashmir	32	31	38	37	35
All-India	23	23	26	29	26
Mean	**25.47**	**25.47**	**28.81**	**30.22**	**27.81**
Standard Deviation	**11.34**	**10.79**	**12.90**	**13.46**	**11.57**
CV (%)	**44.52**	**42.36**	**44.78**	**44.54**	**41.60**
Skewness	**1.41**	**1.30**	**1.60**	**1.32**	**1.46**

Source: AISHE reports

Fig. 5 Pupil Teacher Ratio (PTR)

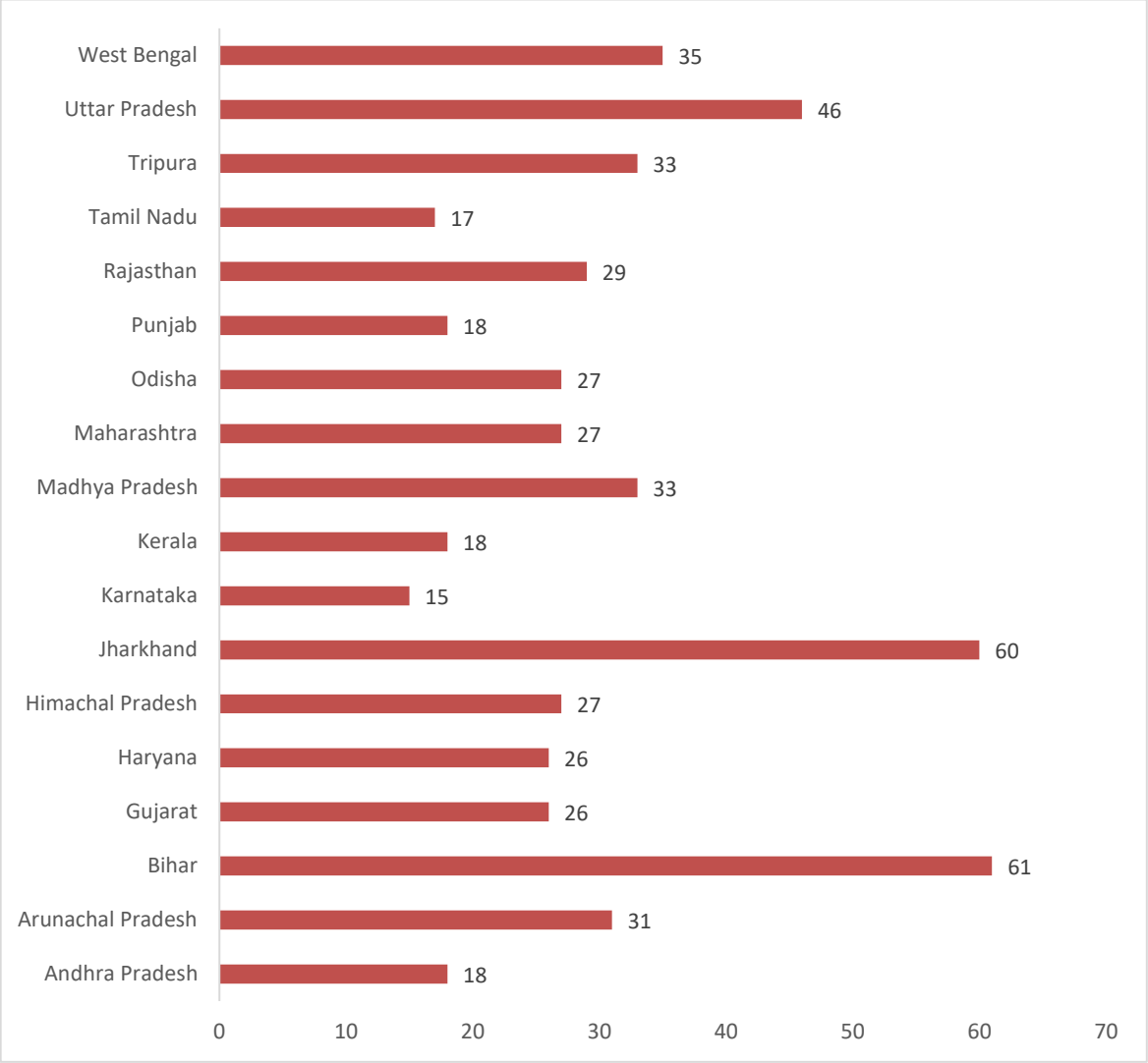

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Table: 9 Test for Equality of Means

Method	**Value**		**Prob.**
ANOVA F -test	3.568966		0.077543
WELCH F-test	0.134254		0.086126
Analysis of Variances			
Source of Variation	df	Sum of Squares	Mean Squares
Between	3	1705426	568475.5
Within	16	3181.827	198.8642
Total	19		
Category Statistics			
Variable	Mean	Std. Dev.	Std. Error of Mean
Average Enrolment per college	700.4855	38.07565	12.5581
Gross Enrolment Ratio	25.2155	0.851537	0.380819
College Density	27.73058	0.435185	0.194621
Pupil Teacher Ratio (PTR)	25.4000	2.509980	1.122497

The table 9 presents the results of a test for equality of means, including ANOVA and Welch's F-tests and category statistics for various variables. The analysis of variances provides insights into the sources of variation in the data, distinguishing between variability within and between groups. The ANOVA F-test assesses whether there are significant differences in means across groups. In this case, the F-value is 3.568966, indicating that there is some evidence to suggest that the means of at least one variable differ significantly across groups. However, the corresponding probability value (Prob.) of 0.077543 is greater than the conventional significance level (e.g., 0.05), suggesting that the result is not statistically significant at typical levels of significance. Welch's F-test, which is another approach to comparing means across groups, also yields a non-significant result, with an F-value of 0.134254 and a probability value (Prob.) of 0.086126.

Conclusion

Accessibility to higher education is a fundamental pillar for promoting the societal progress, economic development, and individual empowerment. In the Indian context, where education has always been revered as a tool for social mobility and change, the initiatives like the RUSA Scheme is playing a pivotal role in enhancing access to higher education in the country. By prioritizing the establishment of new universities, upgrading existing colleges, and providing infrastructural support, it has contributed significantly to expanding educational opportunities

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across the country. Furthermore, its emphasis on improving faculty recruitment, implementing student feedback mechanisms, and promoting quality teaching has further bolstered access to education. Despite challenges such as varying access across states and socio-economic barriers, RUSA has laid a strong foundation for promoting inclusivity and equity in the higher education system.

The socioeconomic disparities, regional imbalances, and systemic barriers as major obstacles to equitable access to higher education in India. These barriers disproportionately affect marginalized communities, including women, rural populations, and economically disadvantaged groups, thereby perpetuating inequality and hindering inclusive development. The effectiveness of RUSA implementation often depends on factors such as state capacity, political commitment, and stakeholder engagement. There is a need for a holistic approach to enhancing accessibility to higher education, beyond the purview of RUSA alone. Addressing structural inequalities requires concerted efforts across multiple fronts, including primary and secondary education, social welfare policies, and affirmative action measures. Initiatives aimed at bridging the rural-urban divide, promoting gender equality, and empowering marginalized communities are essential for creating a more inclusive higher education landscape. There is a need for greater coordination and collaboration among central and state agencies to ensure the effective implementation of RUSA and other related initiatives. This includes streamlining funding mechanisms, enhancing monitoring and evaluation frameworks, and fostering knowledge-sharing platforms for best practices dissemination. In addition to this the efforts to improve the quality of higher education must go hand in hand with measures to enhance access and equity. This entails investing in faculty development programs, promoting research and innovation, and leveraging technology for pedagogical innovation and outreach. Additionally, there is a need to strengthen support systems for students from marginalized backgrounds, including scholarships, mentorship programs, and counseling services.

To conclude, the accessibility to higher education is not merely a matter of individual opportunity but a collective imperative for building a more equitable and prosperous society. The RUSA Scheme is a crucial step for achieving this vision by expanding access, enhancing quality, and promoting inclusivity in higher education across India. However, realizing the full potential of RUSA requires sustained commitment, strategic investments, and concerted action by all stakeholders. By prioritizing equity, excellence, and empowerment, India can unlock the transformative power of higher education to drive inclusive growth and development for generations to come.

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References

1. Gupta, S., & Patel, K. (2019). Assessing the Impact of RashtriyaUchchatar Shiksha Abhiyan (RUSA) on Accessibility to Higher Education in Indian States. *Indian Journal of Education, 45(2)*, 176-192.

2. Kumar, A., & Sharma, N. (2017). Challenges and Opportunities in Implementing RashtriyaUchchatar Shiksha Abhiyan (RUSA) for Enhancing Accessibility to Higher Education in India. *International Journal of Educational Development, 55*, 78-91.

3. Mehta, S. (2005). Measurement and Analysis of student's engagement in university classes. Higher Education Research and Development. Vol 24 Issue 1. Retrieved and downloaded from https://complit.washington.edu on 19/05/2019.

4. Sharma, A., & Singh, R. (2020). Enhancing Accessibility to Higher Education: A Study of RashtriyaUchchatar Shiksha Abhiyan (RUSA) Scheme in India. *Journal of Higher Education Policy and Management, 39(4)*, 432-449.

5. Singh, V., & Gupta, R. (2016). Evaluating the Effectiveness of RashtriyaUchchatar Shiksha Abhiyan (RUSA) in Improving Accessibility to Higher Education: A Case Study of Selected States. *Journal of Educational Research and Innovation, 3(1),* 45-62.

6. Tiwari, P., & Mishra, S. (2018). Accessibility to Higher Education in India: A Review of RashtriyaUchchatar Shiksha Abhiyan (RUSA) Scheme. *Journal of Educational Planning and Administration, 32(3*), 279-295.

7. Varghese, N.V & Michaela, M (2014).Governance reforms in higher education: A study of institutional autonomy in Asian countries. Retrieved and downloaded from http://www.unesco.orgon 27/7/2016.

