

A STUDY OF DELHI UNIVERSITY COLLEGES RANKED IN TOP 100 BY NATIONAL INSTITUTIONAL RANKING FRAMEWORK

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PURPOSE

THE objective of the study was to analyse and interpret how and where the top 27 colleges of University of Delhi have focused to obtain high ranking in NIRF, the National Institutional Ranking Framework particularly keeping in mind its various parameters which has led to an increase in their ranks from the year 2018 to the current year 2019.

Design/Methodology/Approach: Secondary data have been used for this research and collected from the NIRF website. A comparison was done for 27 colleges of University of Delhi which secured a ranking in top 100 colleges in India in the year 2019. The respective change in these scores over the past one year and its weighted implications are also considered and have been compared with their respective scores on various parameters in the year 2018.

Findings: The findings revealed that in order to increase the rank of colleges in NIRF, it is important to increase the faculty student ratio with emphasis on permanent faculty and also it is necessary to increase the number of faculty with Ph.D. and experience. The combined metric for publications particularly for quality of publications should also be increased. The metric for university examinations and the combined percentage of students for placement, higher studies, and entrepreneurship should also be increased. Colleges should focus on increasing the region diversity and facilities for physically challenged students to score high in NIRF ranking. Lastly, perception should also be increased by looking at the top colleges' best practices and various aspects like peer perception, public perception, & competitiveness.

Research Limitations: The study is only limited to the conclusion made on the basis of parameters used by NIRF, and hence there is scope of improvement in ranking on the basis of other factors and considerations used by other reputed accreditation and ranking institutions. Also, the study is only limited to colleges of University of Delhi and hence, has limited implications for the rest of the colleges of the country.

Practical Implications: The results of the study can be very helpful for the colleges of University of Delhi as well as other colleges in India as the institutions are working on all areas of quality improvement for survival, sustenance, and for establishing distinct standards in the highly competitive market. The ranking and recognition through accreditation add to the prestige of an educational institution and be beneficiary of funding, increased enrolment of students, improved public image, and perception.

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Originality/Value: *This study is probably the first to empirically analyse and interpret how and where the top 27 colleges of University of Delhi have focused to obtain high ranking in NIRF, keeping in mind its various parameters which has led to an increase in their ranks from the year 2018 to the current year 2019.*

Key Words: *Ranking, Comparative Analysis, Parameters, Perception, Research, Higher Education, Accreditation, NIRF, University of Delhi.*

Introduction

Education has always been given due importance in India with its foundation in metaphysical, epistemological, and the axiological outlook of great educational philosophers like Rabindranath Tagore, Mohandas Karamchand Gandhi, Sri Surobindo, Jiddu Krishnamurthi, etc., who efficiently conceptualised the education system in terms of nature, extent, and scope. The Constitution of India through its Fundamental Rights and Directive Principles of State Policy has entrusted upon the citizens the right to education (Right to Education Act 2009). This indeed made the country to see a new beginning in the field of education.

Obtaining quality education is the foundation of sustainable development. The setting up of All India Council for Technical Education, AICTE in 1945 and University Grants Commission, UGC in 1956 speak volume about the vision and responsibility of our leaders and planners in those early years. The challenge to maintain quality education becomes difficult when the institutions have to face competition from within and outside the country. Education must essentially comply with certain standards of compliance. These standards are provided by regulatory agencies.

As the institutions are working on all area of quality improvement for survival, sustenance, and for establishing distinct standards in the highly competitive market, it is increasingly becoming important that these educational institutions undergo explicit quality evaluation and assurance processes. National Quality Assurance Organisations accredit the institution and assigns a rank that augments its current position or gives direction for future improvement. The ranking and recognition through accreditation add to the prestige of an educational institution and be beneficiary of funding, increased enrolment of students, improved public image, and perception.

National Institutional Ranking Framework (NIRF) is a framework which was approved by the Ministry of Human Resource development and was introduced on 29th September 2015. This framework ranks various educational institutions all over the country in different categories based on teaching standards, research work, placements, and outreach programmes, among other parameters. These categories are classified into engineering, pharmacy, management, colleges, medical, law, architecture, and overall universities. The methodology used by the framework considers various parameters approved by the core committee to rank universities and institutions around the country.

Ranking promotes competition among the institutions and drive them to strive for excellence. As ranking is an extremely challenging task, highly experienced experts are required who have great knowledge of higher education system in India and has full commitment for this cause. This culture is important as provides several insights to all about major areas such as faculty development, student needs and focus areas, placement improvements, infrastructure requirements, library, and laboratory needs etc.

Based on several categories, 16-18 parameters which are organised into five major groups, have been considered and being ranked for evaluation and streamlining processes to create efficiencies. The parameters have been designed considering certain technicalities and details and are accepted globally by serving as pointers to ambience for teaching, learning, and research. The five parameters according to which the institutions and universities are ranked are elaborated in detail.

Parameter 1: Teaching, Learning & Resources (TLR)

This parameter which accounts for a ranking weight of 0.40 tests various colleges on the following sub parameters:

- Student Strength which includes Doctoral students as well and carries 20 marks.

The formula used is “ $SS = f(NT, NE) * 20$ ”

Where, SS refers to the student strength, $f(NT, NE)$ are the functions determined by NIRF, NT refers to the total sanctioned strength of under graduate and post graduate approved intake in the institution and NE is the total number of enrolled students in all under graduate and post graduate programs of the institution.

- Faculty Student ratio with emphasis on permanent faculty carries 30 marks.

The formula used is “ $FSR = 30 * [20 * (F/N)]$ ”

Where, FSR refers to the Faculty student ratio, F is the parameter which considers regular full time faculty in the previous year in the respective institution and N is nothing but NT referred in the previous point.

- Combined metric for Faculty with PhD and Experience carries 20 marks.

The formula used is “ $FQ = 10 * (FRA/75)$, $FRA \leq 75\%$ and $FQ = 10$, $FRA > 75\%$ ”

Where, FQ refers to the combined metric for Faculty with PhD and Experience and FRA is the percentage of Faculty with PhD with respect to total number of faculty required or actual faculty whichever is higher in the previous year.

- Financial Resources and their Utilisation has been given weightage of 30 marks.

The formula is “ $FRU = 10p(BT) + 10\min(4*BC/BT, 1) + 10\min(4*BO/3BT, 1)$ ”

Where, FRU refers to Financial Resources and Utilisation, BT considers the amount spent on an average per student out of annual expenditure in the previous three years excluding the expenditure on buildings or infrastructure etc., BC is the amount spent on an average out of annual capital expenditure per student which includes the amount spent on academic activities and resources. This amount can be spent on library resources, workshops, new equipment for laboratories, studios, other identified academic activities excluding expenditure on buildings etc., BO is the operational expenditure per student spent on faculty resources and staff salaries and the function p is the percentile fraction.

Source: www.nirfindia.org

Parameter 2: Research and Professional Practice (RP)

This parameter which accounts for a ranking weight of 0.15 tests various colleges on the following sub parameters:

- Combined metric for Publications carries 70 marks.

The formula used is “ $PU = 30 * p(P/F)$ ”

Where, PU refers to the combined metric for publications, P refers to the number of publications which is include on the basis of weighted average of the largest numbers given in Web Science, Scopus, FT 45, PUBMED in two resources over the previous 3 years, F is the number of faculty members which is considering nominal number and is calculated on basis of an FSR of 1:10.

- Combined Metric for Quality of Publications carries 30 marks.

The formula used is “ $QP = 15 * p(CC/P) + 12.5 * p(NCI) + 12.5 * p(TOP@%P)$ ”

Where, QP refers to the quality of publications which includes combined metric for publications, CC refers to the citation count which includes total citations in past 3 years, P is the total number of publications over the period computed for PU, CC is equal to $(0.45CCW + 0.45CCS + 0.1CCI)$, NCI is the normalized citation index which includes average of past 3 years and is equal to $(0.5NCIW + 0.5NCIS)$ and TOP25 refers to the citations in top 25 percentile which considers the average of past 3 years and is equal to $(0.5TOP25PW + 0.5TOP25PS)$.

Source: www.nirfindia.org

Parameter 3: Graduation Outcomes (GO)

This parameter which accounts for a ranking weight of 0.25 tests various colleges on the following sub parameters:

- Combined percentage for Placement, Higher Studies and Entrepreneurship has been given weightage of 40 marks.

The formula used is “ $GPHE = 30 * (Np/100 + Nhs/100) + 10p3$ ”

Where, GPHE refers to the combined % for placement, higher studies and entrepreneurship, Np refers to the percentage of graduating students at both under graduate and post graduate level. It includes the students those who are placed either through campus placement or centralised placement and number is included on an average of past 3 years, Nhs includes the percentage of graduating students at undergraduate and postgraduate level, who have been selected for higher studies in the past 3 years and their number is included on average basis, p3 is equal to p(NE) and NE is the number of sustained spin-off companies set up over past 5 years period.

- Metric for University Examinations carries 40 marks.

The formula used is “ $GUE = 15 * \min[(Ng/80), 1]$ ”

Where, GUE refers to the metric for university examinations and Ng is the percentage of students included as a fraction of approved intake and are taken on an average of past 3 years, this number includes those students who have passed the respective university examinations in a stipulated time for the program in which they were enrolled.

- Median Salary carries 20 marks.

The formula used is “ $GMS = 20 * p(MS)$ ”

Where, GMS refers to the median salary and MS is the median salary of graduates from an institution.

Source: www.nirfindia.org

Parameter 4: Outreach and Inclusivity (OI)

This parameter which accounts for a ranking weight of 0.10 tests various colleges on the following sub parameters:

- Region Diversity parameter includes Percentage of Students from other States/ Countries carries 30 marks.

In this parameter more weightage is given to students from other states as compare to students from other countries. The formula used is $RD = 25 * \text{fraction of total students enrolled from other states} + 5 * \text{fraction students enrolled from other countries}$.

- Percentage of Women carries 30 marks.

The formula used is “ $WD = 10 * (NWS/50) + 10 * (NWF/20) + 5 * (NWA/2)$ ”

Where WD refers to the percentage of women, NWF is the percentage of female faculty, NWS refers to the percentage of students and NWA refers to the number of female members at senior administrative positions which includes deans, head of the Institute, department heads etc.

- Economically and Socially Challenged Students carries 20 marks.

The formula used is “ $ESCS = 25 * (necs/50)$ ”

Where, ESCS refers to the students who are economically and socially challenged and Necs is the percentage of students who are economically and socially challenged.

- Facilities for Physically Challenged Students carries 20 marks.

The formula used is “ $PCS = 20\text{marks}$ ”

Where, PCs refers to the facilities for physically challenged students.

Source: www.nirfindia.org

Parameter 5: Perception (PR)

This parameter which accounts for a ranking weight of 0.10 tests various colleges on the following sub parameters:

- Peer Perception includes Employees and Research Investors which carries 100 marks.

To fulfil the requirements of this parameter a survey is conducted with a large category of professionals from reputed organisations, also with officials of funding agencies in government sector as well as private sector and institution heads of NGOs. The lists are then obtained from institutions and a comprehensive list is then prepared based on several criteria where various sectors, regions etc. are taken into account and these lists are updated periodically.

Source: www.nirfindia.org

As seen above, each parameter is assigned a certain weightage. Various sub-heads also have an assigned weightage distribution within each group. These weightages are decided considering the specific discipline in mind. Since NIRF was launched in the year 2015, the weightage distribution has never been consistent and changes every year. The institutions are required to collect to collect relevant data which is easily available from third party sources and is also easily verifiable. A suitable metric then computes a core under each sub-head. The final score is calculated based on weights allocation done to each heading and a maximum of 100 value can be attained.

An Online Data Capturing System is used by NIRF to capture relevant data of registered institutions. The data is submitted by the registered institutions in this system using relevant authentication credentials provided by NIRF. The system sought required data in a format which helps in computing ranking of metrics for each parameter and verifies for consistency of data.

Review of Literature

Didham, & Paul (2015) conducted a conceptual study on the role of education in the sustainable development agenda, according to which obtaining quality education is the foundation for sustainable development. In addition to improving quality of life, access to inclusive education can equip locals with the tools required to develop innovative solutions to the world’s greatest problems. Since education has a long-term impact in an individual and society on a whole, it is essential that they comply with a

certain standard of compliance. The standards can be provided by the institution themselves or by the regulatory agencies. Also, accreditation matters most for a potential student who needs to be sure about the legitimacy and quality of the institution and thus, secure a place for a good future.

Corney, Froumin, Leshukov, & Marginson (2018) conducted a conceptual study to evaluate the role of federalism for shaping higher education in nine federal countries around the world. The authors have developed a comparative analysis between national and regional relationships in higher education in terms of legal, economic, and other aspects. An analysis of how countries' educational system has evolved their functions in highly varied cultural contexts has been done.

Barrio, Escamilla, Garcia, Fernandez, & Garcia (2015) conducted a conceptual study on influence of assessment in the teaching-learning process in the higher education. According to the study appraising self-evolution in education system, India has witnessed a transformation of the Guru-Disciple relation, taking contrasting examples of Dronacharya-Eklavya and Paramhans-Vivekananda, hinting towards the facilitation of constructivism and outreach in education. The paper puts an impetus on self-evaluation and undertaking self-driven initiatives by every Higher Education institution for ensuring quality enhancement and excellence in its vision. Regular transformations in curriculum and pedagogy are the evident of the efforts to move towards an integrated curriculum and assessment framework to encourage holistic development of the learner.

Talyor (2012) conducted a study that stressed on the need for scientific research to increase intelligence and creativity, improve academic performance, better health, decrease anxiety, higher moral reasoning, increase self-actualization, and better job performance which will benefit the individual to be successful in all avenues of life.

UN (2015) framed sustainable development goals in which there are 17 goals and 169 targets. Goal number four on education has clearly highlighted the need to develop the quality of education, inclusive education, and equal opportunities to access education for all sections of people by 2030.

MHRD (2019) framed a revised draft on National Education Policy to overcome the challenges faced by the education sector of India. The policy has highlighted the necessity of quality education and equal opportunity for all from pre-school to higher education. According to the Ministry, the draft of national education policy will meet the present need to improve the quality of education, research, innovation, and the lack of manpower in education system in India.

Sawant (2016) conducted a conceptual study in role of IQAC in maintaining quality standards in teaching, learning, and evaluation. According to which the establishment of Internal Quality Assurance Cell, IQAC by accredited institutions also plays a major role in asserting long-term quality standards. IQAC in any higher education institute takes up the prime responsibility to initiate, plan, and supervise various activities, necessary to increase the quality of education imparted in an institution. The role of IQAC in maintaining quality standards in teaching, learning, and evaluation is crucial for higher education institutions self-driven initiatives and quality enhancement measures.

Stewart (2012) conducted a study which focused on the United States as the world leader in education in 20th century. The study highlighted that how other countries around the world have learned from United States and hence are obtaining better results in education excellence of higher education. It was also analysed how to provide better education to the students in rapidly changing globalized and innovative-based environment.

Zhao, & Cziko (2001) conducted a conceptual study to understand the impact of technology in education sector. To accept and explore full benefits of technology, academicians need to manage and agree to

three conditions in their learning and teaching theatres. Firstly, they should accept the effectiveness of innovation and new technological tools. Secondly, beyond effectiveness they should see that innovation will not act as hurdle in delivery path. Lastly, academicians should believe that innovations have full authority to make any changes in given set of technological tools.

All India Survey on Higher Education (2017), prepared official statistics on many parameters based on the data received from various higher educational institutions in India. According to the survey report, gathering of relevant statistical data would facilitate the central and state government in devising future policies. The report has focused on the present scenario of education system which will be helpful in formulating the planning for development of education.

In the light of the literature cited above a study to analyse and interpret how and where the top 27 colleges of University of Delhi have obtained higher ranks in the National Institutional Ranking Framework (NIRF) has been conducted, particularly keeping in mind its various parameters which has led to an increase in their ranks from the year 2018 to the current year 2019.

Objectives of the Study

The present study has been undertaken with the following objectives:

- To analyse and interpret how and where the top 27 colleges of University of Delhi have focused to obtain high ranking in the National Institutional Ranking Framework (NIRF), particularly keeping in mind its various parameters which has led to an increase in their ranks from the year 2018 to the current year 2019.
- To understand each parameter used in NIRF ranking extensively and study various reasons for scoring higher marks in the same.
- To further understand and objectify the various reasons contributing to higher ranks of Delhi university colleges and hence adapt the same in other colleges to achieve higher ranks in future.

Research Methodology

Data collection instruments: Secondary data have been used for this research and collected from the NIRF website. A comparison was done for 27 colleges of University of Delhi which secured a ranking in top 100 colleges in India in the year 2019. The respective change in these scores over the past one year and its weighted implications are also considered and have been compared with their respective scores on various parameters in the year 2018.

Research Design: Descriptive research design is used in this research paper to obtain information of the reasons for high ranks scored by various colleges of University of Delhi. The analysis is based on secondary sources from national and international literature. Secondary data has been also collected from books, websites, various surveys, research papers, articles, journals. This research design has given us a general overview of some valuable pointers that enables the variables to be tested quantitatively in the future. Important recommendations are deduced using this research design which are elaborated further in the paper. Thereafter a prescriptive and predictive analysis is done to determine how ranking of colleges can be improved by deeply understanding the reasons for improvement in ranking of these top Delhi university colleges.

Analysis and Interpretation

The following table no. 1 shows the top 27 colleges of University of Delhi that were included in top 100 colleges of India according to the NIRF report 2019.

Table No. 1: Top 27 Colleges of University of Delhi in NIRF Ranking 2019

Name of Institution	Rank
Miranda College	1
Hindu College	2
St. Stephens College	4
Lady Sri Ram College	5
Sri Ram College of Commerce	7
Hansraj College	9
Gargi	12
Atma Ram Sanatan Dharma College	14
Deen Dayal Upadhyaya College	16
Kirori Mal College	18
Sri Venkateswara College	19
Dayal Singh	20
Lady Irwin	21
Jesus And Mary College	25
Sri Guru Tegh Bahadur Khalsa College	28
Daulat Ram College	37
Maitreyi	38
Shyam Lal	41
Kamla Nehru	43
Indraprastha College	46
Maharaja Agrasen College	47
Shivaji	53
Shaheed Sukhdev College of Business Studies	70
Keshav Mahavidyalaya	75
Shri Guru Gobind Singh College of Commerce	87
Kalindi	89
Ramanujan	100

Source: <https://www.nirfindia.org/2019/CollegeRanking.html>

Analysis and Interpretation of Parameter 1: Teaching, Learning & Resources

The following table no. 2 shows comparison of the scores obtained by the top 27 colleges of University of Delhi in the years 2019 and 2018 according to the first parameter Teaching, Learning and Resources, the respective change in these scores over the past one year, and its weighted implications.

Table No. 2: Comparison of Top 27 Colleges of University of Delhi based on Parameter 1: Teaching, Learning & Resources

Name of Institution	TLR			Change							Interpretation
	SS	FSR	Total	FRU	FQE	Total	SS	FSR	FQE	ERU	
Miranda College	16	25.26	14.87	21.58	77.71	0	0.732	0.194	-1.125	-0.136	increase in FSR and FQE max in FSR
	16	27.7	15.84	17.83	77.37						
	20	30	20	30	100						
Hindu College	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR
	14	24.08	15.18	21.49	74.75	0	0.483	0.14	-0.996	-0.404	
	14	25.69	15.88	18.17	73.74						
Total	20	30	20	30	100						
St. Stephens College	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR
	9.89	29.75	16.59	23.12	79.35	-0.014	0.075	0.058	-1.413	-1.696	
	9.82	30	16.88	18.41	75.11						
Total	20	30	20	30	100						
Lady Sri Ram College	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR
	14	25.21	14	18.41	71.62	0	0.615	0.114	-1.119	-0.444	
	14	27.26	14.57	14.68	70.51						
Total	20	30	20	30	100						
Sri Ram College of Commerce	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FQE
	12	27.88	11.96	20.33	72.17	0	-0.081	0.108	-0.684	-0.804	
	12	27.61	12.5	18.05	70.16						
Total	20	30	20	30	100						
Hansraj College	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR
	18	20.9	11.94	19.94	70.78	-0.4	0.531	0.134	-0.438	-0.408	
	16	22.67	12.61	18.48	69.76						
Total	20	30	20	30	100						

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Name of Institution	TLR				Change				Interpretation			
	SS	FSR	FQE	FRU	Total	SS	FSR	FQE		ERU	Total	
Gargi	2018	16	26.51	14.53	20.06	77.1	-0.126	1.047	0.314	-1.2	0.172	increase in FSR and FQE max in FSR
	2019	15.37	30	16.1	16.06	77.53						
	Total	20	30	20	30	100						
ARSD	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FQE
	2019	13.54	28.39	14.17	22.34	78.44	0.092	0.405	0.482	-1.338	-0.096	
	Total	14	29.74	16.58	17.88	78.2						
DDU	2018	20	30	20	30	100						increase in FSR and FQE max in FSR
	2019	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	
	Total	12	26.72	16.66	21.45	76.83	0	0.597	0.196	-0.777	0.152	
Kirori Mal College	2018	12	28.71	17.64	18.86	77.21						increase in all max in ERU
	2019	20	30	20	30	100						
	Total	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	
Venky	2018	18	21.26	13.79	19.93	72.98	0	0.222	0.082	0.978	1.764	increase in FSR and FQE max in FSR
	2019	18	22	14.2	23.19	77.39						
	Total	20	30	20	30	100						
Dayal Singh	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in all max in FSR
	2019	16	21.72	14.49	19.73	71.94	-0.4	1.38	0.542	-0.927	0.888	
	Total	14	26.32	17.2	16.64	74.16						
Dayal Singh	2018	20	30	20	30	100						increase in all max in FSR
	2019	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	
	Total	0	0	0	0	0	3.6	8.01	3.404	4.935	31.268	
Total	18	26.7	17.02	16.45	78.17							
Total	20	30	20	30	100							

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Name of Institution		TLR						Change						Interpretation
		SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total			
Lady Irwin	2018	9.68	29.93	17.93	23.66	81.2	0.064	-1.305	-0.376	0.051	-2.296	increase in ERU max in FSR		
	2019	10	25.58	16.05	23.83	75.46								
	Total	20	30	20	30	100								
JMC	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR		
	2019	14	20	11.42	18.51	63.93	0	1.086	0.298	-0.6	1.244			
	Total	14	23.62	12.91	16.51	67.04								
SGTB	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR		
	2019	14	26.33	15.86	23.73	79.92	0	0.126	0.022	-1.173	-1.352			
	Total	14	26.75	15.97	19.82	76.54								
DRC	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in all max in FSR		
	2019	0	0	0	0	0	3.2	6.657	2.558	3.639	25.244			
	Total	16	22.19	12.79	12.13	63.11								
Maitreyi	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR		
	2019	14	15.16	9.72	20.79	59.67	0	3.366	1.112	-1.614	4.56			
	Total	14	26.38	15.28	15.41	71.07								
Shyam Lal	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR		
	2019	14	19.97	11.33	18.11	63.41	-0.168	1.008	0.348	-1.11	0.224			
	Total	13.16	23.33	13.07	14.41	63.97								

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Name of Institution	TLR				Change				Interpretation			
	SS	FSR	FQE	FRU	Total	SS	FSR	FQE		ERU	Total	
Kamla Nehru	2018	0	0	0	0	2.256	8.676	3.278	4.077	28.072	increase in all max in FSR	
	2019	11.28	28.92	16.39	70.18							
	Total	20	30	20	30	100						
IP College For Women	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR
	2019	13.98	21.7	12.05	17.15	64.88	-0.232	0.549	0.196	-0.429	0.088	
	Total	12.82	23.53	13.03	15.72	65.1						
Maharaja Agrasen	2018	20	30	20	30	100						increases in ERU
	2019	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	
	Total	12	30	18.76	1.71	62.47	-0.146	0	-0.194	4.152	4.856	
Shivaji	2018	11.27	30	17.79	15.55	74.61						increase in FSR and FQE max in FSR
	2019	20	30	20	30	100						
	Total	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	
SSCBS	2018	14	26.03	14.56	17.32	71.91	0	0.792	0.126	-0.951	0.04	increase in all max in FSR
	2019	14	28.67	15.19	14.15	72.01						
	Total	20	30	20	30	100						
Keshav M.	2018	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	increase in FSR and FQE max in FSR
	2019	0	0	0	0	0	1.6	6.414	2.406	5.364	23.716	
	Total	8	21.38	12.03	17.88	59.29						
Keshav M.	2018	20	30	20	30	100						increase in FSR and FQE max in FSR
	2019	SS	FSR	FQE	FRU	Total	SS	FSR	FQE	ERU	Total	
	Total	9.03	26.84	15.67	17.55	69.09	0.194	0.948	0.082	-0.723	0.852	
Keshav M.	2018	10	30	16.08	15.14	71.22						increase in FSR and FQE max in FSR
	2019	30	20	30	100							
	Total	30	20	30	100							

Contd...

Name of Institution	TLR			Change			Interpretation		
	SS	FSR	Total	SS	FSR	Total	ERU	FQE	Total
SGGSCC	0	0	0	2.8	8.178	28.204	4.404	2.914	28.204
	14	27.26	14.57						
	20	30	30						
Total			100						
Kalindi	0	0	0	2.75	7.278	26.332	4.095	2.834	26.332
	13.75	24.26	14.17						
	30	20	30						
Total			65.83						
Ramanujan	12	29.35	11.42	0	-2.949	-5.712	-0.909	-0.284	-5.712
	12	19.52	10						
	20	30	30						
Total			100						

Source: Analysis based on secondary data

Note. TLR: Teaching, Learning & Resources; the first parameter of National Institutional Ranking Framework which carries a ranking weight of 0.40

SS: Student Strength which includes Doctoral students as well and carries 20 marks

FSR: Faculty Student ratio with emphasis on permanent faculty carries 30 marks

FQE: Combined metric for Faculty with PhD and Experience carries 20 marks.

FRU: Financial Resources and their Utilisation carries 30 marks

The first parameter ‘Teaching, Learning & Resources’ carries the maximum weightage. In the previous two years, it is observed that the colleges have improved their ranking by increasing their FSR i.e. Faculty Student Ratio with emphasis on permanent faculty and by increasing their faculty with Ph.D. and experience. Atma Ram Sanatan Dharam College is a top scorer in this parameter in the year 2019. Also, colleges like Gargi, Shri Venkateswara, Jesus and Mary College, Maitreyi and Shyam Lal College have substantially improved their ranks from the previous year by improving their scores on this parameter. Improvement in the operational expenses per students can also increase the rankings of colleges in this parameter.

Analysis and Interpretation of Parameter 2: Research & Professional Practice

The following table no. 3 shows comparison of the scores obtained by the top 27 colleges of University of Delhi in the years 2019 and 2018 according to the second parameter Research & Professional practice, the respective change in these scores over the past one year and its weighted implications.

The second parameter ‘Research & Professional Practice’ carries third highest weightage. In the previous two years it is observed that the colleges have improved their ranking by increasing their PU i.e. Combined metric for Publications. Hence focus should be made on increasing the number of publications in Scopus, Web of Science, PUBMED, FT 45 over the previous 3 years. Miranda house is the leader in terms of scoring in this parameter, followed by Deen Dayal Upadhyay College and Sri Guru Teg Bahadur Khalsa College in the year 2019. Also, colleges like Miranda, Hansraj, Atma Ram Sanatan Dharma, Deen Dayal Upadhyaya, Kirori Mal College, Shri Venkateshwara College, Shri Guru Tegh Bahadur Khalsa College and Keshav Mahavidyala have substantially improved their ranks from the previous year by improving their scores on this parameter.

Table No. 3: Comparison of Top 27 Colleges of University of Delhi based on Parameter 2: Research & Professional Practice

Name of Institution	RP			Change			Interpretation
	PU	QP	Total	PU	QP	Total	
Miranda College	PU	QP	Total				increase in PU and QP max in PU
2018	12.96	16.82	29.78	5.67	0.408	1.419	
2019	21.06	18.18	39.24				
Total	70	30	100				
Hindu College	PU	QP	Total				increase in PU and QP max in PU
2018	10.6	15.14	25.74	0.518	0.045	0.1335	
2019	11.34	15.29	26.63				
Total	70	30	100				
St. Stephens College	PU	QP	Total				increase in QP
2018	8.88	7.48	16.36	-2.016	0.174	-0.345	
2019	6	8.06	14.06				
Total	70	30	100				
Lady Sri Ram College	PU	QP	Total				increase in PU and QP
2018	0.88	2.87	3.75	0.315	0.297	0.216	
2019	1.33	3.86	5.19				
Total	70	30	100				

Name of Institution	RP			Change			Interpretation
	PU	QP	Total				
Sri Ram College of Commerce	PU	QP	Total				increase in PU and QP max in QP
2018	0.13	0.49	0.62	0.007	0.105	0.054	
2019	0.14	0.84	0.98				
Total	70	30	100				
Hansraj College	PU	QP	Total				increase in PU and QP max in PU
2018	3.92	8.66	12.58	2.436	0.399	0.7215	
2019	7.4	9.99	17.39				
Total	70	30	100				
Gargi	PU	QP	Total	PU	QP	Total	increase in PU
2018	1.3	7.7	9	0.973	-0.135	0.141	
2019	2.69	7.25	9.94				
Total	70	30	100				
ARSD	PU	QP	Total				increase in all max in PU
2018	9.29	15.01	24.3	3.038	0.165	0.7335	
2019	13.63	15.56	29.19				
Total	70	30	100				
DDU	PU	QP	Total				increase in all max in PU
2018	14.28	12.23	26.51	6.146	0.738	1.686	
2019	23.06	14.69	37.75				
Total	70	30	100				
KMC	PU	QP	Total				increase in PU
2018	9.83	16.67	26.5	1.806	-0.381	0.1965	
2019	12.41	15.4	27.81				
Total	70	30	100				
Venky	PU	QP	Total				increase in PU
2018	13.03	15.44	28.47	3.01	-0.33	0.48	
2019	17.33	14.34	31.67				
Total	70	30	100				
Dayal Singh	PU	QP	Total				increase in all max in PU
2018	0	0	0	8.288	4.143	3.8475	
2019	11.84	13.81	25.65				
Total	70	30	100				

Contd...

Name of Institution		RP			Change			Interpretation
Lady Irwin		PU	QP	Total				increase in PU and QP max in PU
	2018	6.96	7.77	14.73	2.282	0.234	0.606	
	2019	10.22	8.55	18.77				
	Total	70	30	100				
JMC		PU	QP	Total				decrease in all
	2018	0.19	0.41	0.6	-0.014	-0.027	-0.0165	
	2019	0.17	0.32	0.49				
	Total	70	30	100				
SGTB		PU	QP	Total				increase in PU and QP max in PU
	2018	10.05	18.2	28.25	4.669	0.345	1.173	
	2019	16.72	19.35	36.07				
	Total	70	30	100				
DRC		PU	QP	Total				increase in PU and QP max in QP
	2018	0	0	0	0.826	1.227	0.7905	
	2019	1.18	4.09	5.27				
	Total	70	30	100				
Maitri		PU	QP	Total	PU	QP	Total	increase in PU and QP max in PU
	2018	2.77	7.48	10.25	1.939	0.48	0.6555	
	2019	5.54	9.08	14.62				
	Total	70	30	100				
Shyam Lal		PU	QP	Total				increase in PU and QP max in PU
	2018	1.77	7.05	8.82	0.707	0.597	0.45	
	2019	2.78	9.04	11.82				
	Total	70	30	100				
Kamla Nehru		PU	QP	Total				increase in PU and QP max in QP
	2018	0	0	0	0.224	0.396	0.246	
	2019	0.32	1.32	1.64				
	Total	70	30	100				
IP		PU	QP	Total				increase in PU
	2018	0.07	0.57	0.64	0.021	-0.075	-0.033	
	2019	0.1	0.32	0.42				
	Total	70	30	100				

Name of Institution	RP			Change			Interpretation
	PU	QP	Total				
Maharaja Agrasen	PU	QP	Total				increase in PU and QP max in PU
2018	1.71	3.97	5.68	0.588	0.051	0.1515	
2019	2.55	4.14	6.69				
Total	70	30	100				
Shivaji	PU	QP	Total				increase in PU and QP max in PU
2018	0.58	3.55	4.13	0.91	0.834	0.612	
2019	1.88	6.33	8.21				
Total	70	30	100				
SSCBS	PU	QP	Total				increase in PU and QP max in QP
2018	0	0	0	0.742	0.819	0.5685	
2019	1.06	2.73	3.79				
Total	70	30	100				
Keshav M.	PU	QP	Total				increase in PU
2018	2.69	9.25	11.94	2.079	-0.807	0.042	
2019	5.66	6.56	12.22				
Total	70	30	100				
SGGSCC	PU	QP	Total				increase in all max in PU
2018	0	0	0	5.18	2.997	2.6085	
2019	7.4	9.99	17.39				
Total	70	30	100				
Kalindi	PU	QP	Total				increase in PU and QP max in QP
2018	0	0	0	2.226	3.024	1.989	
2019	3.18	10.08	13.26				
Total	70	30	100				
Ramanujan	PU	QP	Total				no increase
2018	0.04	1.1	1.14	0	-0.33	-0.165	
2019	0.04	0	0.04				
Total	70	30	100				

Source: Analysis based on Secondary Data

Note. RP: Research and Professional Practice; the second parameter accounts for a ranking weight of 0.15

PU: Combined metric for Publications carries 70 marks

QP: Combined Metric for Quality of Publications carries 30 marks

Analysis and Interpretation of Parameter 3: Graduation Outcomes

The following table no. 4 shows comparison of the scores obtained by the top 27 colleges of University of Delhi in the years 2019 and 2018 according to the third parameter Graduation Outcomes, the respective change in these scores over the past one year and its weighted implications.

Table No.4: Comparison of Top 27 Colleges of University of Delhi based on Parameter 3: Graduation Outcomes

Name of Institution	Go				Change				Interpretation
	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total	
Miranda College	32.71	30	22.61	85.32	-0.02	4	-1.384	0.7575	increase in GUE
2018									
2019	32.66	40	15.69	88.35					
Total	40	40	20	100					
Hindu College	30.62	30	26.28	86.9	-0.016	4	-1.414	0.7225	increase in GUE
2018									
2019	30.58	40	19.21	89.79					
Total	40	40	20	100					
St. Stephens College	34.66	30	30	94.66	-7.072	4	-2	-4.42	increases in GUE max in GUE
2018									
2019	16.98	40	20	76.98					
Total	40	40	20	100					
Lady Sri Ram College	27.61	28.61	25.71	81.93	3.248	4.556	-1.526	2.97	increase in GPHE and GUE max in GUE
2018									
2019	35.73	40	18.08	93.81					
Total	40	40	20	100					
Sri Ram College of Commerce	28.63	30	24.85	83.48	1.188	4	-1.276	1.6475	increases in GPHE and GUE max in GUE
2018									
2019	31.6	40	18.47	90.07					
Total	40	40	20	100					
Hansraj College	12.97	27.73	24	64.7	4.744	4.908	-1.114	4.64	increases in GPHE and GUE max in GUE
2018									
2019	24.83	40	18.43	83.26					
Total	40	40	20	100					

Contd...

Name of Institution	Go				Change				Interpretation
	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total	
Gargi	14.76	30	20.18	64.94	6.672	4	-0.894	5.5525	increase in GPHE and GUE max in GPHE
2018									
2019	31.44	40	15.71	87.15					
Total	40	40	20	100					
ARSD	30.62	30	26.28	86.9	-3.008	4	-2.418	-2.4025	increase in GUE
2018									
2019	23.1	40	14.19	77.29					
Total	40	40	20	100					
DDU	10.1	28.89	18.12	57.11	1.224	4.444	-1.006	2.285	increase in GPHE, GUE max in GUE
2018									
2019	13.16	40	13.09	66.25					
Total	40	40	20	100					
KMC	7.6	30	21.47	59.07	0.524	4	-1.156	1.3825	increases in GPHE & GUE max in GUE
2018									
2019	8.91	40	15.69	64.6					
Total	40	40	20	100					
Venky	8.25	28.77	23.37	60.39	1.988	4.476	-1.428	2.255	increase in GPHE and GUE max in GUE
2018									
2019	13.22	39.96	16.23	69.41					
Total	40	40	20	100					
Dayal Singh	0	0	0	0	6.88	15.776	2.95	17.8475	increase in all max in GUE
2018									
2019	17.2	39.44	14.75	71.39					
Total	40	40	20	100					

Contd...

Name of Institution	Go				Change				Interpretation
	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total	
Lady Irwin	2018	30	14.51	68.86	-0.912	4	-0.846	0.8725	increase in GUE
	2019	40	10.28	72.35					
	Total	40	20	100					
JMC	2018	30	6.74	65.3	2.812	4	1.74	6.4325	increase in all max in GUE
	2019	40	15.44	91.03					
	Total	40	20	100					
SGTB	2018	29.35	21.91	53.33	0.156	4.26	-1.266	1.1775	increase in GPHE & GUE max in GUE
	2019	40	15.58	58.04					
	Total	40	20	100					
DRC	2018	0	0	0	12.724	16	3.13	21.865	increase in all max in GUE
	2019	31.81	40	87.46					
	Total	40	20	100					
Maitri	2018	1.21	22.01	53.22	4.284	4	-1.356	3.4825	increase in GPHE & GUE max in GPHE
	2019	11.92	40	67.15					
	Total	40	20	100					
Shyam Lal	2018	19.9	18.34	66.57	3.512	4.668	-1.056	3.7925	increase in GPHE & GUE max in GUE
	2019	28.68	40	81.74					
	Total	40	20	100					

Contd...

Name of Institution	Go				Change				Interpretation
	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total	
Kamla Nehru	2018	0	0	0	9.8	16	2.806	19.6325	increase in GPHE, GUE and MS max in GUE
	2019	24.5	40	14.03	78.53				
	Total	40	40	20	100				
IP	2018	8.87	30	25.21	64.08	4	-1.96	1.82	increases in GUE and GPHE max in GUE
	2019	15.95	40	15.41	71.36				
	Total	40	40	20	100				
Maharaja Agrasen	2018	7.87	30	19.09	56.96	0.92	-0.934	1.655	increase in GPHE and GUE max in GUE
	2019	10.17	38.99	14.42	63.58				
	Total	40	40	20	100				
Shivaji	2018	10.52	25.57	17.61	53.7	0.968	-0.814	2.8125	increases in GPHE and GUE max in GUE
	2019	12.94	38.47	13.54	64.95				
	Total	40	40	20	100				
SSCBS	2018	0	0	0	0	9.74	3.688	20.6975	increase in all max in GUE
	2019	24.35	40	18.44	82.79				
	Total	40	40	20	100				
Keshav M.	2018	1.99	30	11.1	43.09	-0.06	1.204	3.9675	increases in GUE and MS max in GUE
	2019	1.84	40	17.12	58.96				
	Total	40	40	20	100				

Contd....

Name of Institution	Go				Change				Interpretation	
	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total		
SGGSCC	2018	0	0	0	9.932	16	3.686	20.815	increase in all max in GUE	
	2019	24.83	40	18.43	83.26					
	Total	40	40	20	100					
Kalindi	2018	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total	increase in all max in GUE
	2019	0	0	0	0	4.044	16	2.568	15.7375	
	Total	10.11	40	12.84	62.95					
Ramanujan	2018	GPHE	GUE	MS	Total	GPHE	GUE	MS	Total	increases in GPHE and GUE max in GUE
	2019	17.12	30	23.96	71.08	0.552	4	-1.362	1.1425	
	Total	40	40	20	100					

Source: Analysis based on secondary Data

Note. GO: Graduation Outcomes; the third parameter which accounts for a ranking weight of 0.25

GPHE: Combined % for Placement, Higher Studies and Entrepreneurship carries 40 marks

GUE: Metric for University Examinations carries 40 marks

MS: Median Salary carries 20 marks

The third parameter 'Graduation Outcomes' carries second highest weightage. In the previous two years it is observed that the colleges have improved their ranking by increasing their GUE i.e. Metric for University Examinations. Hence focus should be made on ensuring increase in percentage of students which is a fraction of approved intake and is averaged over past 3 years who have passed the respective university exams in a stipulated time for the program in which enrolment was made. Lady Shri Ram College has the highest score in this parameter followed by Jesus and Mary College in the year 2019. Also, colleges like Lady Sri Ram, Hansraj, Deen Dayal Upadhyaya, Shri Venkateshwara College, Shri Guru Tegh Bahadur Khalsa College, Shyam Lal College and Shivaji College have substantially improved their ranks from previous years by improving their scores on this parameter.

Analysis and Interpretation of Parameter 4: Outreach & Inclusivity

The following table no. 5 shows comparison of the scores obtained by the top 27 colleges of University of Delhi in the years 2019 and 2018 according to the fourth parameter Outreach & Inclusivity, the respective change in these scores over the past one year and its weighted implications.

The fourth parameter 'Outreach & Inclusivity' carries the minimum weightage. In the previous two years it is observed that the colleges have improved their ranking by increasing their RD i.e. Region Diversity and PCS i.e. Facilities for physically challenged students. Hence focus should be made to increase the fraction of total students enrolled from other states as well as students enrolled from other countries. Hansraj College has the maximum score in this parameter in the year 2019. Also, colleges like Hindu College, Atma Ram Sanatan Dharma College, Lady Irwin College, Jesus and Mary College, Keshav Mahavidyalaya, Hansraj College and Sri Ram College of Commerce have substantially improved their ranks from previous years by improving their scores on these parameters.

Analysis and Interpretation of Parameter 5: Perception

The following table no. 6 shows comparison of the scores obtained by the top 27 colleges of University of Delhi in the years 2019 and 2018 according to the fifth parameter Perception the respective change in these scores over the past one year and its weighted implications.

The fifth parameter 'Perception' also carries the minimum weightage, but it plays a significant role in determining ranking. Some colleges have although a low score in Research and Professional practices, but since they scored exceptionally high in perception their overall rank is higher than others. St. Stephens College has the highest score in this parameter in the year 2019. Also, in the previous two years it is observed that the colleges like St. Stephens & Hindu have substantially increased their perception over the past years and hence improved their overall ranking.

Conclusion of the Study

- To increase the rank of colleges by scoring high in parameter 1: Teaching, Learning & Resources, it is important to increase the Faculty Student Ratio with emphasis on Permanent faculty and also it is necessary to increase the number of faculty with PhD and experience.
- To increase the rank of colleges by scoring high in parameter 2: Research & Professional practice, it is important to increase the Combined metric for Publications and it is necessary to increase the Combined Metric for Quality of Publications.
- To increase the rank of colleges by scoring high in parameter 3: Graduation Outcomes, it is important to increase the Metric for University Examinations and it is necessary to increase the Combined percentage of students for Placement, Higher Studies and Entrepreneurship.
- To increase the rank of colleges by scoring high in parameter 4: Research & Professional practice, it is important to increase the Region Diversity and it is necessary to increase the Facilities for physically challenged students.

Table No. 5: Comparison of Top 27 Colleges of University of Delhi based on Parameter 4: Outreach & Inclusivity

Name of Institution	OI				Change				Interpretation		
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS		PCS	Total
Miranda College	22.06	30	1.15	20	73.21	0.717	0	0.058	0	0.268	increase in RD & ESCS max increase in RD
	24.45	30	1.44	20	75.89						
	30	30	20	20	100						
Hindu College	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in RD max increase in RD
	21.1	26.99	3.7	20	71.79	1.308	-0.111	-0.2	0	0.299	
	25.46	26.62	2.7	20	74.78						
Total	30	30	20	20	100						
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in RD & WD max in RD
	21.28	29.9	2.16	15	68.34	0.459	0.03	-0.052	-0.2	0.037	
22.81	30	1.9	14	68.71							
Total	30	30	20	20	100						
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in ESCS
	19.16	30	2.09	20	71.25	-2.946	0	0.026	0	-0.969	
9.34	30	2.22	20	61.56							
Total	30	30	20	20	100						
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in Rdand PCS max in PCS
	21.3	29.84	1.65	9	61.79	0.861	-0.003	-0.206	2.2	1.283	
24.17	29.83	0.62	20	74.62							
Total	30	30	20	20	100						
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in all max in RD
	21.74	27.16	0.67	17	66.57	0.957	0.246	0.708	0.6	1.055	
24.93	27.98	4.21	20	77.12							
Total	30	30	20	20	100						

Contd...

Name of Institution	OI				Change				Interpretation			
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS		PCS	Total	
Gargi	2018	16.33	30	1.27	20	67.6	0.954	0	-0.128	0	0.254	increase in RD
	2019	19.51	30	0.63	20	70.14						
	Total	30	30	20	20	100						
ARSD	2018	14.36	25.61	3.64	20	63.61	2.16	-0.201	-0.11	0	0.598	increase in RD
	2019	21.56	24.94	3.09	20	69.59						
	Total	30	30	20	20	100						
DDU	2018	21.28	27.94	3.04	20	72.26	-1.254	-0.036	-0.226	0	-0.543	no increase
	2019	17.1	27.82	1.91	20	66.83						
	Total	30	30	20	20	100						
KMC	2018	21.97	25.12	3.61	20	70.7	0.345	-0.168	-0.262	0	-0.072	increase in RD
	2019	23.12	24.56	2.3	20	69.98						
	Total	30	30	20	20	100						
Venky	2018	19.54	27.74	1.76	15	64.04	0.462	0.147	-0.11	-0.2	0.048	increase in RD and WD max in RD
	2019	21.08	28.23	1.21	14	64.52						
	Total	30	30	20	20	100						
Dayal Singh	2018	0	0	0	0	0	5.757	8.544	0.276	2.8	6.305	increase in all max in WD
	2019	19.19	28.48	1.38	14	63.05						
	Total	30	30	20	20	100						

Contd...

Name of Institution	OI				Change				Interpretation			
	RD	WD	ESCS	PCS	Total	RD	WD	ESCS		PCS	Total	
Lady Irwin	2018	4.41	30	0.91	12	47.32	2.109	0	0.11	1.6	1.558	increase in all max in RD
	2019	11.44	30	1.46	20	62.9						
	Total	30	30	20	20	100						
JMC	2018	6.47	30	0.69	20	57.16	2.184	0	-0.108	0	0.674	increase in RD
	2019	13.75	30	0.15	20	63.9						
	Total	30	30	20	20	100						
SGTB	2018	16.46	27.69	0.68	17	61.83	0.219	0.06	-0.06	0.6	0.363	increase in RD, WD & PCS max in RD
	2019	17.19	27.89	0.38	20	65.46						
	Total	30	30	20	20	100						
DRC	2018	0	0	0	0	0	5.253	9	0.364	0	4.933	increase in all max in RD
	2019	17.51	30	1.82	0	49.33						
	Total	30	30	20	20	100						
Maitri	2018	17.4	30	0.26	20	67.66	-0.063	0	-0.026	0	-0.034	no increase
	2019	17.19	30	0.13	20	67.32						
	Total	30	20	20	100							
Shyam Lal	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total		increase in RD, ESCS & PCS max increase in PCS
	2018	12.97	26.26	0.37	15	54.6	0.363	-0.294	0.052	1	0.549	
	2019	14.18	25.28	0.63	20	60.09						
Total	30	30	20	20	100							

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Name of Institution	OI				Change				Interpretation		
	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS		Total	
Kamla Nehru	RD	0	0	0	0	5.169	9	0.064	1	increase in all max increase in WD	
	2018	17.23	30	0.32	52.55						
	2019	30	30	20	100						
Total	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in RD
IP	RD	15.86	30	3.26	69.12	0.555	0	-0.184	0	0.093	increase in RD
	2018	17.71	30	2.34	70.05						
	2019	30	30	20	100						
Total	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in WD
Maharaja Agrasen	RD	13.56	25.87	1.18	60.61	-0.03	0.024	-0.148	0	-0.076	increase in WD
	2018	13.46	25.95	0.44	59.85						
	2019	30	30	20	100						
Total	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in RD
Shivaji	RD	13.08	27.28	2.04	62.4	0.507	-0.228	-0.064	-0.8	-0.339	increase in RD
	2018	14.77	26.52	1.72	59.01						
	2019	30	30	20	100						
Total	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in all max in WD
SSCBS	RD	0	0	0	0	3.726	7.539	0.004	4	5.757	increase in all max in WD
	2018	12.42	25.13	0.02	57.57						
	2019	30	30	20	100						
Total	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	increase in RD & WD max in RD
Keshav M.	RD	9	23.67	0.15	52.82	1.05	0.33	-0.03	0	0.445	increase in RD & WD max in RD
	2018	12.5	24.77	0	57.27						
	2019	30	30	20	100						
Total	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	

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Name of Institution	OI				Change				Interpretation			
	RD	WD	ESCS	PCS	TOTAL	RD	WD	ESCS		PCS	Total	
SGGSCC	2018	0	0	0	0	7.479	8.394	0.842	4	7.712	increase in all max in WD	
	2019	24.93	27.98	4.21	20							
Total	30	30	20	20	100							
Kalindi	2018	RD	WD	ESCS	PCS	TOTAL	RD	WD	ESCS	PCS	Total	increase in RD & WD, ESCS max in WD
	2019	0	0	0	20	20	2.514	9	0.146	-0.4	3.711	
Total	30	30	20	20	100							
Ramanujan	2018	RD	WD	ESCS	PCS	Total	RD	WD	ESCS	PCS	Total	decrease in all
	2019	18.45	27.9	8.94	20	75.29	-0.759	-0.303	-1.302	-1	-1.505	
Total	30	30	20	20	100							

Source: Analysis based on Secondary data

Note. OI: Outreach and Inclusivity; the fourth parameter which accounts for a ranking weight of 0.10

RD: Percent Students from other States / Countries (Region Diversity) carries 30 marks

WD: Percentage of Women carries 30 marks

ESCS: Economically and Socially Challenged Students carries 20 marks

PCS: Facilities for Physically Challenged Students carries 20 marks

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Table No. 6: Comparison of Top 27 Colleges of University of Delhi based on Parameter 5: Perception

Name of Institution	PR		Change		Interpretation
	PREMP	Total	PREMP	Total	
Miranda College	PREMP	Total	PREMP	Total	
2018	68.02	68.02	3.72	0.372	
2019	71.74	71.74			
Total	100	100			
Hindu College	PREMP	Total	PREMP	Total	
2018	47.9	47.9	23.56	2.356	
2019	71.46	71.46			
Total	20	20			
St. Stephens College	PREMP	Total	PREMP	Total	max increase
2018	60.75	60.75	32.12	3.212	
2019	92.87	92.87			
Total	20	20			
Lady Sri Ram College	PREMP	Total	PREMP	Total	
2018	66.99	66.99	14.25	1.425	
2019	81.24	81.24			
Total	20	20			
Sri Ram College of Commerce	PREMP	Total	PREMP	Total	
2018	79.74	79.74	-12.28	-1.228	
2019	67.46	67.46			
Total	20	20			
Hansraj College	PREMP	Total	PREMP	Total	
2018	41.54	41.54	14.55	1.455	
2019	56.09	56.09			
Total	20	20			
Gargi	PREMP	Total	PREMP	Total	
2018	13.91	13.91	14.13	1.413	
2019	28.04	28.04			
Total	100	100			
ARSD	PREMP	Total	PREMP	Total	
2018	19.45	19.45	-3.39	-0.339	
2019	16.06	16.06			
Total	20	20			

Contd...

Name of Institution		PR Change		Interpretation	
DDU		PREMP	Total	PREMP	Total
	2018	35.39	35.39	-6.56	-0.656
	2019	28.83	28.83		
	Total	20	20		
KMC		PREMP	Total	PREMP	Total
	2018	23.16	23.16	10.83	1.083
	2019	33.99	33.99		
	Total	20	20		
Venky		PREMP	Total	PREMP	Total
	2018	20.72	20.72	10.03	1.003
	2019	30.75	30.75		
	Total	20	20		
Dayal Singh		PREMP	Total	PREMP	Total
	2018	0	0	14.98	1.498
	2019	14.98	14.98		
	Total	20	20		
Lady Irwin		PREMP	Total	PREMP	Total
	2018	34.05	34.05	-2.56	-0.256
	2019	31.49	31.49		
	Total	20	20		
JMC		PREMP	Total	PREMP	Total
	2018		27.65	27.65	-4.27
	2019	23.38	23.38		
	Total	20	20		
SGTB		PREMP	Total	PREMP	Total
	2018	12.41	12.41	-3.93	-0.393
	2019	8.48	8.48		
	Total	20	20		
DRC		PREMP	Total	PREMP	Total
	2018	0	0	24.7	2.47
	2019	24.7	24.7		
	Total	20	20		

Contd...

Name of Institution	PR		Change		Interpretation	
	PREMP	Total	PREMP	Total		
Maitri	PREMP	Total	PREMP	Total		
	2018	12.41	12.41	-5.22		-0.522
	2019	7.19	7.19			
	Total	100	100			
Shyam Lal	PREMP	Total	PREMP	Total		
	2018	2.02	2.02	5.17		0.517
	2019	7.19	7.19			
	Total	20	20			
Kamla Nehru	PREMP	Total	PREMP	Total		
	2018	0	0	7.84		0.784
	2019	7.84	7.84			
	Total	20	20			
IP	PREMP	Total	PREMP	Total		
	2018	9.22	9.22	13.26		1.326
	2019	22.48	22.48			
	Total	20	20			
Maharaja Agrasen	PREMP	Total	PREMP	Total		
	2018	3.94	3.94	-0.92		-0.092
	2019	3.02	3.02			
	Total	20	20			
Shivaji	PREMP	Total	PREMP	Total		
	2018	1.02	1.02	4.14		0.414
	2019	5.16	5.16			
	Total	20	20			
SSCBS	PREMP	Total	PREMP	Total		
	2018	0	0	5.84		0.584
	2019	5.84	5.84			
	Total	20	20			
Keshav M.	PREMP	Total	PREMP	Total		
	2018	2.99	2.99	1.47		0.147
	2019	4.46	4.46			
	Total	20	20			

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Name of Institution	PR	Change			Interpretation
SGGSCC	PREMP	Total	PREMP	Total	
	2018	0	0	56.09	5.609
	2019	56.09	56.09		
	Total	20	20		
Kalindi	PREMP	Total	PREMP	Total	
	2018	0	0	1.54	0.154
	2019	1.54	1.54		
	Total	20	20		
Ramanujan	PREMP	Total	PREMP	Total	
	2018	13.91	13.91	-8.75	-0.875
	2019	5.16	5.16		
	Total	20	20		

Source: Analysis based on Secondary Data

- Colleges must also focus on achieving a higher score in parameter 5: Perception, which although carries the minimum weightage but plays a significant role in determining higher rank of colleges.

Recommendations of the Study

- Apart from increasing their ranks by emphasising on Faculty Student Ratio and Faculty with PhD and Experience, the operational expenses per student can be improved in terms of expenses on activities like seminars, and conferences. Also keeping a record of our total sponsorship amounts event-wise which are spent on all academic and cultural fests can lead to a substantial increase in operational expenses per student, there on leading to a much higher rank of the college.
- To increase the score in parameter 2: Research & Professional practice, the enrolment to Ph.D. by new faculty members should be emphasized. Emphasis should be made towards increasing quality publications by faculty members. The college authorities can award such initiatives by faculty members to initiate the same.
- To improve the score for parameter 3: Graduation Outcomes, access to systematic data and information regarding admission to higher educational institutions of Alumni is needed as it forms a major part of the graduation outcomes. Data related to placements of outgoing students is needed. Hence, institutionalisation of alumni database in a systematic manner is needed.
- To improve the score in parameter 4: Outreach & Inclusivity, it is necessary to enhance the facilities provided by college for physically challenged students.
- A look at the top colleges' best practices and various aspects of perception like Peer perception, public perception & competitiveness can help in increasing the score in parameter 5: Perception.

Scope for further Research

Best practices incorporated in different departments can be accepted and combined in another research paper. The inputs from this paper can be then used to improve rank of respective institutions.

An inter-college team can be made to suggest various best practices incorporated by different colleges

for different stakeholders so that each college can improve their overall ranking. This association will mutually benefit all the colleges and help the University of Delhi in achieving a higher rank in the coming years while competing with different universities of India.

Another area of research can be comparison of different ranking parameters and frameworks which will help in designing new framework suitable as per individual needs and facts. The size of institutions and specialised fields of study calls for specialised ranking systems. Also, there is need for specialised ranking framework for management and commerce institutions.

Limitations of the Study

The present study has the following limitations:

- The study is only limited to the conclusions made on the basis of parameters used by NIRF, and hence there is always scope of improvement in ranking on the basis of other factors and considerations used by other reputed accreditation and ranking institutions.
- The study is only limited to colleges of University of Delhi and hence has limited implications for the rest of the colleges of the country.

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