

Analyse ranking indicators on NIRF to improve quality of low performers

To identify the factors that helps to achieve quality education that can adopt all colleges to perform well to reach even on global ranking

The higher education institutions of India needed a proven quality assurance mechanism to build the confidence in the quality of higher education. The Ministry of Human Resource Development (MHRD), Government of India (GOI) in the year 2015 launched National Institutional Ranking Framework (NIRF) to evaluate the institutions with India centric parameter and also to minimize the impact of media ranking run by non-academic agencies. The NIRF has gained its momentum and confidence of public as it covers all kind of institutions and transparency in result announcement. The national ranking was used as one of the criteria to decide Institutes of Eminence (IOE) when there was a tie-break among institutions. The paper reviews the NIRF ranking and its impact.

The analysis starts with finding factors that helps to improve quality and the aim is to accomplish these task for the rest of colleges to perform much better.

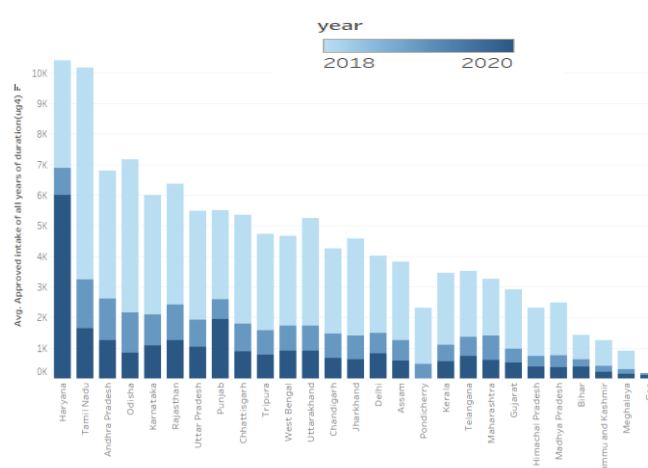
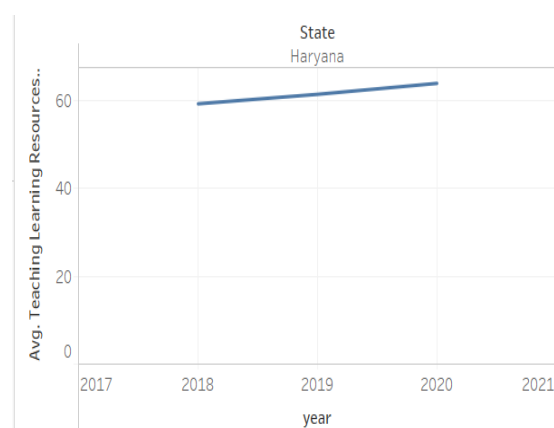
Preview of findings

- If a college increases their intake that doesn't mean that their quality increases in all time.
- Either change in value of Graduation outcome or Publication made a score difference
- But for main reason Low takers for traditional courses, more seats than takers, creates a bad impact
- Focus on Publication and PhD staff can increase the score

Intake of students, PhD staff details, Passed students details, Placements, median salary are Publications details, patents details are main concern

Graph shows the intake of students over 3 years 2018, 2019 and 2020. Consider the case of Punjab and Haryana. Haryana has doubled their intake in 2020 and in Punjab intake also increased.

So will check the case of Punjab and Haryana. So

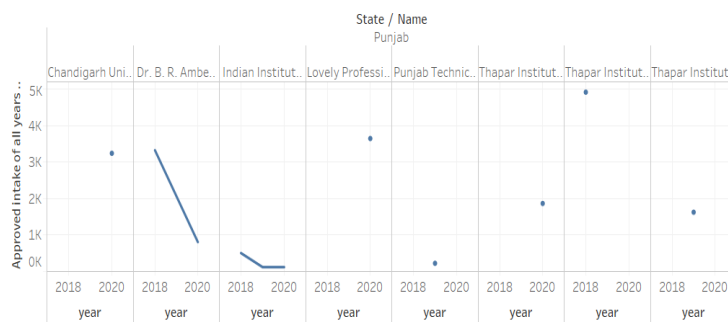
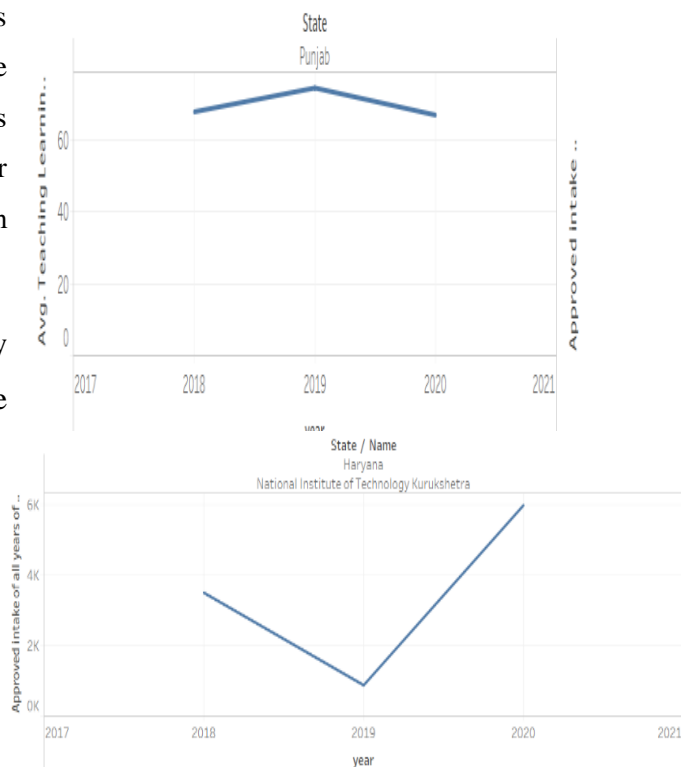


for analyzing we need to get Teaching learning resources and intake of Punjab and Haryana. Teaching learning resource value of Punjab and Haryana are shown in graphs.

In case of Punjab Teaching learning resources value is decreasing but in case of Punjab the value is increasing. So in case of Haryana it's clear that the intake increased because of their resources increased. And let's see the case in college

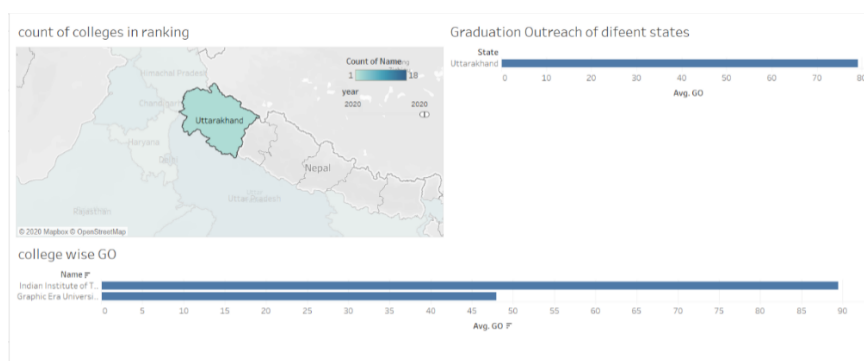
According to study, In Haryana there is only one college NIT Kurukshetra (intake increase) and the performance factors are high in all cases.

In Punjab even though Teaching Learning Resources values are decreasing intake increasing. According to graph, the reason might be there are many colleges in Punjab has got approval during 2018 and 2019.



Generally Haryana quality of education increases, but in Punjab increase in intake not depend on any criteria. Its only matter of approval.

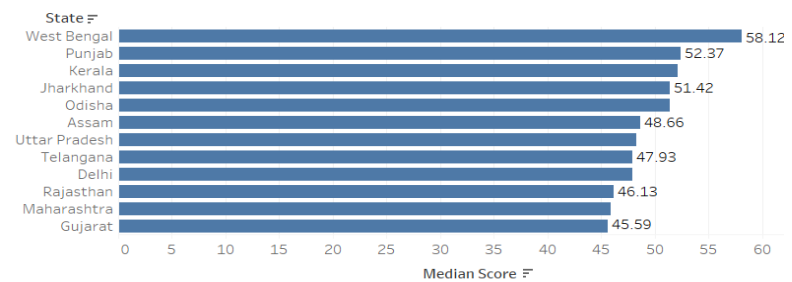
So the flow of analysis starts with minimum number of colleges. Take the case of Uttarakhand. There is only two colleges. And among them IIT has all the factors high. The performance of IIT is incomparable so that we couldn't find the factors to focus. Selection criteria doesn't mean that there is no other state with high performance college rather than for analysing purpose to find the factors that the state or college's performance, minimum number has to be taken.



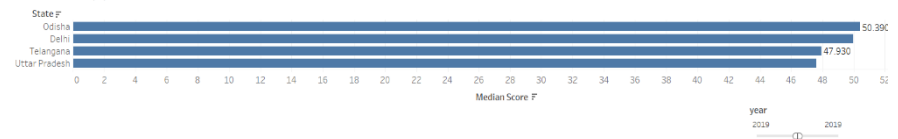
So let's consider states with score value greater than 45. Selection criteria is in such a way that a state with score above 45 and minimum 5 city states are selected. Score values of states in 2019 and 2020 is also different. So the questions arise from above graph are:

- What happened to West Bengal in 2018 and 2019?
- What are the criteria's that keep constant performance of state's Odisha, Delhi, Telangana and Uttar Pradesh
- In 2020 Tamilnadu and Punjab came 45 above score. So their performance improvement factors

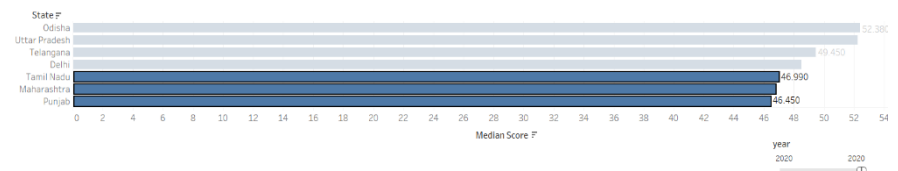
state_score



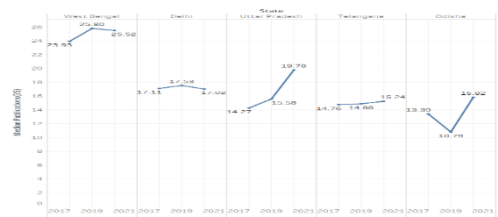
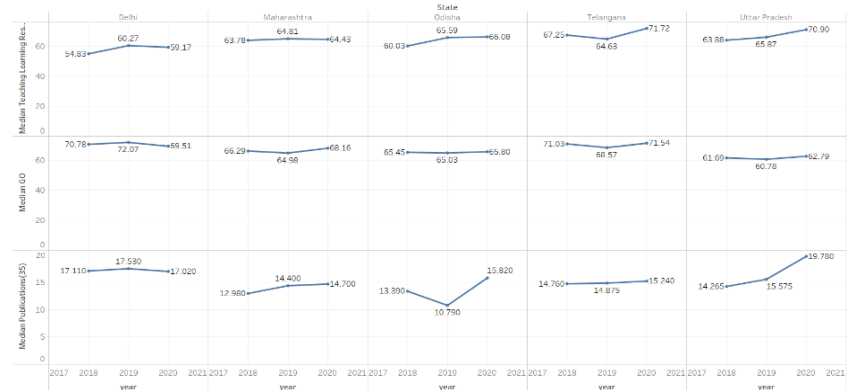
state_score(2)



state_2020

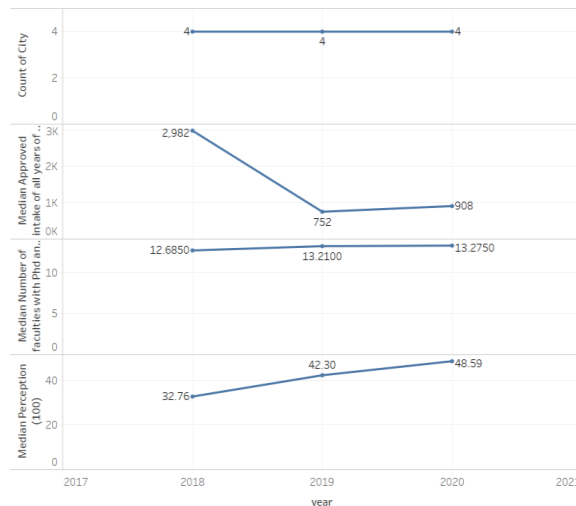
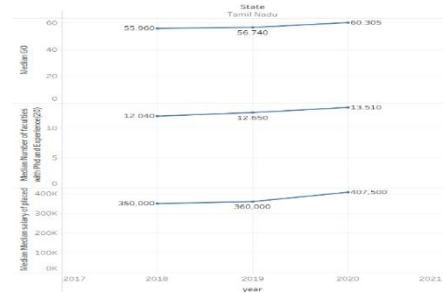


Consider the performance of Delhi, Maharashtra, Odisha, Telangana and Uttar Pradesh. The graph shows that all the states has high publication, teaching learning resources graduation outcome. That means states with high value in these factors are come up with greater score let's consider publication rate of these states.

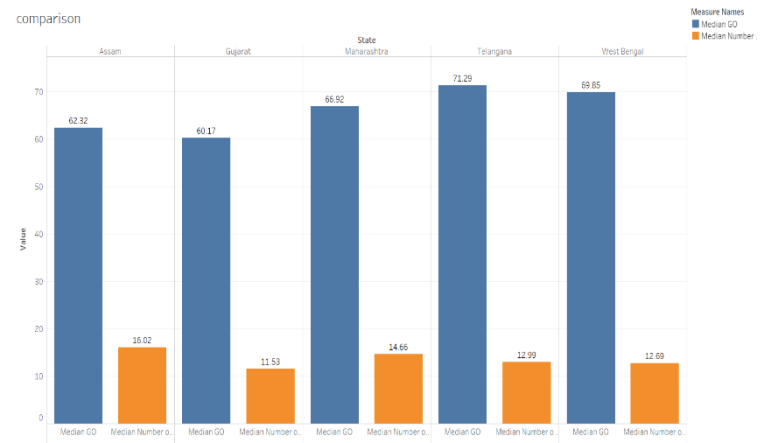


The graph shows that all the states including West Bengal shows high publication rate. All the top states has publication rate high.

Take the case of Tamil Nadu in graph .In 2020 the state shows an increased performance in all factors. Thus come up with the score high. But in case of West Bengal all the factors are increasing but except the case of intake of students. There is a drastic difference in intake of students. So many seats are vacant. Student's intake is far lesser than their seats.



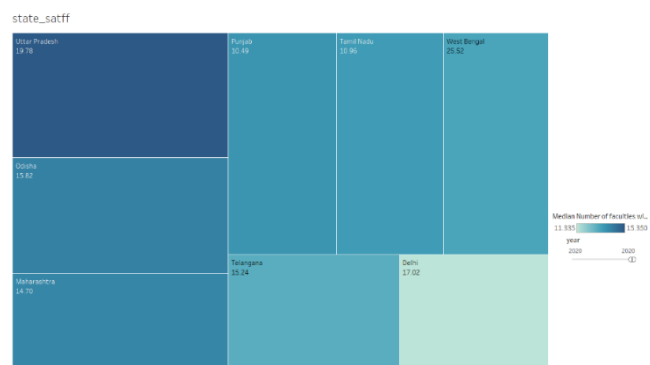
Compare the performance of states in case of Graduation outcome and Number of faculties. So west Bengal is high in case of factors. Let's



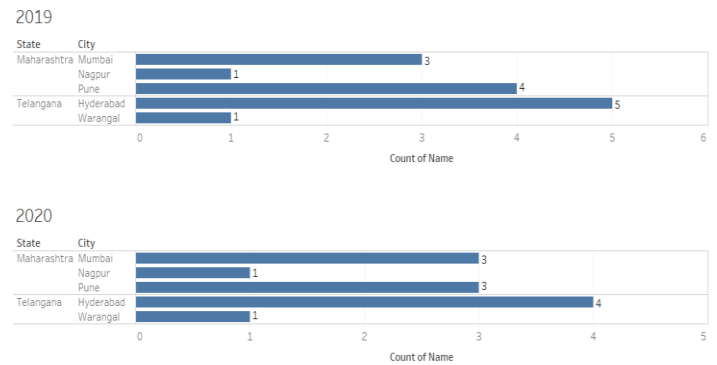
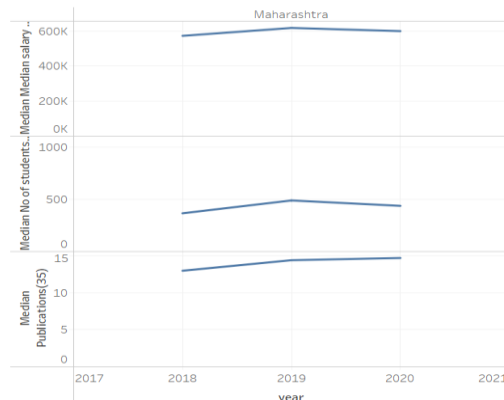
compare values in comparison with West Bengal.

Maharashtra and Telangana Has almost equal performance with West Bengal. But the score value fall behind West Bengal. Other states either

Graduation outcome or faculty rate is low. Graph shows the number of faculties and publication. The sates with performance high has staff rate also high. Even Delhi has staff rate low their publication rate is high and score also high. Thus concluding a fact that Publication rate made a score difference



Graph shows the variation in colleges in Maharashtra and Telangana. In 2020 the number of colleges in Maharashtra and Telangana decreased. But below graph shows the publication rate.



In case of Maharashtra the publication rate is increasing thus the score also increasing. Even though the number of colleges in ranking decreased in 2020 the performance is not degrading because they are improving in case of publication rate that help to perform well in ranking score.

REVIEW OF ANALYSIS The NIRF helped the institutions to understand their performance by each year and to know their competitors and peer performers. This has more advantages like valuing perception, attracting industry for better placement and become reliable tool for parents and students to know about the institution. Through the analysis the factors that helps to improve the performance of colleges are identified. Generally values in publication rate made major score difference. By increasing the number of experienced staffs and focused on PhD and research can also help to increase the score. But for main reason all should ensure the intake should be not less than the approval. The creation of vacant seats may degrade the score of states though.

QUALITY EDUCATION ACROSS INDIA: THROUGH RESEARCH PARAMETERS

Research parameter like IPR & Patents increased 7 times in 2020 when compared with previous year. Don't take that literally. Here we are taking NIRF data to analyse it.

INTRODUCTION

The higher education institutions of India needed a proven quality assurance mechanism to build the confidence in the quality of higher education. The Ministry of Human Resource Development (MHRD), Government of India (GOI) in the year 2015 launched National Institutional Ranking Framework (NIRF) to evaluate the institutions with India centric parameter and also to minimize the impact of media ranking run by non-academic agencies. The NIRF has gained its momentum and confidence of public as it covers all kind of institutions and transparency in result announcement. The national ranking was used as one of the criteria to decide Institutes of Eminence (IOE) when there was a tie-break among institutions. The paper reviews the NIRF ranking and its impact.

Here we analyse different states on research aspects and additional factors which links them.

PREVIEW OF FINDINGS

- Jharkhand as a best state in Research aspects
- In 2018-2019 we found an unnatural increase in Publication rate, PhD graduation & PhD staff with experience and a slowdown in 2019-2020 for the following factors.
- In 2019-2020 we found a tremendous increase in IPR & Patents whereas in 2018-2019 it had a lay off.
- Same states which created a boom in PhD graduation in 2018-2019 created a slowdown phase in 2019-2020.

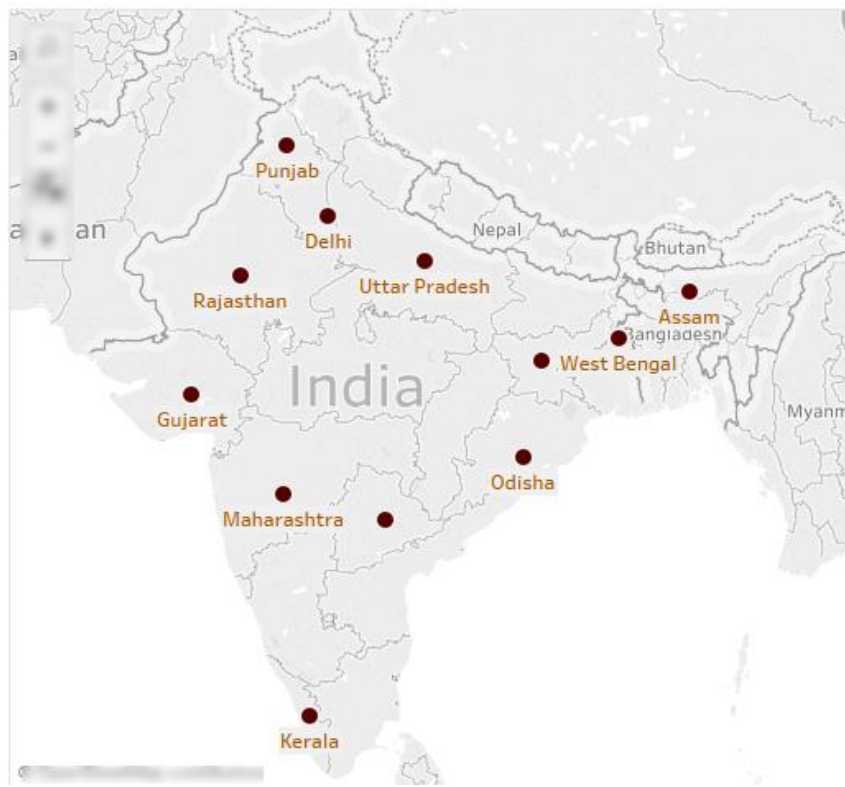
Main focus is for the following factors:

- i. Publications (RPC – PU)
- ii. Quality of publication (RPC – QP)
- iii. IPR & Patents
- iv. PhD staff with experience
- v. PhD graduation rate

Why we are considering some states?

We had filtered out states which are able to achieve a score of at least 45 & states with contributed minimum of 5 colleges towards NIRF Ranking. And among them IITs & IIITs has all the factors high. The performance of IITs & IIITs is incomparable with rest of the institutions. So in order to neutralize the discrepancy we had taken median for in all quantities.

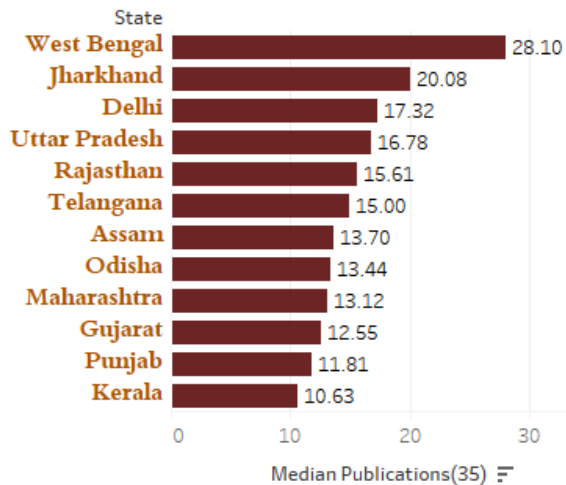
STATES WITH MIN. SCORE 45



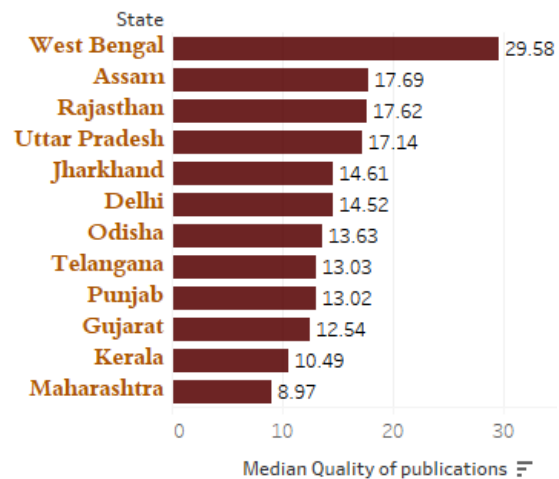
Overall view of states in Research parameters & its related factors

West Bengal maintains a top position in Publication rate and Quality of publication. But in overall research parameters Jharkhand is the best state.

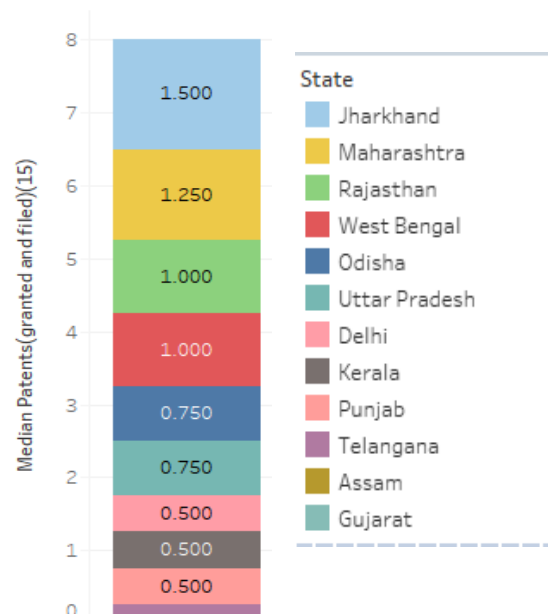
PUBLICATION RATE



QUALITY OF PUBLICATION



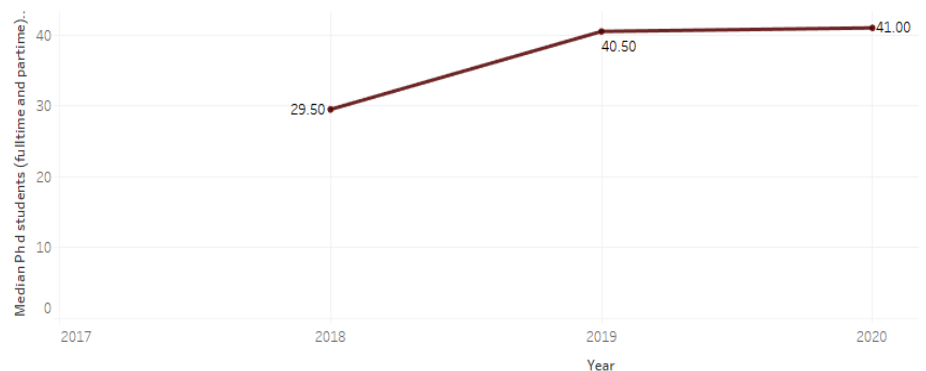
IPR & PATENTS GRANTED



PHD GRADUATION RATE FOR 2018-2020

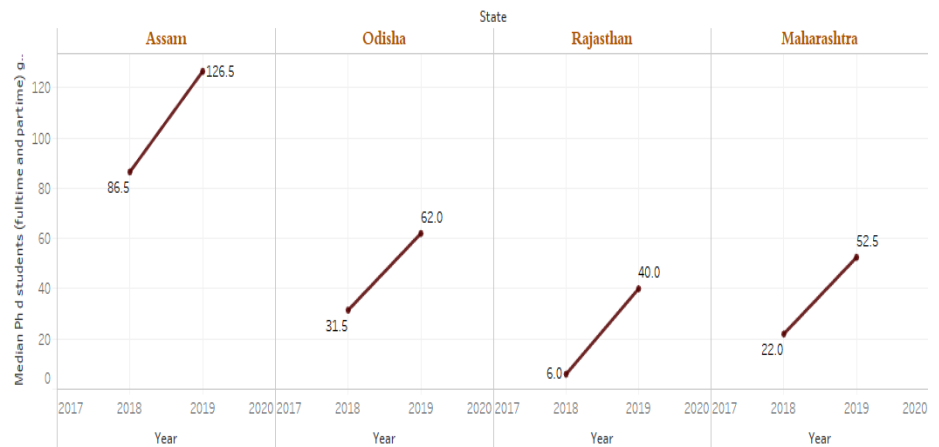
We can see a steady increase for PhD graduation in 2018-2019. . We can see a slowdown for 2019-2020 as compared to previous year.

PHD GRADUATION RATE 2018-2020



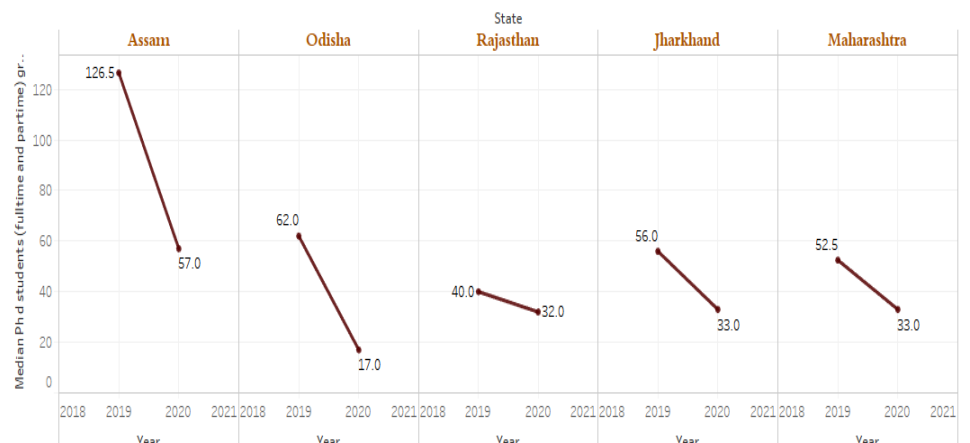
STATES WHICH ACCELERATED PHD GRADUATION RATE RISE IN 2018-19

The major states which accelerated the PhD graduation growth was Maharashtra, Rajasthan, Assam & Odisha. . Of these states Rajasthan shows a drastic variation from merely 6 points in 2018 to 40 points in 2019



STATES WHICH DECELERATED THE PHD GRADUATION RATE IN 2019-20

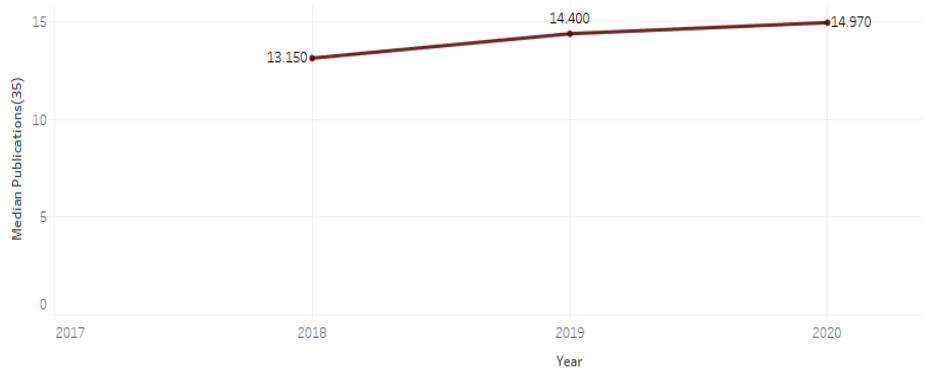
The same states as in 2018-2019 boom (i.e., Maharashtra, Rajasthan, Assam, and Odisha) decelerated the growth in 2019-2020 including Jharkhand. Of these states Assam shows a drastic variation from 126 points in 2019 to 57 points in 2020.



PUBLICATION RATE FOR 2018-2020

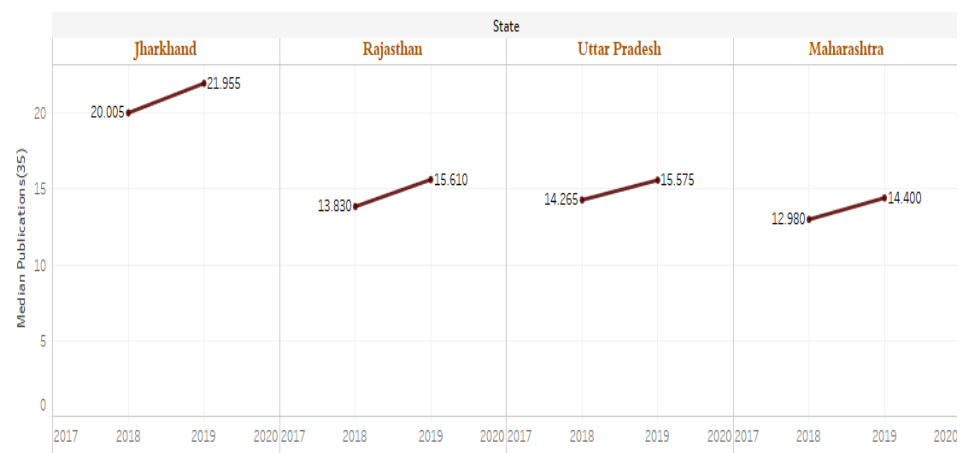
We can see a steady increase for publication in 2018-2019. We can see a slowdown in 2019-2020 as compared to previous year. Since the range for the above parameter is small we cannot visualize as like above PhD parameters

PUBLICATION RATE

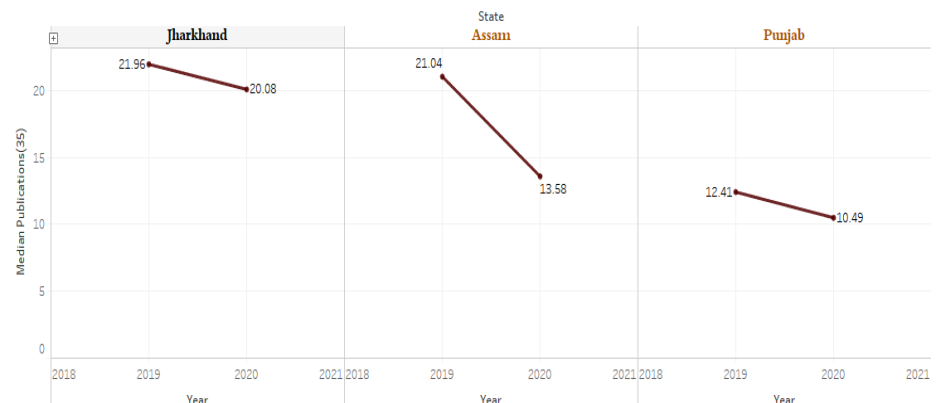


The major states which accelerated the publication growth are Rajasthan, Maharashtra, Uttar Pradesh & Jharkhand. Of this Jharkhand with a high value again improved.

STATES WHICH ACCELERATED PUBLICATION RATE IN 2018-19



STATES WHICH DECELERATED PUBLICATION RATE IN 2019-20

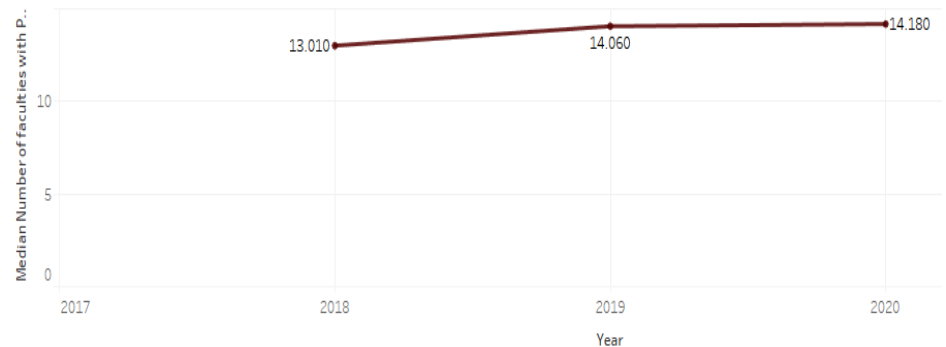


The major states which decelerated the publication growth are Jharkhand, Assam & Punjab. Of this Assam is the one which decreases steeply to nearly half of the initial.

FACULTIES WITH PHD & EXPERIENCE FOR 2018-2020

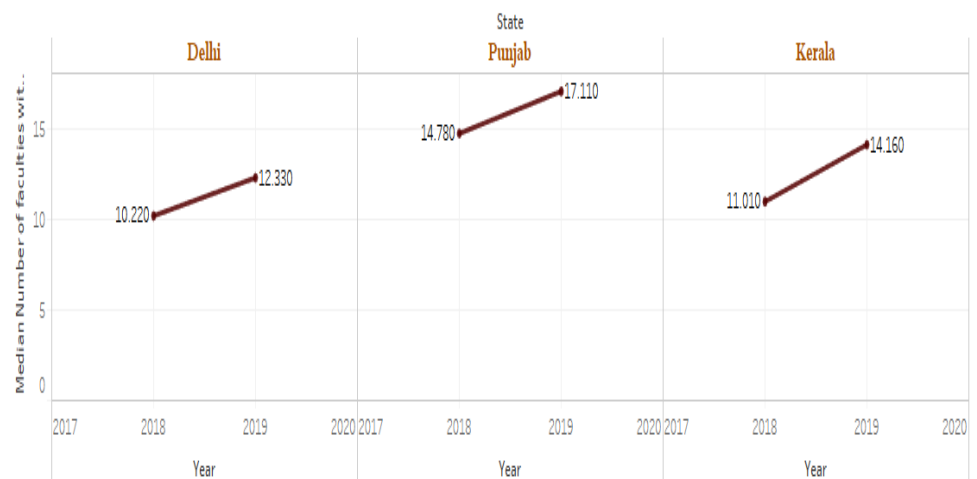
We can see a steady increase for PhD staff with experience in 2018-2019 followed by a slowdown in 2019-2020

FACULTIES WITH PHD & EXP.



The major states which accelerated the publication growth was Kerala, Punjab & Delhi

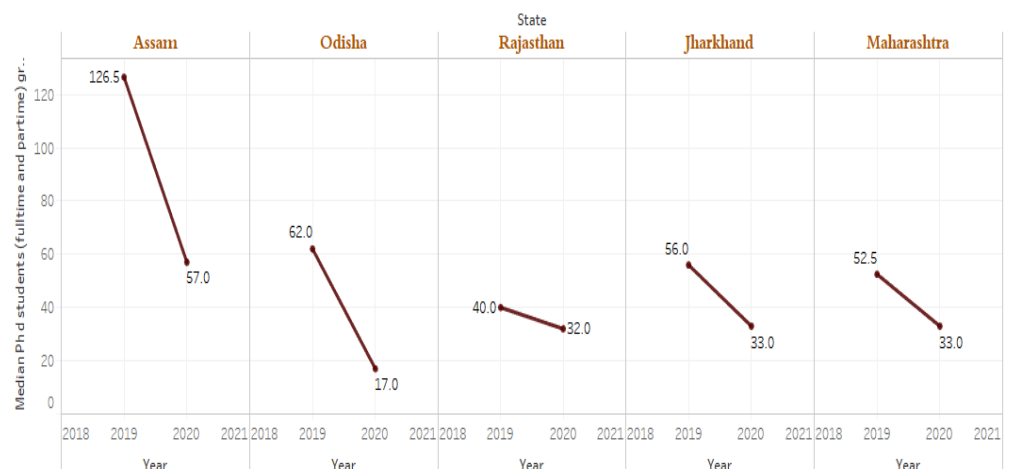
STATES WHICH ACCELERATED FACULTIES WITH PHD & EXP. IN 2018-19



The states which decelerated the growth are Punjab, Jharkhand & Maharashtra

The Jharkhand & Punjab are the same states which lead the deceleration of Publication & PhD staff with experience in 2019-20

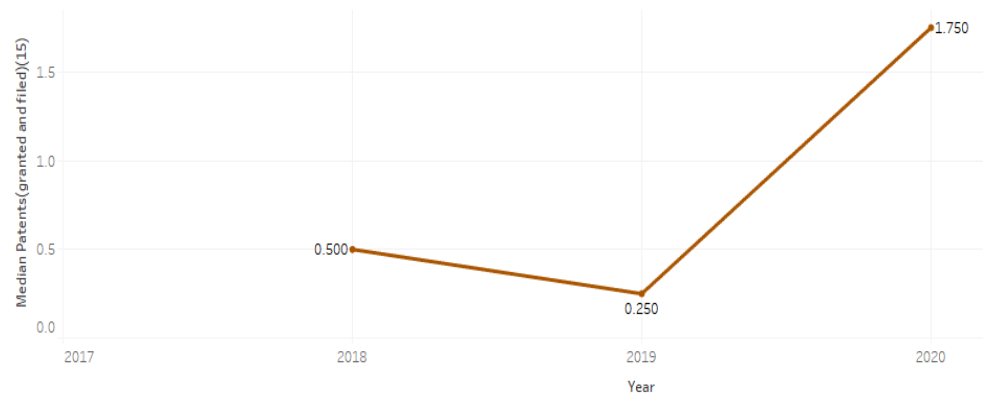
STATES WHICH DECELERATED THE PHD GRADUATION RATE IN 2019-20



IPR & PATENTS FOR 2018-2020

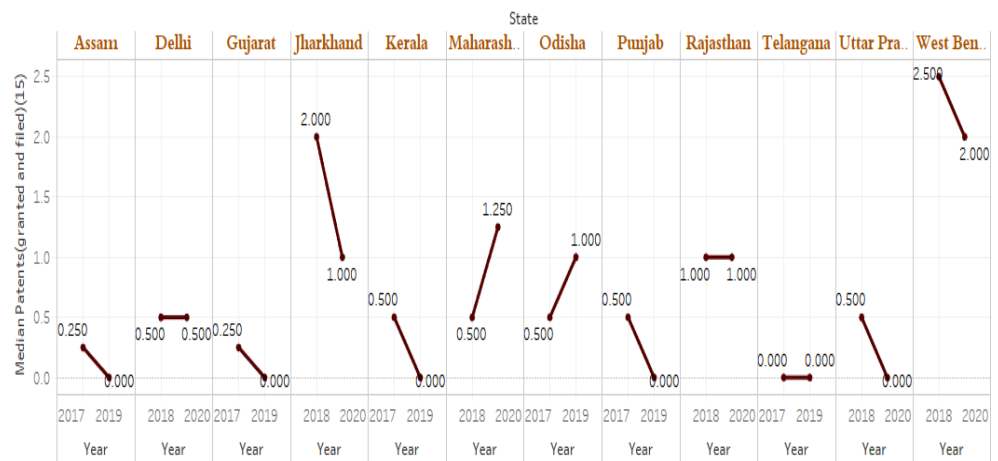
We can see an unnatural increase for IPR & Patents in 2019-2020 when compared to previous year. We can see a lagging phase in 2018- 2019

IPR & PATENTS GRANTED 2018-2020



IPR & PATENTS GRANTED 2018-2019

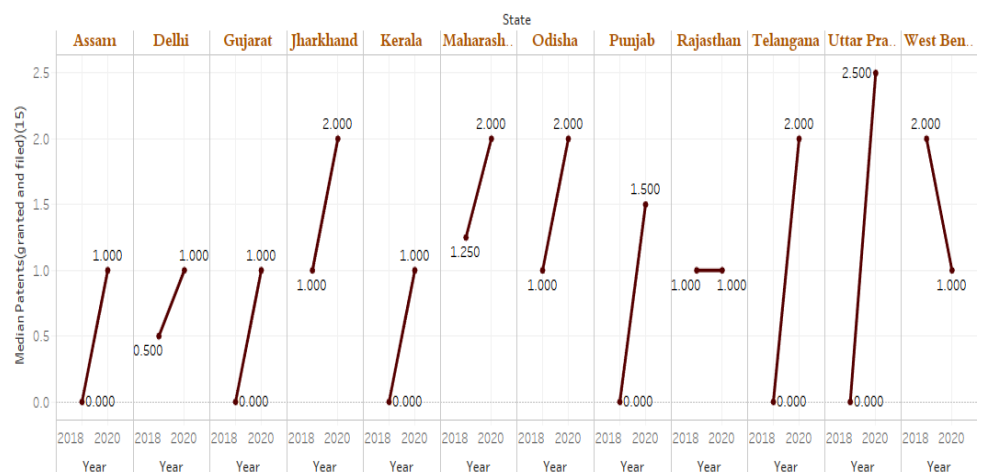
The major states which lead the race in 2019-2020 was Uttar Pradesh, Telangana & Punjab



IPR & PATENTS GRANTED 2019-2020

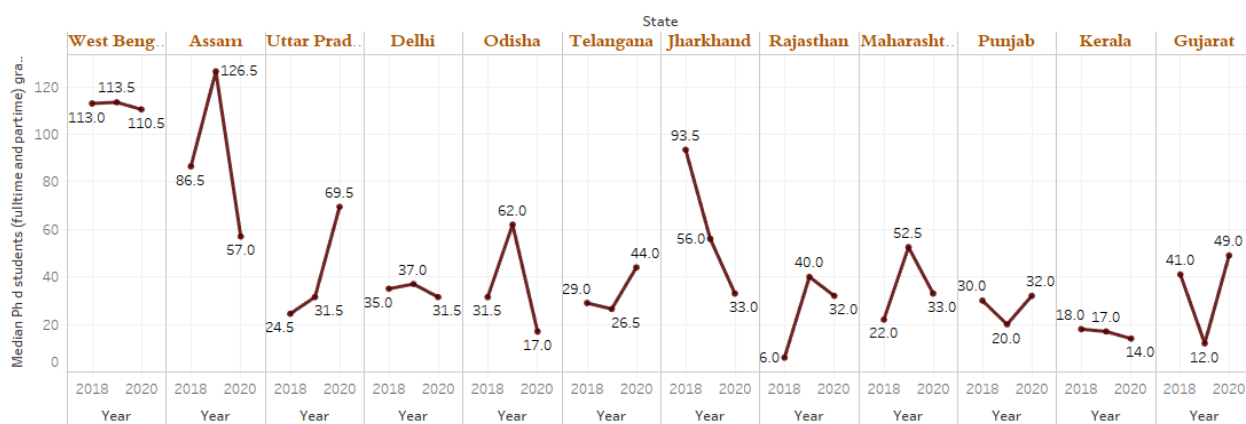
In 2018- 2019 the degraded growth is seen in most of the states.

But the states Maharashtra & Odisha remains as a silent mover which shows a continuous growth from 2018-2020.

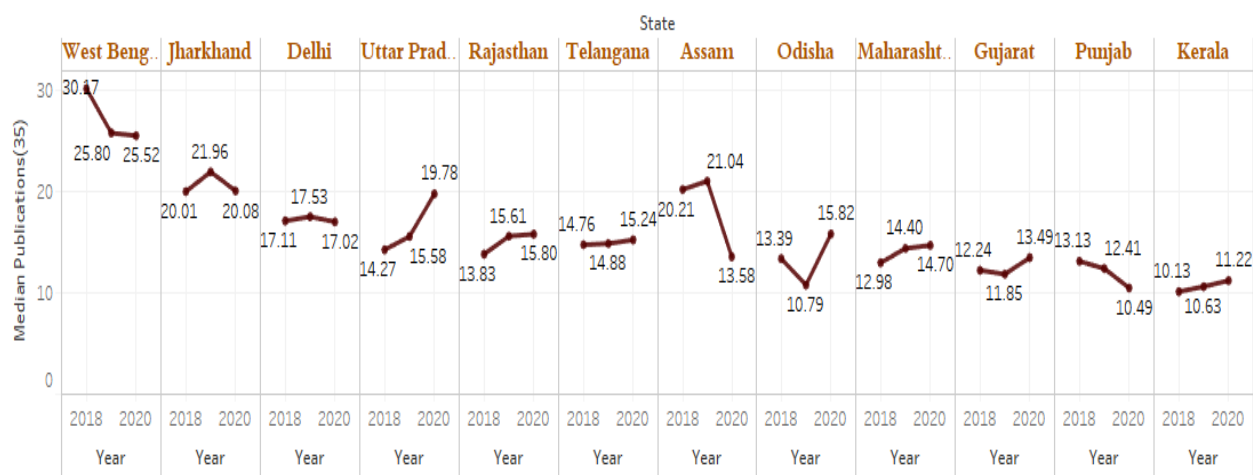


APPENDIX FOR 2018-2020

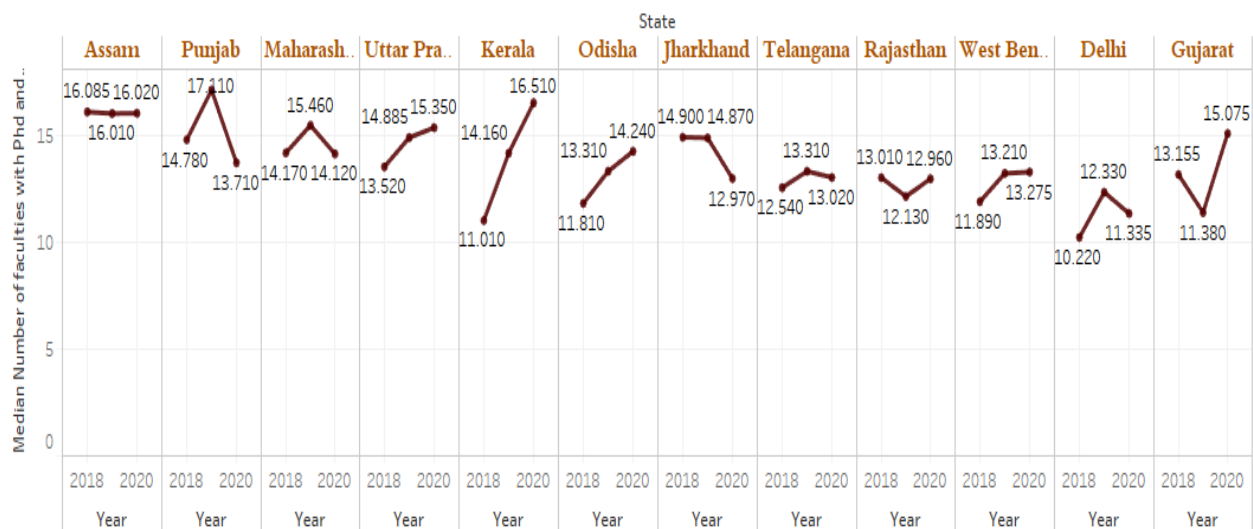
PHD GRADUATION RATE 2018-2020



PUBLICATION RATE



FACULTIES WITH PHD & EXP.



REVIEW OF ANALYSIS

Jharkhand is the best state in Research aspects. In 2018-2019 we found an unnatural increase in Publication rate, PhD graduation & PhD staff with experience and a slowdown in 2019-2020 for the same factors. Same states which created a boom in PhD graduation in 2018-2019 created a slowdown phase in 2019-2020. In 2019-2020 we found a tremendous increase in IPR & Patents whereas in 2018-2019 it had a lay off.

TEST OF EDUCATION QUALITY ON NIRF RANKING SYSTEM

National Institutional Ranking Framework (NIRF) for higher educational institutions in India. National Institutional Ranking Framework is based on the parameters of Teaching, Learning and Resources, Research and Professional Practices, Graduation Outcomes, Outreach and inclusivity, and Perception. In this paper we have analysis National Institutional Ranking Framework (NIRF) participated by Engineering is one of the most asked professional courses opted by students in India because it has a number of job opportunities and bright future prospects. The only hub of quality engineering in India is the Indian Institute of Technologies, and it is counted as top institution among all other top engineering colleges in India.

INTRODUCTION

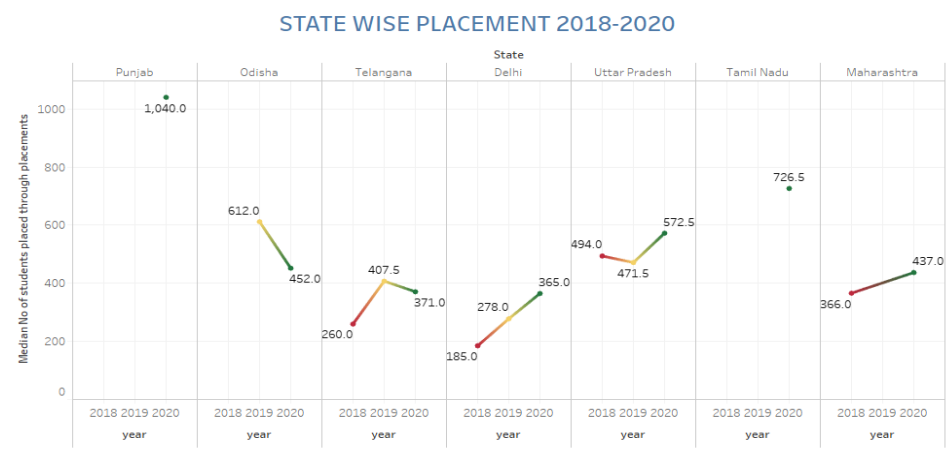
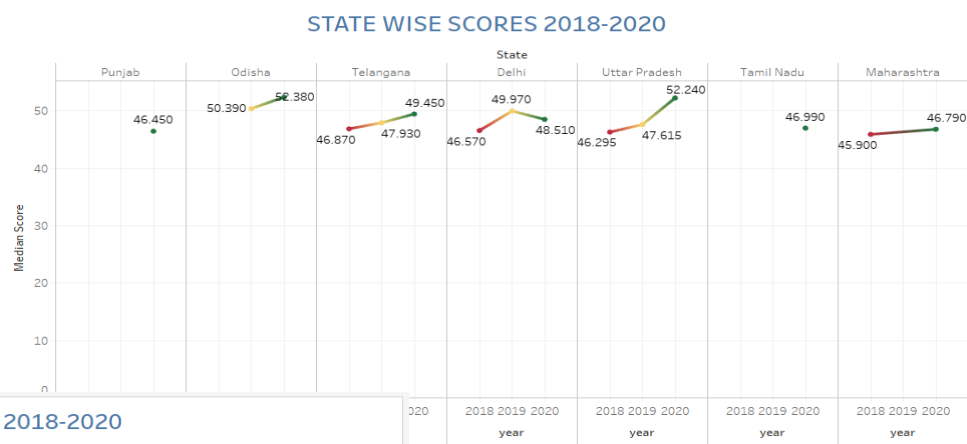
Analysis on NIRF website has done for finding the factors that influence the quality of education in placements of all states or particular institutes.

Main focus on placements of states or institutes and to know **How to improve placements?**

Preview of Findings:

- Some states had lowest scores but case of placements these states became high and vice versa, why it happened and what all ideas to improve their placements.
- Overall placements is increased 2018-2020 because of some states highest placements.

Here the graph represents scores of top states 2018-2020 here we can see scores are

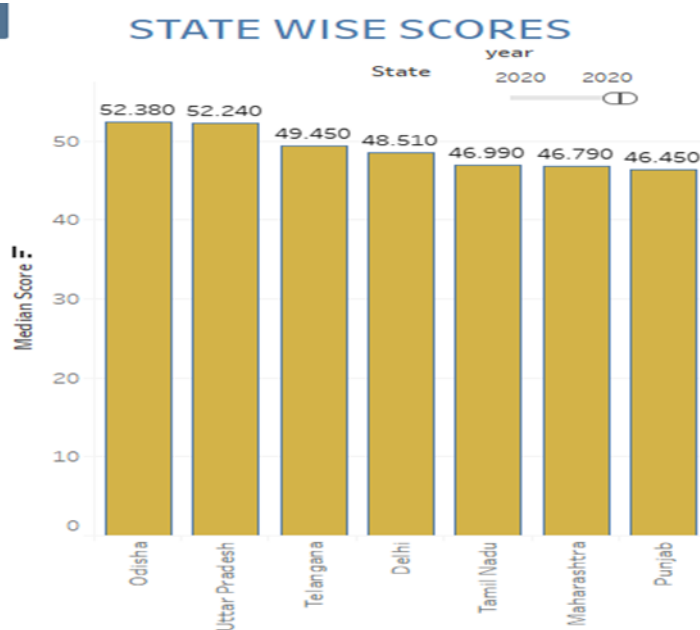


increasing every year. Let us see how this state in case of placements.

Here we can identify which states provide highest

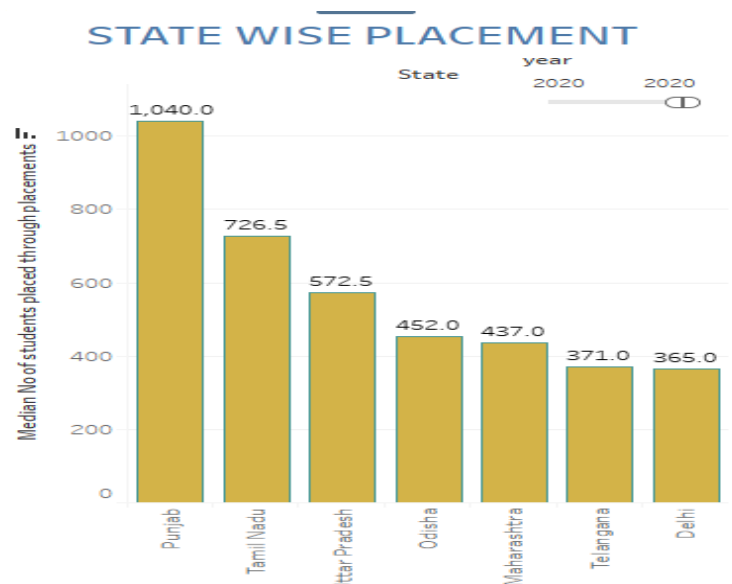
placements and what all measures they provide to increase their education quality of placements.

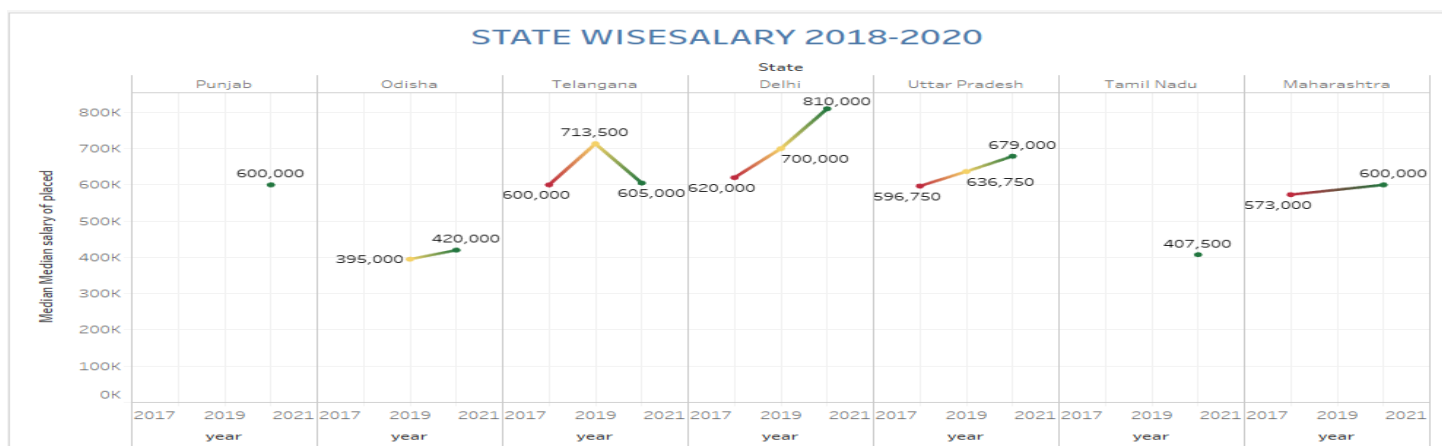
We can compare each state score and placements values. In some states scores is high but placement became low so we can analysis why it came? For instance, 2020 Telangana had highest score but in placement it diminished and Uttar Pradesh score and placement also high so, here we can analysis why Telangana is back in placements.



The median scores of each state Telangana is in 3rd position and Uttar Pradesh in second position but in placements it became different Telangana is highest in case of score but in placements it became diminishing. So, here we can compare these states what all measures they taken and what all things they want to do for good education quality in placements.

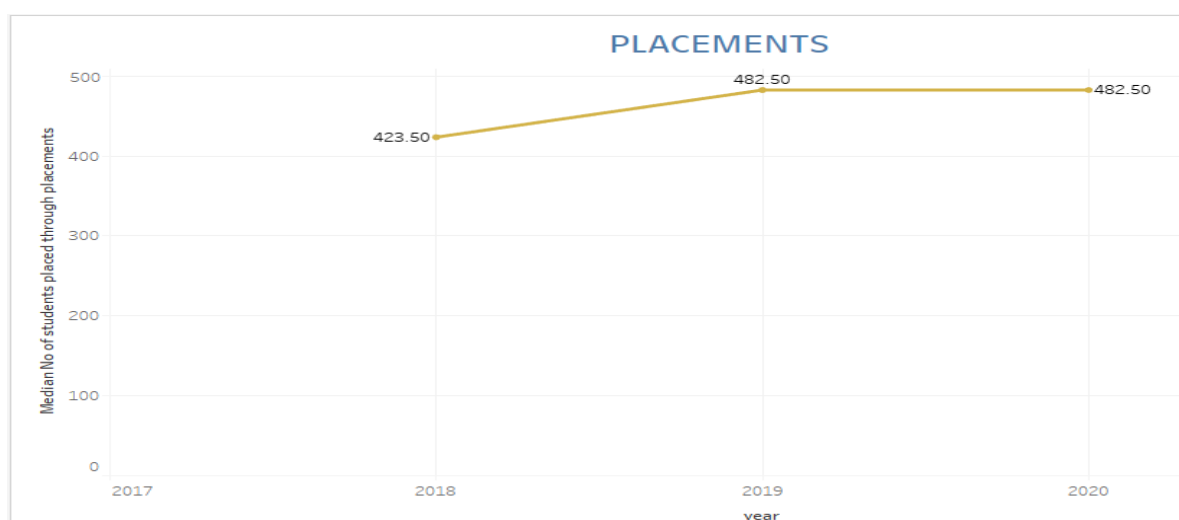
In this graph we can understand in more detail in the case of score Telangana and Uttar Pradesh had highest performance but in placements Telangana is diminishing.





Above graph represents the 2018-2020 median salary of each states. We can see the variations in each year salary package.

Here we can realise that how the variations came in placements 2018-2020 and which states is deficient in placements.



To improve Placements

- Organizing Pre- Placements Training's
- To provide recruitment to students.
- To have good relations with the recruiters.
- Managing Recruiters correspondence and feedback's

Some colleges start their training in the final year, others begin from second year onwards. Your training should focus on helping students know themselves and then prepare them for placements. The training should be focused on real world problems and what the industry

currently requires. Having your students trained on this will differentiate your college from others and will certainly give you an edge.

The placement cell should collaborate with other student societies to build the communication and confidence of students in college as a whole. This will be required along with their academic scores to crack their dream job or Masters Interviews. In case your college does not have an active cell, revive it and support the professors and faculty to build a brand for your college in industry.

REVIEW OF ANALYSIS: The NIRF helped the institutions to understand their performance by each year and to know their competitors and peer performers. This has more advantages like valuing perception, attracting industry for better placement and become reliable tool for parents and students to know about the institution. In this analysis paper we can identify 2018-2020 every year variations in scores and placements. Also know which all states score high and placements are low. Through this factor placements is very helpful to improve education quality.

Test of educational quality on NIRF ranking system

Taking everything into account, intuitively knowledge of any person or society shows the order of its progress similarly good content deserves the good ranking. The India Rankings, known as National Institutional Ranking Framework (NIRF), is the first most popular ranking system in India initiated by Government of India for benchmarking of Indian Institutions on the basis of different parameters. One of the core / major parameters of this ranking system is research outcomes. This paper focused impact of NIRF on research outcomes. Moreover, it also evaluates trends of publications by the Indian Universities. The study investigates the growth of publication in the different subject category. Variation in ranking is mainly due to the variation in publication rating. States should further focus on publication to get into world university ranking. Tremendous increase in patents in 2019-2020 should be maintain further to reach on top ranking globally. Along with publication state should ensure placements with minimum salary. In recent years we will see a drastic increase engineering institution with poor quality education. But the volume of students choosing engineering is decreasing. There is no such variation in case teaching learning resources among colleges. A booming growth in the number of technical institutions has led to particularly acute issues and concerns for the engineering sector, where colleges are struggling to hire adequately qualified staff graduates are failing to find employment and regulators are under pressure to improve standards. Too many institutions due to unregulated growth especially in private sector that also led to poor quality outcome.