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GOVERNMENT OF KARNATAKA

HUMAN DEVELOPMENT
REPORT - 2022
BRIDGING THE GAPS TOWARDS SUSTAINABLE WELL BEING

SKILLS

**Human Development Division,
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KARNATAKA

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Chapter - 3

Quality Education in the era of New Education Policy-2020

Chapter 3

Quality Education in the era of National Education Policy 2020

Section I: School Education

3.1: Introduction

This report anatomizes Karnataka's educational system with the aim to appreciate and encourage perseverance of excellent standards; to identify areas that will benefit from improvement in order to attain global educational goals; to record the state's progress towards achieving equitable quality education in comparison to, and with its immediate southern neighbours, and India as a whole. Quality Education is adopted as one of the seventeen UN's Sustainable Development Goals, and it will play a crucial part in bringing about global peace and prosperity. The National Education Policy, 2020 introduces extensive changes to education in order to make the learning process more personalized, meaningful and holistic in order to give the best possible chances for every child to realize the potential that they possess in the fields that would be best suited for their strengths and inclinations.

While analyzing the Net Enrolment Ratios of the Southern states, which are generally frontrunners in Human Development, Karnataka commendably performs well even amongst the southern states. It is notably the only southern state to have achieved a perfect NER of 100 at the lower primary level for both the genders. This is a direct consequence of the efforts undertaken with the underlying goal of education for all. Within Karnataka, districts like Dakshina Kannada and Bengaluru Urban have consistently performed well in the educational sector. While progresses have been made to ensure that younger children enter schools, advancements in higher education in Karnataka and the rest of India needs betterment in order to compete with, and achieve global standards in education. Karnataka is home to several reputable and esteemed institutions like ISRO, RRI, NAL, IIITB, NLSIU to name a few. These institutions have received nods from global superpowers. The potential of these institutions can be expanded with conscious and constant efforts to ensure improved enrolments in higher education.

In the overall ranking of the states for the performance of the SDG goals in the year 2020 and 2021, Kerala is at the first position with a score of 75, followed by Tamil Nadu and

Himachal Pradesh, who are in the second position. Andhra Pradesh,Goa, Karnataka and Uttarakhand share the third rank with a score of 72. Karnataka is the among the front runner states in the overall SDG performance.

However, with respect to SDG-4 related to education, Karnataka has been ranked in the category of a performer state with a score of 64. The highest score is for Kerala (80) in the SDG4 that takes the first rank and continues to be the front runner for SDG4. The other states which are the front runner are Tamil Nadu, Himachal Pradesh, Goa, Uttarakhand along with the union territories of Chandigarh, Delhi and Puducherry.

In this report, we statistically investigate Karnataka's initiatives and advancements in achieving literacy rates, enrolments across social groups, efforts to achieve retention in schools, schemes and plans like the Mid-Day Meal and their role in contributing to students' learning. While Karnataka is a frontrunner in several areas, there are other areas which need attention and will benefit from actively working on them.

3.2: Literacy Rates at the District Level

The growth in education in any state rests on the literacy rates. It is often argued that the literacy rates has a close correlation with the enrolment and retention of children in formal school education. In particular the literacy level of women has a direct bearing on increasing the enrolment of children particularly girls. It has been observed that the figures of literacy levels at the state often mars the differences that exist between districts as well as taluks. Table 3.1A and 3.1 B presents the literacy rates of the top 5 districts and bottom five districts in Karnataka respectively. It also records the literacy rates for rural, urban and the total for men and women.

Table 3.1 A: Districts with Highest Literacy Rates (Top 5)

District	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Dakshina Kannada	90.97	79.83	85.33	95.50	88.83	92.12	93.13	84.13	88.57
Bengaluru (U)	84.54	70.92	78.21	91.66	85.27	88.61	91.01	84.01	87.67
Udupi	89.85	78.65	83.91	95.22	89.21	92.13	91.41	81.58	86.24
Uttara Kannada	87.63	74.87	81.31	94.49	86.91	90.73	89.63	78.39	84.06
Kodagu	85.90	76.30	81.00	94.40	88.50	91.40	87.10	78.10	82.60

Source: Karnataka At A Glance - Statistical Report - FY 2019-20

Examining the Literacy Rates of districts in Karnataka based on 2011 census, it was observed that Dakshina Kannada stood at the top of the chart with a total literacy rate of 88.57. Dakshina Kannada is followed by other high achievers in Literacy Rates: Bengaluru Urban (87.67), Udupi (86.24), Uttar Kannada (84.06) and Kodagu (82.60). The gender difference is more pronounced in the rural part of the districts than the urban. Kodagu surprisingly records a higher female literacy rate in the urban which is around 13 percent.

Table 3.1 B: Districts with the Lowest Literacy Rates (Bottom 5).

District	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Yadgiri	58.02	36.05	47.05	80.03	63.92	72.01	62.25	41.38	51.83
Raichur	66.01	42.36	54.11	83.10	67.10	75.12	70.47	48.73	59.56
Chamarajanagar	64.80	51.06	57.95	83.29	73.64	78.39	67.93	54.92	61.43
Kalaburagi	69.08	46.86	58.09	85.12	71.91	78.61	74.38	55.09	64.85
Vijayapura	74.03	51.10	62.81	87.80	74.79	81.33	77.21	56.72	67.15

Source: Karnataka At A Glance - Statistical Report - FY 2019-20

Yadagiri occupies the bottom position in the chart with a Literacy Rate of 51.83. Other districts with low literacy rates are Raichur (59.56), Chamajanagara (61.43),Kalaburgi (64.85), and Vijayapur (67.15). The gender difference in the literacy rates among the bottom five districts is big ranging from 13 per cent for Chamrajanagara to 21 percent for Vijayapura and Yadgiri. The gender difference is higher in rural areas of the districts than the urban parts.

3.3: Literacy Rates at the Taluk Level

The literacy rates at the Taluk level are an important indicator of the human development index for the Taluks. In particular, the female literacy rate has ramification for the overall education of the Taluks. It has always been argued that the literacy of women at the household level has a direct impact on the enrolment at the school level. (**Table 3.2**)

Table 3.2 : **Taluks with Highest and Lowest Literacy Rates**

Taluks with Highest Literacy Rates)		Taluks with Lowest Literacy Rates	
Taluk	Literacy Rate	Taluk	Literacy Rate
Dakshina Kannada- Mangalore	91.99	Yadagiri-Yadgir	48.38
Uttar Kannada- Karwar	89.91	Raichur- Devdurga	49.49
Udupi- Udupi	89.16	Yadagiri- Shahapur	49.6
Bengaluru Urban- Bengaluru East	88.25	Ballari-Siraguppa	53.26
Kodagu- Madikeri	88.25	Raichur- Manvi	54.38

Source:Karnataka At A Glance - StatisticalReport-FY2019-20

Mangalore in Dakshina Kannada, Karwar in Uttara Kannada, Udupi in Udupi district, Bengaluru East in Bengaluru Urban and Madikere in Kodagu are the top five taluks that has the highest literacy rates. It may be worthwhile to find out if this has a bearing not only on the availability of schools and colleges in these specific taluks and correspondingly higher enrolment rates. It has to be noted that the taluks that have recorded the lowest literacy rates are again located in the districts that have recorded low development indicators including education indicators. The influence of the literacy rates to fuel the growth of education as well as other related development indicators needs to be recognised and hence addressed urgently.

Most of the taluks which are at the bottom with regard to the literacy rates are located in districts that occupy the lowest levels in literacy rates. The taluk level analysis helps state level policies and interventions to further focus on micro units beyond districts. The lowest literacy level taluks are in the Kalyana Karnataka region and bordering the erstwhile Andhra Pradesh. Yadagir and Shahapur of Yadagiri district; Devadurga of Raichur and Siraguppa of Bellari are the five taluks that register the lowest literacy level at the taluk level.

3.4: School Education & Quality Index (SEQI)

In an attempt to foreground school quality, NITI Aayog developed the School Education Quality Index (SEQI) As education is on the concurrent list, the role of the state is crucial to improve the school quality. The SEQI(for details refer to Pg., NITI Aayog 2017,) consists of 30 indicators that helps assess the delivery of quality education.

Among the states that have gone down in their ranking, Karnataka has gone down by 8 ranks and holds the 13th rank with respect to the reference year with an EI of 52.95. Himachal Pradesh (EI: 62.78) and Rajasthan (EI: 59.43) have gone down by 1 rank and occupy the 5th and the 7th position respectively. Maharashtra with the EI of 62.55 is in the 6th position(↓ 3 ranks) for the reference year. Uttarakhand with an EI of 48.15 occupies the 14th position for 2016-17 for the reference year (↓4 ranks).

Against this data, it will be important for us to examine why Karnataka has drastically declined in its ranking of the EI.

Table 3.3: *Karnataka Overall Performance*

Category/ Domain Rank	Category/Domain	Education Index Reference year (Y1)
3	Overall	69.57
1	Outcomes	81.93
1	Learning outcomes	95.37
5	Access outcomes	79.89
12	Infrastructure and facilities for outcomes	25.97
6	Equity outcomes	65.76
16	Governance processes	39.35
16	Governance processes aiding outcomes	39.35

Source: NITI Aayog

(Base year: 2015-16, Reference year: 2016-17)

Karnataka tops in learning outcomes. But it will have to pay attention to Infrastructure and facilities and the governance processes as well as the Governance processes aiding outcomes.

Performance Grading Index

Performance Grading Index (PGI measures the performance of States/UTs on a uniform scale to catalyse the transformational change in the field of school education. One of the objectives of the PGI is to provide insight on the status of school education in States & UTs, including key levels that drive their performance and critical areas of performance. It pinpoints the gaps

and helps States/UTs in prioritising the areas for intervention to ensure that the school education system is robust at every level.

The PGI structure comprises of total weightage of 1000 points across 70 indicators, and 26 sub indicators which are grouped under 5 domains, viz., Learning Outcomes (LO), Access (A), Infrastructure & Facilities (IF), Equity (E) and Governance Process (GP). Following the same approach of State PGI in the previous years, States/ UTs are graded.

Table 3.4: PGI Indicators

PGI Indicators	Targeted Score	2017-18	2018-19	2019-20	2020-21
Domain1-Learning Outcomes and Quality	180	160	160	160	160
Domain2-Access	80	69	75	72	76
Domain3-Infrastructure &Facilities	150	100	81	96	123
Domain 4-Equity	230	212	199	206	211
Domain 5- Governance Processes	360	165	240	279	292
TOTAL WEIGHT	**1000**	**706**	**755**	**813**	**862**

Source:

Karnataka is in Level III (Scores range 85%-90%). It is second highest along with Chandigarh in learning outcomes but is placed at lower level in Governance and infrastructure. (Performance Grading Index for States & Union Territories 2020-21, Ministry of Education, GoI 2022)

The Performance Grading Index is also estimated at District level with a more focused approach based on 83 indicators, across six domains and the maximum score is 600. Among the districts, Chitradurga, Belgavi& Dharwad are in category -III -Ati-Uttam -(score range 71-80%). Bengaluru North, Udupi, Chickmagaluru, Kalaburagi, Mysuru &Raichuru -6 districts are in Prachesta-1 category (51 to 60 %). The remaining 21 districts are in Uttam (61% -70%) category.

3.5: Net Enrolment Rate: The National Picture

The Gross Enrolment Ratio has always been used as an indicator to measure access to formal education in the absence of the Net Enrolment Ratio. The analysis in the following section has been made using the Net Enrolment Ratio.

For the year 2019-20, at the Elementary Levels (I-VIII), India records a NER of 90.44. The NER for boys is 91.28 and girls is 89.66. It is heartening to note that Assam, Delhi, Karnataka, Manipur, Meghalaya Mizoram and Punjab all have an overall NER of 100.

It is important for one to examine the NER at the secondary education level in two parts, i.e., 10th grade and 12th grade. The reason for this is that not all states have included 11th and 12th grade as part of the schooling system. In particular, Karnataka has continued to

retain the pre university education that is equivalent to the 11th and 12th grade as in most states.

There is sharp decline in the NER figures for India at the secondary level with an overall value of 50.23. Though there is a negligible gender difference at the national level with boys recording 50.3 and girls 50.7. Investigating the Secondary Education (IX-X) enrolments across all states and union territories, it was seen that Punjab holds the top position on the chart with an overall NER of 81.54, followed by Kerala with an NER of 74.13. Tripura, Delhi and Karnataka closely follow Kerala with overall NERs of 73.79, 72.32 and 72.31 respectively. Punjab also secures the top position in female enrolments with a female NER of 85.81. Other highest female NERs in secondary education are held by Tripura (76.22), Delhi (75.38), Kerala (74.14) **and Karnataka (71.5).** Ladakh occupies the lowest position on the chart with an overall NER of 33.15.

India records a further downward trend in the NER for higher secondary school (11th& 12th) with an overall value of 32.34.There is slight increase in the gender gap when compared to the secondary school with the NER for boys at 33.26 and 31.42 for girls.

A comparison across the different states reveal that Lakshadweep occupies the highest position with an overall NER of 63.44, followed by Kerala (NER: 62.38), Punjab (55.46), Himachal Pradesh (55.38) and Chandigarh (54.92). The female enrolments in higher secondary education found that Kerala tops the chart with an NER of 65.94. Other regions that follow Kerala with high female NERs are Lakshadweep (64.75), Chandigarh (61.37), Punjab (59.15) and Himachal Pradesh (57.78).

Table 3.5 *NER - Southern States*

NER Southern Indian States (2019-20)														
Primary (I-V)			U.Primary (VI-VIII)			Elementary (I-VIII)			Secondary (IX-X)			H.Secondary (XI-XII)		
Location	Girls	Boys	Overall	Girls	Boys	Overall	Girls	Boys	Overall	Girls	Boys	Overall	Girls	Boys	Overall
Andhra Pradesh	85.73	88.78	87.3	70.56	72.19	71.38	87.68	90.7	89.22	55.15	55.08	55.11	37.18	32.46	34.73
Karnataka	100	100	100	89.49	90.11	89.8	100	100	100	71.5	73.06	72.31	43.39	36.43	39.78
Kerala	90.52	90.68	90.58	81.77	81.66	81.66	93.14	93.37	93.21	74.14	74.03	74.13	65.94	58.99	62.38
Tamilnadu	84.72	84.56	84.64	70.74	72.07	71.41	89.13	89.05	89.08	54.02	55.65	54.86	46.79	40.1	43.36
Telangana	94.96	94.76	94.82	72.92	72.82	72.84	96.02	95.79	95.87	57.15	56.9	57.04	36.06	26.1	30.91
INDIA	92.37	90.52	91.4	71.89	70.44	71.14	91.28	89.66	90.44	50.3	50.17	50.23	33.26	31.42	32.3

Source: NIC School Education Report 2019-20, Report ID: 4011

The southern states have performed better with respect to human development indicators. Hence it may be useful to compare the performance of Karnataka with reference to the southern states. It is observed that **Karnataka has been the only southern state** that has an NER of 100 at the lower primary level and this is seen for boys as well as girls. This in a sense reflects the long years of sustained effort to make sure that no child is left behind. This is followed by Telangana(94.82), Kerala(90.58), Andhra Pradesh(87.3) and Tamil Nadu(84.64). All the southern states do not show visible gender difference.

Comparing the NER for the higher secondary level for the year 2019-20, Kerala records a high of 62.38 as against the national NER of 32.3. Karnataka records higher than the national average **at 39.78.** However, Tamil Nadu fairs better than Karnataka with a NER of 43.36. Andhra Pradesh is marginally higher than India with 34.73 and Telagana is below the national figure at 30.91.

Thus, the issues of concern are drop in NER at Secondary and higher secondary level.

3.5.1: District level NER - Karnataka

To capture the district variation, the NER for elementary and secondary level at the district level was analysed. The district of Bengaluru urban was the highest with 124.05.

Table 3.6: *Lowest and Highest NER in Karnataka's Districts*

Districts with Lowest NER (Avg of Taluks)				Districts with Highest NER (Avg of Taluks)			
District	NER Elementary	District	NER Secondary	District	NER Elementary	District	NER Secondary
Mandya	74.34	Yadagiri	62.14	Bengaluru Urban	124.05	Udupi	103.82
Chamrajanagara	76.44	Kalaburagi	70.21	Vijayapur	103.60	Bengaluru Urban	103.00
Hasan	77.78	Bidar	70.54	Udupi	100.36	Dakshina Kannada	98.35
Chikkaballapur	78.08	Dharwad	71.61	Dakshina Kannada	95.61	Bagalkot	90.49
Kolar	78.70	Kodagu	71.65	Gadag	95.42	Bengaluru Rural	89.32

Source: DoE 2019-20

The other four districts that followed are Vijayapur, Udupi, Dakshina Kannada and Gadag. At the secondary school level, the district that topped was Udupi with 103.82 followed by Bengaluru urban, Dakshina Kannada, Bagalkot and Bengaluru rural in that order with a value greater than 89.

It was observed that Mandya district has the lowest in the NER at the elementary level at 74.34. The other districts that occupied the lowest ranks for NER at the elementary level are Chamarajnagar, Hassan, Chikaballapur and Kolar respectively with a value less than 79. The low NER at Elementary level indicates highest deprivation with respect to education, access to knowledge and better life. These districts need focus from the bottom.

At the secondary level, Yadagiri district with a value of 62.14 recorded the lowest NER. The other districts that were at the bottom of the table were Kalaburgi, Bidar, Dharwad and Kodagu. It may be useful to consider the low NER in the above districts with the higher number of children from SC and ST households.

3.5.2: Net Enrolment Ratio for Taluks in Karnataka

While district level data allows one to locate specific districts that are performing well with respect to education indicators, it may be important to examine data at the Taluk level to identify Taluks which may be performing high/low contradictory to the performance of the district.

Table 3.7: *Top Performing Taluks As Per NER*

Taluks with Highest NER			
Taluk	NER Ele.	Taluk	NER Sec.
Bengaluru Urban - Bangalore South	152.18	Uttar Kannada- Joida	162.88
Bengaluru Urban- Anekal	130.62	Uttar Kannada- Siddapur	133.85
Uttar Kannada- Joida	117.99	Uttar Kannada- Karwar	121.25
Dharwad- Hubli	115.79	Bengaluru Urban - Bangalore South	119.35
Vijayapur- Bijapur	114.5	Udupi- Karkala	116.89

Data written as District-Taluk, Source: DOE 2019-20

Among the taluks in Karnataka, the highest NER at the elementary level is Bengaluru South. The other taluks in the top ranks are Anekal (BU), Joida (Uttara Kannada), Hubli (Dharward) and Bijapur (Vijayapur) with a NER of above 114. At the secondary level, Joida, Sidapur and Karwar (all from Uttara Kannada) take the first three ranks with a value over 121. Bengaluru South and Karkala from Udupi occupy the 4th and 5th position with a value of above 116.

Table 3.8: Bottom *Performing Taluks As Per NER*

Taluks with Lowest NER			
Taluk	**NER Elementary**	**Taluk**	**NER Secondary**
Belagavi- Athani	29.64	Belagavi- Athani	27.88
Dharwad- Dharwad	45.9	Dharwad- Dharwad	38.99
Mandya- Nagamangala	62.65	Uttar Kannada- Haliyal	47.26
Chikkaballapur- Gudibande	64.08	Kalaburagi- Chincholi	53.92
Uttara Kannada - Haliyal	67.03	Uttar Kannada - Honnavar	55.31

Data written as District-Taluk, Source: DOE 2019-20

The taluks that have recorded the lowest NER at the elementary level of 29.64 is Athani(Belgavi). The other Taluks that are at the bottom of the table are Dharwad(Dharwad), Nagamangala(Mandya), Gudibande(Chillaballapur and Haliyal(Uttar Kannada) with a value lesser than 67.03. Athani(Belgavi) has recorded the lowest NER even et the secondary level. The other taluks that are the at the lower end are Dharwad(Dharwad), Chincholi(Kalburgi) and Honnavar(Uttar Kannada) with a NER less than 55.

3.6: Gender Gap in Enrolment

At the elementary level, the Gender Gap among the districts range from 0.90 to 0.97 Vijayapura records the lowest with 0.90 while Uttara Kannada records the highest with 0.97. At the secondary education level, the Gender Gap ranges from 0.90 (Udupi) to 1.01 (Hassan). When the Gender Gap in Enrolment at the elementary level was examined at the Taluk level, Badami in Bagalkot recorded the lowest at 0.85 and Yadgir of the Yadagiri district recorded the highest at 1.08. The Gender Gap in the enrolment at the secondary level was examined, Tumkur recorded the lowest at 0.77 while Alur Taluk of Hasan district recorded the highest at 1.14.

3.7.1 Pupil Teacher Ratio at the District Level

The Pupil Teacher ratio is an important indicator of school quality. While the data is available for sanctioned and working schools at the elementary and secondary level, the analysis was

based on the working schools at these two levels. The data at the district and taluk level are presented separately for the top five and bottom five districts and taluks.

The Pupil Teacher Ratio for Karnataka at the district level for elementary level ranges from 17.02 for Chikkamagalur to Yadagiri with 47.50. At the secondary school level the PTR range is from 9.7 in Hassan district to 30.64 for Bellari district.

Table 3.9: *Districts with Lowest and Highest PTR: Elementary and Secondary*

Districts With Lowest PTR (Avg of Taluks)								Districts With Highest PTR (Avg of Taluks)							
District	PTR SE	District	PTR WE	District	PTR SS	District	PTR WS	District	PTR SE	District	PTR WE	District	PTR SS	District	PTR WS
Hasan	13.75	Chikkamagaluru	17.02	Hasan	7.71	Hasan	9.7	Koppal	27.76	Yadagiri	47.5	Yadagiri	23.97	Ballari	30.64
Chikkamagaluru	13.92	Hasan	17.04	Kodagu	9.03	Kodagu	10.68	Yadagiri	27.23	Ballari	45.09	Ballari	23.52	Yadagiri	29.82
Kodagu	14.07	Kodagu	17.82	Mandya	9.14	Mandya	11.53	Raichur	26.87	Raichur	40.94	Koppal	22.41	Koppal	27.55
Uttar Kannada	14.57	Kolar	18.12	Chikkamagaluru	9.2	Chikkamagaluru	11.58	Dharwad	26.64	Koppal	39.12	Raichur	19.71	Raichur	25.8
Kolar	14.8	Uttar Kannada	19.96	Ramanagar	9.51	Ramanagar	11.66	Ballari	26.19	Belagavi	33.34	Belagavi	18.19	Belagavi	23.03

PTR_SE: Sanction Elementary, PTR_WE: Working Elementary PTR_SS: Sanction Secondary, PTR_WS: Working Secondary

The other top performing districts with low PTR at the elementary level are Hassan, Kodagu, Kolar and Uttara Kannada with a PTR less than 20. At the secondary level, the other top performing districts with low PTR are Kodagu, Mandya, Chikmagaluru and Ramanagar with a PTR of less than 12. In contrast the poor performing districts at the elementary level in addition to Yadagiri are Ballari, Raichur, Koppal and Belagavi with a PTR (33-45).

3.7.2 PTR at the Taluk Level

Based on the data available for the year 2019-20, the range of the pupil teacher ratio at the Taluk level for Elementary School is 12.01(Karwar in Uttara Kannada district)&53.24 for Savadatti in Belagavi district.

The range of the PTR among the taluks in Karnataka for secondary school is from 6.56 (Karwar in Uttara Kannada) to 42.05 for Siraguppa in Ballari district.

Table 3.10: *Taluks with Lowest and Highest PTR: Elementary And Secondary*

Taluks With Lowest PTR								Taluks With Highest PTR							
Taluk	PTR SE	Taluk	PTR WE	Taluk	PTR SS	Taluk	PTR WS	Taluk	PTR_SE	Taluk	PTR WE	Taluk	PTR SS	Taluk	PTR WS
Uttara Kannada Karwar	9.1	Uttar Kannada Karwar	12.01	Hasan Sakleshpura	4.9	Uttar Kannada Karwar	6.56	Belagavi Savadatti	29.46	Ballari Siraguppa	53.24	Ballari Siraguppa	27.59	Ballari Siraguppa	42.05
Chikkamagaluru Sringeri	11.55	Kolar Srinivaspura	14.34	Uttar Kannada Karwar	5.29	Hasan Sakleshpura	6.76	KoppalKushtagi	29.13	YadagiriShorapur	53	Yadagiri Shahapur	26.72	Yadagiri Shahapur	33.09
Tumkur Kunigal	12.24	Ramanagar Magadi	14.99	Hasan Alur	6.36	Hasan Hassan	7.77	YadagiriShorapur	28.54	YadagiriShahapur	50.08	BallariHospet	24.89	KoppalGangavathi	32.24
Tumkur Turuvekere	12.3	Hasan Hassan	15.01	Dakshina Kannada Mangalore	6.91	Hasan Alur	8.2	GadagShirahatti	28.5	Raichur Devdurga	48.89	KoppalGangavathi	24.6	Raichur Devdurga	31.83
RamanagarMagadi	12.4	Kodagu Somawarpet	15.07	Tumkur Turuvekere	6.93	Kodagu Somawarpet	8.33	Koppal Yelburga	28.39	Ballari Sonduru	45.09	Belagavi Gokak	23.95	Ballari Hospet	31.11

Data written as District-Taluk

PTR_SE: Sanction Elementary, PTR_WE: Working Elementary

PTR_SS: Sanction Secondary, PTR_WS: Working Secondary

The other four taluks with the lowest PTR around 15 at the elementary level are Srinivaspura, Kolar; Magadi, Ramanagar; Hassan, Hassan; and Somawarpet in Kodagu district.

At the secondary level the other four with low PTR of less than 9 are Sakleshpura, Hassan and Alur in Hassan district; and Somawarpet, (Kodagu).

The other four among the bottom five taluks with the highest PTR of 31 are Shahapur, (Yadagiri); Gangavathi, (Koppal); Devdurga, (Raichur) and Hospet, (Ballari).

The PTR across the taluk show large classes(45-53) at the elementary level which is not unmanageable. However, the problem perhaps lies in the distribution of this student strength across different grades/standards which may be a challenge. The management of the MDM scheme being the responsibility of the teacher will further reduce the actual instruction time that has direct bearing on student learning outcomes.

3.8: Dropout- District and Taluk

Another sensitive indicator of school quality is the dropout rates. The dropout rates by social groups cross the districts in Karnataka will provide important insights for interventions.

3.8.1: General Category

For the year 2019-20, the range of school dropout rates for General category at the lower primary level is zero (for udupi, Uttara Kanada and Shivamoga) to the highest for Chamarajanagara with 21.32.. Additionally, Yadagiri, Kolar, Bidar and Kalburgi also recorded dropout rates above 13 among girls at the lower primary in the General category. At the upper primary level, the dropout rates range from 0 (Dakshina Kannada, Udupi) to 30.86 for Yadagiri, Raichur, Haveri and Kalburgi that recorded more than 24. Surprisingly, Mandya that has not figured amongst the districts with the highest dropout rates at the lower primary level has recorded 25.46 for girls at the upper primary level. The dropout rates at the secondary school level ranges from 0 for (Ballari and Udupi) to a high of 60.23 for Haveri. The dropout rate is the highest for boys at 65.65. The other districts that have a dropout rate > 49 are Yadagiri, Belagavi. Chitradurga and Mandya.

3.8.2: Scheduled Castes

At the lower primary level, the dropout rates among the scheduled castes range from nil to 4.66 in Bidar. Even among districts having the highest dropout rates among the SCs in the upper primary level, the value is around 2 per cent. The dropout range for the secondary level for the SCs is 8.15 (Bengaluru North) to 36.1 in Bidar. Bidar has the highest dropout rate(37.97) among boys among the SCs in the state.Koppal, Raichur, Belagavi Chikkodi and Kalburgi record higher than 22. However, **the dropout rates are lower than for general category. This is the favourable outcome of financial assistance and support facilities for these students.**

3.8.3: Scheduled Tribes

Among the STs at the lower primary level, the dropout rates range from nil to 5.44 for Bidar.At the upper primary level, the highest dropout rate is 8.93 for Kalburgi. Uttara Kannada, Belagavi Chikkodi, Belagavi and Bidar register a dropout rate of over 5. At the secondary level the dropout ranges from 5.91 (Bengaluru North) to about 34 by Bidar and Kalburgi. Uttara Kannada, Belagavi Chikkodi and Belagavi also register a dropout rate of over 25.

3.8.4: School Dropouts and Learning Outcomes:

Another sensitive indicator for school quality is the learning outcomes of students across districts for different levels of school education. The nexus of learning outcomes is inextricably intertwined with dropout rates. At the school level, the teaching learning process, teacher quality, the class size, the active instructional time, the medium of instruction, school community interaction, leadership and governance factors impact learning outcome of students and drop out rates.

The household factors play an equally important role in influencing student attendance and learning outcomes. These factors, range from food security, disposable income at the family level/poverty, the matching of school language with language spoken at home, prior learning, time and support for learning at home, parental perceived returns from schooling, literacy levels of parents and members in the household, distance of school from home among others. In addition, factors related to age, caste, gender, availability of functional toilets and cultural practices like early marriage among girls affect the dropout of girls.

Therefore, At the state level, good infrastructure, nutritional support for children through mid-day meals schemes, incentives in the form of textbooks, scholarships, bicycles have positively impacted and enhanced the retention of children in schools.

3.9: Resources & Outcomes

Given the growing demand for secondary and higher education, it may be useful to devise innovative mechanisms to encourage private partnership to meet the aspirations of the youth in this country. To better capture the private participation in school education, it may be important to compare the expenditure made against the number of students served in the government and the private management schools. Best practices in terms of budget allocation and expenditure need to be systematically researched to derive new insights to reorganise the budget in ways that it can impact the overall quality of education.

Table 3.11: Budget Allocation and Expenditure on General Education (HOA-2202)

(Rs. In Lakhs)

Education Department	2016-17				2017-18		2018-19		2019-20	
	Budget Allocated (Revised)		Expenditure		Budget Allocated (Revised)	Expenditure	Budget Allocated (Revised)	Expenditure	Budget Allocated (Revised)	Expenditure
	Plan	Non-Plan	Plan	Non-Plan						
Elementary Education	384105.72	657861.96	369398.17	659308.7	941069	1125444.3	1461332.9	1262955.9	1539931.5	1402495.95
Secondary Education	126124.33	377762.37	124013.98	376388.97	500178	558634.92	612720.67	646638.44	714885.5	715543.91
Higher Education	92615.49	246207	81505.44	242024.43	287717.82	280270.58	265232.21	270360.56	275232.9	370316.79
Adult Education	2187	419	3584	405.86	1299	399.74	1304	1312.8	187.17	176.37
Language Development	500	3158	500	3263.41	3683	3597.15	4123	4659.88	4931	5809.04
General	25943.81	127	12979.88	72.65	31098	18349.12	17682.92	18408.34	16135.65	15726.74
Total	**631476.4**	**1285535**	**591981.5**	**1281464**	**1765045**	**1986695.8**	**2362396**	**2204335.9**	**2551304**	**2510068.8**

Source; FD, GoK

State Initiatives

- School dropout period of children out of school is considered to be 7 days instead of 60 days.To prevent absenteeism of children and to attend schools regularly Education Coordinator (ECO) is appointed as Attendance Authority. In case absenteeism of more than 7 days is found, ECO is supposed to visit the students' family to persuade the parents to bring their children to schools and this method is being implemented.

- Free uniform, text books, mid-day meals plan, Ksheerabhagya, vitamin tablets etc. are provided to encourage students to attend schools regularly.

- Scholarships and admissions in hostels are provided to coordinate different incentives given by other departments regarding Child Education.

- Totally 71 Kasturba Gandhi Balika Vidyalaya(KGBV) schools and 86 KKGVB Hostels are opened in educationally backward blocks so that drop out girl students are admitted to continue their education on priority basis.

- Accommodation is provided to students in the hostels run by other departments.

- Action is taken to collect the data of all children who have come to mainstream in the Vidyavahini software.

BENGALURU: A report on <u>midday meals</u> in the state by the <u>Karnataka Evaluation Authority</u> says that 2.1 lakh children — 6.4% of total children in <u>government schools</u> — do not get <u>breakfast</u> at home. For them, milk given in school is the first meal of the day, pointing to the need of expanding the midday meals to breakfasts too. Noting that milk and midday meal scheme have done wonders in enrolment, retention, learning levels and health of children. (Times of India-March 11, 2021)

Impact of COVID-19

The COVID-19 pandemic brought about the Learning Loss phenomenon that was widely observed in school-going children. Learning Loss is observed as a loss of academic skills over an extended break from school- usually during summer breaks. Learning loss includes forgetting and losing expertise over skills that were previously learned during the academic year, such as mathematical skills, reading skills etc. ASER's study of rural Karnataka's educational status in 24 out of the existing 30 districts revealed that in children aged 5-16, a decline in reading skills was seen in the year 2020 when compared to the year 2018. The different levels of reading were categorized as: Not even a letter, Letter, Word, Std 1 Level Text, Std 2 Level Text. The report revealed that there were 40.3% children in grade 1 who could not read a single letter in 2018 and this number increased to 56.8 % children who could not read in 2020. Similarly, the percentage of children who could not read a single letter has increased across grades 1-8 (except grade 6) in 2020 in comparison to 2018. Similarly, the percentage of children who could not recognize numbers 1-9 (arithmetic skills) have increased across grades 1-8

- Nali-Kali programme to provide quality education.

3.10: Way Forward

Despite the high performance at the primary level of education, secondary education lags considerably in the state of Karnataka. It should be distinctly noted that all the education outcomes of enrolment, transition and retention falls sharply at the secondary and higher secondary level. Dropout is inextricably linked to these parameters. This can be attributed to number of factors which include cultural, environmental, school-based or socio-economic factors. NITI Aayog annually ranks and measures the progress of the Indian states on

different SDGs, highlighting their performance and journey towards achieving SDGs including SDG 4.

The analysis of School Education and quality Index as well as Performance Grading Index indicated the low performance of the State in infrastructure and Governance processes. Therefore, to improve learning outcomes, it is essential to focus on these sectors.

Improving Infrastructure and Learning facilities
The following are the bottom 10 talukas without basic infrastructure facilities like Girls Toilet, Drinking water, Library etc. and teaching learning support facilities like Science kit Maths kit etc. These talukas to be given top priority with higher level of resource transfer.

- **Without Functional Girls Toilets**

District	Taluk	number of schools without functional girls toilet	number of schools without functional girls toilet(%)
Kalburgi	Chittapur	34	11.2
Yadgir	Hunisigi	28	11.1
Yadgir	Shorapur	36	10.6
Kalburgi	Aland	38	8.9
Kalburgi	Yadrami	12	8.05
Kalburgi	Kalagi	15	8.02
Kalburgi	Chincholi	28	8
Ballari	Hadagali	19	7.78
Raichur	Devdurga	33	7.46
Kalburgi	Sedam	24	7.29

Library

District	Taluk	Number of Schools without library	Number of Schools without library(%)
Yadgir	Hunisigi	85	33.7302
Yadgir	Shorapur	100	29.4118
Bidar	Bhalki	124	29.3144
Davanagere	Nyamati	30	27.7778
Yadgir	Shahapur	84	26.0062
Bidar	Kamalanagara	30	25.4237
Raichur	Maski	77	23.1928
Kalburgi	Shahbadha	25	22.7273
Yadgir	Vadagera	23	22.1154
Yadgir	Gurumithakala	39	21.9101

Drinking Water

District	Taluk	number of schools without drinking water facility	number of schools without drinking water facility(%)
Kalburgi	Aland	19	4.46
Kalburgi	Kamalapura	11	4.16
Raichur	Devdurga	15	3.39
Chitradurga	Holalkere	9	2.87
Vijayapura	Muddebihal	7	2.47
Yadgir	Shorapur	8	2.35
Vijayapura	Talikote	5	2.34
Koppal	Kushtagi	6	1.73
Bidar	Humnabad	5	1.65
Ballari	Hadagali	4	1.63

Without Science Kit

District	Taluk	number of schools without functional science kit	number of schools (%)
Dharwad	Navalgund	64	52.03
Bidar	Hulasuru	37	50.00
Dharwad	Annigeri	40	45.98
Udupi	Kapu	43	45.26
Kalburgi	Chittapur	136	45.03
Chikkamagalur	Sringeri	25	44.64
Udupi	Bramhavara	65	42.21
Vijayapura	Talikote	89	41.78
Bidar	Bhalki	173	40.90
Belavi	Kitthuru	56	40.58

Without Maths Kit

Dist	Taluk	number of schools without functional maths kit	No of schools (%)
Dharwad	Navalgund	49	39.8374
Dharwad	Annigeri	31	35.6322
Vijayapura	Talikote	70	32.8638
Bidar	Hulasuru	24	32.4324
Chamarajanagara	Yalandur	27	32.1429
Kalburgi	Chittapur	96	31.7881
Kalburgi	Gulbarga	308	29.9029
Vijayapura	Sindagi	118	28.7805
Bidar	Bhalki	118	27.896
Koppal	Kushtagi	94	27.2464

Without Computer Aided Learning Lab

District	Taluk	number of schools without functional CAL lab	number of schools (%)
Bagalkot	Badami	208	70.99
Haveri	Ranebennur	248	69.08
Bagalkot	Guledagudda	57	67.86
Haveri	Byadagi	114	67.86
Belagavi	Nippani	161	65.98
Belagavi	Mudalagi	141	65.89
Gadag	Gajendragad	84	65.63
Gadag	Mundargi	97	65.54
Bidar	Hulasuru	48	64.86
Belagavi	Hukkeri	272	64.30

In terms of ensuring that formal schooling is accessible to all, particularly with children with special needs, Karnataka has not only made schools open to CWSN, and has provided ramps. They have also provided provisions in terms of transport allowances.Uttara Kannada, Ramanagar, Haveri ,Gadag and Chikmangalur are the districts that record the highest children with special needs which is less than 2 percent. However, Yellapur taluk in Uttara Kannada records close to 5 percent CWSN.

3.11: Quality and Inclusive Education - Implementing National Education Policy

As per National Education Policy (NEP Clause 4.26): Every student should be imparted vocational crafts, such as carpentry, electric work, metal work, gardening, pottery making. Internship opportunities to learn vocational subjects may be made available to students throughout Grades 6-12, including holiday periods. Vocational courses through online mode will also be made available.

Indian Knowledge Systems, including tribal knowledge and indigenous and traditional ways of learning, will be covered and included in mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as in governance, polity, and conservation

 6 core areas to be concentrated:

- Arts and Culture
- Teacher Training
- Digital Library

- Language Learning
- Vocational Skills
- Orienting Dropouts and mainstreaming them.

In order to encourage smooth transition of children and main stream drop outs and for implementing the National Education Policy (NEP) there is a need to establish **Centres of Excellence / Skill Development Centres at all Educational centres.** Ideally, the above-mentioned **Centres of Excellence / Skill Development Centres at all Educational centres** should work with the technical institutions to update and upskill.

The initiative in Vocational education needs a greater fillip. There are about 75000 dropout children, it may be useful to transform vocational education within the school in ways that it focuses of developing skill sets with knowledge for all students in secondary schools post 9th grade. The need is to make the shift of not looking at vocational education in isolation but integral to quality education and technology that will enable students to learn through multiple languages through a click of a button.

- It may be useful to collaborate with NGOs like Labournet located in Karnataka that have demonstrated strength in helping several state governments to implement vocational education schools and ITIs. They prepare students for early employment option through specific trade-based skilling and prepare them for interoperable options for higher education.This will closely link to the NEP 2020 where multiple entry and exit options will be introduced in higher education.
- The collaboration with tata Technologies to upgrade 150 ITIs and introducing 23 courses (June 2022) is a concrete step in this direction.
- Drawing on initiatives in Haryana, Punjab, Assam and Odissa, where digital content is widely used along with lab facilities to learn the practical aspects will help to bridge the shortage of teachers/trainers in vocational education and introduce students to technology which is integral to be gainfully employed in today's changing employment space. There are 4687 high schools, out of them, 2150 schools do not have ICT Labs. These to be covered under **TALP and other ICT initiatives**. To encourage Science education, establish **STEM labs in Girls' high schools**.
- Provide transport facilities and financial assistance and ensure safe environment at school to increase the enrolment of girls.
- Establishment of Special Education Zones in educationally backward talukas with Vocational Education and Skilling Hub (VESH) in every SEZ.

- Start Early Childhood Care and Education in Anganwadi centres and develop model Anganwadi centres. A Model School with pooling of resources and feeder schools at Hobli/ GP level

- It is recommended that SDMC for Urban Schools must be created and Urban Local Government must also undertake to start Child Budgeting in their Budget.

- The NEP 2020 has emphasised the need for inclusive education where Karnataka has made strides in reaching out to children with disability. ECCE Workers and Aganwaditeachers to be trained in Udisha portage which has already been tried in Karnataka for early intervention of all children including children with dis/abilities. To coordinate with block resource centres for IE for providing necessary support with health and professionals.

- There is a need to focus on completion of schooling at grade 12, which will mean the transition of students from grade 8, 9, 10 and 11 to assess the eligible population for higher education. In the absence of this data, the rush to increase the enrolment in colleges will be futile as that is dependent on the student population that has completed grade 12.

- Karnataka is now focusing on evidence-based policy by pooling and analysing the data at taluk/GP level. This has been extremely useful to locate specific taluks and villages which require interventions. The data analytics helps to find out correlations among the variables to locate specific variables and populations groups that require urgent attention in the hope to reduce inequality among different populations.

- The close correlation between, health indicators, women's literacy rates, livelihood opportunities, migration and education need to be carefully studied to understand multiple interventions beyond the school education to enhance school related educational outcomes.

Financing NEP:

- The cost for equipping each school with equipment, cognitive tools, vocational labs as mandated by NEP is estimated at Rs 42 lakh for infrastructure and 20% annual recurring costs for operation and maintenance. Karnataka has approximately 49800 Government Schools, establishing above mentioned infrastructure would mean Rs. 20,916 crores. A model school in every GP is envisaged, which means 6000 schools in the state with the estimated cost of Rs 2,520 crore.

- Public Private Partnership (PPP) should be encouraged to build such infrastructure. In order to Boost private sector investment in social infrastructure projects, under Atma Nirbhar , Enhanced Viability Gap Funding only for Social Infrastructure Projects (Education, Health, Skill Development) has been increased to 40% by Center Government with a matching state share and 20% by Private Partner.

Section II   Higher Education

3.12 Introduction

The 21st century is witnessing unprecedented changes in the sphere of development. According to the United Nations World Population Prospects Database (2012), India will soon have the largest working population of the world. To convert this challenge to an asset we need to transform this work force into knowledge workers. India as a key global player, will have to focus on transforming higher education and prepare this young work force to be a part of this international competition regime. It is predicted that like the revolutionary change in the industrial sector of India during the nineties, India is poised for a similar revolution in the field of higher education during the coming decade. The key drivers of change according to the University Grants Commission (UGC), the National Planning Commission and the National Knowledge Commission, are Expansion, Equity and Excellence (3Es).

Against this background, higher education is seen as critical to Karnataka's emergence as a major player in the national and global knowledge society and economy. The role of higher education in support of overall education is clearly seen as the country moves from the universalisation of basic education (RTE) to the progressive massification of secondary education. A closer examination of the preparedness of Karnataka particularly of higher education to respond to the challenges of the 3Es is examined through the following sections.

3.13: Higher Education Scenario-Infrastructure

The state is poised to play a key role in leading the transformation. Historically, the state and particularly the capital city of Bangalore has been a pioneer in establishing science and technology institutions that have been comparable to international standards. The Indian

Institute of Science and other national research institutions like the National Centre for Biological Sciences (NCBS), Raman Research Institute (RRI), Indian Institute of Astrophysics (IIA), Indian Satellite Research Organisation (ISRO), National Aeronautics Laboratory (NAL), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), National Law School of India University (NLSIU), Indian Institute of Science, Bangalore (IIMB) and International Institute of Information Technology, Bangalore (IIITB), are among the best research and teaching institutions in the country.

These institutions have the state of art facilities in terms of laboratory and libraries that can be an envy of other universities and institutions in the country. It is unfortunate but critical to point out that the growth in higher education in Karnataka and for that matter India has been extremely uneven with regard to several dimensions.

3.13.1: Distribution of Higher Educational Institutions

At the national level, in the year 2019-20, the total number of universities in India is 1043. The distribution of the higher educational institution at the national level reveal that the highest proportion is the state public universities, closely followed by the state private universities

Table 3.12: **List of Universities by Type**

Sl.No.	State/Uts	All India	Percentage	Karnataka	Percentage
1	Central University	48	4.60	1	1.45
2	Central Open University	1	0.10		0.00
3	Institute of National Importance	135	12.94	4	5.80
4	State Public University	386	37.01	30	43.48
5	Institute under State Legislature Act	5	0.48		0.00
6	State Open University	14	1.34	1	1.45
7	State Private University	327	31.35	18	26.09
8	State Private Open University	1	0.10		0.00
9	Deemed University-Government	36	3.45	4	5.80

10	Deemed University-Government Aided	10	0.96		0.00
11	Deemed University-Private	80	7.67	11	15.94
12	Grand Total	1043	100	69	100

Source: AISHE 2019-20

India has 135 institutes of National importance, 80 deemed universities private and 36 deemed universities government. Karnataka has a total of 69 universities. The distribution of different types of universities in Karnataka follow the national pattern with 30 state public universities and 18 state private universities.There are 11 deemed universities private and 4 deemed universities state.There are 4 institute of national importance, 1 central university and 1 open university in Karnataka.

Figure-3.1 Karnataka State 2019-20
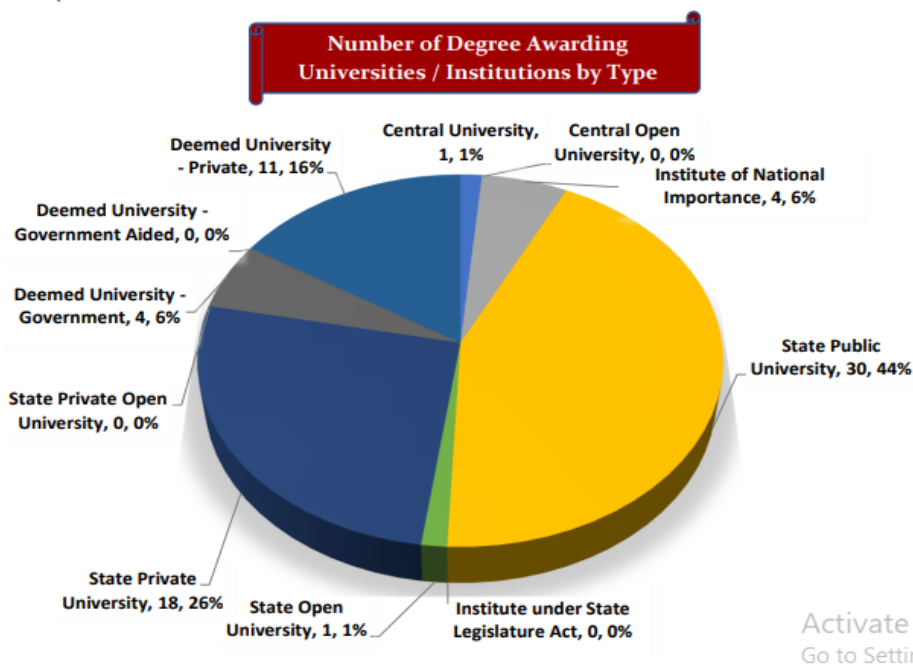
3.13.2: Premier Educational Institutions in Karnataka

In addition to above mentioned universities, Karnataka is a major place for independent/autonomous research or specialized institutions like Raman Research Institute; Institute for Social and Economic Change (ISEC); National Institute of Advanced Studied (NIAS); National Centre for Biological Sciences (NCBS) and such specialized institutions totaling to more that 25 of them. These institutes are not only contributing to specialized

research but also to the large social development within and outside the state. The form and spectrum of higher education institutions in the State of Karnataka is wide and varied, from independent research institutes to social, scientific research across institutions.

Karnataka and in particular Bengaluru has been home to several premier institutions in science and technology as well as humanities and social sciences. The Indian Institute of Science, Bengaluru, The National Centre for Biological Sciences, The Raman Research Institute, The Indian Institute of Astrophysics, The Jawaharlal Centre for Advanced, Scientific Research, The Indian Institute of Information Technology are some of the leading S&T institutions in Bengaluru. The above institutions along with leading Information technology industries, like, the INFOSYS, WIPRO, BIOCON, have spearheaded innovations in Karnataka and made Bengaluru the IT capital/Silicon Valley of India. In addition, Bengaluru also houses the National Institute for Fashion Design, Indian Institute of Management, Bengaluru, Institute of Social and Economic Change, The National Institute of Advanced Studies among others. Karnataka has an IIT in Dharwad. Among the leading private universities in India, The Manipal Academy of Higher Education, Christ deemed to be University and Azim Premji University need special mention.

3.13.3: Colleges

Apart from these higher educational institutions, there are 3971 colleges, out of 39,955 colleges in India (AISHE, 2020). Nearly 70% of these colleges are private unaided(2793). The remaining 30% of these colleges are government and government aided colleges. The role of the private sector in higher education in Karnataka is significant and it may be important to examine the distribution of these institutions across different districts as well as professional and general colleges.

Table 3.13: List of Colleges by Type (Based on actual Response)

Sl. No.	College Type	All India	Percentage	Karnataka	Percentage
1	Private Un-Aided	26054	65.21	2793	70.33
2	Private Aided	5336	13.36	471	11.86
3	Government	8565	21.44	707	17.80
4	Grand Total	39955	100	3971	100

Source: AISHE 2019-20

Figure 3.2: College Distribution across Karnataka- A Snapshot

Legend
- Central University
- Deemed University
- State Private University
- State Public University

State Public Universities
1. Bangalore University, Bengaluru
2. Bengaluru City University, Bengaluru
3. Bengaluru Dr B R Ambedkar School of Economics University, Bengaluru
4. Bengaluru North University, Kolar
5. Davangere University, Davangere
6. Gulbarga University, Gulbarga
7. Karnataka Janapada Vishwavidyalaya, Haveri
8. Kannada University, Hampi
9. Karnataka State Law University, Hubli
10. Karnataka State Open University
11. Karnataka State Rural Development and Panchayat Raj University, Gadag
12. Karnataka State Women University, Bijapur
13. Karnataka University, Dharwad
14. Karnataka Veterinary, Animal & Fisheries Science University, Bidar
15. Karnataka Samskrit University, Bengaluru
16. Karnataka Folklore University, Haveri
17. KSGH Music and Performing Arts University, Mysore
18. Kuvempu University, Shimoga
19. Maharani Cluster University, Bengaluru
20. Mandya University, Mandya
21. Mangalore University, Mangalore
22. Nrupathunga University, Bengaluru
23. National Law School of India University, Bengaluru
24. Raichur University, Raichur
25. Rajiv Gandhi University of Health Sciences, Bengaluru
26. Rani Channamma University, Belgaum
27. Tumkur University, Tumkur
28. University of Agricultural Sciences, Bengaluru
29. University of Agricultural Sciences, Dharwad
30. University of Agricultural Sciences, Raichur
31. University of Horticultural Sciences, Bagalkot
32. University of Mysore, Mysore
33. Visveswaraiah Technological University, Belgaum
34. Vijayanagara Sri Krishnadevaraya University, Bellary

List of Universities
Central Universities
1. Central University of Karnataka, Gulbarga

Deemed Universities
1. B.L.D.E, Bijapur
2. Christ, Bengaluru
3. Indian Institute of Science, Bengaluru
4. International Institute of Information Technology, Bengaluru
5. JSS Academy of Higher Education & Research, Mysore
6. Jain, Jakkasandra
7. Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru
8. KLE Academy of Higher Education and Research, Belgaum
9. Manipal Academy of Higher Education, Manipal
10. NITTE, Mangalore
11. Sri Devraj Urs Academy of Higher Education and Research, Kolar
12. Sri Siddhartha Academy of Higher Education, Tumkur
13. Swami Vivekananda Yoga Anusandhana Sansthana, Bengaluru
14. Yenepoya, Mangalore

State Private Universities
1. Adichunchanagiri University, Nagamangala
2. Alliance University, Bengaluru
3. Azim Premji University, Bengaluru
4. CMR University, Bengaluru
5. Dayananda Sagar University, Bengaluru
6. Garden City University, Bengaluru
7. JSS Science & Technology University, Mysore
8. Khaja Bandanawaz University, Kalaburagi
9. KLE Technological University, Hubli
10. Ramaiah University of Applied Sciences, Bengaluru
11. PES University, Bengaluru
12. Presidency University, Bengaluru
13. Rai Technology University, Bengaluru
14. Reva University, Bengaluru
15. RV University, Bengaluru
16. Sharnbasva University, Kalaburagi
17. Shri Dharmasthala Manjunatheshwara University, Dharwad
18. Sri Sathya Sai University for Human Excellence, Kalaburagi
19. Srinivas University, Mangalore
20. The University of Trans-Disciplinary Health Sciences and Technology, Bengaluru

3.14: Access- Enrolment in Higher Education

Examining the enrolment of students in the regular mode for the years 2015-2020, it has been observed that among the southern states, Tamil Nadu records a higher percentage of 8.71 percent followed by Karnataka with 6.14 per cent. Karnataka has recorded a small but a steady rise when compared to Tamil Nadu that has seen a slight decline. The enrolment percentage for Andhra Pradesh (4.77), Telangana (3.89) and Kerala is 2.5.

Table 3.14: **Enrolment through Regular Mode - Karnataka & Southern States**

Year	All India	Karnataka	%	Andhra Pradesh	%	Kerala	%	Tamil Nadu	%	Telangana	%
2015-16	30759880	1786965	5.81	1408781	4.58	754742	2.45	2763456	8.98	1288648	4.19
2016-17	31616124	1808536	5.72	1494538	4.73	798052	2.52	2870773	9.08	1391629	4.40
2017-18	32610784	1882507	5.77	1585554	4.86	832200	2.55	2975131	9.12	1372419	4.21
2018-19	33427320	1929855	5.77	1576181	4.72	848243	2.54	3007564	9.00	1374056	4.11
2019-20	34249437	2102002	6.14	1632509	4.77	881477	2.57	2982489	8.71	1333841	3.89

Source: AISHE 2015-20

Table 3.15: Enrolment Through Distance Mode

Year	All India	Karnataka	%	Andhra Pradesh	%	Kerala	%	Tamil Nadu	%	Telangana	%
2015-16	3824901	70981	1.86	315757	8.26	184413	4.82	471898	12.34	185587	4.85
2016-17	4089781	62758	1.53	304895	7.46	235091	5.75	500578	12.24	47108	1.15
2017-18	4031594	61349	1.52	111728	2.77	250717	6.22	465814	11.55	46888	1.16
2018-19	3972068	58639	1.48	184649	4.65	247599	6.23	406632	10.24	52405	1.32
2019-20	4286922	85890	2.00	264640	6.17	256376	5.98	537822	12.55	55767	1.30

Source: AISHE 2015-20

Examining the enrolment of students in higher education in the distance mode, Tamil Nadu has registered over five lakh students followed closely by Andhra Pradesh and Kerala with over 2.5 lakh. The other two southern states of Karnataka and Telangana have registered less than a lakh students in the distance mode. Karnataka has only one open university that has having in the distance mode.

Table 3.16: Enrolment across Colleges Per Lakh Population in Major South Indian States

States	No. of Colleges	No. of Colleges per lakh Population	Average Enrolment per College
Karnataka	4047	59	l415
Andhra Pradesh	2750	51	547
Kerala	1417	48	575
Tamil Nadu	2610	38	872
Telangana	2071	53	545

Source: AISHE 2019-20

Among the southern states, Karnataka has the highest number of colleges of 4047. Correspondingly the student enrolment in colleges in Karnataka is 1415, which is the highest among the southern states.Karnataka also records the highest number of colleges per lakh population indicating better access. Among the southern states, Tamil Nadu records the lowest access with 38 colleges per lakh population.

Table 3.17: State-Wise Foreign Students

Year	All India	Karnataka	%	Andhra Pradesh	%	Kerala	%	Tamil Nadu	%	Telangana	%
2015-16	45424	14398	31.70	1787	3.93	133	0.29	5377	11.84	3032	6.67
2016-17	47575	13050	27.43	2341	4.92	104	0.22	4889	10.28	3461	7.27
2017-18	46144	12041	26.09	2092	4.53	136	0.29	3542	7.68	2877	6.23
2018-19	47427	10023	21.13	1982	4.18	217	0.46	4101	8.65	2020	4.26
2019-20	49348	10231	20.73	2094	4.24	302	0.61	4461	9.04	2261	4.58

Source: AISHE 2019-20

The NEP 2020 has also emphasized the need to focus on internationalization of higher education. Indian students have traditionally travelled abroad for higher education. The need to make India an attractive destination for students from other countries has gained importance in recent years. It has been observed that there is a steady increase of students from the African countries and the Middle East nations. Data with respect to the number of students were not available till recently. Examining the share of the foreign students who come to India for higher studies, nearly one third of them studied in Karnataka in 2015-16. However, for the year 2019-20, the percentage has reduced to about one fifth. One of the prime reasons could be the pandemic. More importantly, it could be the absence of necessary infrastructure like hostels on campus, the gap in the current curriculum and pedagogic practices in comparison to international standards. India and particularly Karnataka that has several colleges professional and general, it may be useful to address the above issues so that Karnataka may become attractive as a destination for higher education among other nations. Social Groups Enrolment Category-Wise Across Leading States in Southern India

Table 3.18: Scheduled Caste Enrolments in Southern India

Schedule Caste						
State	**Year**	**Male**	**%**	**Female**	**%**	**Both**
All India	2015-16	2606117	54.18	2204197	45.82	4810314
	2019-20	2854313	50.45	2803359	49.55	5657672
Karnataka	2015-16	124945	52.36	113675	47.64	238620
	2019-20	147206	50.73	142956	49.27	290162
Andhra Pradesh	2015-16	146454	55.45	117688	44.55	264142
	2019-20	167358	52.87	149215	47.13	316573
Kerala	2015-16	22714	36.63	39289	63.37	62003
	2019-20	25434	35.19	46838	64.81	72272
TamilNadu	2015-16	274323	49.73	277354	50.27	551677
	2019-20	298278	48.59	315606	51.41	613884
Telangana	2015-16	125580	52.71	112655	47.29	238235
	2019-20	93804	44.77	115713	55.23	209517

Source: AISHE 2015-16 & 2019-2020

In the quest of reaching the SDG4 targets on quality education and to ensure that the gap among the social groups and gender is being bridged, the data of enrolment among the scheduled castes across the southern states is examined with respect to the years 2015-16 and 2019-20. The overall trend shows that the gender gap in enrolment is definitely closing across India and so also the southern states. Kerala records highest percentage of girls (64.81) enrolment in comparison to boys (35.19) among the southern states. Telangana (55.23) and Tamil Nadu (51.41) has higher percentage of scheduled caste girls enrolled in higher education when compared to boys from amongst the same community. For Karnataka the corresponding figure is close to 50 percent.

Table: 3.19: Scheduled Tribe Enrolments in Southern India

Scheduled Tribes						
State	**Year**	**Male**	**%**	**Female**	**%**	**Both**
All India	2015-16	916917	53.80	787544	46.20	1704461
	2019-20	1072646	49.75	1083463	50.25	2156109
Karnataka	2015-16	44571	53.81	38264	46.19	82835
	2019-20	53814	50.88	51947	49.12	105761
Andhra Pradesh	2015-16	39407	54.96	32293	45.04	71700
	2019-20	47292	53.60	40939	46.40	88231
Kerala	2015-16	3163	40.08	4728	59.92	7891
	2019-20	4360	38.80	6877	61.20	11237
Tamil Nadu	2015-16	14789	55.90	11667	44.10	26456
	2019-20	17240	52.62	15526	47.38	32766
Telangana	2015-16	71184	57.13	53411	42.87	124595
	2019-20	55494	51.08	53143	48.92	108637

Source: AISHE 2015-16 & 2019-2020

The Gender Gap in enrolment of girls from Scheduled Tribes has reduced by 7 percent at the national level and also in Karnataka when the figures are compared for the years 2015-16 and 2019-20. The distribution among boys and girls is almost equal to 50 percent. The percentage for girls among the scheduled tribes in Kerala is over 61 percent. Among the southern states Andhra Pradesh records the highest gender gap of 7 percent.

Table 3.20: Other Backward Classes Enrolments in Southern India

Other Backward Classes						
State	Year	Male	%	Female	%	Both
All India	2015-16	6239481	53.45	5434054	46.55	11673535
	2019-20	7202109	50.54	7047005	49.46	14249114
Karnataka	2015-16	431212	50.02	430942	49.98	862154
	2019-20	536146	48.73	564008	51.27	1100154
Andhra Pradesh	2015-16	403618	58.26	289172	41.74	692790
	2019-20	464389	55.45	373065	44.55	837454
Kerala	2015-16	141039	42.14	193628	57.86	334667
	2019-20	194158	39.67	295290	60.33	489448
Tamil Nadu	2015-16	937148	51.09	897210	48.91	1834358
	2019-20	1074844	50.11	1070143	49.89	2144987
Telangana	2015-16	355291	54.13	301130	45.87	656421
	2019-20	301585	48.08	325657	51.92	627242

Source: AISHE 2015-16 & 2019-2020

The trend in the enrolment of students in higher education among the backward classes is similar when compared to the scheduled castes and scheduled tribes. For 2019-20, the gender gap at the national as well as the Karnataka state has closed by 7 points, indicating a positive trend. While Kerala has been the top performer recording over 60 percent girls of the total enrolled students in higher education from the BCs, Andhra Pradesh is the lowest with an enrolment percentage of 44.55 percent.

Comparing the data on enrolment of the scheduled castes, scheduled tribes and backward classes, the gender gap among the scheduled castes has almost closed for Karnataka. However, among the scheduled tribes as well as backward classes in Karnataka, the gender gap stands around 7 percent and needs to be addressed despite the fact it reflects the national trends.

3.15: Growth Rate of Enrolment in Higher Education in India:

The enrolment of students across the levels of higher education has steadily increased in the during the period (2015-16 to 2019-20), with a compound annual growth rate of nearly 20 percent.

Table 3.21: Level-wise Enrolment and its Compound Annual Growth Rate (2015-20)

All India – Student Enrolment								
Year	Ph.D.	M.Phil.	Post Graduate	Under Graduate	PG Diploma	Diploma	Certificate	Integrated	Grand Total
2015-16	126451	42523	3917156	27420450	229559	2549160	144060	155422	34584781
2016-17	141037	43267	4007570	28348197	213051	2612209	166617	173957	35705905
2017-18	161412	34109	4114310	29016350	235263	2707934	177223	195777	36642378
2018-19	169170	30692	4042522	29829075	224711	2699395	162697	241126	37399388
2019-20	202550	23934	4312535	30647287	217249	2672562	159869	300373	38536359
CAGR	8.5	-8.1	12.2	19.1	-7.6	9.4	5.9	9.8	19.9

Source: AISHE 2015-20

Comparision the annual compound growth rate of student enrolment across the levels for the same period reveal that the undergraduate education records close to 20 percent. This is indicative of the expansion of colleges at the undergraduate level in response to the rising demand for college education across the country. The M.Phil and PG diploma have registered a negative CAGR of about 8 percent. While NEP 2020 has indicated the restructuring of higher education to increase the honour courses at the undergraduate level where research can be introduced, fuelling the interest for research and attracting talent at the undergraduate level. In addition, NEP 2020 envisages to revamp the Masters and PhD programme which will be built on the honours at the under graduate level where the M.Phil loses its significance. Hence the NEP gradually aims at replacing the M.Phil program. There has been a rising enrolment at the master's level over the five years.

Growth Rate of Enrolment in Higher Education in Karnataka: Table 3.9 records the annual growth rate in enrolment across different levels in higher education. In contrast, Karnataka has registered a CAGR of 12.31 in the post graduate diploma courses.

Table 3.22: Level-wise Enrolment and its Compound Annual Growth Rate Karnataka (2015-20)

Year	Ph.D.	M.Phil.	Post Graduate	Under Graduate	PG Diploma	Diploma	Certificate	Integrated	Grand Total
2015-16	11777	592	200909	1420697	5546	206680	4329	7416	1857946
2016-17	10841	527	203889	1432755	5655	205872	3713	8042	1871294
2017-18	14190	527	209262	1502926	6212	200062	3686	6991	1943856
2018-19	13300	468	211941	1557985	6446	187128	3079	8147	1988494
2019-20	14988	528	239156	1714696	9873	194493	2702	11456	2187892
CAGR	**4.88**	**-3.39**	**4.17**	**4.55**	**12.31**	**-1.61**	**-12.75**	**8.96**	**3.95**

Karnataka – Student Enrolment

Source: AISHE 2015-20

Similarly, Karnataka has a CAGR at the under graduate level of 4.55 as against the national figure of 19.1. The state CAGR figures for masters and PhD is less than 5 and shows a sharp decline when compared to the corresponding national figures of 19.1 and 8.5 respectively. The certificate courses have become less popular with a negative CAGR of -12.75. This is reflective of the low employment opportunities for certificate holders in the state.

Table 3.23: All India - Percentage of Enrolment Level-Wise 2015-20

Year	PhD		PG		UG		Certification		Integrated	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2019-20	55.02	44.98	43.13	56.87	50.78	49.22	65.14	34.86	56.17	43.83
2018-19	56.18	43.82	43.57	56.43	50.97	49.03	66.80	33.20	57.50	42.50
2017-18	57.35	42.65	45.96	54.04	51.88	48.12	67.88	32.12	58.44	41.56
2016-17	58.00	42.00	45.43	54.57	52.68	47.32	69.71	30.29	58.90	41.10
2015-16	58.95	41.05	46.42	53.58	53.29	46.71	70.35	29.65	59.61	40.39

Source: AISHE 2019-20

The gender distribution of enrolment across different levels of higher education shows a slow but steady rise in enrolment of girls. While the enrolment of boys is higher in the certification and integrated courses, the percentage of girls is close to 50 percent at the undergraduate level and rises to 57 percent at the post graduate level. At the doctoral level, it is encouraging to observe that women constitute nearly 45 of the students enrolled for PhD. The closing gender gap is a positive sign.

Table 3.24: Percentage of Enrolment Level -Wise in Karnataka 2015-20

	PhD		PG		UG		Certification		Integrated	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2019-20	56.19	43.81	43.83	56.17	49.50	50.50	58.47	41.53	55.71	44.29
2018-19	60.68	39.32	44.17	55.83	49.33	50.67	60.81	39.19	55.17	44.83
2017-18	64.15	35.85	46.27	53.73	48.82	51.18	61.13	38.87	55.49	44.51
2016-17	61.16	38.84	47.40	52.60	49.63	50.37	63.27	36.73	54.79	45.21
2015-16	63.04	36.96	48.60	51.40	50.05	49.95	64.17	35.83	54.91	45.09

Source: AISHE 2019-20

The enrolment trend by gender across different levels of higher education in Karnataka represents the national trend. The share of women in enrolment from the UG to doctoral level has increased over the past five years as shown in the table. Women are less than half in the certificate and integrated courses. At the UG level women are almost half and this rises to 56 % at the master's level. 43.81 percent of the doctoral students enrolled in Karnataka are women.

Table 3.25: Gender Parity Index in Higher Education (18-23 Years)

Gender Parity Index in Higher Education (18-23 Years)

State/ UTs	All Categories					SC Students						ST Students			
	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
Karnataka	0.99	1.01	1.05	1.04	1.05	0.93	0.96	0.97	0.98	0.99	0.89	0.95	0.97	1	1
Andhra Pradesh	0.77	0.78	0.78	0.81	0.84	0.78	0.79	0.83	0.84	0.87	0.72	0.74	0.77	0.76	0.76
Kerala	1.32	1.41	1.26	1.4	1.36	1.73	1.78	1.81	1.85	1.86	1.41	1.36	1.45	1.43	1.5
Tamil Nadu	0.92	0.95	0.98	0.97	0.99	0.99	0.98	1.02	1.01	1.04	0.75	0.62	0.78	0.75	0.86
Telangana	0.85	0.88	0.92	1.02	1.05	0.9	0.95	1.06	1.18	1.23	0.73	0.76	0.82	0.88	0.93
India	0.92	0.94	0.97	1.00	1.01	0.91	0.93	0.96	1.02	1.05	0.83	0.85	0.87	0.92	0.97

Note: Should be greater than 1 for better GPI, Sources: AISHE (2015-20)

The Gender Parity index in higher education (18-23 years) has increased at the national level and for Karnataka. A closer observation of GPI across the social categories for India for the period 2015- 20 shows an increase for all categories (1.01), SCs (1.05) and STs (0.97). The

corresponding figures for Karnataka are AC(1.05), SCs(0.99) and ST(1). The efforts of the government to provide access to girls among the SCs and STs by providing them hostels, scholarships have yielded results. The affirmation steps in providing reservations to these categories at the college level and the rising aspiration of girls for higher education have been contributing factors. The expansion of colleges and universities beyond Bengaluru would have had a positive impact sincereduced geographical distance from home has always encouraged girls to access education.It is important to consider despite advancement made in several spheres of life, cultural factors that restrict mobility of girls associated with family honour after puberty still operates in rural areas coupled with early marriage practices. Providing access to higher education through colleges that are not far from residences will help enhance enrolment among girls particularly among the scheduled castes and schedules tribes. Expansion of hostel facilities for girls will be an encouragement for girls to enrol in higher education.

Table 3.26: Gross Enrolment Ratio 2019

Gross Enrolment Ratio (GER) – 2019									
State/Uts	**ALL**			**SC**			**ST**		
	Both	**Male**	**Female**	**Both**	**Male**	**Female**	**Both**	**Male**	**Female**
Karnataka	32.0	31.2	32.7	23.2	23.3	23.1	20.9	20.9	21.0
Andhra Pradesh	35.2	38.3	32.2	31.2	33.4	29.0	29.4	33.6	25.6
Kerala	38.8	32.9	44.7	26.7	18.7	34.8	24.0	19.1	28.7
Tamil Nadu	51.4	51.8	51.0	39.6	38.8	40.4	40.7	43.8	37.7
Telangana	35.6	34.8	36.4	32.5	29.1	35.8	30.2	31.3	29.1
India	27.1	26.9	27.3	23.4	22.8	24.1	18.0	18.2	17.7

Source: AISHE (2019-20)

There have been national and state efforts to increase the GER in higher education with the hope that it will provide a fillip to the national growth and development. The rapid expansion of higher education institutions across the country has opened the doors of higher education to students from social categories who were earlier not a part of higher education system in India. The higher education sector has been transformed with the reconstitution of the student community that has increasingly become diverse with many students who are first generation learners who are entering the portals of higher education.

In comparison, there is gap in the GER for all categories when compared to the SCs and STs with the STs registering 18, which is less than 10 of all the categories taken together. The SCs with a GER of 23.4 is relatively closer to the overall GER(27.1). The gender difference in GER in each of these categories is less than 1 which is encouraging. The GER for Karnataka overall (32) is higher than the national average. The GER for ST in Karnataka(20.9) is higher than national figure of 18 by 3 points. The GER for the SC for Karnataka is 23 close to the national corresponding figure.

Table 3.27: State Wise- Pupil Teacher Ratio

Year	India	Karnataka	Andhra Pradesh	Kerala	Tamil Nadu	Telangana
2015-16	20	13	13	13	13	14
2016-17	23	14	15	15	15	17
2017-18	25	16	18	15	15	18
2018-19	24	15	16	14	15	17
2019-20	23	14	16	14	15	16

Sources: AISHE 2015-20

The pupil teacher ratio in higher education is low indicating that in the overall pool of faculty at the national level, the number of students per teacher is 23. The same is true for all the southern states including Karnataka that records a PTR of around 15.

Figure 3.3: Students Enrolled Across Different Colleges in Karnataka
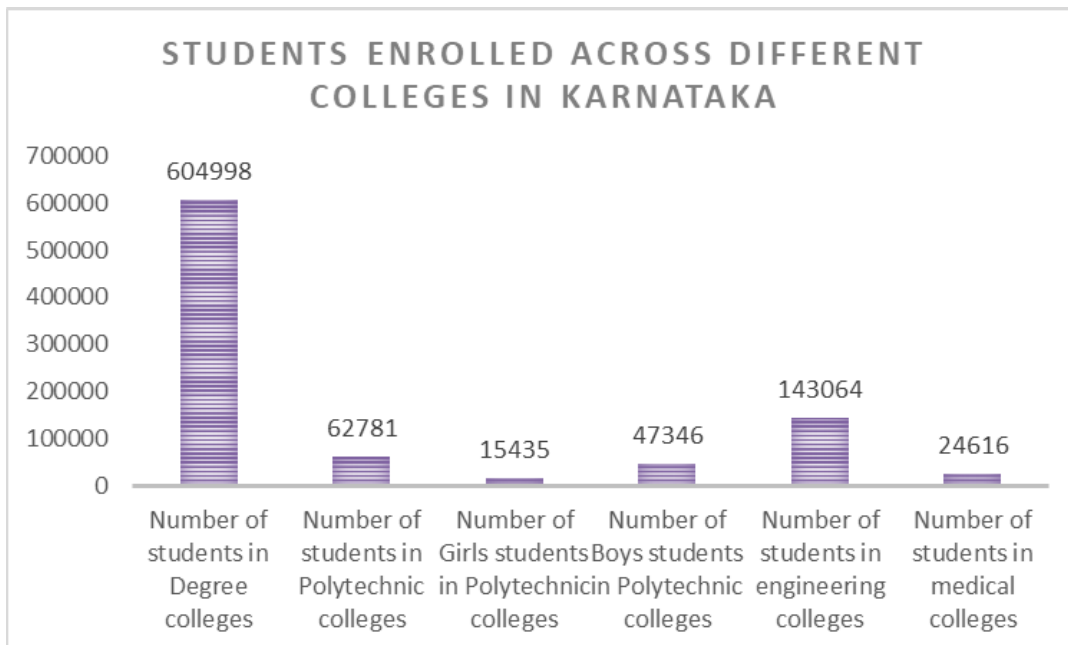
The maximum enrolment of students across different kinds of colleges in Karnataka show that the maximum enrolment of 604998 is in degree colleges. The next highest enrolment in Karnataka is in the engineering colleges with a total of 143064 students. This is followed by polytechnic colleges with a student enrolment of 62781. The lowest number of enrolment is in the medical colleges which is 24616.

Figure 3.4: Educational Institutes Distribution across Levels in Karnataka
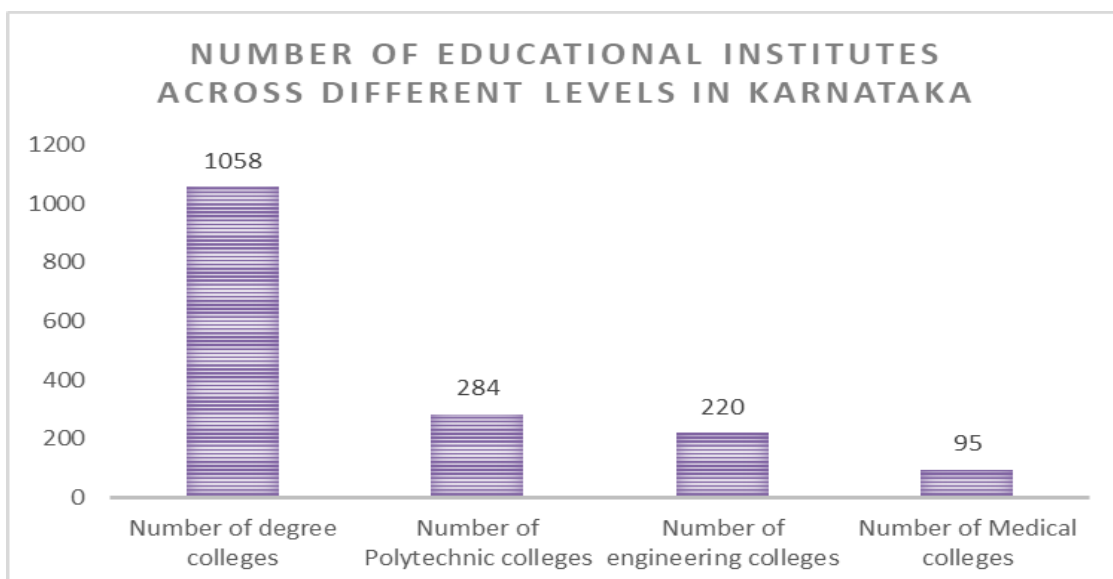
The distribution of the higher education institutions across different types reflects the pattern of student enrolments. Except that after degree colleges that account for 1058, the polytechnic colleges (284) is higher than the engineering colleges (220). Karnataka has 95 medical colleges. The distribution of these colleges across the state of Karnataka will be useful.

Table 3.28: Five Districts with Largest Values in the Selected Variables

No. Of Degree Colleges	No. of Students In Degree Colleges	No. of Poly.Tech Colleges	No. of Students InPoly.Tech Colleges	No. of Girls Students InPoly.Tech Colleges	No. of Boys Students InPoly.Tech Colleges	No. of Engg. Colleges	No. of Students InEngg. Colleges	No. of Medical Colleges	No. of Students In Medical Colleges
Belagavi	Belagavi	Bengaluru(U)	Bengaluru(U)	Bengaluru(U)	Bengaluru(U)	Bengaluru(U)	Bengaluru(U)	Bengaluru(U)	Dakshina Kannada
Vijayapura	Bengaluru(U)	Belagavi	Dakshina Kannada	Tumakuru	Dakshina Kannada	Dakshina Kannada	Dakshina Kannada	Dakshina Kannada	Bengaluru(U)
Tumakuru	Vijayapura	Dharwad	Ballari	Dakshina Kannada	Ballari	Belagavi	Belagavi	Belagavi	Belagavi
Bengaluru(U)	Tumakuru	Ballari	Tumakuru	Ballari	Tumakuru	Mysuru	Udupi	Bagalkot	Kalburgi
Bagalkot	Dakshina Kannada	Dakshina Kannada	Uttara Kannada	Hassan	Uttara Kannada	Tumakuru	Tumakuru	Udupi	Vijayapura
		Kalburgi							

In districts Bengaluru(U), Dakshina Kannada, Belagavi, Mysuru, Tumakuru the concentration of number of private (Aided and unaided) engineering colleges are higher.

Table 3.28 shows the district names with largest 5 values. It can be observed that Bengaluru urban has highest value across 7 variables out of 10 variables. For number of polytechnic colleges 6 districts are given as both Dakshina Kannada and Kalburgi have 12 polytechnic colleges1.

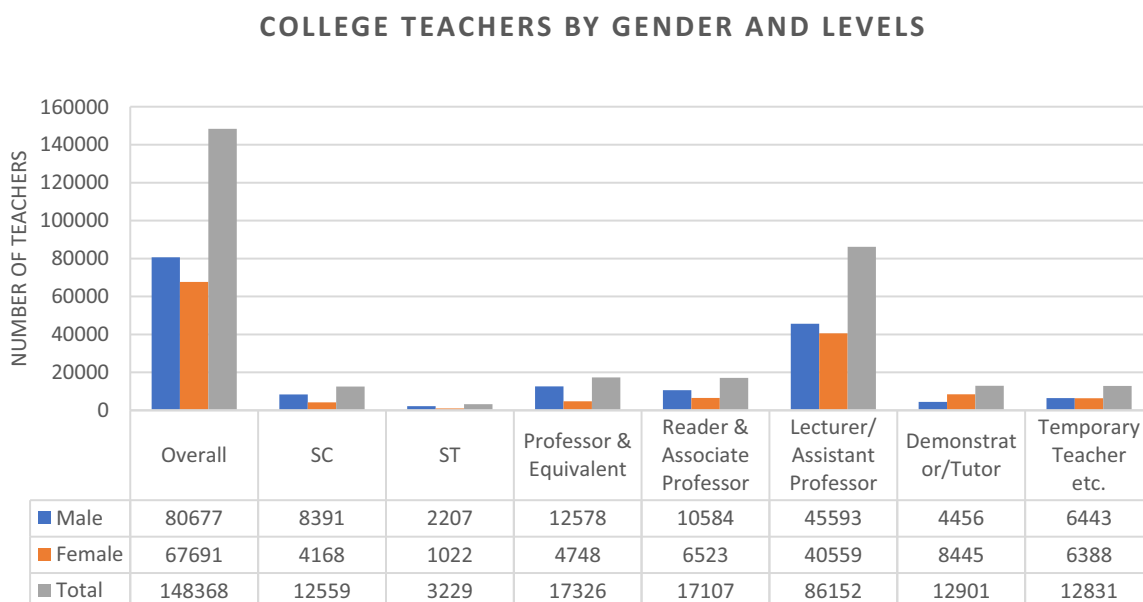**Table 3.29: Five Districts with Smallest Values in the Selected Variables**

No. Of Degree Colleges	No. Of Students In Degree Colleges	No. Of Poly.Tech Colleges	No. Of Students InPoly.Tech Colleges	No. Of Girls Students InPoly.Tech Colleges	No. Of Boys Students InPoly.Tech Colleges	No. Of Engg Colleges	No. Of Students InEngg Colleges	No. Of Medical Colleges	No. Of Students In Medical Colleges
Kodagu	Kodagu	Chamarajanagara	Bengaluru(R)	Yadgir	Bengaluru(R)	Koppal	Koppal	Chamarajanagara	Davanagere
Bengaluru(R)	Chamarajanagara	Kodagu	Yadgir	Koppal	Koppal	Chikkamagaluru	Yadgir	Chikkamagaluru	Haveri
Yadgir	Bengaluru(R)	Bengaluru(R)	Koppal	Bengaluru(R)	Yadgir	Chitradurga	Chitradurga	Haveri	Bengaluru(R)
Chikkaballapura	Yadgir	Chikkamagaluru	Bidar	Bidar	Vijayapura	Yadgir	Raichur	Ballari	Chikkamagaluru
Chamarajanagara	Dharwad	Chikkaballapura	Raichur	Raichur	Bidar	Chamarajanagara	Ramanagara	Bengaluru(R)	Chitradurga
						Chikkaballapura		Davanagere	
						Haveri		Koppal	
						Kodagu		Tumakuru	
						Shivamogga		Uttara Kannada	

Source: DoE 2019-20

1There are total 284 Polytechnic colleges in Karnataka

Table 3.29 shows district names with smallest 5 values. It can be observed that koppal, Chamrajnagara and kodagu have lowest values in two variables. The number of engineering colleges in koppal is 0, Chikkamagaluru, Chitradurga and Yadgir districts have 1 engineering college respectively and Chamarajanagara, Chikkaballapura, Haveri, Kodagu and Shivamogga districts have 2 engineering colleges respectively. Chamarajanagara, Chikkamagaluru, Haveri districts have 1 medical college respectively and Ballari,Bengaluru(R),Davanagere, Koppal, Tumakuru, Uttara Kannada districts have 2 medical colleges respectively.

Figure 3.5: Distribution of Teachers across Levels and Gender

COLLEGE TEACHERS BY GENDER AND LEVELS

	Overall	SC	ST	Professor & Equivalent	Reader & Associate Professor	Lecturer/ Assistant Professor	Demonstrat or/Tutor	Temporary Teacher etc.
Male	80677	8391	2207	12578	10584	45593	4456	6443
Female	67691	4168	1022	4748	6523	40559	8445	6388
Total	148368	12559	3229	17326	17107	86152	12901	12831

3.16: Gender distribution of faculty by level types

The gender distribution of students at the higher education level has substantially improved except for some disciplines. It is often argued that fair distribution across gender needs to be reflected even at the faculty level. Faculty most often are role models and hence one needs to pay attention to this aspect. The distribution of the faculty across men and women show that there are 80677 men as against 67991 women showing a difference of over 12000 faculty in favour of men. However, when one examines this distribution across social categories, the gender difference increases. For the scheduled castes, women faculty (4198) is almost half

the number of men faculty(8391). The pattern is similar for faculty among the scheduled tribes. When one examines the gender difference of faculty across different level, it is the highest among the professors with about one third of the professors being women. At the Associate professors' level, the gender difference stands at little more than half of them are women. At the Assistant Professor's level, the gender difference is negligible as is the case of temporary teachers. As one moves lower in the hierarchy for example at the demonstrator/Tutor's level. The number of women is double the number of men. It may be important to understand the gender difference across social categories at different levels of the faculty.

3.17: Distribution of student enrolment in higher education across districts in Karnataka:

The gross enrolment ratio across districts for the last five years show that in general the enrolment has incrementally increased across most districts for both men and women.

However, it is important to note that Yadgir that had an enrolment in higher education around 3 per cent in 2015-16 which is lowest for the state has considerably increased to 22.9 percent for men and 15 percent for women. In fact, it has recorded a higher rate of enrolment when compared to Koppal,Chamrajnagar and Hassan that has consistently recorded low enrolment rates in higher education.It may be important to examine the factors in 2019-20 that has resulted in this increase. The factor for Koppal, Chamrajnagar and Hassan recording consistently low enrolment in higher education could be migration and/or the need for agricultural labour in and around the districts.

Udupi has shown a steep increase in enrolment in higher education over the past five years with a GER increasing from 44.57 to 69.30. In fact the enrolment of men in higher education has risen from 46.48 to 75.13. propelling a big demand for higher education among theyouth in Udupi. There is a marginal decrease in GER in higher education in Hassan and Chikmagalur, where the pandemic must have been one of the factors.

District Wise GER in Higher Education the Best Performing Districts (2019-20)

Comparing the GER across the districts in Karnataka for the year 2019-20, the top performing districts are Udupi, Dakshina Kannada, Bengaluru Urban, Haveri and Mysore. The gender gap is positive and in favour of women in Dakshina Kannada. Bengaluru Urban has lowest gender gap followed by Haveri and Mysore respectively. Udupi that has higher

development indicators has the highest gender gap of over 10. It will be useful to examine the factors responsible for this gender gap.

Figure 3.6: The Top 5 Districts with the Highest Enrolment in Higher Education in Karnataka (2019-20)
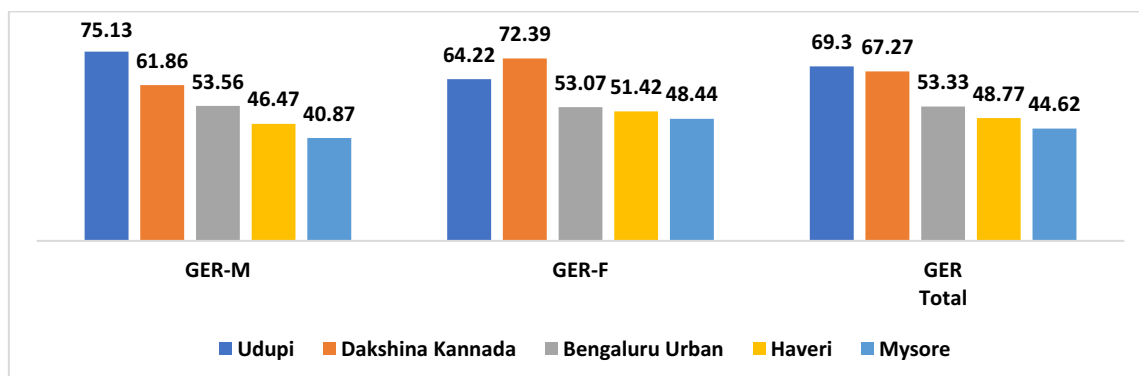
District-wise GER in Higher Education the Lowest Performing Districts(2019-20)

Examining the GER in higher education among the lowest performing districts, Chamarajnagar records the lowest with 11.94 followed by Koppal,Hassan, Chikmagalur and Gulbarga in that order. What is surprising among these low performing districts with respect to GER in higher education(**Fig-3.7)** is that the women are relatively doing much better than the men. It may be important to correlate this with annual household income, caste and migration data/daily wage labour data.

Figure 3.7: Lowest 5 Districts in Karnataka with the 5 lowest Enrolment in Higher Education (2019-20)
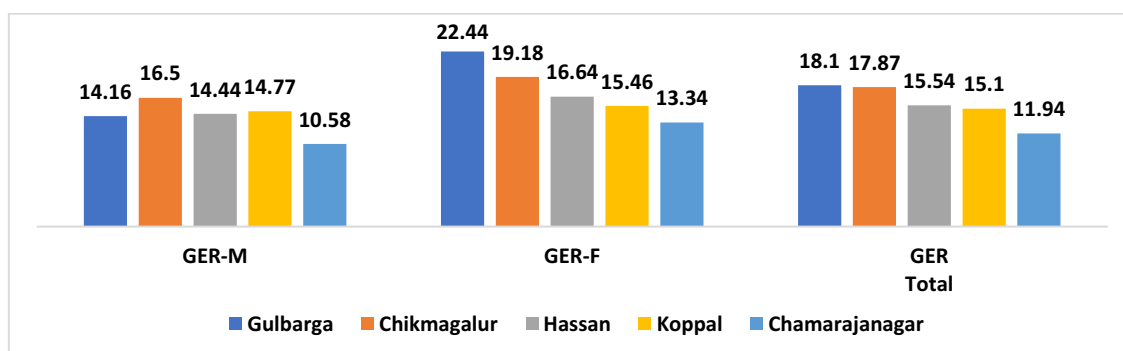
3.18: Quality of Education - Accreditation Status of Universities and Colleges

Accreditation: One of the important markers of quality higher education is the number of universities and colleges that are accredited. Karnataka has the highest number of universities among the southern states and the total number is 69. This is followed by Tamilnadu (59),

Andhra Pradesh(41) and Telagana(24) and Kerala(23). However, Tamilnadu has the highest proportion of universities (42/59) that are accredited followed by Telagana(15/24). Karnataka at 27/69 occupies the 3rd position among the southern states. Andhra Pradesh and Kerala have around only a third of their universities accredited.

Fig-3.8: Accreditation Status of Universities among the Southern States.
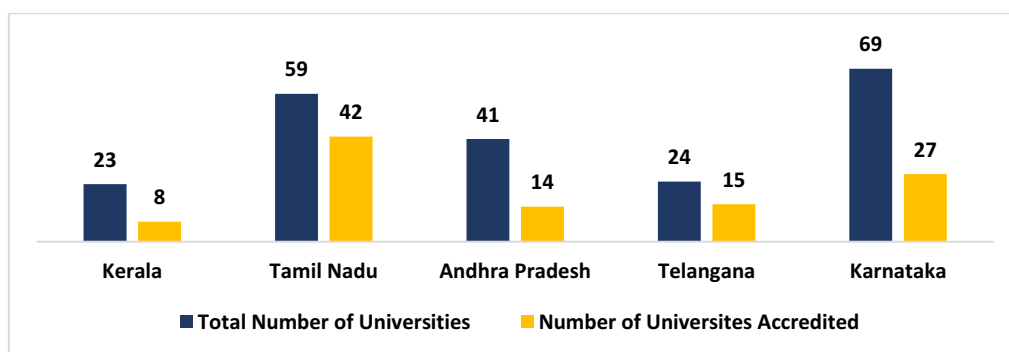
Source: NAAC, 2022 (https://assessmentonline.naac.gov.in/public/index.php/hei_dashboard

Fig-3.9: Accreditation Status of Colleges among the Southern States
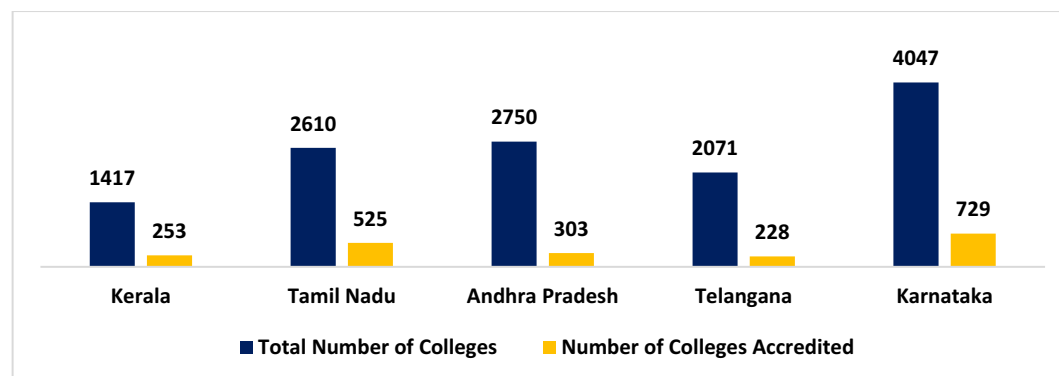
Source: NAAC, 2022 (https://assessmentonline.naac.gov.in/public/index.php/hei_dashboard

Among the colleges in the southern states, the pattern of accreditation shows that only a very small number of them are accredited. Reference to **Fig-3.9,** out of the total 4047 colleges in Karnataka, only 729 of them are accredited. Tamil nadu is relatively better in terms of the proportion of colleges that are accredited. This is followed by Karnataka. Andhra Pradesh (303/2750); Telangana (228/2071) and Kerala (253/1417) have extremely small number of their colleges that are accredited.

3.19: Knowledge & Innovations - India Innovation Index

Higher education should lead to expansion of knowledge base and innovations. In the quest to improve the ranking of India in the global innovation index, NITI Aayog has computed the

India Innovation Index. This index is a combination of two dimensions —Enablers and Performance—with seven pillars and 36 indicators between them. The findings from the index provide some interesting insights about the ranking of states on the India innovation index. There is a strong positive correlation between the Gross Domestic Product of the state and the Innovation index.

The Indian states display a wide range of scores on the index with Delhi at the top with 46.6 while Lakshadweep finishes last with a score of 11.7. To ensure a fair comparison, states have been categorised under three segments, viz. NE and Hill States, UT and City States, and Major States. Amongst the Major States, the average innovation score is 25.35. Karnataka tops at 42.5, which is attributable to its strong number of venture capital deals, registered GIs and ICT exports. Karnataka's high FDI inflow has also enhanced the innovation capabilities of the state. Maharashtra follows second at 38, while Bihar finishes last at 14.5. The case for the southern states as the top performers has also become stronger as four of them occupy the top-five spots within the Major States.

3.20: Knowledge Output and Human Capital

Comparing the southern states with respect to knowledge output, human capital and knowledge diffusion, it is clear that Karnataka leads in Knowledge diffusion and jointly holds the first position with Andhra Pradesh with respect to knowledge output. However, when the human capital is compared across the southern states, Tamilnadu leads at 62.8 followed by Kerala at 59.72. Karnataka is in the third position among the southern states at 52.27.

Figure-3.11: Comparison of select Innovation indicators across the Southern States.
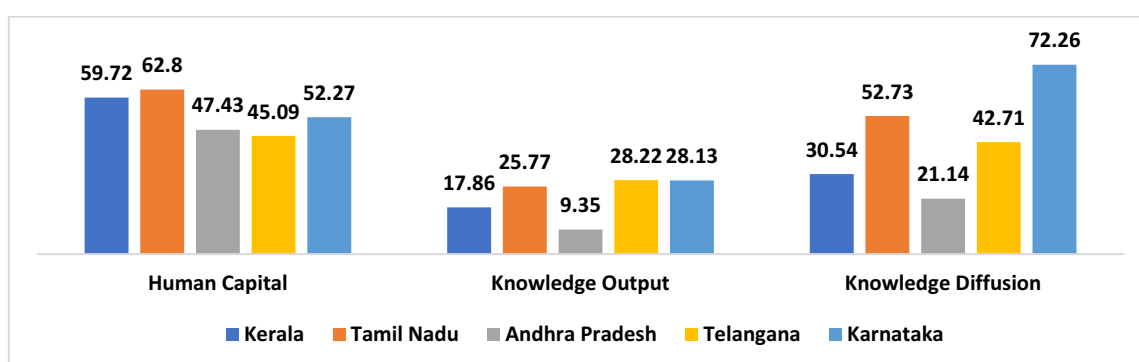
Source: India Innovation index 2019-20

3.21: Way Forward

The expansion of higher education has to take care of geographical distribution across different districts in Karnataka. The state may need to focus to start new colleges including professional colleges and universities in aspirant districts of Karnataka. If Karnataka must be a leader in higher education, it is important to build inter-linkages between colleges, universities, and research institutions and more importantly the industries. Documenting, analysing, and disseminating the best practices will be critical to stay ahead.

- Acknowledging the progress in school education, particularly elementary education, there is a need to focus on the 11th and 12 grades to ensure increase in the success rates to enable the much-desired increase in the enrolment in higher education. Targeted inventions in specific districts and taluks have yielded results. Karnataka will have to focus on factors that will enable the state to be a leader in innovation and make the necessary investment in those verticals that can enhance and hasten the speed of progress and development.

Karnataka is the first state that has taken a bold step in initiating changes in education in accordance with NEP-2020.

- The NEP and the UGC has re-emphasised the need to strengthen research and research culture in universities. To ensure this transformation, there is a need to relook at the curriculum, the pedagogic practices as well as redefine the role of faculty in universities where the current structure and teaching load need to be reworked to allow teachers to strike a better balance between teaching and research.

- The multiple entry and exit option for under-graduate education has been adopted by Karnataka as an important first step. What may be required is the redesign of the curriculum in line with what is the possible career track for these students who exit at the certificate, diploma and graduate and graduate(research) levels. Each of these career track needs to build possibilities for upward mobilities in terms of skills and career growth.

- **The Right to Education should be extended to Grade 11 and 12 which will mean that every child is assured 12 years of schooling**.

- The much-popularised credit transfer is indeed a step in the right direction. But integral to this, equally important is to build equivalence of the credits across higher education institutions of different quality and develop templates for all subjects at the national or state level that has an organic blend of standardisation and flexibility.

- The vocational education vertical which is an important component of NEP needs a complete revamp and perhaps recreated based on best practices from within the state, country and international experiences.The analysis of rates of return on education indicates that the overall returns to education for regular workers are the highest for diploma (15.9%), followed by graduation and above degree (11.5%), and secondary education (10.2%) (Singhari and S. Madheswaran-2016). Therefore, there is an urgent need to focus on skill based technical and professional diploma and certificate courses tailoring to the job market requirements.

- The returns on **investment at all levels are higher for SC/ST population** (Diploma) 21%, Higher education- 11.3% and Muslim (Diploma) 19.11%, higher education-(15.1%) and for Women (Diploma 23.1%, Secondary 17.5% & Graduate and above 13.6%) across all levels of education for regular workers therefore, increasing access to education and providing opportunities in job market for these marginalized groups will increase their HDI and contribute to their empowerment and mainstreaming.

Quality Education

- Towards the road of quality education, Karnataka has to choose some of the promising institutions from different geographical locations and develop them into institutions that are on par with global standards.

- Proactive recruitment retention and capacity building of students and faculty from less represented geographical areas, castes, classes and communities differently abled to make research, teaching/education institution/or Universities more inclusive.

- Support accreditation of colleges – govt. and Private to improve learning environment

- Against the target set for the increase in the enrolment of higher education (GER) from about 18 % to 30% by 2020, Karnataka has very little option but to explore innovative financial Solution to support a large number of students aspiring to enter the higher education system (Kurup, A Et. Al, 2011).

- The budget of the Department of Higher Education must be enhanced to **an annual spending of 2% of the GSDP and must be at least 30% of the overall education budget**. Encourage private higher education institutions to enhance spending on research, capacity building of faculty. Linking universities to research institutions has to be organically built to promote mutual exchange and sharing of resources.

- To set up **Karnataka Student Scholarship and Loan Authority** to co-ordinate, disburse and manage the scholarships and loans to students who pursue higher education in Karnataka, merge schemes, use a single window to identify and mentor deserving/ needy students in a transparent and user-friendly manner based on AADHAAR identification. The initial fund can be created by levying a surcharge of 5% on excise duty on liquor which will amount to about Rs. 500 crore per year (Karnataka Higher Education Vision Document, 2021).

- Allow Universities to float long term, 10years + bonds for creating necessary academic and hostel infrastructure, labs, libraries etc. These bonds should be guaranteed by the State. The interest on the bonds should be paid by the Universities from their fee collection and internal funds while the principal upon maturity should be paid by the State. A sum of Rs 5000 crore in the form of bonds over the next 5 years may be allocated for this purpose. This would bring the infrastructure on par with the best in India. Many Universities have various funds invested in bank deposits and these may be invested in such bonds thus recycling these funds (Karnataka Higher Education Vision Document 2012)

Need to develop a framework which is competency – based and is in tune with the fast-changing employment opportunities that are emerging both for the domestic and international job markets. Portability of qualifications with due accreditation is integral to the creation and sustainability of mobile workforce (Kurup, A.et. Al, 2011)

- Encourage and support the private sector vocational education through accreditation and recognition mechanisms (Delloite, 2012). The growth and expansion of the vocational sector rests on a symbiotic interaction of the sector with the industry in a continuous manner where responsibilities are shared between them to ensure the efficiency of the workforce created through this mechanism.

- Establish an independent **Teachers Academy** at the State level and strengthen the **Higher Education Academy** at Dharwad on a public-private partnership model to address recruitment, foundation/induction training, periodic capacity building, performance assessment, professional development, ethics, research and database management.

- The present **State Council for Higher Education must be restructured** to play role of Think-Tank. Experts with fresh thinking and new ideas need to be drawn from across the State, country and the world.

- Thrust should be provided to 27 schemes from 8 departments to enhance Education and Skilling. Rs 3,233 crores have been allocated to the above mentioned schemes in 2022-23 Budget. Major Schemes for Education include Sarva Shiksha Abhiyana, Samagra Shikshana Abhiyana, Vidya Vikasa Scheme, Raitha Vidhya Nidhi, Scholarships to Students. Major schemes for Skilling include Pradhan Mantri Kaushalya Vikas Yojana, Chief Minister's Kaushalya Karnataka Yojana and SANKLAP.

Conclusion

Education is the right approach for mainstreaming and empowerment of the deprived groups. It will also increase the size of demographic dividend. Karnataka is now emerging as research, innovation and knowledge hub of India. The National Education Policy 2020 provides concrete strategies and programmes for inclusive, need based education planning and the State has taken a lead to implement it. Therefore, it is expected that the state will be able to increase the quantity as well as quality of human capital to promote rapid and inclusive human development and achieve the targets set in SDG-4 Quality education for all by 2030.