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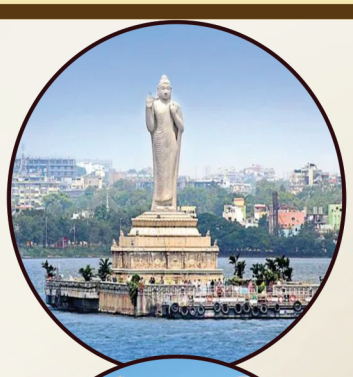
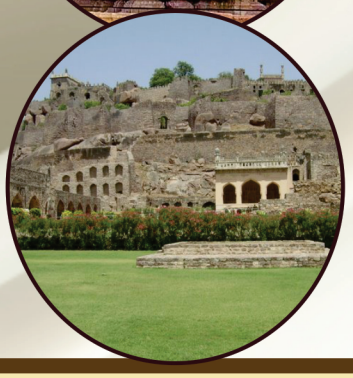
State Level Analysis of Accredited Higher Education Institutions of Telangana





राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

NAAC

VISION

To make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives.

MISSION

- To arrange for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic programmes or projects;
- To stimulate the academic environment for promotion of quality of teaching-learning and research in higher education institutions;
- To encourage self-evaluation, accountability, autonomy and innovations in higher education;
- To undertake quality-related research studies, consultancy and training programmes, and
- To collaborate with other stakeholders of higher education for quality evaluation, promotion and sustenance.

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To promote the following core values among the HEIs of the country:

- Contributing to National Development
- Fostering Global Competencies among Students
- Inculcating a Value System among Students
- Promoting the Use of Technology
- Quest for Excellence

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Foreword

It gives me immense pleasure to know that National Assessment and Accreditation Council (NAAC), Bengaluru is bringing out a State-wise Analysis of NAAC Accreditation Peer Team Reports. The criteria-wise quality parameters have been analysed scientifically and relevant statistical tools have been applied so as to bring out this research publication by NAAC.

I appreciate NAAC for exhibiting its keen interest in undertaking research with the primary data available in the form of Self-study Report (SSR), Annual Quality Assurance Report (AQAR), Peer Team Report (PTR) and Peer Review Score Sheet (PRSS) of each NAAC Accredited University and College in India.

To being with, NAAC has published the analysis of NAAC Accreditation Reports of Institutions from 14 States, viz., Andhra Pradesh, Delhi, Gujarat, Haryana, Union Territories-Jammu Kashmir and Ladakh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, North-Eastern States, Tamil Nadu, Telangana, Uttarakhand and West Bengal, I hope that the State-wise Analysis of NAAC Accreditation Reports will be helpful to the Colleges and Universities to understand the areas in which they need improvements for achieving quality and excellence in Higher Education. This report will also provide valuable information to the policy makers in Higher Education.

I take this opportunity to acknowledge the contributions of the officials of NAAC and the external experts in carrying out this analysis. I also compliment Prof. V.S. Chauhan, Chairman, Executive Committee of NAAC under whose leadership this initiative has been undertaken. I also extend my best wishes to Prof. S.C. Sharma, Director, NAAC for initiating this exercise and hope similar analysis shall also be done for the remaining states as such analysis will be useful in furthering the cause of quality education in the country.

(Prof. D.P. Singh)
Chairman, UGC
and
President General Council, NAAC

New Delhi
8th October 2020

From the Director's Desk

The National Assessment and Accreditation Council (NAAC) has its focus and concern on "stimulating the academic environment for promotion of quality of Teaching-Learning and Research in Higher Education Institutions". Its commitment is to make Higher Educational Institutions provide quality education based on Assessment and Accreditation Process carried out by the peer team members.

The core values of NAAC expects Higher Educational Institutions of the country to contribute for national development, foster global competencies among students, inculcate a value system in students, promote the use of technology and develop a quest for excellence. Maintaining Quality at the Institutional level depends on internal as well as external factors. Stake holders of Higher Education also have greater responsibility to join hands with government, policy makers and funding agencies to develop a quality education system. NAAC, through its Assessment and Accreditation process, has created greater awareness among higher educational Institutions to commit them to provide quality education based on various quality parameters.

The Internal Quality Assessment Cell (IQAC) has specific objectives and action plan for Quality Assurance programs at the Institutional level. Similarly, the Peer Teem as an external agency plays a significant role in the Assessment and Accreditation of institutions and gives a lot of feedback for Institutions to bring positive changes and holistic development of the Institutions. It is worthwhile to note that the assessment and accreditation process, initiated by NAAC, has helped meeting such challenges and has resulted in tremendous quality consciousness in institutions.

Every year NAAC assesses hundreds of Universities and Colleges (Constituent / Affiliated as well as Autonomous) across the country, through its assessors and the reports of peer team members. These reports contain information about the Institution and also specific information about the Criteria used for assessment. Keeping the rich content and applicability of the peer teem reports. NAAC has published many state level analysis reports. As a self-introspection and in order to achieve the core objectives of NAAC i.e. facilitating quality and excellence in higher education, NAAC has been analysing the 'Assessment and Accreditation Reports' (qualitative and quantitative) of states where accreditation process of the Higher Education Institutions (HEIs) by NAAC has progressed.

Such analyses of accreditation reports (State-wise and region-wise) help to understand the scenario of quality assurance in higher education and aid state governments, departments of collegiate education and universities to plan their future quality assurance and enhancement activities on the basis of the recommendations that ensue from these reports.Keeping all these in minds, the state analysis report of Telangana seeks to provide a bird's eye view of NAAC accredited institutions of the state. It does so by briefly introducing NAAC's system of assessment, accreditation and grading to provide a comprehensive quantitative and qualitative analysis of assessment reports of these institutions. Further, it also sets out a road map for further planning of quality enhancement in the Higher Education Institutions of Telangana.

This report has been prepared by a team of experts consisting of Prof. V. Venkaiah, Prof. C. R. Visweswara Rao, Prof. K. Ramakrishna, Prof. V. Sudhakar, Dr. Anjali Patwardhan Kulkarni and Dr. K. R. Vishnu Mahesh. I appreciate their efforts in taking pain in collecting, collating and interpreting information and data in terms of quality improvement. We hope that this publication will help governments, institutions and the stakeholders of higher education in enhancing the quality of Higher Education Institutions (HEIs) individually and collectively. I hope the report will help in motivating all the stakeholders to understand the ground reality in terms of strengths and weaknesses of the Institutions with respect to quality education and guide them to do better in future.

Quality - an investment not an expense

Together We Invest on Quality of Higher Education

S. C. Sharma

(Prof. S.C. Sharma)
Director

Acknowledgement

We extend our sincere thanks to Prof. D. P. Singh, Chairman, UGC and former Director, NAAC. We also convey our sincere gratitude to Prof. M. Jagadesh Kumar, Chairman, Executive Committee, NAAC for all the support and encouragement.

We are ever grateful to Prof. S. C. Sharma, Director, NAAC for his vision and continuous support in bringing out this State-wise Analysis of Accredited Higher Education Institution of Telangana.

We owe our immense debt of gratitude to Prof. R. Limbadri, Chairman Telangana State Council of Higher Education and Sri. Navin Mittal, IAS, Commissioner, Commissionerate of Collegiate Education, Telangana for their encouragement and support. We also thank Prof. V. Venkataramana, Vice-Chairman and Dr. N. Srinivasa Rao, Secretary, Department of Higher Education, Government of Telangana for providing the necessary information of higher educational Institutions.

We thank Dr. S. Srikanta Swamy, Academic Expert, Mr. Kiran R. Jere, Senior Statistician, Mr. M. S. Anil Kumar and Mrs. Manjula M. Assistants of NAAC for their support in data collection for this Report.

We sincerely thanks to all the Advisers, Deputy Advisers, Assistant Advisers and also,we extend our thanks to all other staff members of NAAC for their constant support and encouragement during the preparation of this State Level Analysis of Accredited Higher Education Institutions of Telangana report.

-Dr. K. R. Vishnu Mahesh
Assistant Adviser, NAAC

Chapter – 1

Telangana State: A Profile

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Telangana State: A Profile

Introduction

'Telangana' meaning "Land of the Telugu People", the State of Telangana was formed as an outcome of the Telangana movement. Telangana, as a geographical and political entity was th born on June 2, 2014 as the 29 and the youngest State in Union of India. However, as an economic, social, cultural and historical entity it has a glorious history of at least two thousand five hundred years or more.

1.1 Geography

Telangana is situated on the Deccan Plateau, in the central stretch of the eastern seaboard of the Indian Peninsula. It covers 114,840 square kilometres (44,340sq mi). The region is drained by two major rivers, with about 79% of the Godavari River catchment area and about 69% of the Krishna River catchment area, but most of the land is arid. Telangana is also drained by several minor rivers such as the Bhima, the Manjira and the Musi.

The Geographical area of the Telangana State for the year 2014-15 is 1,12,077 sq. kms., and stood at 12th position in India. The total geographical area of the State is 112.08 lakh hectares, of which the area under forest cover is 25.40 lakh hectares, constituting 22.66% of the land. About 39.05% area is under cultivation (43.77 lakh hectares), 12.50% is current fallow lands (14.01 lakh hectares), 7.90% of land is put to non-agricultural uses (8.85 lakh hectares), 5.42% is barren and uncultivable (6.07 lakh hects.) and 7.18% falls under other fallows (8.05 lakh hects.). The remaining 5.29% is under culturable waste, permanent pastures and other grazing lands, and land under miscellaneous tree crops and groves are not included in the net area sown (5.93 lakh hectares).

As per the Agricultural Census, 2010-11, the number of holdings in the State accounted to 55.54 lakh and the area held by these holdings was 61.97 lakh hectares. The average size of the holdings in the State is 1.12 hectares, which is highly uneconomical to operate. In the State, 62.0 percent of the holdings are marginal (less than 1 hectare) and the percentage of small holdings (1 to 2 hectares) is 23.9%. Thus, marginal and small holdings constitute about 85.9% of total agricultural holdings in the State, making agriculture a subsistence source of livelihood for a majority of the population.

The Central Deccan Plateau dry deciduous forest eco-region covers much of the State, including Hyderabad. The characteristic vegetation is woodlands of Hardwickiabinata and Albiziaamara. Over 80% of the original forest cover has been cleared for agriculture, timber harvesting, or cattle grazing, but large blocks of forest can be found in Nagarjunasagar-Srisailam Tiger Reserve and elsewhere. The more humid Eastern Highlands moist deciduous forests cover the Eastern Ghats in the eastern part of the state.

Forests constitute one of the major natural resource of the State. The 'forest area' is the area recorded as forests by the Government as per revenue records. The State has 29,242 Sq. Kms as forest area including social forestry, which amounts to 25.46% of State area. Out of 29,242 Sq.kms, Reserved Forest area is 21,024 Sq. Kms, Protected forest forms 7468 Sq.Kms and the rest of 750 Sq. Kms are unclassified.

Over 20% of the coal deposits in the country is in Telangana region. Singareni Collieries excavate coal and use it for industrial purposes and for thermal power stations. The coal supplied from this region and the power generated are supplied to entire South India.

Telangana is also rich in limestone deposits that cater to cement factories. Telangana has other mineral resources like bauxite and mica. Various colours of Limestone Slabs from Tandur, (Rangareddy District) and Mudimanikyam (Nalgonda District) are well known for flooring and paneling purposes within the country and are also being exported to many countries. Slate and Phyllites in various shades of colours Nalgonda Districs are used as decorative stones and are being exported to various countries.

1.2 Demography

Telangana is the twelfth largest state with geographical area of 112,077 km . The terrain of the Telangana region consists mostly of hills, mountain ranges and thick dense forests covering an area of 27,292 km . It is the twelfth most populated state in India with 35,193,978 residents as per the 2011 census with population density of 307/km and the sex ration (female per 1000 males) is 988. Telugu, one of the classical languages of India, is the official language of Telangana and Urdu is additional official language. About 77% of the population of Telangana speak Telugu, 12% speak urdu and 13% speak other languages. The make-up of religions in Telangana is about 85.1% Hindu, 12.7% Muslim and 1.3% Christians, and 0.9% others. Literacy rate is 66.46% as per the 2011 census. The lowest literacy rate is 49.87% in Jogulamba Gadwal and the highest literacy district is Hyderabad with 83.25%.

1.3 History and Culture

The State of Telangana has a glorious history of at least two thousand five hundred years or more. Megalithic stone structures like cairns, cists, dolmens and menhirs found in several districts of Telangana show that there were human habitations in this part of the country thousands of years ago. The history includes its governance by many rulers. It was ruled by the Satavahana Dynasty (230 BCE to 220 CE), the Kakatiya Dynasty (1083-1323), the Musunuri Nayaks (1326-1356) the Delhi Sultanate, the Bahmani Sultanate (1347-1512) and the Golconda Sultanate (1512-1687).

In 1724, Nizam-ul-Mulk, defeated Mubariz Khan and conquered Hyderabad. His successors ruled the princely state of Hyderabad, as Nizams of Hyderabad. The Nizams established the first railways, postal and telegraph networks, and the first modern Universities in Telangana. After Indian independence, though initially Nizam did not sign the instrument of accession to India, the accession did take place due to the initiative of the Government of India. In 2014, th Telangana became the 29 State of India with Hyderabad as its capital. Telangana and Andhra Pradesh share the same language and similar cultural traits, though Telangana has some unique aspects to the language and culture.

1.4 Economic Development

Telangana has shown rapid and robust economic growth amidst global and national economic slowdown. Global growth for 2019 was 2.4%, the slowest since the financial crisis. The Indian economy is expected to grow at 5% in 2019-20. Telangana however, is expected to register a real economic growth rate of 8.2% in 2019-20 - well above the national average as shown in Fig 1.1 and Fig 1.2. The driver of growth seems to be the primary and the tertiary sectors which are estimated to grow at 15.8% and 14.1% respectively. Overall, the tertiary sector still dominates the total gross value added in the economy - it contributes 65.2% of the total. The per-capita income in the State remains higher than the national average. Moreover, the State has once again experienced a higher growth rate of current price per capita income - 11.6% compared to 6.3% at the national level. Finally, the inflation measure as per the CPI (IW) is 7.46 - close to the national level which is 8.08.

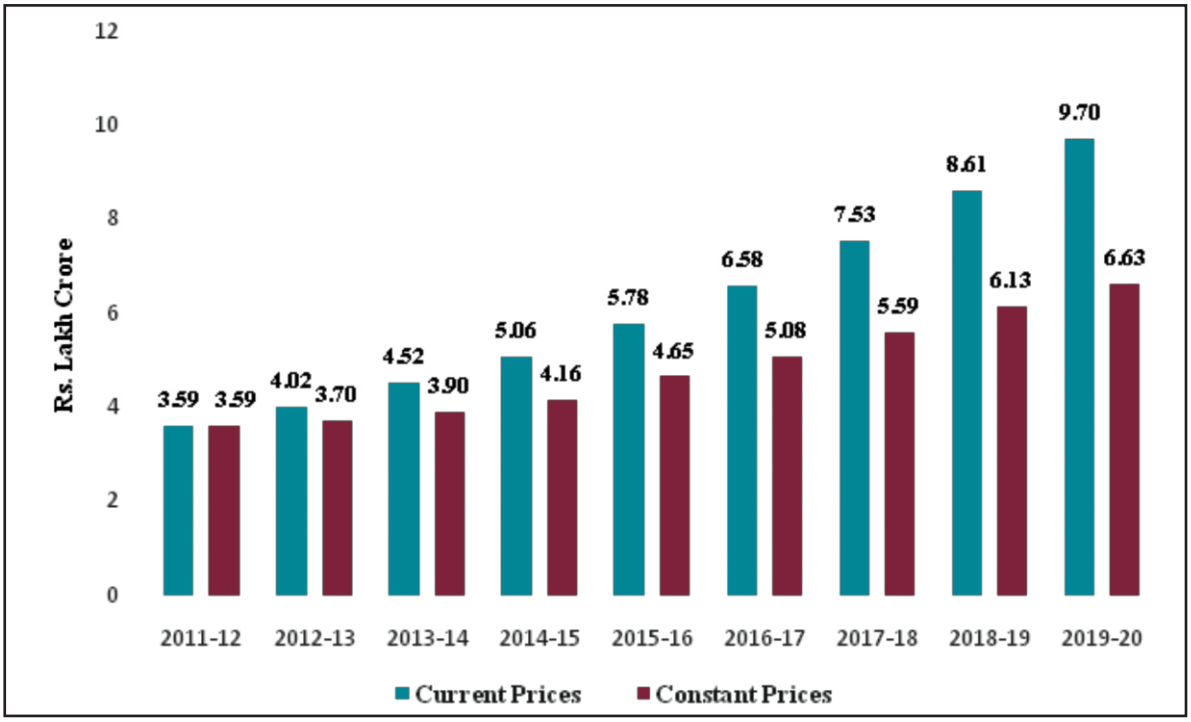

Fig. 1.1: Trend in GSDP for Telangana in Current and Constant Prices

Source: Socio Economic Outlook 2020, Planning Dept., Govt. of Telangana

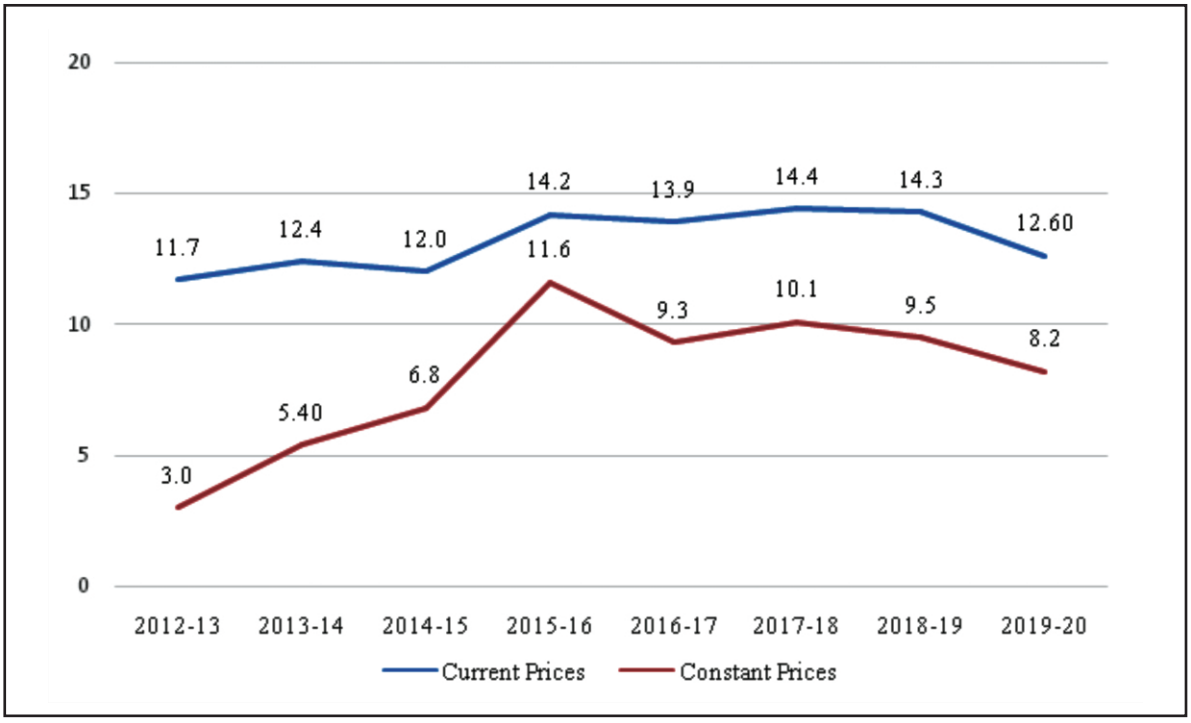

Fig. 1.2: Trend in GSDP Growth Rate for Telangana in Current and Constant Prices

Source: Socio Economic Outlook 2020, Planning Dept., Govt. of Telangana

As soon as the bifurcation took place, the State Government focused on ensuring that the State becomes self-sufficient in power. It currently provides 24x7 power to all sectors including free 24x7 power to agriculture. Telangana is the only State in the country which has the distinction of offering 24x7 power supply to agriculture serving 24.16 lakh farmers. This enhanced supply of quality power not only prevented livelihood losses out of production discontinuities arising from power cuts, but also enabled farmers to irrigate their farms at their desired timing. Further, the certainty of having quality and continuous power supply significantly boosted the economic opportunities for all sections of the population. The government plans to become self-sufficient in power and is halfway through with several projects, which will add another 11,612 megawatts to the existing contracted capacity of 16,261 megawatts.

To improve ease of doing business, the State Government has ushered in model reforms in the country through TS-i-PASS with deemed approvals beyond stipulated timelines. TS-i-PASS has paid good dividends so far, attracting as many as 11,857 industrial units with an employment potential of 13.08 lakh persons to the State.

The attractive incentives coupled with the business environment created in the State enabled the State to attract businesses in terms of new investments for reputed companies like Apple, Amazon, Facebook, Uber, Google, Microsoft, etc. While continuing to attract reputed multinational companies, the Government has ensured that Telangana leads the country in promoting entrepreneurship through T-Hub and We-Hub, a dedicated platform for Women Entrepreneurship.

In an effort to improve farm incomes, the Government has embarked on a significant expansion of irrigation potential in the Sate, duly compensating for the past injustices. Most notably, the Government has taken up Kaleswaram project to provide irrigation for 18 lakh acres spread over 13 districts by lifting 180 TMC of water from Godavari River at Rs. 80,500 crore. Since the formation of the State, the Government has created an irrigation potential of 70.10 lakh acres and stabilized an ayacut of 10.00 lakh acres under 36 projects. It has also undertaken the rejuvenation of 27,584 tanks under Mission Kakatiya. A gap ayacut of 6.09 lakh hectares have been stabilized duly restoring the storage capacity to an extent of 8.94 TMC. This has resulted in enhanced farm incomes. This focus on improving irrigation has won national acclaim and Mission Kakatiya is recognized as a model programme for other states by the NITI Aayog.

Recognizing the importance of clean land titles, the Government has undertaken a programme 'Land Records Updation Programme' (LRUP) to cover 1.78 crore survey numbers

belonging to 75.54 lakh accounts to provide hassle free land rights. Building on the success in this programme, and with an objective to improve farm incomes, the Government has embarked on the first of its kind programme to provide Direct Cash Transfer to farmers, in the form of Rythu Bandhu, a investment support of Rs. 5,000 per acre per season to every farmer as investment support to purchase seed and fertilizers and to reduce rural indebtedness. This direct cash transfer ensures that there are no distortions in agricultural inputs markets, and therefore, this model was widely acclaimed by all economists. Very soon, this programme became a model adopted by the Government of India and other States.

The Government has also brought in a novel measure to support farmer families in case of farmer deaths, by providing Rs. 5 lakhs to every farmer within 10 days of death under Rythu Bima programme. This also became a model for adoption by other States. To enhance the farmer's income, the government has taken measures to supply at subsidized cost, farm mechanization equipment to overcome the shortage of labour at the time of operations and harvesting. Micro irrigation systems, polyhouses, greenhouses for raising commercial horticulture crops are provided on subsidy. The Government has also facilitated the farmers to sell their produce at a better remunerative price on e-NAM portal.

To supplement the income of agriculture, the Government has embarked on the distribution of sheep on subsidy to sheep rearing families. With the increase in water availability in tanks and irrigation sources, the Fisheries Sector was given high priority. Fish and prawn seedlings were supplied to the fishermen free of cost so as to increase their income.

With a strong belief that Bangaru Telangana should not only focus on the needs of the present, but also on theneeds of the future, the Government has embarked upon drastically improving the forest cover from 24% to 33%, with a goal to plant 230 crore seedlings in the State. So far, 157 crores of seedlings have been planted by all the departments and general public in rural and urban areas across the State.

The efforts of the State Government are reflected in the economic growth recorded by the State. In the last five years, the average annual growth of GSDP in the State has overtaken the all-India GDP growth by a significant margin. The average annual GSDP growth of Telangana at 9.25% in the last six years is much higher than the corresponding national GDP growth of 6.97%. The nominal and real growth rates for the State are 12.6% and 8.2% respectively - as against 7.5% and 5.0% at the All-India level in 2019-20.

In fact, Telangana has consistently outperformed the national average in terms of economic growth since its formation. In 2019-20, the primary, secondary, and tertiary sectors are expected to grow at 10.7%, 11.7%, and 9.6% respectively at constant prices. The sectoral

growth rates at constant prices were higher than the national leverage for the primary and tertiary sectors.

The per-capita income is the GSDP per person in the State in a given year. In Telangana, the per capita income is Rs. 2,28,216 in 2019-20. This is higher than the national average of Rs. 1,34,432 for the same year. The State's per-capita income is growing faster than that of the country. Between 2018-19 and 2019-20, Telangana grew at 11.6% at current prices, whereas the national per capita income grew only at 6.3%.

1.5 Human Development and Welfare

Since the bifurcation, the State Government has significantly prioritized welfare, health and educational programmes. The prime objective in the welfare arena is to ensure that there is no deprived community in the State. To improve food security, 6 kg fine rice per head per family is supplied through the Public Distribution System. The Government has enhanced the amounts under Aasara Pensions programme.

It is well known that expenditure on social occasions like marriage is a significant reason for people to fall into poverty. Therefore, the Government has embarked on Kalyana Lakshmi and Shadi Mubarak schemes and significantly enhanced the amount to Rs. 1,00,016 to eligible beneficiaries from the ST, SC, BC and Economically Backward Classes communities.

The Government has brought in a novel KantiVelugu programme to ensure that people enjoy free diagnostic services for eye care, cataract surgeries, etc. This has ensured that people, especially the old, have access to eye care facilities in the event of accidental injuries and related eye care problems. This programme has witnessed tremendous success.

It was common that poor women, even though they were pregnant were compelled to go to work due to their poverty. To ensure that pregnant women can adequately focus on their own well being during pregnancy, the State Government brought in KCR Kit, with cash and kind support for items necessary for pregnant women for a safe delivery. Similarly, through Arogya Lakshmi, nutritious meals are being provided to pregnant and lactating women.

The Telangana Government's initiatives in the past 6 years have been focused on improving the reproductive and child healthcare services. As a result of its concerted efforts, the Maternal Mortality Ratio has reduced from 92 in 2013 to 76 in 2017. Moreover, the introduction of KCR Kit has tremendously increased the institutional deliveries in public institutions from 31% to 60%. The IMR has steadily declined from 34 in the year 2014 to 29 in the year 2017 and Under-5 Mortality Rate decreased from 40 in the year 2014 to 32 in the year 2017.

The State is taking measures to reduce the burden of infectious diseases and non-communicable diseases. The State ranked amongst the top three States as per NITI Aayog report for two consecutive years (2018 and 2019) in providing better medical care through public sector health facilities. In education too, the Government has enhanced its thrust on educational schemes, Samagra Shiksha Abhiyan, Right To Education, etc., with emphasis on scaling up and improving residential schools and welfare educational institutions. Government has scaled up Social Welfare Residential Schools from 296 at the time of formation of the State to 959 today. It has significantly enhanced the diet charges with supplementary nutritious diet based on prescribed by National Institution of Nutrition (NIN). Also the Government has enhanced the scale of scholarships for marginalized communities to encourage their families to enrol children in these institutions. The Government is also encouraging students to study overseas with scholarship support. Mission Bhagiratha was launched to ensure that no member of the household, especially the women, is compelled to walk to fetch water. Through this scheme, the objective is to supply piped drinking water to 80 lakh households and this project is nearing completion. Teams from other States have been constantly visiting Telangana to understand how Telangana has achieved this feat.

Rural sanitation has been given utmost importance by the Government to provide quality and healthy life to the people. The Government has partnered with the Government of India and has implemented Swatchh Bharat – Open Defecation Free Telangana Programme - for providing cleanliness and sanitation. The efforts put in by the Government by a massive drive and awareness programme could achieve the ODF status in all the districts. Under this programme, 96.32% of houses were covered with IHHLs on a saturation basis to ensure sanitation. The awareness created has helped in ensuring that latrines are not only constructed but are also utilized. Consequently, the villages have become clean, contributing to a healthy and enhanced quality of life.

1.6 Cultural Renaissance

While focusing on economic development, human development and welfare, the State Government has been consciously promoting the local festivals and traditions, aimed at cultural renaissance of the Telangana region, which has been neglected over the past few decades prior to bifurcation.

The Telangana government announced the following four icons for the State. They are the State Bird - Palapitta (Indian Roller or Blue Jay), the State Animal - Jinka (Deer), the State Tree - Jammi Chettu (Prosopis Cineraria), and the State Flower - Tangedu (Tanner's Cassia). These

icons reflect the culture and tradition of Telangana state and three of them - Tangedu flowers, Blue Jay and Jammi Chettu - are associated with the popular festivals of Batukamma and Dasara. While Tangedu flowers are used in stacking of Batukammas, spotting the Blue Jay on Dasara is considered a good omen and people worship Jammi Chettu on that day.

Accordingly, it has supported festivals like Kakatiya Festival and Deccan Festival along with religious festivals like Bonalu, Bathukamma, Medaram Jathara, Miladun Nabi, Ramadan, Diwali, Sadar and Christmas. Most notably, Medaram Jatara is drawing crores of devotees, pilgrims and visitors. The Government has also been utilizing these occasions to promote Telangana Food, its culture and the richness of its Telugu language.

1.7 Art Forms

Some classical art forms received royal patronage and attained finesse. However, the art forms of the innumerable communities spread across the length and breadth of the State give Telangana its distinct identity.

While the Kakatiya rule led to evolution of dance forms such as Perini Sivatandavam, also known as 'dance of warriors', the commoners, faced with the challenges of daily life, developed traditions of story-telling coupled with solutions to tide over them through Golla Suddulu, Oggu Kathalu and Gotralu, etc.

Several art forms like the above mingled and new forms have emerged. The ubiquitous 'Dhoom Dham' is one such evolved and composite art form. These are generally about struggle and exploitation.

A variant of Yakshagana, Chindu Bhagavatham is performed widely across Telangana. It is a theatre art form that combines dance, music, dialogue, costume, make-up, and stage techniques with a unique style and form. The word 'Chindu' in Telugu means 'jump'. As their presentation is interspersed with leaps and jumps, it gained the name of Chindu Bhagavatam. Most of the stories narrated are from 'Bhagavatam'. Qawali, Ghazals and Mushairas evolved under the patronage of Qutub Shahi and the Asafjahi, rulers in and around the capital city of Hyderabad.

1.8 Festivals

The Hindu festivals like Ugadi, Srirama Navami, Bonalu, Vinayaka Chaturthi, Dasara, Deepavali, Sankranti, Holi, Mahashivaratri are celebrated with pomp, gaiety and devotion. Dasara is the main festival with the epithet 'peddapanduga. 'Bathukamma, a part of Dasara festivities, is unique to Telangana. This colourful festival has historic, ecological, societal and

religious significance. Women clad in glittering costumes and jewellery carry beautifully stacked Bathukammas with flowers like Tangedu, Gunugu, Chamanti and others to the village or the meeting point in the street.

Making circles around the assembled Bathukammas, womenfolk recite songs in a group. The songs have their roots in Puranas, history and even in the recent political and social developments of the particular region. The fete culminates in Saddula Bathukamma where the villagers immerse the flower stacks in the nearby tanks and lakes.

Bonalu is a Hindu Festival, celebrated during the Telugu month of Ashadam (translates to June/ July of Gregorian calendar) wherein Goddess Mahakali is worshiped. The festival is also considered a thanksgiving to the Goddess for fulfilling the desires of devotees.

As part of the festival, Bojanam or Meal is offered to the presiding Mother Goddess. Women prepare rice cooked with milk, jaggery in a Brass or Earthen Pot adorned with Neem Leaves, Turmeric, Vermilion and put a Lighted Diya on top of the Ghatam.

An important part of the festival is Rangam (prophecy). Women standing atop of an earthen pot 'invokes' goddess Mahankali onto her and turns an Oracle.

Next is Ghattam. A copper pot is decorated in the form of Mother Goddess. The Ghattam is carried by a priest and is taken in procession accompanied by 'Pothurajus' and musical instruments like trumpets and drums for immersion. Pothurajus are considered the brother of Mother Goddess and are represented by well-built, bare-bodied men, wearing a small tightly draped red dhoti and bells on ankles with turmeric on bodies and vermilion on the foreheads.

Bonalu, Bathukamma, Vinayaka Chavithi and other festivals are celebrated with fervor side-by-side where the common man enjoys the festivities without any religious discrimination. Hyderabad is a testimony to this philosophy of brotherhood and peace between various religious and cultural groups. In short, Hyderabad is a beacon of multi-religious, multi ethnic, multi cultural and multi linguistic society at peace with itself.

Charminar is a monument and a mosque, which is synonymous with the history of Hyderabad. The majestic structure was completed in 1591 CE and is not only a landmark building of Hyderabad but also a famous monument of India.

Gokonda Fort was originally known as Mankal, and built on a hilltop in the year 1143. It was originally a mud fort under the reign of Rajah of Warangal. Later it was fortified between 14th and 17th centuries by the Bahmani Sultans and then the ruling Qutub Shahi dynasty.

Golconda was the principal capital of the Qutub Shahi kings. Golconda fort is undoubtedly one of most magnificent fortress complexes in India. The fortress rests on a granite hill 120 meters high while huge crenellated ramparts surround this structure.

Sammakka Saralamma Jatara or Medaram Jatara is a tribal festival of honouring the goddesses celebrated in the state of Telangana. The Jatra begins at Medaram in Tadvai Mandal in Mulugu district. It is believed that after Kumbha Mela, the Medaram jatara attracts the largest number of devotees in the country.

Medak Cathedral was built by Charles Walker Fasnet of British Wesleyan Methodists and consecrated on 25th December 1924. It is the single largest diocese in Asia and the second largest in the world after the Vatican located in Medak town.

Ramzan and Bakrid are the main festivals of the Muslims celebrated with great fervour in Telangana. Moharram too is celebrated on a large scale in Telangana. Many Hindus too take part in these festivals. Christians celebrate Christmas and Good Friday with great enthusiasm and religiosity.

1.9 Arts and Crafts

Telangana is a great place for arts and crafts and handicrafts. Bidri Craft is the unique art of silver engraved on metal. Black, gold and silver coatings are applied on this. It involves several stages like casting, engraving, inlaying and oxidizing. The name of this art form is derived from a town called Bidar (currently part of Karnataka) of the erstwhile Hyderabad state.

Banjara Needle Crafts: Banjara Needle Crafts are the traditional handmade fabrics made by Banjaras (the tribal gypsies) in Telangana. It is a form of embroidery and mirror work on fabrics employing the needlecraft.

Dokra Metal Crafts: Dhokra or Dokra is also known as bell metal craft and is widely seen in Jainoor Mandal, Ushegaon and Chittalbori in Adilabad district. The tribal craft produces objects like figurines, tribal gods, etc. The work consists of folk motifs, peacocks, elephants, horses, measuring bowl, lamp caskets and other simple art forms and traditional designs.

Nirmal Arts: The renowned Nirmal oil paintings use natural dyes for depicting themes from the epics such as the Ramayana and the Mahabharata. Also, the wood paintings and other wooden articles, has great aesthetic expression.

The origin of the Nirmal craft is traced back to the Kakatiya era. The motifs used for Nirmal craft are floral designs and frescoes from the regions of Ajanta and Ellora and Mughal miniatures.

Bronze Castings: Telangana is famous world-wide for its amazing bronze castings. While using solid casting of icons, the mould is created using several coatings of different clays on a finished wax model. This process then imparts fine curves to the cast image.

1.10 Governance

The State Government has been a forerunner in decentralizing the administration by bringing key functionaries closer to the people. In this spirit, it has enhanced the number of districts from 10 to 33, revenue divisions from 43 to 71, and mandals from 464 to 589, gram panchayats from 8,368 to 12,751. It has also enhanced the Municipal Corporations from 6 to 13, Municipalities from 68 to 128. The main objective here is to ensure that the enhanced governance and ease of access to the people result in better quality of life for the citizens of the

State.

One of the prominent improvements in Governance has been the focus on Governance in local bodies, both rural and urban, through programmes like Palle Pragathi and Pattana Pragathi. There were two phases of Palle Pragathi which were completed and Pattana Pragathi has just been launched. Over the past few years, the Government has intensively worked on improving the governance in rural and urban bodies. Accordingly, it has brought in new legislations – the Telangana Panchayat Raj Act 2018 and the Telangana Municipalities Act 2019. These legislations are enacted to stay in tune with the existing times and context in Telangana. These legislations are expected to lead to a better quality of life for the present and the future generations.

Having ensured that the local bodies are adequately empowered, adequately staffed and have adequate resources, the focus now is to ensure that all local bodies are clean. Thus garbage collection is made on a regular basis, the drains have been cleaned and at least 85% of the plants are surviving. Every house is supplied with clean water and has a toilet, etc. In terms of common facilities, every local body should have access to a nursery, graveyard, dump yard, tractor etc. These Palle Pragathi and Pattana Pragathi programmes are conducted with extensive citizen involvement. In line with the spirit of empowering Local Bodies, the structure of district administration is amended to give enhanced impetus to local governance. A new post of Additional Collector (Local Bodies) has been created in the districts to provide special impetus to governance in Gram Panchayats and Municipalities/Municipal Corporations.

The State Government strongly believes that if the villages and wards in every local body are governed properly, the State would automatically be developed. It is with this spirit that the Government has systematically over the past few years undertaken the above measures.

With the increase in cosmopolitan culture and expanding urbanization, law and order plays a critical role in the matter of the security and safety of the people and to build confidence among the investors in the State. The Government has strengthened the police department by providing more resources to strengthen law and order. The police department has taken up installation of about 5.44 lakh CCTV Cameras, which is amongst the highest in the country, to control crime. SHE teams, the first of their kind in the country, have become active to control crime against women and children. These teams are successful in inculcating confidence among women and children. These measures also helped in Hyderabad being now regarded as the best venue for various national and international conferences, summit and events.

1.11 Overall Progress

The broad-based progress in the State is reflected in the recent ranking issued by NITI Aayog based on progress made against the Sustainable Development Goals. Amongst the Indian rd States, Telangana has been ranked 3 in the country. This is a manifestation of the State Government's intent and achievements over the past few years for building up a Bangaru Telangana. Despite the above achievements, the Government has been making relentless effort in formulating and implementing innovative ideas to strengthen the economy, industry, agriculture, irrigation, sanitation, development of a green belt, improved health care, tourism, socioeconomic benefits for the well-being of the State.

Important statistical data relating to the State is presented in Table 1.1. It gives valuable information relating to sex ratio, density of population, rural-urban dispositions, literacy rate, social category statistics, population and gender data.

Table 1.1 Detailed Telangana Statistics

Items	Quantity
Capital City	Hyderabad
Area	112,077 Sq. Kms.
Districts	33
Revenue Divisions	70
Towns	141
Municipal Corporations	13
Municipalities	128
Zilla Praja Parishads	9

Mandal Praja Parishads	438
Gram Panchayats	12,751
Revenue Mandals	584
Revenue Villages (as per Census, 2011)	10,434
Inhabited Villages (as per Census, 2011)	9,834
Un-inhabited Villages (as per Census, 2011)	600
Households	83.04 Lakhs
Household size	4
Population	350.04 Lakhs
Male	176.12 Lakhs
Female	173.92 Lakhs
Sex Ratio (Female per 1000 Males)	988 Ratio
Density of Population	312 per Sq. Km
Decadal Growth Rate (2001-2011)	13.58 Rate
Rural Population	213.95 Lakhs
Rural Population Male	107.05 Lakhs
Rural Population Female	106.90 Lakhs
Rural Population Sex Ratio (Female per 1000 Males)	999 Ratio
Rural to Total Population	61.12 %
Urban Population	136.09 Lakhs
Urban Population Male	69.07 Lakhs
Urban Population Female	67.02 Lakhs
Urban Population Sex Ratio (Female per 1000 Males)	970 Ratio
Urban to Total Population	38.88 %
SC Population	54.09 Lakhs
SC Population Male	26.93 Lakhs
SC Population Female	27.16 Lakhs
ST Population	31.78 Lakhs
ST Population Male	16.08 Lakhs

ST Population Female	15.70 Lakhs
Child Population (0-6 years)	38.99 Lakhs
Child Population (0-6 years) Male	20.18Lakhs
Child Population (0-6 years) Female	18.81 Lakhs
Child to Total Population	11.14 %
Child Sex Ratio (Female per 1000 Males)	932 Ratio
Literates	206.97 Lakhs
Literates Male	117.02 Lakhs
Literates Female	89.05 Lakhs
Literacy Rate	66.54 %
Literacy Rate Male	75.04 %
Literacy Rate Female	57.99 %
Total Workers	163.42 Lakhs
Main Workers	137.20 Lakhs
Marginal Workers	26.22 Lakhs
Members of Parliament (MPs)	17
Members of Legislative Assembly (MLAs)	120
Member of Legislative Council (MLCs)	40
Towns (Statutory)	136

Source: https://www.telangana.gov.in/About/State-Profile

Chapter – 2

Higher Education in The State of Telangana

Chapter – 2

Higher Education in The State of Telangana

Introduction

The progress and advancement of people and society largely depend on the development of education, especially Higher Education. One of the important roles of the government is to deliver, foster, and promote quality in higher education. Higher Education needs to be designed in such a way that it can produce competent, responsible, and civilized persons, who can serve the State and people. The other important function of the institutions of higher learning is to participate in the generation, dissemination, and evaluation of knowledge and innovation.

2.1 Higher Education in Hyderabad Deccan

The State of Telangana is the twelfth largest State of India both interms of size and population. At the time of its emergence as the 29th State of India, the State of Telangana, inherited a conceptualized system of education and administrative setup from the united Andhra Pradesh. The roots of higher education in the State of Telangana can be traced back to the times of Asaf Jahi rulers, who ruled Hyderabad Deccan, the princely State of India. The sixth Nizam, Mir Mahboob Ali Khan, with his secular and liberal policies prepared the ground and implanted the seeds of primary education. He promoted primary education in different languages, including Telugu, Marathi, and Kannada. Many Christian missionaries and philanthropic organizations were encouraged by him to start schools for the children of the disadvantaged sections of society. Western and indigenous systems of schools were promoted, and amultilingual, multicultural, and multi-religious social environmental ecosystem was fortified. The liberal initiations and indefatigable efforts of the sixth Nizam prepared the ground for the future higher educational institutions in the State. The seventh Nizam, Mir Osman Ali Khan, Hyderabad, introduced compulsory primary education in all the districts of the State and promoted public education. He strongly believed that strengthening of primary education would lead to quality higher education. He allocated adequate funds for the education of children. During his period Urdu language was declared as the official language and it was promoted across the State. Persian and Arabic were the only other languages encouraged, besides English, which was taught as a second language.

During his time the Osmania University was established in 1918 with the following objectives:

- The ancient and modern, the oriental and occidental arts and sciences are synthesized in such a manner that the defects of the present system of education are rectified.
- The ancient as well as modern methods of physical, intellectual, and spiritual education are to be fully utilized along with an effort for the propagation of knowledge. The moral improvement of the students is regulated on the one hand, and research work of a higher order in all branches of knowledge is conducted on the other.

Higher Education was offered in Urdu and also in English medium. Many scholars across the world were invited to join Nizam College and Osmania University. After Independence, in the year 1948 Hyderabad Deccan was merged with the Indian Union. As part of the reorganization of States, in 1956 the Government of India merged the Telugu speaking people of Madras Presidency (Andhra) and a major portion of the Hyderabad State into one State and named it as the State of Andhra Pradesh.

2.1.1 Higher Education in the United State of Andhra and Telangana

During 1956 to 2014, the State of Andhra Pradesh made significant efforts in expanding access to higher education by establishing new universities and colleges. Responding to the guidelines of the Government of India and the UGC, the Government of Andhra Pradesh enacted ACT. No 16 of 1988 to establish the Andhra Pradesh State Council of Higher Education (APSCHE). The primary objective behind forming this institution is to plan and coordinate Higher Education at State level and also to coordinate with the UGC and Ministry of Education at the central level. As part of its mandate the Council is expected to consult various stakeholders in Higher Education and formulate quality standards for transacting effective and socially relevant education. The APSCHE evolved perspective plans of the State and introduced several innovations in the university education, especially in administration, governance, curriculum, and assessment and examinations.

2.1.2 Higher Education in the State of Telangana

In the year 2014, the State of Andhra Pradesh was bifurcated into the State of Telangana and the State of Andhra Pradesh. As part of the State bifurcation norms, the Andhra Pradesh State Council for Higher Education (APSHE) was also divided and the Government of Telangana constituted its Telangana State Council for Higher Education (TSSHE).

2.1.3 Department of Higher Education, the Government of Telangana

Taking into cognizance the rich intellectual tradition of the united Andhra Pradesh State, especially in field of higher education, the Department of Education, Government of

Telangana, is making sincere efforts to improve and expand higher education in all the areas of the State. The Department of Higher Education of the Government of Telangana is currently engaged in bringing world class opportunities of higher education and research to the country so that Indian students have easy access to the international higher educational fora. At present the Department of Higher Education at the State level deals with the higher education, i.e., college education, technical education, and the universities. A few objectives of the department are:

- Formulating the State Policy on Education and to ensure that it is implemented in letter and spirit
- Providing planned development, including expanding access and improving the quality of the educational institutions throughout the country, including in the regions where people do not have easy access to education.
- Paying special attention to disadvantaged groups like the poor, females and the minorities
- Providing financial help in the form of scholarships, loan subsidy, etc., to deserving students from deprived sections of the society
- Encouraging international cooperation in the field of education.
- In addition to the above, the development of undergraduate and postgraduate education, increasing access to higher education, encouraging private participation in the expansion of collegiate education, development of infrastructure in Government colleges, ensuring maintenance of high standards of education in colleges are the other functions of the Department of Higher Education. At present the following are the Institutions under the administration of Higher Education Department of the Government of Telangana.
- Telangana State Council of Higher Education, Hyderabad
- State Board of Technical Education and Training, Hyderabad
- Hindi Academy, Hyderabad
- Sanskrit Academy, Hyderabad
- Telugu Academy, Hyderabad
- Jawaharlal Nehru Technological University, Hyderabad
- Jawaharlal Nehru Architecture & Fine Arts University, Hyderabad

- Potti Sree Ramulu Telugu University, Hyderabad
- Dr. B. R. Ambedkar Open University, Hyderabad
- Osmania University, Hyderabad
- Kakatiya University, Warangal
- Palamuru University, Mahabubnagar
- Telangana University, Nizamabad
- Mahatma Gandhi University, Nalgonda
- Satavahana University, Karimnagar.

At present the State of Telangana has six (6) conventional universities, ten (10) specialized universities and one state level specialized institute. The governance and quality of Higher Education can be seen at two levels: (i) relation between the State and higher education institutions in terms of legislative authority, financial arrangements and in actual practice; and (ii) the quality of education, Governance structure and functioning within the institutions of higher education.

The Government of Telangana has been making efforts to promote the quality of higher education by means of meaningful academic reforms and governance and institutional restructuring initiatives. Despite all such initiatives, higher education in the State is facing inadequate financial and human resources. Telangana had many institutions that ranked high on the Government of India's National Institutional Ranking Framework started in 2016. However, in the 2020, in the NIRF rankings released on June 11, 2020, most of them slipped in the rankings, with a few exceptions.

The vision of the State Government involves a three-pronged approach. The first thing is to improve the Gross Enrolment Ratio (GER) which was around 36 percent in 2017-18. Though the GER of Telangana is nearly 10 percent higher than that of the national average, access for education to every student in the State is the topmost priority of the Government. The second focus area of the Government is ensuring basic infrastructure in both government and the private sector. A lot of focus is on maintaining the infrastructure, which includes buildings, laboratories, libraries, equipment, furniture, and other basic amenities. The third is improving overall quality in terms of teaching and learning. The latest practices are integrated into the education system of the State to improve its quality.

To provide equal, qualitative as well as professional qualification to girls and boys, the State government is introducing various educational initiatives across Telangana. Low cost

education in comparison to other states, easy access for all, and equity in higher education, free education to girls up to PG level, free education from KG to PG, and special education centers for women in residential degree college are a few important initiatives of State Government.

2.2 Collegiate Education

Collegiate Education monitors the administrative functions and academic quality of 126 Government Degree Colleges and 69 Aided Colleges with an enrolment of 91,966 and 58291 students respectively in the State. Government of India introduced the concept of Model Degree Colleges covering 374 districts in the country through XI Five Year Plan based on low Gross Enrolment Ratio in Higher Education. The assistance from MHRD, Government of India under RUSA is 65% and 35% has to be borne by the Government of Telangana.

2.3 Telangana State Council of Higher Education

The Telangana State Council of Higher Education (TSCHE) came into existence by an Order of the State Government of Telangana by adopting the APSCHE Act 16 of 1988 as per the provisions of the AP Reorganization ACT 2014.The Telangana State Council of Higher Education is primarily a coordinating body between the University and the University Grants Commission (UGC), the State Government and the Universities. It is the general duty of the Council to coordinate and determine standards in institutions of Higher Education, Research, Scientific and Technical Institutions in accordance with the guidelines issued by the University Grants Commission from time to time. Act 16 of 1988 envisages three distinct functions (a) Planning and Coordination, (b) Academic Functions and (c) Advisory Functions.

2.3.1 Planning and Coordination

(i) The TSCHE seeks to prepare consolidated programs in the sphere of Higher Education in the State in accordance with the guidelines that may be issued by the University Grants Commission from time to time, and assist in their implementation, keeping in view the overall priorities and perspectives of Higher Education in the State. Its functions include.

(ii) To assist the University Grants Commission in respect of determination and maintenance of standards and suggest remedial action wherever necessary.

(iii) To evolve perspective plans for the development of Higher Education in the State.

(iv) To forward the development programs of Universities and Colleges in the State to the University Grants Commission along with its comments and recommendations.

(v) To monitor the progress of implementation of such developmental programs.

(vi) To promote cooperation and coordination of the educational institutions among themselves and explore the scope for interaction with industry and other related establishments.

(vii) To formulate the principles as per the guidelines of the Government and to decide upon, approve and sanction new educational institutions by according permission keeping in view the various norms and requirements to be fulfilled; and,

(viii) To suggest ways and means of augmenting additional resources for Higher Education in the State.

2.3.2 Academic Functions

These are: (i) To encourage and promote innovations in curricular development, restructuring of courses and updating of syllabi in the University and the Colleges; (ii) To promote and coordinate the program of Autonomous Colleges and to monitor its implementation; (iii) To devise steps to improve the standards of examinations conducted by the Universities and suggest necessary reforms; (iv) To facilitate training of teachers in Colleges and Universities; (v) To develop programs for greater academic cooperation and inter-action between University teachers and College teachers and to facilitate mobility of students and teachers within and outside the State; (vi) To conduct entrance examination for admission to institutions of Higher Education and render advice on admissions; (vii) To conduct sports, games, physical education and cultural activities in the universities and colleges; (viii) To encourage extension activities and promote interaction with the agencies concerned in the matter of regional planning and development; and (ix) To prepare an overview report on the working of the universities and the colleges in State and to furnish a copy of the report to the University Grants Commission.

2.3.3 Advisory Functions

To advise the Government (i) on determining the block maintenance grants and to lay down the basis for such grants; (ii) on setting up a State Research Board so as to link research work of educational institutions with that of the research agencies and industry, keeping in view the overall research needs of the State; (iii) on the Statutes and Ordinances to various Universities in the State (excluding Central Universities) and on the Statutes proposed by the Universities in the State. (iv) to work in liaison with the Southern Regional Committee of the All India Council for Technical Education in the formulation of the schemes in the State; (v) to make new institutions self-sufficient and viable; (vi) on the policy of 'earning while learning'

and, (vii) to perform any other functions necessary for the furtherance of Higher Education in the State.

The Telangana State Council of Higher Education (TSCHE), ever since its inception, is striving hard, to bring quality in higher education and to sustain the same in spite of several transitions triggered due to State bifurcation and globalization. The consistent endeavor of the Council is to improve and expand higher education in all areas equitably, recognize and eliminate areas of disparities in access, and emphasize the relevance of higher education for national development. At present, the focus areas of TSCHE are:

- Thrust on Industry- academia collaboration.
- Improved funding to the Universities (2018-19).
- Filling up of Teaching vacancies.
- Conduct Accreditation and Sensitization NAAC workshops for improving quality in Higher Education.
- Introduce of student centric academic processes including Mentoring and guidance.
- Conduct Common Entrance Tests (CETs).
- Prepare Perspective Plans and Strategic plans.
- State level awards are being introduced to encourage the best innovators to the teachers in Higher Education.
- Conduct refresher courses for the upgradation of knowledge of teachers in Higher Education.

The State of Telangana adopted the Common Entrance Test (CET) to bring in quality in Higher Education. These CETs are conducted both at the entry to the UG and the PG courses to ensure quality on one hand and extending choice of choosing the institution on the other.

2.4 Universities in Telangana

The State of Telangana has a total of 24 Universities in the year 2018, which includes 16 (sixteen) state universities and one specialized medical science institute. Among the 16 state universities, six (6) are conventional universities, ten (10) specialized universities .The details are shown in Table 2.1 .The list of 10 state Universities and the list of 6 conventional universities along with their year of establishment is shown in Table 2.2 and Table 2.3 respectively. In addition to these there exists one State level specialized medical institute as

mentioned in Table 2.4. The State has three (3) Central Universities, two (2) Deemed-to-be Universities and two (2) National Level Institutes.

Table 2.1 Details of Universities in Telangana State

Particulars	No
State Universities	10
Central/Centrally Funded/ Deemed Universities	06

Table 2.2 Conventional Universities: Total Six

Sl. No.	University	Year of Establishment
1.	Osmania University, Hyderabad	1918
2.	Kakatiya University, Warangal	1976
3.	Telangana University, Nizamabad	2006
4.	Mahatma Gandhi University, Nalgonda	2007
5.	Palamuru University, Mehboob Nagar	2008
6.	Satavahana University, Karimnagar	2008

Table 2.3 State Universities

Sl. No.	University	Year of Establishment
1.	Professor Jayashankar T.S.Agriculture University, Hyderabad	2014
2.	Kaloji Narayana Rao University of Health Sciences, Waranagal	2014
3	Sri Konda Laxman TS Horticultural University, Hyderabad	2014
4.	Sri. P.V. Narasimha Rao TS Veterinary University, Hyderabad	2014
5.	Rajiv Gandhi University of Knowledge & Technologies, Basara	2014
6.	JN Architecture & Fine Arts University, Hyderabad	2008
7.	NALSAR University of Law, Hyderabad	1998
8.	PS Telugu University, Hyderabad	1985
9.	Dr. B.R. Ambedkar Open University, Hyderabad	1982
10	Jawaharlal Nehru Technological University, Hyderabad	1972

Table 2.4 Specialized State Level Institution

1.	Nizam's Institute of Medical Sciences, Hyderabad	1989

The details of Central Universities (3), Deemed-to-be Universities (2) and National level Institutes (2) and their year of establishment is shown in Table 2.5. The complete picture of total 24 Universities along with their type is represented in the Fig. 2.1. The growth of the Universities in the state since 1979 is shown in Table 2.6. The bar chart presented in Fig. 2.2 shows the growth of the different type of Universities year-wise.

Table 2.5 Different Types of Universities

Particulars		Year
Central Universities-3		
1	The English & Foreign Languages University, Hyderabad	1972
2	University of Hyderabad, Hyderabad	1974
3	Maulana Azad National Urdu University, Hyderabad	1998
Deemed-to-be-Universities-2		
1	International Institute of Information Technology, Hyderabad	1998
2	ICFAI University, Hyderabad (Private)	2008
National Level Institutes-2		
1	National Institute of Technology (Ex-REC),Warangal	2003
2	Indian Institute of Technology (IIT), Hyderabad	2008

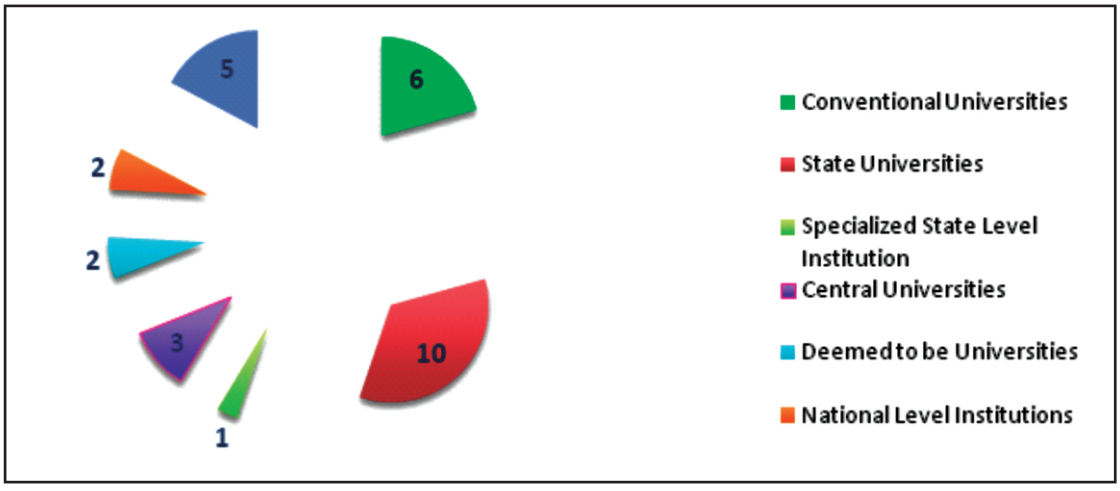

Fig. 2.1: Types of Universities (Year 2020)

Table 2.6 Growth of the Universities – Year-wise

Universities	Growth of the Universities-Year											
	1979	1980	1990	2000	2005	2006	2007	2008	2009	2014	2018	2020
State Universities	1	3	6	6	6	7	8	11	11	16	16	16
Central & National level Institutions	0	2	2	5	5	5	5	5	5	5	5	5
Deemed/State Level Institutions	0	0	0	0	1	1	1	3	3	3	3	3
Private Universities												5
TOTAL	**1**	**5**	**8**	**11**	**12**	**13**	**14**	**19**	**19**	**24**	**24**	**29**

Source: TSCHE Statistical Booklet 2018 & TS Order 16, Law Department, Telangana Pvt.Universities-2020

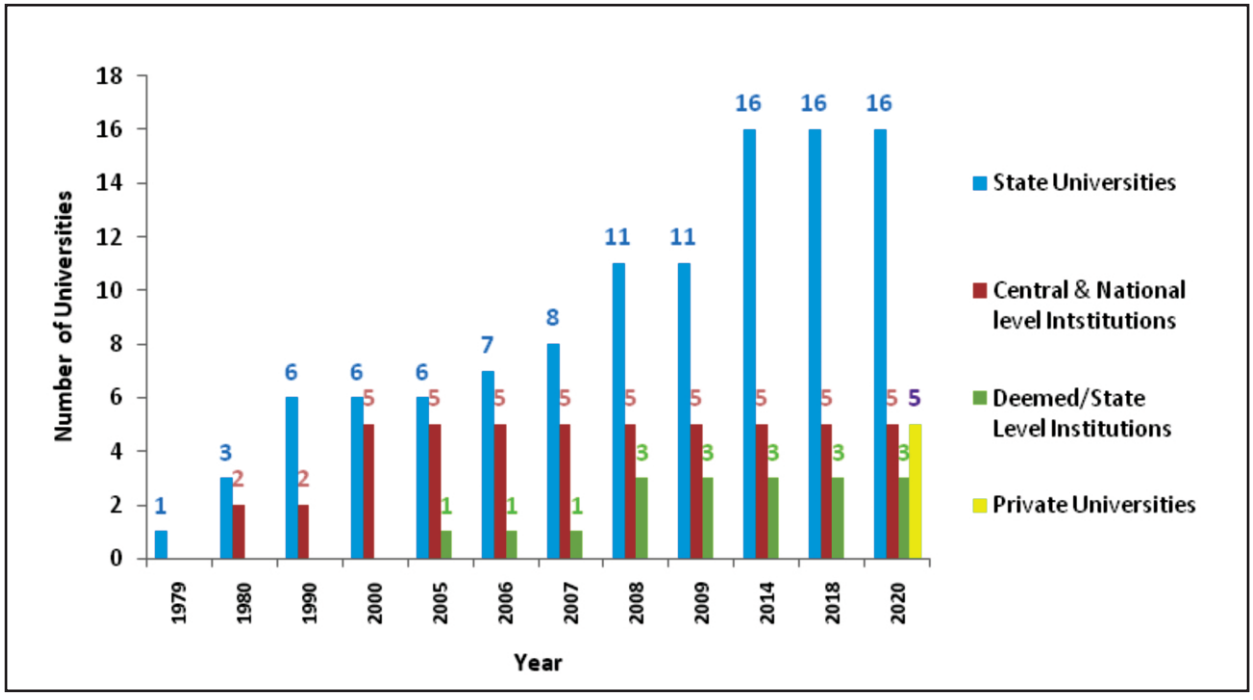

Fig. 2.2: Growth of Universities Year-wise

The State of Telangana houses some of the most premier educational institutions of the country. It incorporates many universities, management colleges, research centers, and technical institutes.The State of Telangana has three central universities, including the University of Hyderabad, English and Foreign Language University (EFLU), and Maulana Abul Kalam Azad National Urdu University. All these three universities are in Hyderabad city.

The total number of seats available program wise and category-wise are presented in Table 2.7.There is a continuous improvement till 2017-18 and thereafter a downfall is recorded. The details of number of Colleges with Intake and Enrollment for the Academic Years-2015-16 To 2018-19 in Telangana State is shown in Table 2.8.The number of vacant seats in these institutions w.r.t their enrollment number is shown year wise in the bar chart presented in Fig. 2.3.It is observed from the figure that there is a steady rise in number of vacant seats till 2017 18. Further, it reveals that the number of seats available are decreased, which might have caused a slight improvement in filling of seats in 2018-19.

Table 2.7 Number of Colleges and Seats available under different Categories

Year	Category	Engineering	MCA	MBA	B.Ed.	Law	Degree Colleges
2014-15	Govt./Univ.	14	15	21	4 3*	(3ydc]	124
	Aided	0	0	0	2	0	54
	Un-aided	330	73	410	268	14	1097
	Total Colleges	344	88	431	274	17	1275
	Total Seats	184419	5846	55034	29044	2670	246176
2015-16	Govt./Univ.	14	15	21	6	4* (3ydc]	126
	Aided	0	0	0	0	0	54
	Un-aided	249	33	322	219	13	1098
	Total Colleges	263	48	343	225	17	1278
	Total Seats	126468	2966	41796	22670	2850	283823
2016-17	Govt./Univ.	14	13	21	07	3* (3ydc]	130
	Aided	0	0	0	0	0	54
	Un-aided	210	24	284	210	18	941
	Total Colleges	224	37	305	217	21	1125
	Total Seats	105132	2436	32934	19200	3190	378654
2017-18	Govt./Univ.	14	13	21	07	03	136
	Aided	0	0	0	0	0	50
	Un-aided	198	29	283	209	18	886@
	Total Colleges	212	42	304	216	21	10720
	Total Seats	97961	2736	32710	18350	4610	421947
2018-19	Govt./Univ.	14	13	18	7	3	138*
	Aided	0	0	0	3	0	50
	Un-aided	188	29	293	208	18	861
	Total Colleges	202#	42	311	218	21	1049··
	Total Seats	97134	2786	34562	19050	3610	403002

***3years degree course**

Table 2.8 No. of Colleges with Intake and Enrollment for the Academic Years-2015-16 To 2018-19 in Telangana State

Program	No. of Colleges 2015-16					No. of Colleges 2016-17					No. of Colleges 2017-18					No. of Colleges 2018-19				
	Govt.	Pvt.	Total	Total Intake	Enrol-ment	Govt.	Pvt.	Total	Total Intake	Enrol-ment	Govt.	Pvt.	Total	Total Intake	Enrol-ment	Govt.	Pvt.	Total	Total Intake	Enrol-ment
Degree	180	1098	1278	283223	231257	184	941	1125	408266	213321	136	936	1072	421947	202232	138*	911	1049	403002	202394
Engineering	19	249	268	115912	70792	14	206	220	104758	73686	14	198	212	97961	68594	14	188	202	97134	68138
B-Pharmacy	4	141	145	11438	9265	4	119	123	9226	7994	3	128	131	10283	8158	3	124	127	9792	8542
B.Ed.	6	219	225	22670	16095	7	210	217	19200	13824	7	209	216	19350	1383	47	211	218	19050	17743
B.P.Ed.	3	15	18	1760	1707	3	15	18	1760	1725	3	14	17	1760	1352	3	14	17	1760	1239
Law (3&5yrs)	3	14	17	2850	2622	3	18	21	3190	2934	3	18	21	4710	4474	4	18	22	4830	4509
MCA	15	34	49	2966	632	13	24	37	2436	2211	13	29	42	2736	1814	13	29	42	2786	1879
MBA	21	326	347	41796	31975	21	284	305	32934	28047	21	283	304	32710	28068	18	293	311	34562	27507
Total	**251**	**2096**	**2347**	**483215**	**364345**	**249**	**1817**	**2066**	**581770**	**343742**	**200**	**1815**	**2015**	**590457**	**328526**	**200**	**1788**	**1988**	**572916**	**331951**
Courses offered in the UG Colleges																				
PG	76	444	520	25285	21745	76	444	520	25285	22251	76	444	520	25285	21492	76	446	522	25415	23134
M.Tech	8	163	171	15152	7795	8	135	143	10998	6001	8	74	82	5996	4799	8	86	94	7743	5185
M.Pharmacy	4	126	130	7820	4072	4	103	107	4694	3396	4	91	95	2790	1352	3	109	112	3929	2763
Pharm-D	0	48	48	1440	1310	0	54	54	1620	1276	0	56	56	1645	1398	0	55	55	1600	1479
Pharma-D (PB)	0	20	20	200	120	0	26	26	260	197	0	24	24	240	186	0	24	24	240	127
Total	**88**	**801**	**889**	**49897**	**35042**	**88**	**762**	**850**	**42857**	**33121**	**88**	**689**	**777**	**35956**	**29227**	**88**	**719**	**807**	**38927**	**32688**

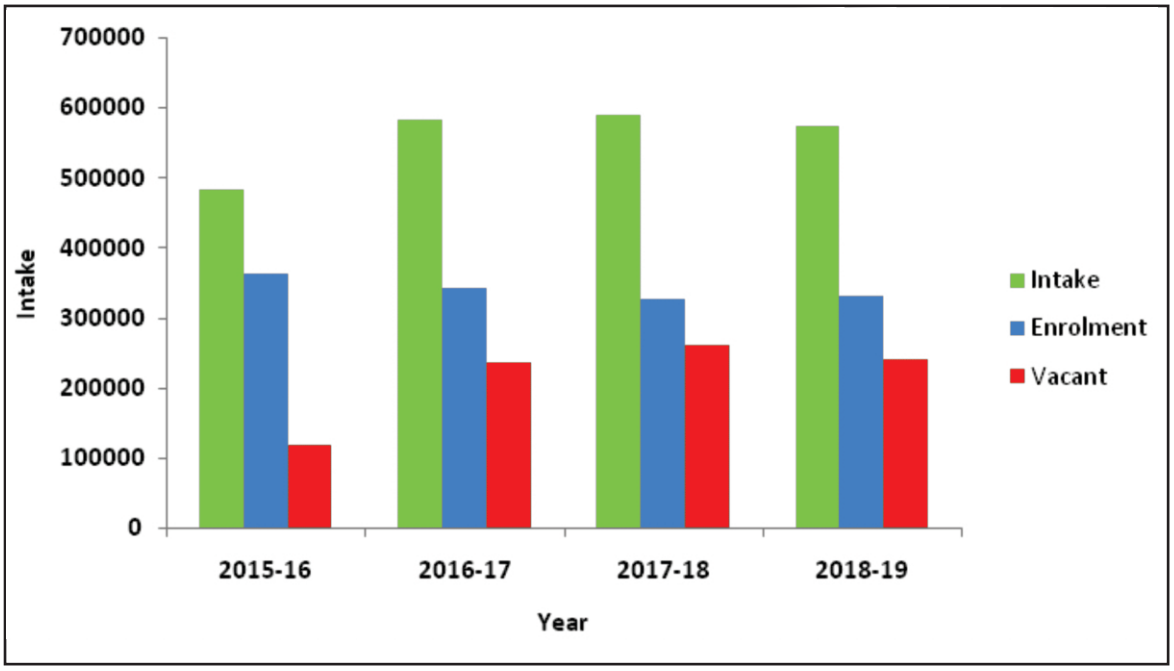

Fig. 2.3: Details of Intake, Enrollment and Vacant seats in total Colleges

2.4.1 Private Universities in the State of Telangana

The Government of Telangana opened gates to private universities and invitedapplications from various corporates, philanthropic organizations, and other sponsoring societies in the country. As per the provisions of Act No. 11 of 2018 and G.O. Ms .No. 26 of 2018 (HE), Government of Telangana laid out the procedures for permitting the establishment of Private Universities in the geographical jurisdiction of the Telangana State.

As per the government order 16 issued by the Law department, the Telangana State Private Universities, 2020 will be published in Telangana Gazette in English, Telugu, and Urdu languages as Telangana Ordinance No.1 of 2020. The ordinance set the pace for creating separate acts for each private university which would be established in the State. The state government has already brought in Telangana State Private Universities (Establishment and Regulation) Act, 2018. These five universities are Women's University in Sadasivpet, Mallareddy University at Dhulapally, Mahindra University in Quthbullapur, Anurag University at Ghatkesar and SR University at Hasanparthy in Warangal (Urban) district. Private universities are divided into two categories. Greenfield and Brownfield. The Greenfield universities would have full autonomy to decide on fee, curriculum, and other aspects. The Brownfield universities are expected to follow the existing state norms.

Table 2.9 PG Courses sanctioned (2006-2018) in Private colleges – University-wise Data

Sl. No.	Univ-ersity	No. of Colleges Permitted by State Council of Higher Education											
		2006	2007	2008	2009	2010	2011	2011	2013	2014	2015-16 & 2016-17	2017-18	2018-19
1.	OU	50	31	28	24	43	10	12	4	48	**No New PG courses sanctioned from 2015-16 to 2018-19**	2	-
2.	KU	27	18	26	6	18	6	8	16	45		9	-
3.	TU	-	-	-	-	0	4	3	1	11		-	-
4.	MGU	-	-	-	-	12	2	6	7	14		2	-
5.	PU	-	-	-	-	3	0	0	1	12		2	-
6.	SU	-	-	-	-	10	1	2	4	20		4	-
Total		77	49	54	30	86	23	31	33	150		19	-

2.4.2 Professional/Technical Education

The Technical Education Department is responsible for the development of Technical Education both at the Degree (Graduate and Postgraduate in Professional Courses) as well as Diploma level (Technicians). The Department implements the policies of the Government of Telangana and also coordinates with the All India Council for Technical Education (AICTE) in processing the applications for the establishment of Engineering Colleges, M.B.A., M.C.A., B. Pharmacy and Polytechnics and enhancement of sanctioned intake, introduction of new courses etc., in them. The Department manages Government Polytechnics and monitors private unaided Polytechnics and professional Colleges.

Table 2.10 shows the Intake details of Professional courses like Engineering, Pharmacy, MBA etc., from 2014 to 2018. The same data is presented in the form of diagram in Fig. 2.4 It is observed that there is a fall in Intake in number of seats almost in all courses. In case of Engineering there is a drastic drop in number of Institutions as well as Number of seats.

Table 2.11 shows the list of Professional colleges in Telangana based on 2014 published data and the same is also presented in the form of Pie chart in Fig. 2.5.

Table 2.10 Intake details of Professional Courses from 2014 to 2018

Sl. No.	Year	UG Engineering		B Pharmacy		MBA		MCA		M.E./ M.Tech.		M. Pharm.		L.L.B		B.Ed.	
		No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake
1	2014-15	344	184419	171	16320	431	55034	88	5846	272	31250	155	12568	17	2670	13	1260
2	2015-16	263	126468	145	11438	343	41796	48	2966	171	15152	130	7820	17	2850	17	1760
3	2016-17	224	105132	123	9476	305	32934	37	2436	143	10998	107	4694	21	3190	17	1760
4	2017-18	212	97961	131	10283	304	32710	42	2736	82	5996	95	2790	21	4610	17	1760
5	2018-19	202	97134	127	9792	311	34562	42	2786	94	7743	112	3929	21*	3610	17	1760

Table 2.11 Professional Colleges in Telangana

Particulars	No.
Engineering Colleges	336
Government Engineering Colleges	17
Medical Colleges	17
MCA Colleges	197
MBA Colleges	496
Education Colleges	225
Pharmacy Colleges	168
Law Colleges	18
Total	**1474**

Source: http: //www.ap college admissions.com/2014/06/universities -and-colleges-in-telangana.html

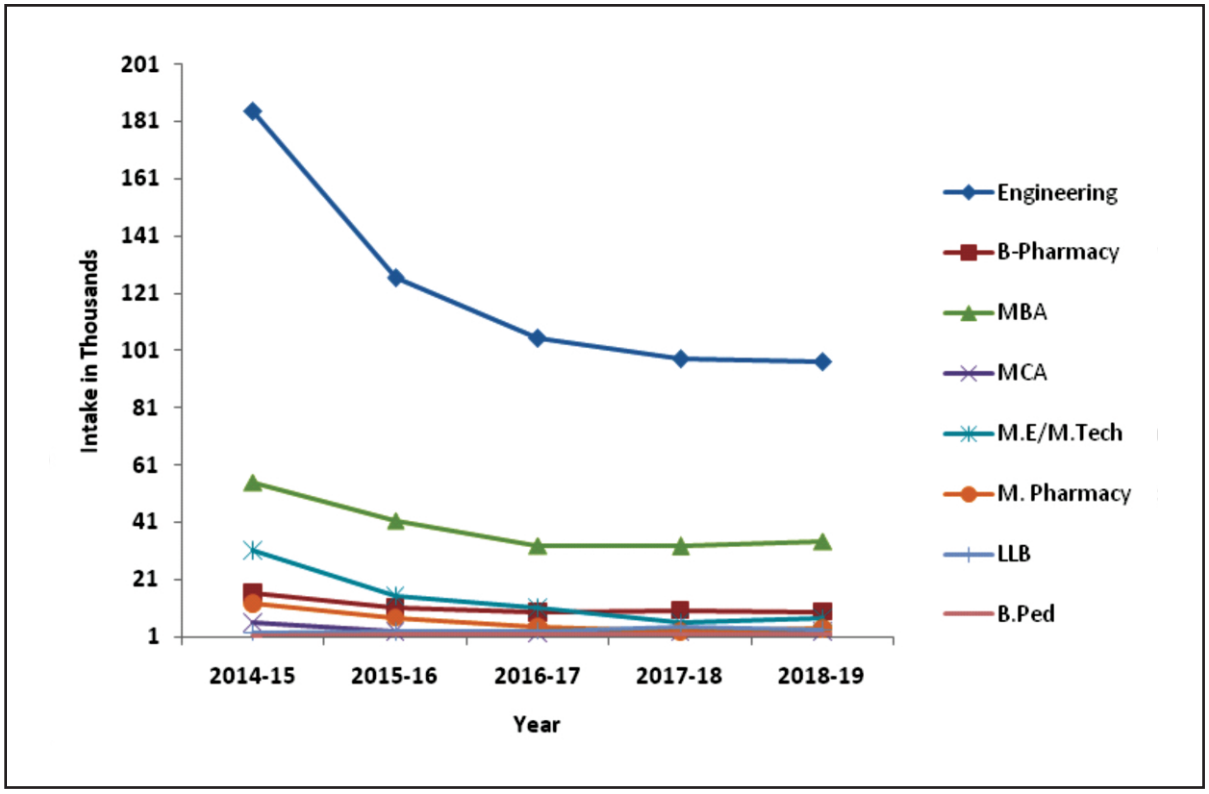

Fig. 2.4: Trend showing Intake details in Professional Courses

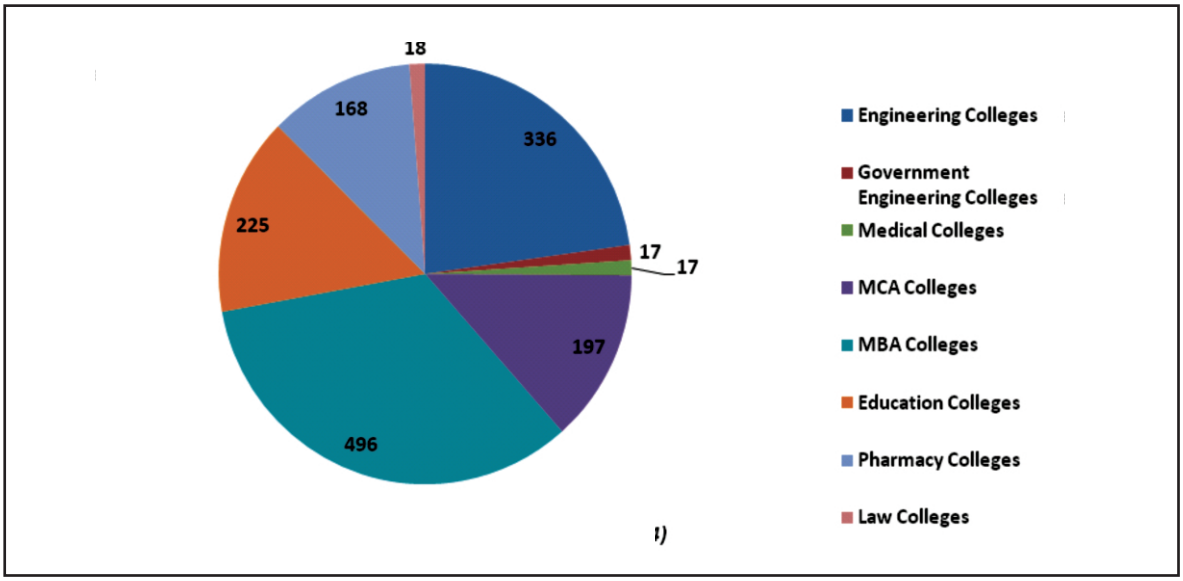

Fig. 2.5: Professional Colleges in Telangana (2014)

The first technological university of the country -Jawaharlal Nehru Technological University Hyderabad (JNTUH)-and the University of Hyderabad featured as two of the top universities in the country for academic excellence, as per Ministry of Human Resource Development's survey conducted among 3,500 higher educational institutions. Table 2.12 shows the distribution of Professional colleges in Telangana State, University wise with complete details of number of colleges and bifurcation of seats in University/Government and Private Institutions.

Table 2.13 shows the private degree colleges sanctioned by Telangana State Council of Higher Education since 2006 onwards it also presents the number of colleges divided into Urban, Rural and Tribal areas. The number of Government-aided Colleges is very less. In 2018-2019, there were only 3 B.Ed. Colleges and 50 undergraduate Degree colleges. Table 2.14 shows the details of colleges sanctioned in each Mandal to provide Higher Education in the state of Telangana. It also represents year wise the total percentage of Mandals brought into Higher Education access. Table 2.15 shows the number of Private and Un-Aided degree colleges and each University since 2006.

2.12 Abstract Showing Professional Colleges Distribution in Telangana State for the Year 2018-19

Sl. No.	Type of Colleges	Affiliating University	No.of Colleges		Total Colleges	Intake		Total Intake
			Univ/ Govt.	Pvt.		Univ/ Govt.	Pvt.	
1	Engineering	JNTUH	3	173	176	1380	86046	87426
		OU	2	11	13	420	6230	6650
		KU	3	4	7	825	1800	2625
		MGU	1	0	1	180	0	180
		JNAFAU	1	0	1	160	0	160
		PJSTAU	2	0	2	51	0	51
		Veterina	2	0	2	42	0	42
	TOTAL		**14**	**188**	**202**	**3058**	**94076**	**97134**
2	MBA	JNTUH	1	137	138	60	12587	12647
		OU	6	119	128	420	16965	17385
		KU	5	19	24	420	1500	1920
		MGU	1	5	3	60	480	540
		PU	2	3	5	120	240	360
		SU	2	7	9	120	1260	1380
		TU	1	3	4	30	300	330
	TOTAL		**18**	**293**	**311**	**1230**	**33332**	**34562**
3	MCA	JNTUH	2	3	5	60	180	240
		OU	6	22	28	360	1540	1900
		KU	3	3	6	160	336	496
		MGU	1	0	1	60	0	60
		TU	1	1	2	30	60	90
	TOTAL		**13**	**2.9**	**42**	**670**	**2116**	**2.786**
4	B.Pharmacy	JNTUH	0	82	82	0	6530	6530
		OU	0	14	14	0	1240	1240
		KU	1	24	25	60	1582	1642
		PU	1	3	4	60	180	240
		SU	1	1	2	40	100	140
	TOTAL		**3**	**118**	**127**	**160**	**9632**	**9792**
5	Pharma-D	JNTUH	0	32	32	0	945	945
		KU	0	11	11	0	295	295
		OU	0	11	11	0	330	330
		PU	0	1	1	0	30	30
	TOTAL		**0**	**55**	**55**	**0**	**1600**	**1600**

Sl. No.	Type of Colleges	Affiliating University	No.of Colleges		Total Colleges	Intake		Total Intake
			Univ/ Govt.	Pvt.		Univ/ Govt.	Pvt.	
6	LLB-3 Years	KU	1	2	3	80	480	560
		OU	1	14	15	60	2700	2760
		MGU	0	1	1	0	60	60
		SU	1	0	1	180	0	180
		TU	1	0	1	50	0	50
	TOTAL		**4**	**17**	**21**	**370**	**3240**	**3610**
7	LLB-5 Years	KU	1	1	2	80	120	200
		MGU	0	1	1	0	60	60
		OU	2	9	11	120	840	960
	TOTAL		**3**	**11**	**14**	**200**	**1020**	**1220**
8	LLM-2 Years	KU	1	2	3	60	60	120
		OU	2	8	10	245	256	501
		TU	1	0	1	15	0	15
	TOTAL		**4**	**10**	**14**	**320**	**316**	**636**
9	B.Ed.	KU	2	44	46	200	2700	2900
		MGU	1	32	33	100	2850	2950
		OU	2	73	75	200	7150	7350
		PU	1	25	26	100	2150	2250
		SU	0	23	23	0	2250	2250
		TU	1	14	15	100	1250	1350
	TOTAL		**7**	**211**	**218**	**700**	**18350**	**19050**
10	B.P.Ed.	KU	2	1	3	200	100	300
		MGU	0	3	3	0	400	400
		OU	1	6	7	60	600	660
		PU	0	3	3	0	300	300
		SU	0	1	1	0	100	100
	TOTAL		**3**	**14**	**17**	**260**	**1500**	**1760**
11	UGDPED	OU	1	1	2	200	50	250
		MGU	0	2	2	0	100	100
	TOTAL		**1**	**3**	**4**	**200**	**150**	**350**

Sl. No.	Type of Colleges	Affiliating University	No.of Colleges		Total Colleges	Intake		Total Intake
			Univ/ Govt.	Pvt.		Univ/ Govt.	Pvt.	
12	M.TECH	JNA&FAU	1	0	1	20	0	20
		JNTUH	4	74	78	540	5655	6195
		KU	1	4	5	36	373	409
		OU	2	8	10	457	662	1119
	TOTAL		**8**	**86**	**94**	**1053**	**6690**	**7743**
13	M.PHARMACY	JNTUH	1	68	69	54	2478	2532
		KU	1	23	24	54	734	788
		OU	0	14	14	0	480	480
		PU	1	3	4	18	51	69
		SU	0	1	1	0	60	60
	TOTAL		**3**	**109**	**112**	**126**	**3803**	**3929**
14	PHARM-D (PB)	JNTUH	0	14	14	0	140	140
		KU	0	3	3	0	30	30
		OU	0	6	6	0	60	60
		PU	0	1	1	0	10	10
	TOTAL		**0**	**24**	**24**	**0**	**240**	**240**

Table 2.13 Private Degree Colleges Sanctioned by the State Council of Higher Education – Urban, Rural & Tribal-wise from 2006-07 to 2018-19

Year	Urban	Rural	Tribal	Total
2006-07	13	45	5	63
2007-08	4	53	4	61
2008-09	12	66	3	81
2009-10	5	37	2	44
2010-11	9	58	1	68
2011-12	29	61	8	98
2012-13	25	35	6	66
2013-14	63	131	8	202
2014-15	47	154	22	223
2015-16 to 2018-19	**No new notification issued for sanction of new Private Colleges from 2015-16 to 2018-19**			

Table 2.14 Number of Mandals Identified to provide access to Higher Education and Colleges Sanctioned (2006 to 2018)

Year	No. Mandals	No.of Applications Received	No.of Colleges Sanctioned	No.of Mandals Covered	Percentage of Mandals Covered
2006-07	78	93	63	35	44.8
2007-08	123	97	61	43	34.9
2008-09	159	94	81	39	24.5
2009-10	197	115	44	33	16.7
2010-11	236	102	68	47	19.9
2011-12	167	160	98	69	41.3
2012-13	117	128	66	44	37.6
2013-14	181	294	202	114	77.9
2014-15-AP	73	209	73	54	73.9
2014-15-TS	66	125	150	68	54.4
2015-16 to 2018-19	No notification issued for sanction of new Private Colleges from 2015-16 to 2018-19				

Table 2.15 Number of Private Un-aided Degree Colleges permitted under each University from the year 2006-2018

Sl. No.	University	No. of Colleges permitted by State Council of Higher Education										
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015-16 & 2016-17	2017-18	2018-19
1.	OU	12	12	14	6	15	28	24	53	48	No new Pvivate Degree colleges sanctioned from 2015-16 to 2018-19	-	-
2.	KU	11	14	14	6	3	18	16	39	45		1	-
3.	TU	-	-	-	-	-	1	1	11	11		1	-
4.	MGU	-	-	-	-	-	4	1	19	14		1	-
5.	PU	-	-	-	-	3	4	1	4	12		-	-
6.	SU	-	-	-	-	6	4	0	20	20		-	-
Total		**23**	**26**	**28**	**12**	**27**	**59**	**43**	**146**	**150**		**3**	**-**
** in 2017-18 4 Hotel Management Colleges and 5 Law Colleges Sanctioned													

2.4.3 Global, National and State Level Research and Training Institutions

Besides, these universities, Telangana has several research institutes such as the Indian Institute of Chemical Technology (IICT), Centre for Cellular and Microbiology (CCMB), National Remote Sensing Agency (NRSA), National Institute of Nutrition (NIN) and some of India's premium defense laboratories and space institutes.

The capital city of the State of Telangana and a few districts close to Hyderabad have top-class business schools, engineering colleges, research institutes and Start-Up Incubators like the Indian School of Business (ISB), Indian Institute of Technology, Hyderabad (IITH), ICICI Knowledge Park, Tata Institute of Social Science Research, Narsee Monjee Institute of Management Studies, Symbiosis University, XLR, ICFAI, Tata Institute of Fundamental Research (TIFR) and T-Hub. The National Institute Technology, Warangal, IIIT, RGUKT Basaraand more than 300 private engineering and medical colleges and business schools are also playing a major role in higher education in the State. The Indian School of Business and ICFAI Business School Hyderabad are two AACSB accredited business schools located in the state and are attracting students from all over India and foreign countries.

Further the performance of the students in various common entrance tests conducted by the Telangana State and the number of seats left vacant in professional courses is presented in the following sections. Table 2.19 shows the number of students appeared and qualified in various common entrance test conducted since 2015 the state of Telangana Fig. 2.9 shows the performance in Common Entrance Test conducted during 2018-19 in the state of Telangana. Table 2.20 shows the number of seats left vacant in professional colleges since 2015.

Table 2.16 Vital Statistics of Telangana & All India (18-23 years)

Parameter	Telangana	India
Gross Enrolment Ratio(GER)	35.7	25.8
College Population Index(CPI)	51	28
Average Enrolment per College	558	698
Gender Parity Index(GPI)	0.92	0.97

Source: TSCHE Statistical Booklet 2018

Table 2.17 Gross Enrolment Ratio in Higher Education (18-23 Years)

Sl. No.	State/All India	All Categories			SC			ST		
		M	F	T	M	F	T	M	F	T
1.	Telangana	37.1	34.2	35.7	30.6	32.4	31.5	32.3	26.6	29.4
2.	All India	26.3	25.4	25.8	22.2	21.4	21.8	17.0	14.9	15.9

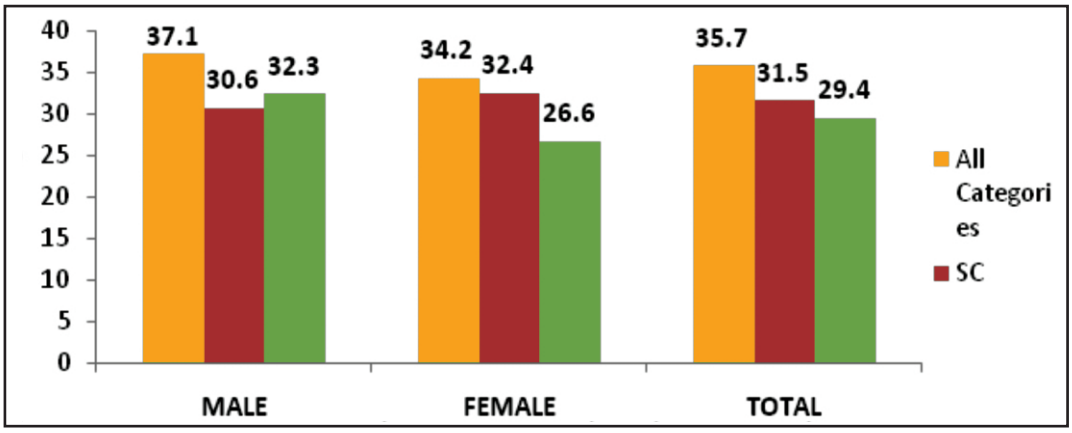

Fig. 2.6: Gross Enrolment Ratio in Higher Education in Telangana State

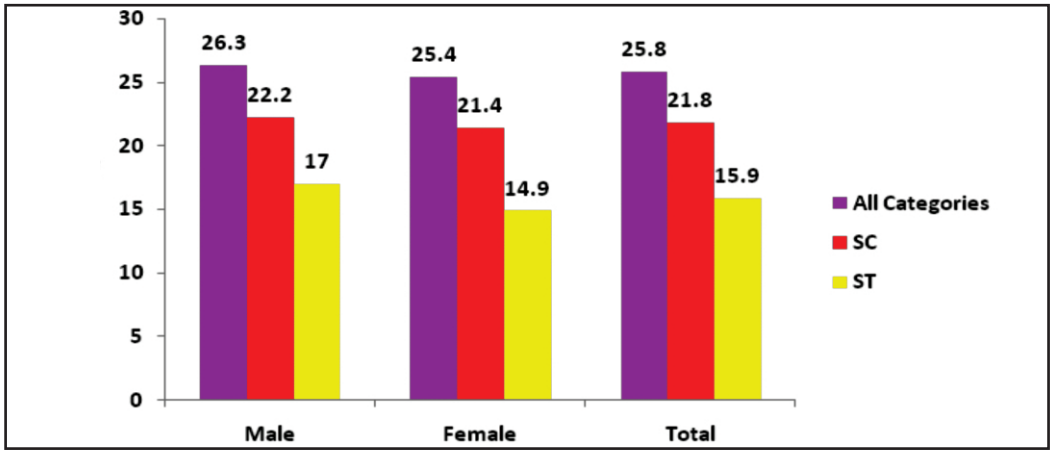

Fig. 2.7: Gross Enrolment Ratio in Higher Education in All India

Table 2.18 Gender Priority Index in Higher Education (18-23 years)

Sl. No.	State/All India	All Categories	SC	ST
1.	Telangana	0.92	1.06	0.82
2.	All India	0.97	0.96	0.87

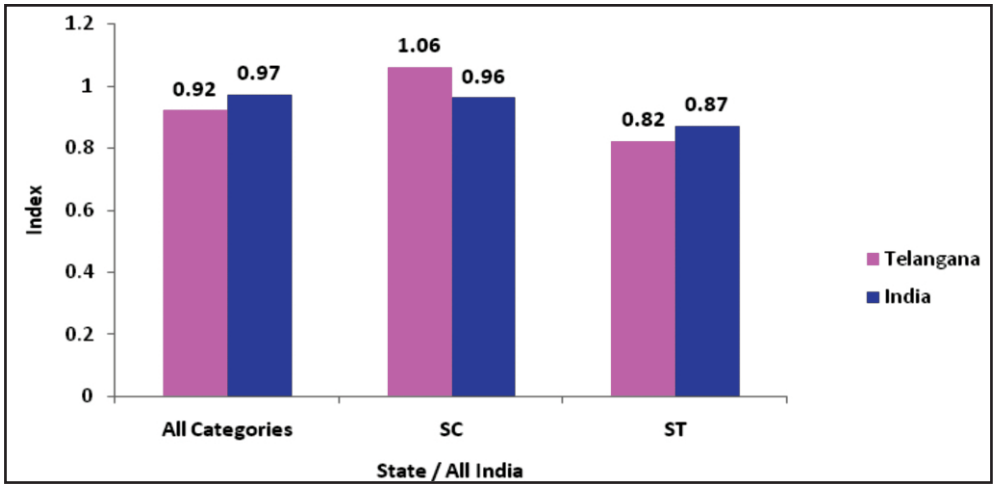

Fig. 2.8: Gender Parity Index in Higher Education

Table 2.19 Number of Students Appeared and Qualified in Various CETs from 2015-16 to 2018-19 in Telangana State

Sl. No.	CET	Details	Years			
			2015-16	2016-17	2017-18	2018-19
1	EAMCET (Engg+Med)	Appeared	212821	223542	205395	203163
		Qualified	163350	200861	181813	159820
2	EDCET	Appeared	57775	41485	58738	32330
		Qualified	57220	40826	57413	30606
3	ECET	Appeared	19748	26410	24458	26883
		Qualified	18143	24742	22702	24746
4	ICET	Appeared	63488	66510	71097	55191
		Qualified	58037	63549	69091	49812
5	LAWCET (3yr+ 5yr)	Appeared	17546	11630+ 3561	15408+ 4031	18547*
		Qualified	12870	9897+ 2811	13955+ 2893	15793*
6	PECET (UGDP.Ed + B.PEd)	Appeared	6327	5823	5653	3835
		Qualified	6216	5672	2388	3707
7	PGECET M.Tech + Pharm)	Appeared	43776	41281	33246	22461
		Qualified	38882	35093	29742	20131

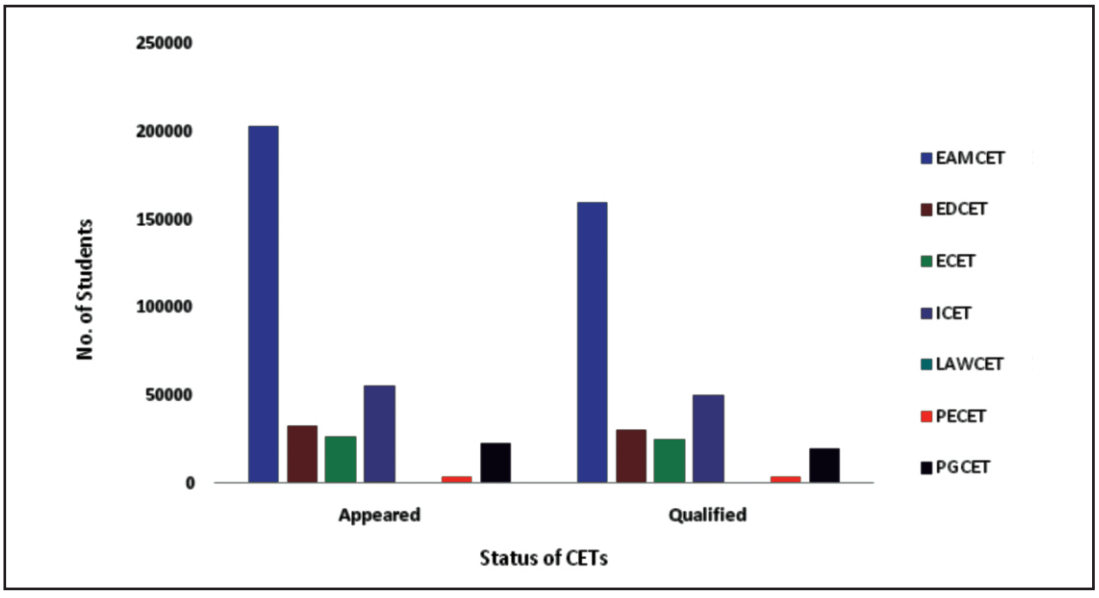

Fig. 2.9: Performance in Common Entrance Tests during 2018-19

Table 2.20 Vacant Seats of Professional Courses from 2015 to 2018

Sl. No.	Year		Professional Courses					
			Engineering	B-Pharmacy	MBA	MCA	B.Ed.	Law
01	2015-16 (TS)	Colleges	266	145	347	49	225	17
		Seats	115912	11438	41796	2966	22670	2850
		Enrolled	70792	9265	31975	632	16095	2622
		Vacant	45120	2173	9821	2334	6575	228
02	2016-17	Colleges	220	123	305	37	217	21
		Seats	104758	9476	32934	2436	19200	3190
		Enrolled	73686	7334	20820	1659	13824	2934
		Vacant	31072	2142	12114	777	5376	256
03	2017-18	Colleges	212	131	304	42	216	21
		Seats	97961	10283	32710	2736	18350	4610
		Enrolled	68594	8158	28068	1814	13834	4474
		Vacant	29367	2125	4642	922	4516	136
04	2018-19	Colleges	202	127	311	42	218	21
		Seats	97134	9792	34562	2786	19050	3610
		Enrolled	68138	7933	27507	1879	1n43	3435
		Vacant	28996	1859	7055	907	1307	175

Source: TSCHE Statistical Booklet 2018

2.4.4 Gross Enrolment Ratio (GER)

One of the important concerns of higher education today is access and Gross Enrolment Ratio (GER). The State of Telangana stands in GER at the 6th place in SC/ ST Categories and 9th Place in All Categories in the Country. The total GER of the State is relatively higher than the all India GER, which is 25.8. The details are presented in Table 2.16 which shows the Vital Statistics of Telangana and all over India regarding the Gross Enrolment ratio College Population index, Gender Priority Index in the age group of 18-23 years. Similarly, Table 2.17

shows the comparison of Gross Enrolment ratio in Higher Education in Telangana and overall India.The data is also presented in graphical form in Fig. 2.6 and 2.7, a bar graph representing the enrolment of Male, Female and Total under three categories viz., SC, ST and All Categories.

The Gross Enrollment Ratio of SC and ST students is also relatively higher than the all India GER, which is 21.8 and 15.9 respectively.The Gender Parity Index (GPI) is a socioeconomic index usually designed to measure the relative access to education of males and females. In its simplest form, it is calculated as the quotient of the number of females by the number of males enrolled in a given stage of education (primary, secondary, etc.).The GPI measures progress towards gender parity in education participation and/or learning opportunities available for girls in relation to those available to boys. A GPI equal to 1 indicates parity between females and males. In general, a value less than 1 indicates a disparity in favour of boys and a value greater than 1 indicates a disparity in favour of girls. The GPI data clearly indicates a disparity in favor of boys in the case of enrollment of all the categories put together and in the case of the enrollment of students belonging to the SC category. Only in the case of students under the ST category the GPI is in favor of girls. Table 2.18 shows the details of Gender Priority Index in Telangana and All India. The same is presented in bar chart in Fig. 2.8. It is also observed from the above tables that except in Law program; a larger number of seats are vacant in the other professional programs.

Table 2.21 No. of Colleges per Lakh Population (18-23 Years)
Average Enrollment per College

Sl. No.	State/All India	No. of Colleges	Colleges per Lakh population	Average Enrolment per College
1.	Telangana	1988	50	554
2.	All India	39931	28	693

Source: Table 4, AIHE Report 2018-19

The number of colleges perone lakhpopulation in the State of Telangana is significantly high compared to all India figures. However, the average enrollment per college is very low in Telangana compared to all India data. Table 2.21 shows the number of colleges in Telangana and all over India for one lakh population and the average enrolment per college.

2.4.5 Programs and Courses Offered

The duration of UG courses offered in Telangana State is as follows: 2-years (B.Ed.), 3- years (BA; B.Sc.; B.Com.), 4-years (B.E.; B.Tech.; Agricultural .B.Sc.; B.Pharm.), 5-years (LLB; BVSc.), 5.5-years (MBBS),and 6-years (Pharma-D). Branch-wise courses are offered in PG and their duration varies from 2-years (MA; M.Sc.; M.Com.; ME; M.Tech., MBA; LLM), 3-years (MCA) to 3.5 years (MS; MD). Table 2.22 shows the duration of both UG & PG programs in different categories.

Table 2.22 Courses and Duration (years)

UG Programs (Entry after)				PG Programms (Entry after completing UG)		
General	BA, B.Sc, B.Com	3yr		General	MA, M.Sc, M.Com	2yr
Engineering	BE, B.Tech	4yr		Engineering	ME, M.Tech	2yr
Medical	MBBS	5 ½ yr		Medical	M.S, M.D	3 ½ yr
Pharmacy	B. Pharma	4 yr		Pharmacy	M. Pharma	2 yr
	Pharma .D	6 yr			Pharma .D (PB)	3 yr
Veterinary	B.V.Sc.,	4 yr		Management	MBA	2 yr
Agriculture	B.Sc.,	4 yr		Law	LLM	2 yr
Law	LL.B	5 yr		Computers	MCA	3 yr
PG Programs (Entry after Completing UG)						
Education	B.Ed.,	2 yr		Law	LL.B	3 yr

2.4.6 Quality Assurance & Accreditation

TSCHE is encouraging the affiliating State universities to create adequate awareness among the colleges by organizing NAAC awareness workshops wherever needed by utilizing National Quality Renaissance Initiative (NQRI) funding program of NAAC, Bangalore. As per the NAAC portal, Telangana State has 7 Universities and 104 Colleges under NAAC accreditation as on 27.11.2017. University, College, Institution and Branch/Department-wise assessment and accreditation has become the order of the day, and the performance of HE institutions is considered to identify the Potential for Excellence of an institution and for funding. Among 15 such Universities, the Potential for Excellence status was bagged in Telangana State by two Universities, one Central University and one State University.

2.4.7 Fee Structure & Grants

For the purpose of fixation of fees the colleges affiliated to the respective universities are categorized into three groups. Telangana Admissions Fee Regulation Committee (TAFRC) has been constituted to stipulate the fee structure considering the feasibility of a college in terms of infrastructure, faculty, and other related parameters. Admission to professional courses is through a process of Common Entrance Test (CET) and three categories of entries. In addition, a few courses both in UG and PG programs are offered under the Self-Supporting mode, wherein student is expected to pay full fee. The details of fee structure aregiven in the Table 2.23 further Table 2.24 shows the details of fee structure for Government and Un-aided degree courses University-wise for UG program.

Table 2.23 TAFRC-Fee structure for Admission into various Professional Courses for 2015-16 to 2017-18 (valid for 3 years)

Sl. No.	Course	Tuition fee per annum for the students of Private Unaided colleges		Special fee per annum
		Category 'A'	Category 'B'	
1	Engineering	Varies from College to College (Rs. 35,000 to Rs. 1,13,500)		Rs. 5,500/-
2	MBA/MCA	Varies from College to College (Rs. 23,000 to Rs. 90,000)		Rs. 5,500/-
3	Pharmacy	Varies from College to College (Rs. 35,000 to Rs. 90,000)		Rs. 5,500/-
4	B.Ed.	Rs. 13,500/-	Rs. 13,500/-	Rs. 3,000/- special fees
5	L.LB./B.L.	Rs. 9,600/-	Rs. 32,000/-	Rs. 2,500/-
6	M.E/ M.Tech./ M.Arch./ M. Pig.	Rs. 57,000/-	Rs. 1,25,000/- Up to 6000 US Dollars for each NRI Student	Rs. 7,500/- Special fee at the time of admission and Rs. 6,500/- from and year onwards
7	M.Pharmacy	Rs. 1,10,000/-	Rs. 2,25,000/- Upto 7000 US Dollars for each NRI Student	

8	Pharm.D.(PB)	Rs. 68,000/-	Rs. 1,55,000/- Upto 6000 US Dollars for each NRI Student	Rs. 5,500/- Special fee at the time of admission and Rs. 2,500/-from 2"d Year onwards
9	L.L.M	Rs. 21,600/-	Rs. 33,800/-	
10	M.Sc.Nursing	Rs. 75,000/- PA (Free Seats)	Rs. 1,48,500/- 50% 50% Seats	-----
11	B.P.Ed	Rs. 13,500/-	Rs. 13,500/-	Rs. 3,500/-
12	U.GD.P.Ed	Rs. 12,000/-	Rs. 12,000/-	Rs. 3,500/-
13	MBBS	Rs. 60,000/- (50% cat. A Seats Non-Minority) Rs. 60,000/- (60% cat. A Seats Minority)	Rs. 11,00,000/- (10% cat. B Seats Non-Minority) Rs. 11,00,000/- (40% cat. B Seats Minority)	Cat.-C maximum up to 2 times of Cat 'B' (40% Cat. C seats Non-Minority) Rs. 13,25,000
14	BDS	Rs.45,000/- (50% cat. A Seats Non-Minority) Rs. 45,000/- (60% cat. A Seats Minority)	Rs.4,00,000/- (10% cat. B Seats Non-Minority) Rs. 2,70,000/- (40% Cat.B seats Minority)	Cat-C Rs. 4,00,000/- (40% Cat. C seats Non-Minority) Rs. 2,70,000/-
15	Language Pandit (Hindi, Telugu & Urdu)	Rs. 13,000/-	Rs. 13,000/-	Rs. 3,000/- Special fees

Source: TSCHE Statistical Booklet 2018

Table 2.24 Degree Courses Fee Structure

Sl. No	University Colleges	Fee Range (Rs. Per Annum)					
		UGLevel (Government)			UG Level (Un-aided)		
		B.A	B.Com	B.Sc	B.A	B.Com	B.Sc
1	OU	3550	3850-6850	3950-6950	7870	10535-22535	12535-14535
2	KU	2750-5750	2850-6050	3150-6150	12510	17010-21560	19910-22560
3	TU	3050-6050	3350-6350	3650-6650	16900-20400	18100-20600	19100-21600
4	MGU	3550-6550	3650-6850	3950-6950	11450-13950	16015-18515	16015-20515
5	PU	3050-6550	3550-6850	3950-6950	6900-14600	14600-19100	16600-19100
6	SU	2750-6050	2850-6350	3150-6450	12100	15100-19800	17300-19800

Source: TSCHE Statistical Booklet 2018

2.4.8 Financial Support for Students

The Government has initiated various schemes for the underprivileged and economically weaker section of the society including the provision of the Residential Education Institutions for socially backward classes. The Ambedkar Overseas Vidhya Nidhi (AOVN) has been introduced by the State Government to enable the benefit of higher education to the meritorious SC students who would like to pursue PG, Ph.D and any other higher education programs in foreign universities. Under this scheme, a grant of Rs 20 lakh in two installments would be made for every eligible student. The grants are issued for study in foreign universities covering 10 selected countries - Australia, Canada, Germany, Italy, Singapore, United Kingdom, USA and others. Till 2019, over 405 students have been given these grants after thorough screening of their academic background. For students from poor socio-economic backgrounds, the government provides fee reimbursement if they are studying in private colleges.

The State of Telangana also extends financial support to students belonging to the Backward Classes,who would like to pursue higher studies in Indian and foreign universities. This opportunity is extended to meritorious Backward Classes Students d thereby providing them an opportunity for better career prospects within the country and aboard. This financial support scheme popularly known as Mahatma *Jyothiba Phule BC Overseas Vidya Nidhi* is extended to three hundred BC students every year and is open to all eligible graduates to pursue Postgraduate studies.

The State Government is keenly interested in the social, educational and economic development and welfare of the Minorities in the Telangana State and accordingly Government has made substantial allocations for providing Scholarships to Minority Students on a saturation basis and this initiative over the years has encouraged a large number of Minority Students to complete professional courses and other Graduate Courses. There are huge opportunities and challenges in India and abroad in respect of education and jobs and students from the Minority communities are often handicapped because of their extreme backwardness and poverty and inability to access the benefit of pursuing education abroad to better their lives. The Government of Telangana has introduced a new scheme of "Overseas Study Scheme for Minorities" for the benefit of the students belonging to the Minority community. Financial Assistance under this Scheme for studies abroad will be sanctioned to 500 minority students/graduates per year to pursue Postgraduate/Doctoral studies abroad.

The Government of Telangana contemplates introducing a new scheme called "Financial Assistance to Students of Telangana (FAST)" to enable the poor and eligible students to pursue higher studies in the Universities and the Institutions regulated by the Government, which will not only improve access to the poor and eligible students to higher education but also increase their gross enrolment ratio. As per the State orders, e FAST shall be made applicable to all the students pursuing ongoing studies and fresh admissions provided the parents are bonafide residents of Telangana State as on 01-11-1956 and this scheme came into force in the academic year 2014-15.

2.5 Telangana Academy of Skill & Knowledge (Task)

TASK is a not-for-profit organization created by the Government of Telangana to bring the State Government institutions, Industry and Academia together on to one platform with an objective of offering quality human resources and services to the industry.

TASK has been collaborating with various corporate and multi-national companies that will work towards setting up a 'train-and-hire' model for students of mechanical, electrical, electronics and aeronautical domains. Companies have designed various training modules across these domains to help students get practical industry exposure. TASK has been collaborating with various corporate and multi-national companies that will work towards setting up a 'train- and-hire' model for students of mechanical, electrical, electronics, and aeronautical domains in TASK-registered engineering colleges.

2.6 Higher Education for Women

Also, the Government of Telangana has set up over 30 Women's Degree Colleges in last four years to benefit young girls from the Scheduled Caste community. This move has yielded excellent results with more than 80-90 percent pass-outs. The Telangana Social Welfare and Tribal Welfare Residential Education Institutions Society has been catering to the needs of students from these underprivileged sections by providing high standard education in Junior Colleges and Degree, PG, Medical, Engineering, and allied institutions. These initiatives are in line with the Union Government's vision of aligning the students with modern means and promoting innovations

2.7 Budget and Financial Constraints

The Kothari Committee had in the 1960's suggested that 30% of the State budget, 10% of the central budget and 6% of the GDP should be ideally allocated for education. The Government of Telangana has allocated 7.4% of its expenditure on education in 2020-21.

This is significantly lower than the average budget allocation for education (15.9%) by 29 states (using 2019-20 BE) as shown in the Table 2.25.

Table 2.25 Budget Allocation for Education

Sl. No.	Year	%
1	2018-19	9.8
2	2019-20 (BE)	7.5
3	019-20 (RE)	7.7
4	2020-21(BE)	7.4
5	2019-20 (BE) Average of 29 States	15.9

Source: Annual Financial Statement (2019-20 and 2020-21), various state budgets; PRS.

The allocation of budget for education in general and higher education has consistently been falling since the formation of the State In the fiscal year of 2014-15, the government had allocated 10 per cent of its overall budget to the Education Department. Gradually, it kept reducing the share. This year, it is just 6.69 per cent. The overall budget for education department has come down from Rs 12,220 crore in 2019-20 to Rs 12,144 crore in 2020-21.

The percentage of total budget allocated to education over the last four years is: 10.88% in 2014-15, 9.69% in 2015-16, 8.29% in 2016-17, 8.49% in 2017-18 and 7.61% in 2018-19. In 2014-15, the government had allocated 10.88 per cent of the Budget towards education, which has declined to 9.69 per cent, 8.23 per cent, 8.49 per cent, and 7.61 per cent in the 2015-16, 2016-17, 2017-18 and 2018-19 financial years respectively.A study of the budgets of 18 States in the country found that Telangana had the lowest allocation for education, with just 8.2%. This is lower than that of other States such as Andhra Pradesh (15.1%), Bihar (15.8%), Madhya Pradesh (16.6%) and Maharashtra (18%). Table 2.26 shows the University wise grants sanctioned in Telangana state since 2006.

Telangana's literacy rate was 66.46%, much below the national average of 74.04%. The status of literacy among tribal students in the State is even more dismal, at just 49.5%. Allocations to the education sector have been declining in percentage terms ever since the State was formed in 2014.

There seem to be wide variations in the capacity of institutions to mobilize resources from different internal sources. While institutions located in urban and resource-rich areas find it easier to mobilize resources, their counterparts in rural and resource-poor areas find it difficult to do so. In view of the decline in public funding and the difficulty in mobilizing resources, some of the institutions end up spending 96 percent of their recurring expenditures on salaries, leaving them with very little for the conduct of other academic activities in the universities. The various strategies adopted to compensate for the reduction in public resources have severe repercussions. Some institutions focus more on cost-saving, cost-cutting, and cost-sharing measures. The most common among these cost-saving measures is the decision to not fill the sanctioned positions of academic and non-academic staff in order to save on salary bills. Other measures include the cutting of non-salary benefits for the staff, as well as cancellation of advocacy events like seminars and workshops.

Table 2.26 University-wise Block Grants from 2006-07 to 2018-19 in Telangana State

(Rupees in Crores)													
Univ.	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
OU	93.00	93.00	49.22	75.00	135.53	113.30	216.40	170.14	170.14	266.24	238.19	496.16	369.54
KU	23.72	23.72	24.87	18.75	34.68	25.80	65.58	47.88	47.88	41.11	67.03	125.75	112.41
BRAOU	6.74	6.74	5.31	6.00	15.72	8.25	14.36	14.36	57.4	40.19	8.03	29.08	30.45
PSTU	11.69	13.19	13.19	9.90	13.13	10.50	15.51	17.10	6.75	17.07	15.38	36.95	39.42
JNTUH	35.65	36.64	33.75	8.50	16.00	16.00	36.00	166.85	396.00	282.35	55.44	62.65	72.04
TU	3.00	12.00	12.00	6.00	17.99	10.50	10.54	20.00	24.16	11.67	28.29	50.95	43.77
MGU	0	10.00	10.00	5.00	17.49	10.50	8.15	15.00	15.16	15.00	15.00	56.95	44.49
SU	0	0	2.50	1.63	14.88	7.75	6.30	4.79	12.42	7.30	21.69	28.42	28.71
PU	0	0	2.50	1.63	14.75	7.75	4.93	4.79	8.95	8.10	8.10	45.77	26.63
JNA & FAU	0	0	0.00	0.00	6.00	6.50	8.50	9.35	9.96	5.45	5.45	9.02	10.37
RGUKT	0	0	265.00	275.00	400.00	425.00	560.40	353.50	119.63	93.24	50.00	30.00	34.50
Total	**173.80**	**195.29**	**418.34**	**407.41**	**676.17**	**641.85**	**946.67**	**823.76**	**868.45**	**787.72**	**512.60**	**944.42**	**812.43**

2.8 Teaching and Non-Teaching Faculty Positions

With respect to the availability of permanent teaching and non-teaching staff in the State universities, the State of Telangana has a very large number of vacant positions. Many temporary, ad-hoc and contract teachers are working in all the State universities. Out of the total number of posts of Professor sanctioned under the direct recruitment quota, about 60 per cent remain vacant.

Available data indicates that around 60 per cent of the faculty positions are vacant in the universities of Telangana put together. Out of the 2,753 posts of professors, assistant professors and associate professors, 1,249 posts are filled, and the others remain vacant. Out of the 11 universities, only Telangana University and Open University have recruited for more than 50 per cent posts sanctioned. In Osmania University about 769 of 1,264 sanctioned posts are vacant and in Kakatiya University 251 of 391 posts are yet to be filled. In the case of the more recently established universities the vacancy position is higher. All the posts sanctioned for IIIT Basararemainvacant. In 126 Government degree colleges in the State, out of 3,975 Lecturer posts, 2,487 posts are vacant. More than 80 colleges do not have permanently appointed principals. In aided Degree colleges, 1,361 of 1,686 posts are vacant.The filling up of these posts is necessary for quality improvement in higher education and for reducing the faculty-student ratio to create a more congenial learning environment.

2.9 Accreditation Reforms

The State of Telangana is making efforts to maintain minimum standards and guaranteeing of quality higher education. The Government of Telangana constituted the State Level Quality Assurance Co-ordination Committee (SLQACC) under the chairmanship of Hon'ble Minister for Education and Vice-Chancellors, industrialists, and noted academicians as members of the Committee. The State Level Quality Assurance Cell (SLQAC) is a functional unit of the SLQACC. The SLQAC operates under the Academic Cell of the Commissionerate of Collegiate Education and is looked after by teachers working in Government Degree Colleges under the guidance of the Commissioner, Collegiate Education.

However, it is observed that many State universities and colleges are not yet ready for NAAC accreditation and assessment. This is also the case with a majority of private colleges. According to a report brought out by NAAC, only 11 percent of the accredited higher education institutions are of 'A' Grade, 71 percent are of 'B' Grade and the remaining are of 'C' Grade. Till today only thirteen universities in the State of Telangana are accredited by NAAC. The State has many universities that are not yetrecognized by the UGC under Section 12(B). Only 9 universities and 133 colleges have valid accreditation as on 17.12.2016. Out of which, 67 Colleges are Government Degree Colleges. In the recent past, the Accreditation of Higher Education Institutions has been prioritized by the Government and accordingly the Government is encouraging eligible institutions to get accredited by NAAC. Out of e 130 GDCs, only 71 colleges are functioning in their own buildings and are eligible for accreditation by NAAC. In March 2015, when Telangana approached RUSA for funding, out of these 71 colleges, only 36 had valid accreditation and all these colleges got funding under RUSA in March, 2015.

2.9.1 Academic Reforms

The State has already been implementing CBCS at the PG Level and successfully rolled it out at the UG level in all Colleges from the academic year 2016.17. CBCS has been introduced in Degree Colleges affiliated to universities and in Engineering Colleges. Semester system has been introduced at UG level in all colleges in the State.

2.10 Autonomous Colleges

From the beginning of its formation the Government of Telangana is keen in granting administrative and academic autonomy to the qualified colleges. Autonomy is a functional status given to the colleges by the University Grants Commission (UGC) which gives them greater flexibility in planning their curricula and academic development for the

improvement of academic standards and excellence. To enable colleges to award degrees on behalf of the affiliating University by providing more academic and operative freedom to function better with credibility, the Education Commission of India (1964-66) recommended college autonomy as an instrument for promoting academic excellence. The conferral of autonomy was meant to give greater freedom for development to identified colleges because of the growing concern for the increasing number of colleges affiliated to a single university. It has also taken into account the regulations of the university and its common system, governing all colleges alike, irrespective of their characteristic strengths, weaknesses and locations. The 1964 - 66 Education Commission pointed out that the exercise of academic freedom by teachers is a crucial requirement for the development of the intellectual climate of our country. It observed that with students, teachers and Management being co-partners in raising the quality of higher education, it is imperative that they share a major responsibility.

The National Policy on Education (1986-92) formulated the following objectives for autonomous colleges. An autonomous college will have the freedom to: 1. Determine and prescribe its own courses of study and syllabi, and restructure and redesign the courses to suit local needs; 2. Prescribe rules for admission in consonance with the reservation policy of the State government; 3. Evolve methods of assessment of students' performance, the conduct of examinations and notification of results; 4. Use modern tools of educational technology to achieve higher standards and greater creativity; and 5. Promote healthy practices such as community service, extension activities, projects for the benefit of the society at large, neighborhood programs, etc. Thus, granting affiliation and autonomy is a very challenging task for universities and the UGC.

During 2017-18, only 57 colleges were granted autonomy and in 2018-19, two more colleges and in 2019-20 six (6) more colleges were granted autonomy under the five universities in Telangana. The number of autonomous colleges as per the present records is only 65. Out of 65 autonomous colleges, 34 are affiliated to Jawaharlal Nehru Technological University (JNTU), 23 colleges are affiliated to Osmania University, and the remaining are affiliated to other State universities. All these colleges are advised to launch academic programs in emerging technologies like, Business Analytics, Data Sciences, Artificial Intelligence, etc. The Government of Telangana aims at turning all the autonomous colleges into the centers of excellence.

2.10.1 Transparency in Higher Education

Introduction of online admissions from the academic year 2016-17 has proved instrumental in the regulation of affiliated colleges with respect to courses offered, sanctioned intake. The earlier practice of taking more than the sanctioned intake and getting it ratified subsequently by the affiliating university has been dispensed with.Online admission system has been successfully rolled out for Degree Colleges. 1086 Degree Colleges in Government, Private aided, and Private Un-aided sectors affiliated to six universities have taken part in the online admission process. A web portal dost.cgg.gov.in for the Degree Online Services, Telangana (DOST), is launched for online admissions for undergraduate students started from 2016-17 onwards. It is contemplated that whole examination process is made online right from admission, conduct of examination, valuation of answer scripts and finally the issuance of certificates.

2.11 The Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

The RUSA was launched in 2013 as a centrally sponsored program aimed at providing strategic funding to eligible State higher educational institutions. The central funding (in the ratio of 60:40 for general category States, 90:10 for special category States, and 100% for union territories) is based on norms and is outcome dependent. Funds flow from the Central ministry through the State governments/union territories to the State Higher Education Councils before reaching the identified institutions. Funding to Sates will be made based on the critical appraisal of State Higher Education Plans, which would enlist each State's strategy to address issues of equity, access, and excellence in higher education. RUSA places great emphasis on the improvement of the quality of teaching-learning processes to produce employable and competitive graduates, post-graduates, and PhDs. Spread across two plan periods (XII and XIII), the program focuses on State higher educational institutions and draws upon the best practices from colleges and universities across the nation. It is the central government's plan to develop every State university based on criteria of assessment.

The key objectives of RUSA are to improve access, equity, and quality in higher education through planned development of higher education at the State level. Objectives include creating new academic institutions, expanding and upgrading the existing ones, and developing institutions that are self-reliant in terms of quality education, professional management, greater inclination towards research, and offering education that is relevant to the community and the nation as a whole.

The salient objectives of RUSA are:

i. Improve the overall quality of State institutions by ensuring conformity to prescribed norms and standards and adopt accreditation as a mandatory quality assurance framework.

ii. Usher in transformative reforms in the State higher education system by creating a facilitative institutional structure for planning and monitoring at the state level, iii. promote autonomy in State Universities and improving governance in institutions.

iv. Ensure reforms in the affiliation, academic and examination systems.

v. Ensure adequate availability of quality faculty in all higher educational institutions and promoting capacity building at all levels of employment.

vi. Create an enabling atmosphere in the higher educational institutions to promote research and innovation.

vii. Expand institutional base by creating additional capacity in existing institutions and establish new institutions, to achieve higher enrollment.

viii. Correct regional imbalances in terms of access to higher education by setting up institutions in un-served and underserved areas of the country and.

ix. Improve equity in higher education by providing adequate opportunities of higher education to SC/STs and socially and educationally backward classes.

x. Promote inclusion of women, minorities, and differently abled persons.

The State of Telangana joined RUSA on 14.07.2014 by committing itself to bringing reforms in Higher Education in the State. The total fund approved by the PAB for the State is 163.32cr comprising 97.9cr central share and 65.32cr as the State share. Available evidence shows that RUSA funds remain by and large unutilized by the State universities, as they are not fulfilling the conditions of RUSA due to inadequate permanent staff. A unique feature of the Telangana higher[1] education institutions is that a major percentage of them are not yet accredited. Under the umbrella of RUSA the State universities of Telangana would get significant financial support and get an opportunity to emerge as autonomous institutions since the RUSA aims to build a self-sustaining momentum that will push for greater accountability on the part of State institutions and impress upon them the need to improve the quality of education and infrastructure.

Chapter – 3

Quality Assurance, Assessment and Accreditation: Concept and Process

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Quality Assurance, Assessment and Accreditation: Concept and Process

Introduction

Education, in general, and higher education, in particular plays an important role in the development of any nation. Education Commission -1964 - 66 rightly pointed out, saying, 'The destiny of India is being shaped in her classrooms.' In fact, classrooms are the places where the future citizens of the country are reared, trained, educated and motivated to accept the new challenges and to face the changing situations. In India, the national efforts to ensure education for all have resulted in widening of the bases of elementary and secondary education. Further, NPE-1986 stressed the importance of universalization of primary education and equalization of educational opportunity for all. The NPE-1986 considered as "fundamental to our all-round development, material and spiritual". The National Education Policy-2020 builds a quality consciousness into its concerns, with an outlook on globalization needs and on a futuristic perspective that focuses on the acquisition of multiple skills, liberal and holistic education and the development of twenty-first century competencies. The Indian higher education system has also witnessed significant expansion in recent years, both in terms of the number of institutions as well as in student enrolment. This is also in response to growing and changing manpower requirements of today's knowledge intensive economy. The University Grants Commission (UGC) has reported that there are about 900 universities and 45000 colleges in the higher education sector.

Although Higher Education has expanded several times since independence, issues of access, equity, and quality still continue to be the areas of concern. The aim is to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035 and the present 26.3% is lower than that of many countries. Multiple and graded inequalities including gender and weaker sections' ratios continue to haunt the system. Moreover, higher educational institutions in India suffer from large quality variations. NASSCOM-McKinsey Report-2005 has said that not more than 15 percent of graduates of general education and 25-30 percent of Technical Education are fit for employment. Though, there exist bodies for assessment and monitoring quality standards in the institutions of

higher education, deficiencies if infrastructure, funding, faculty and so on continue to exist. Many observers and policy makers have expressed their concerns over 'middling or poor quality of colleges and faculty in higher education in India. It follows that quality of higher education has a strong inter-relationship with physical and academic infrastructure. Thus, there is a need for major qualitative reforms in Indian higher education system in order to ensure high quality colleges as well as faculty.

3.1 Concept of Quality Assurance

Quality assurance is a systematic process of determining whether a product or service meets specified requirements. It establishes and maintains certain standards for developing or manufacturing reliable products. A quality assurance system is meant to increase customer confidence of a company or institutional credibility. It helps in the direction of improving work processes and efficiency in order to enable a company or institution to do better and compete with others.

The National Assessment and Accreditation (NAAC) is an autonomous body to monitor Quality Assurance of the higher educational Institutions. ISO (International Organization for Standardization) is a driving force behind QA practices and mapping the processes used to implement QA. QA is often paired with the ISO 9000 international standard. Many companies use ISO 9000 to ensure that their quality assurance system is in place and effective. The concept of QA as a formalized practice started in the manufacturing industry, and it has since spread to most industries, including software development. Quality assurance is a way of preventing mistakes and defects in manufactured products and avoiding problems when delivering solutions or services to customers; which ISO 9000 defines as "part of quality management focused on providing confidence that quality requirements will be fulfilled".

Globally, Quality Assurance in higher education is defined as a process by which an institution is evaluated, at least in part, by an external body in its educational offering. Assessment and Accreditation is broadly used for understanding the "Quality Status" of an institution. In the context of higher education, the accreditation status indicates that the particular Higher Educational Institutions (HEI)–a College, a University, or any other recognized Unit therein, meets the standards of quality as set by the Accreditation Agency, in terms of its performance related to the educational processes and outcomes, covering the curriculum, teaching-learning, evaluation, faculty, research, infrastructure, learning resources, organization, governance, financial well being and student services.

'Academic Quality' means the quality of teaching, learning and research and consequently their contribution to enhancement of knowledge and includes physical infrastructure,

human resources (including faculty), administration, course curricula, admission and assessment procedures, governance structures of the higher educational institution (Source: The NAAHEI Bill, 2010).

'Accreditation' means the process of quality control in higher education, whereby, as a result of evaluation or assessment or by any other scientific method followed by accreditation agencies, a higher educational institution or any programme conducted therein is recognized by it as conforming to parameters of academic quality and benchmarking of such academic quality determined by the appropriate statutory regulatory authority. 'Assessment' means the process involved in ascertaining or verifying the capabilities of a Higher Educational Institutions in terms of its physical infrastructure and human resources prior to the commencement of its academic programmes.

3.2 The Accreditation Process

Through the accreditation process, an agency or its designated representatives evaluates the quality of higher education institution as a whole or a specific educational programme, in order to formally recognize it as having met certain predetermined minimal criteria or standards. The result of this process it usually the awarding of a status of recognition and sometimes of a license to conduct educational programs within a time-limited validity. The process can imply initial as well as periodic self-study and evaluation by external peers. The accreditation process generally involves there steps with specific 'activities':

(i) A self-evaluation process conducted by the faculty, the administrators and the staff of the institution or academic programme, resulting in a report that takes as its references set of standards and criteria of the accrediting body.

(ii) A site visit, conducted by a team of peers, selected by the accrediting organization, which reviews the evidence, visits the premises and interviews the academic and administrative staff resulting in an assessment report, including a recommendation to the accrediting body; and

(iii) Examination of the evidence and recommendation on the basis of the given set of criteria concerning the quality and resulting in a final judgment and the communication of the formal decision to the institution and other constituencies, if appropriate.

3.3 Types of Accreditation

Worldwide, broadly there are two types of accreditations are in place. One is Institutional Accreditation, wherein the quality of the institution with reference to its competency to provide quality in education is evaluated. In India, National Assessment and Accreditation

Council, under the aegis of the University Grants Commission, undertakes this kind of quality assurance. The other kind of accreditation is Programme Accreditation which is done on the basis of the outcome programme. In Technical Education, the quality as well as the relevance of the programme is specially assessed and evaluated during the process of accreditation. In India, National Board of Accreditation, under the aegis of All India Council for Technical Education, undertakes this kind of quality assurance.

3.4 Accreditation Practices

3.4.1 International Practices

Over 150 countries have some kind of accreditation mechanism to ensure quality in higher education. Most of the Quality Assurance (QA) bodies are supported directly or indirectly by the respective governments. The International Network for Quality Assurance Agencies in Higher Education (INQAAHE) is a world-wide association of over 200 organizations active in the theory and practice of quality assurance in higher education. INQAAHE has provided Guidelines for Good Practices (GGP) to be followed by the QA bodies. Another organization, Asia Pacific Quality Network (APQN) caters to enhancing the quality of higher education in Asia and the Pacific region through strengthening the work of quality assurance agencies and extending the co-operation between them. APQN has provided over 120 member institutions, including NAAC, having interest in quality assurance. A good number of countries have multiple QA bodies.

USA

Institutional accreditation is done by 6 Regional independent QA bodies. Programme accreditation is done at the national level by various special councils as well as faith based organizations. The Council for Higher Education Accreditation (CHEA) is an association of 3,000 degree-granting Colleges and Universities. The accrediting organizations are recognized by the CHEA. Recognition by CHEA affirms that the standards and processes of Quality and Excellence in Higher Education of the accrediting organizations are consistent with the academic quality, eligibility standards, improvement, accountability, expectations.

Germany

In Germany, the Federal States (Lander) are responsible for the shape and development of higher education and research. The responsibility for the contents and organizations of studies and examinations as well as for the quality of higher education is in principle with the Lander. According to the Higher Education Framework Act, proposals for standards of study courses and degrees as well as for their mutual recognition have been for a long time made by

framework regulations for studies and examinations, which had to be jointly adopted by the Lander and the Hochschulrektorenkonferenz (HRK). Based on the recommendations of HRK and Wissenschaftsrat, since the mid-1990s evaluation procedures for teaching have been introduced with the goal of increasing transparency, strengthening institutional responsibility, supporting higher education institutions in the introduction of systematic quality-promoting measures as well as advancing the profile, image and competitiveness of German HEIs. Since the beginning of 1998, the HRK runs a three-year national programme to enhance the exchange of information and experience in the field of quality improvement measures in German HEIs – the Quality Assurance Project. Moreover, in recent years evaluation agencies have been established at the regional level either by the federal states or by associations of universities. Besides the above-mentioned activities, a lot of departments in many HEIs have started evaluation initiatives using different approaches and different perspectives. (Source: ENQA)

United Kingdom

In the UK, it is illegal to offer a qualification that is or might seem to be a UK degree unless the awarding body is recognized by the Secretary of State, a Royal Charter or an Act of Parliament to grant degrees. Private higher education (HE) and further education (FE) institutions are unregulated, but may choose to become accredited by various nonregulatory bodies such the British Accreditation Council or the British Council and Accreditation Service for International Colleges in order to demonstrate third - party assessment of the quality of education they offer. The Universities Funding Council and Polytechnics and Colleges Funding Councils established in the UK under the 1988 Education Reform Act have responsibility for the public funding of the FE and HE sector.

Philippines

Voluntary accreditation of all higher education institutions is subject to the policies of the Commission of Higher Education. Voluntary accrediting agencies in the private sector are the Philippines Accrediting Association of Schools, Colleges and Universities' Commission on Accreditation (PACUCOA), and the Association of Christian Schools, Colleges.

Universities Accrediting Association Inc. (ACSCU-AAI) all operate under the umbrella of the Federation of Accrediting Agencies of the Philippines (FAAP), which itself is the certifying agency authorized by CHED. Accreditation can be either of programs or of institutions. Accrediting Association of Charted College and Universities Commission on Accreditation (ALCUCOA), accrediting agencies for government-supported institutions together formed the National Network of Quality Assurance Agencies (NNQAA). However

NNQAA does not certify all government- sponsored institutions. The Technical Vocational Education Accrediting Agency of the Philippines (TVEAAP) was established and registered nd th with the Securities Exchange Commission on 2 October, 1987. On 28 July, 2003, the FAAP Board accepted the application of TVEAAP to affiliate with FAAP.

Russia

In Russia, accreditation / national recognition is directly overseen by the Ministry of Education and Science of Russian Federation. Since 1981, Russia has followed the UNESCO international regulations to ensure Russian institutions and international institutions meet higher quality standards. It is illegal for a school to operate without government approval. The Russian Federation has a three-step recognition system: License, Accreditation and Attestation. Additional agencies, including the National Accreditation Agency (NAA) of the Russian Federation, under the Ministry of Education and Science of Russian Federation, operate under the authority of the Federal Service of Supervision in Education and Science. NAA is recognized as the organization in Russia responsible for dissemination of knowledge and information on procedures of the state accreditation of HEIs. It develops materials and methodological recommendations for conducting self-evaluations and external reviews, trains experts, conducts research into the development of QA of higher education in Russia, prepares the final reports on the quality of the HEIs.

3.4.2 Accreditation in India

There are 900 universities and 45000 colleges in the higher education sector. This pool of HEIs is serviced for accreditation purposes by either:

1. National Assessment and Accreditation Council (NAAC) for a score and grade based institutional assessment and accreditation
2. National Board of Accreditation for programmes accreditation in Technical Institutions (the term "Technical Institution" as defined under AICTE Act.)
3. Accreditation Committee of the Bar Council of India.
4. National Accreditation Board of the Medical Council of India.
5. Accreditation Board (AB) - set up by the ICAR in 1996 with a mandate to accredit agriculture institutions.

3.4.3 Mandatory Accreditation

Accreditation was voluntary in India as a result of which less than one-fifth of the colleges and less than one third of all universities obtained accreditation. The Department of Higher

Education, Government of India, has taken the following measures for the mandatory assessment of Higher Educational Institutions:

1. National Accreditation Regulatory for Higher Educational institutions Bill, 2010 (NARAHE Bill) in Lok Sabha.
2. The UGC (Mandatory Assessment and Accreditation of Higher Educational Institutions), Regulations, 2012. Mandatory accreditation in the higher education would enable the higher education system in the country to become a part of the global quality assurance system.

The National Accreditation Regulatory Authority for Higher Educational Institutions Bill, 2010 (NARAHEI Bill) was a bill introduced to make provisions for assessment of academic the quality of higher educational institutions, programmes conducted therein and their infrastructure through mandatory accreditation by independent accreditation agencies and to establish a statutory Authority for the said purpose and to provide for matters connected therewith or incidental thereto.

Application of the Act

This Act shall apply to all higher educational institutions, other than the higher educational institutions engaged in agricultural education and research, and the programmes of study conducted therein.

Accreditation is mandatory under the provisions of this act and, every higher educational institution and every programme conducted therein shall be accredited. Duties and Obligations of Accreditation Agencies

1) While undertaking accreditation of a higher educational institution or programme conducted therein, the accreditation agency shall have regard to following principles in discharging its obligations for the advancement of knowledge, namely:-

   a) advancement of academic quality;

   b) enabling uniform reference of standards of academic quality in any class or classes of higher educational institutions or any one or more programmes conducted therein;

   c) informing stakeholders (including students and employers) about the quality of the higher educational institution or any programme conducted therein;

   d) rendering assistance to higher educational institutions in managing and enhancing their academic quality while working towards the development of explicit intended learning outcomes;

e) adherence to such other principles for advancement of knowledge which may evolve from time to time.

2) The accreditation agency shall, while undertaking accreditation of higher educational institutions or any programme conducted therein, follow the standards in respect of academic quality specified by the appropriate statutory regulatory authority.

3) Every accreditation agency shall abide by the code of ethics.

Procedure of Accreditation by the Accreditation Agency

1) Every accreditation agency shall accredit a higher educational institution or a programme conducted therein on an application made to it by such institution in such form and manner, and on payment of such fees, as may be specified by regulations.

2) The process and procedure for accreditation of a higher educational institution or a programme in such institution shall be such as may be specified by the regulations.

3) The accreditation of a higher educational institution or a programme in such institution shall be done at such intervals and after such periods as may be specified by the appropriate statutory regulatory authority.

4) The accreditation agency shall, while undertaking accreditation of a higher educational institution or a programme in such institution, provide an opportunity to the stakeholders in the higher educational institution, including students and employees, to submit their views on matters of academic quality.

5) The accreditation agency shall give a reasonable opportunity to the higher educational institution to file suggestions or objections, if any, on the draft accreditation prepared by it and shall take note of such suggestions or objections, if any, while finalizing the accreditation of such institution or any programme conducted therein.

6) he accreditation agency shall publish on its website the accreditation together with all documents and reasons for such accreditation.

Chapter – 4

NAAC Process of Assessment and Accreditation

Chapter – 4

NAAC Process of Assessment and Accreditation

4.1 NAAC Process

Since its beginning in 1995 (when the grading was limited to Accredited and Not Accredited system), NAAC's process of assessment and accreditation has undergone changes before the 4 point grading system was introduced as presented in Tables 3.1 (a), 3.1 (b), 3.1(c), and 3.1(d) . While the overall weightages in the new methodology and grading system remain the same, inclusion of micro aspects and assigning weightage to these aspects has been the new introduction. Key Aspect based assessment is expected to reduce subjectivity in the process of Assessment and Accreditation. The different grading systems followed by NAAC over years are given below:

Table 4.1 (a) Grading According to the Star System (1998-2002)

Grade	Instructions Weighted Score in % (upper limit exclusive)
A*****	≥75
A****	70 - 75
A***	65 - 70
A**	60 - 65
A*	55 - 60

Table 4.1(b) Grading According to Nine Point Scale (2002-2007)

Grade	Instructions Weighted Score in % (upper limit exclusive)
A++	95 - 100
A+	90 - 95
A	85 - 90
B++	80 - 85
B+	75 - 80
B	70 - 75
C++	65 - 70
C+	60 - 65
C	55 - 60

Table 4.1 (c) Four Grading According to the Cumulative Grade Point Average (CGPA) Grading System (2007-2016)

Letter Grade	Range of CGPA	Performance Descriptor
A	3.01 - 4.00	Very Good (Accredited)
B	2.01 - 3.00	Good (Accredited)
C	1.51 - 2.00	Satisfactory (Accredited)
D	<=1.50	Unsatisfactory (Not Accredited)

Table 4.1 (d) Grading System from 1st July 2016 to March 2018

CGPA	Letter Grade	Status
3.76 - 4.00	A++	Accredited
3.51 - 3.75	A+	Accredited
3.01 - 3.50	A	Accredited
2.76 - 3.00	B++	Accredited
2.51 - 2.75	B+	Accredited
2.01 - 2.50	B	Accredited
1.51 - 2.00	C	Accredited
< =1.50	D	Not Accredited

After several rounds of discussion with experts and stakeholders, NAAC has arrived at an evaluation framework consisting of seven criteria for Assessment and Accreditation Process (A&A). They are the following:

1. Curricular Aspects
2. Teaching-Learning and Evaluation
3. Research Consultancy and Extension
4. Infrastructure and Learning Resources
5. Student Support and Progression
6. Organization and Management
7. Healthy Practices

From 1st April 2007, there have been some modifications in the aforementioned seven criteria and the grading pattern. From 1 April 2012, changes were also made with respect to the content (Key Aspects) and in the weightages given to each criterion. The details of the

modified seven criteria and their weightages are available on NAAC website (www.naac.gov.in).

The outcome of the A&A process includes both qualitative and qualitative reports. The confidential score sheets form the quantitative reports and the Peer Team Reports (PTR) form the qualitative reports. The PTRs usually consist of three sections; (i) Introduction, giving the scope of work, brief history and profile of the institution, (ii) Criteria-wise Analysis, detailing the criterion specific achievements and strengths & weakness in the institution under assessment; and (iii) Overall Analysis, as the concluding section with the recommendations of the Peer Team.

The PTR attempts to illustrate an institution - its strengths, weakness and suggestions or directions for improvement and to move ahead in its quest for quality. It seeks to map the Institution's short term as well as long term goals. Further, it shows the broad national and global arena in which it has to compete (with others) in its pursuit of excellence. Though the new reporting format comprises of the same major headings of the previous format, it is more specific and lays stress on reporting all the attributes of the institutions (the strengths and the weaknesses). NAAC is also working actively towards formulating a corpus of best practices that are being evolved nationally in the working of many institutions, and a target framework of these, will be immensely useful to individual institutions and higher education management as a whole.

4.2 Revised Criteria and Evaluation Matrix

The details of the various criteria and the differential weightages allocated to these criteria for various categories of institutions are summarized in Table 4.2 (a), 4.2 (b) and 4.2(c).

Table 4.2 (a) The Seven Criteria Evaluation Matrix
(Adopted Up to March 2007)

	Criteria	University	Autonomous College	Affiliated College
C-I	Curricular Aspects	15	15	10
C-II	Teaching-Learning and Evaluation	25	30	40
C-III	Research, Consultancy and Extension	15	10	05
C-IV	Infrastructure and Learning Resources	15	15	15

C-V	Student Support and Progression	10	10	10
C-VI	Organization and Management	10	10	10
C-VII	Healthy Practices	10	10	10
Total		**100**	**100**	**100**

Table 4.2 (b) The Seven Criteria Evaluation Matrix (Adopted from April 2007 to March 2012)

	Criteria	University	Autonomous College	Affiliated College
C-I	Curricular Aspects	150	150	50
C-II	Teaching-Learning and Evaluation	250	350	450
C-III	Research, Consultancy and Extension	200	150	100
C-IV	Infrastructure and Learning Resources	100	100	100
C-V	Student Support and Progression	100	100	100
C-VI	Governance and Leadership	150	150	150
C-VII	Innovative Practices	50	50	50
Total		**1000**	**1000**	**1000**

The colleges in the affiliating system have little freedom to make or effect changes in the curriculum. Therefore, the universities get a greater weightage (150) in 'Curricular Aspects'. Here, 'Teaching-Learning' is backed by 'Research, Consultancy and Extension' while in colleges there is not much scope for these activities. Therefore, colleges have a larger score for 'Teaching-Learning and Evaluation', while having a lesser score for 'Research, Consultancy and Extension'. The universities have greater weightage in that area. The weightage in the rest of the criteria are the same for both. The second and third criteria are the most important ones for colleges and these are the areas where they need to work the hardest 'Student Support and

Progression' reflect the success of both academic and administrative support services extended by the institution to ensure wholesale campus life for student community. 'Infrastructure and Learning Resources' need long term planning and organization. Colleges seldom show interest in such investment, improvisation and innovation. However, there is still some scope where they can add, invent, innovate and enrich and these are appropriately considered while deciding the weightages and also under criteria Innovative Practices.

Table 4.2 (c) The Seven Criteria Evaluation Matrix
(Adopted from April 2012 to 2017)

	Criteria	University	Autonomous College	Affiliated College
C-I	Curricular Aspects	150	150	100
C-II	Teaching-Learning and Evaluation	200	300	350
C-III	Research, Consultancy and Extension	250	150	150
C-IV	Infrastructure and Learning Resources	100	100	100
C-V	Student Support and Progression	100	100	100
C-VI	Governance, Leadership and Management	100	100	100
C-VII	Innovative and Best Practices	100	100	100
Total		**1000**	**1000**	**1000**

4.3. Revised Accreditation Framework (RAF), July 2017

4.3.1 Units of Assessment

NAAC's instrument is developed to assess and grade institutions of higher education through a three-step-process and make the outcome as objective as possible. Though the methodology and the broad framework of the instrument is similar, there is a slight difference in the focus of the instrument depending on the unit of Accreditation, i.e., Affiliated / Constituent colleges / Autonomous colleges / Universities / Health Science / Teacher / Physical Education.

A) Institutional Accreditation

- University: University Central Governance Structure along with all the Undergraduate and Postgraduate Departments.
- College: Any College (Affiliated, Constituent or Autonomous) with all its departments of studies

B) Department Accreditation

- Any Department/school/centre of the University.
- Presently, NAAC is undertaking only institutional accreditation. Expert groups have been constituted to work on Program Accreditation.

4.3.2 Criteria and Weightages

NAAC has identified a set of seven criteria to serve as the basis of its assessment procedures. NAAC has categorized Higher Educational Institutions into three major types (University, Autonomous College and Affiliated/Constituent College) and have assigned different weightages to these criteria under different key aspects based on the functioning and organizational focus of the three types of HEIs.

Key Indicators and Weightages

Table 4.3 (a) Seven Criteria Evaluation Matrix (adopted from July 2017: RAF)

	Criteria	University	Autonomous College	Affiliated College
C-I	Curricular Aspects	150	150	100
C-II	Teaching-Learning and Evaluation	200	300	350
C-III	Research, Innovations and Extension	250	150	120
C-IV	Infrastructure and Learning Resources	100	100	100
C-V	Student Support and Progression	100	100	130
C-VI	Governance, Leadership and Management	100	100	100

C-VII	Institutional Values and Best Practices	100	100	100
Total		**1000**	**1000**	**1000**

4.3.3 Grading

Institutions are graded for each Key Aspect under four categories, viz. A, B, C and D, denoting 'Very good', 'Good', 'Satisfactory' and 'Unsatisfactory' levels respectively. The summated score for all the key aspects under a particular criterion is then calculated with the appropriate weightage applied to it and the GPA is worked out for the Criterion. The Cumulative GPA (CGPA), which gives the final Assessment Outcome, is then calculated from the seven GPAs pertaining to the seven criteria, after applying the prescribed weightage to each Criterion.

Table 4.3 (b) Range of Institutional Cumulative Grade Point Average (from March 2018)

Range of Institutional Status Cumulative Grade Point Average (CGPA)	Letter Grade	Status
3.51 - 4.00	A++	Accredited
3.26 - 3.50	A+	Accredited
3.01 - 3.25	A	Accredited
2.76 - 3.00	B++	Accredited
2.51 - 2.75	B+	Accredited
2.01 - 2.50	B	Accredited
1.51 - 2.00	C	Accredited
<= 1.50	D	Not accredited

Advantages of CGPA

- Letter grades converted to Numerical Grade Points (and overall score is represented as Cumulative Grade Point Average).
- Qualitative measurements converted to grade points.
- Wider scope for normalizing the scores.
- Extreme biases (if any) could be minimized.

- A one-point difference between two letter grades, with 50 or 100 points assigned between two successive letter grades results in appreciable fine-tuning of the process.
- Relative evaluation would be more exact, due to a reduction in variations and standard deviations.
- Inter-Peer Team variations are substantially reduced.
- With scarce scope for adjustment at any stage, the peer team judgment would be more accurate.

4.3.4 Cycles of Accreditation

Institutions, which would like to make an improvement in the accredited status, may volunteer for Re-assessment, after completing at least one year but not after the completion of three years. The manual to be followed for re-assessment is the same as that for the Assessment and Accreditation. However, the institution shall make specific responses based on the recommendations made by the peer team in the first assessment and accreditation report, as well as the specific quality improvements made by the institution. The fee structure would be the same as that for Assessment and Accreditation.

When an institution undergoes the accreditation process for the first time it is referred to as Cycle 1 and the consecutive five-year periods as Cycles 2, 3, etc.

For Cycle 1, please refer to the following process of accreditation

For Cycle 1 and subsequent cycles, the following are essential:

- IQAC to be functional
- Timely submission of AQAR annually
- Institutions to submit IIQA, six months before the expiry of the accreditation status
- Other steps remain the same as for the first cycle

4.3.5 Assessment Outcome

The final result of the Assessment and Accreditation exercise will be an ICT based score, which is a combination of evaluation of qualitative and quantitative metrics. This will be compiled as a document comprising three parts.

1. Peer Team Report

- Section 1: Gives the general information of the institution and its context

- Section 2: Gives a criterion-wise analysis based on peer evaluation of qualitative indicators. Instead of reporting with bullet points, this will be a qualitative, descriptive assessment report based on the Peer Team's critical analysis presenting strengths and weaknesses of HEI under each Criterion.
- Section 3: Presents an overall analysis which includes Institutional Strengths, Weaknesses, Opportunities and Challenges.
- Section 4: Records recommendations for quality enhancement of the institution (not more than 10 major ones).

2. Graphical representation based on Quantitative Metrics (QnM)

This part will be a System Generated Quality Profile of the HEI based on statistical analysis of quantitative indicators in the NAAC's QIF (Quality Indicator Framework). Graphical presentation of institutional features would be reflected through synthesis of quantifiable indicators.

3. Institutional Grade Sheet

Contains the institutional grade sheet which is based on qualitative indicators, quantitative indicators and student satisfaction survey using existing calculation methods but it will be generated by software.

The above three parts will together form "NAAC Accreditation Outcome" document. It is mandatory for the HEIs to display it on their institutional website apart from NAAC hosting it on its website.

4.4 Motivation, Rationale and Objectives of the Analysis

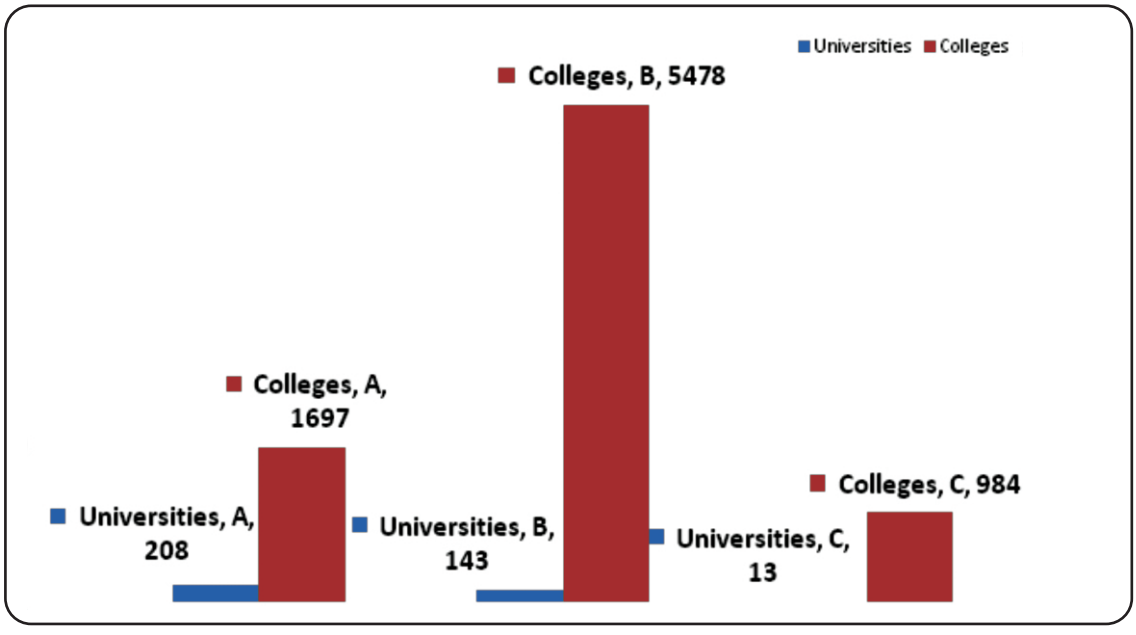
The whole accreditation process of NAAC has been designed to enable Higher Education Institutions (HEIs) to re-discover themselves, their strength as well as their deficiencies and areas for improvement. The process also facilitates stakeholders to know and realize their th latent potential. NAAC has (as of 11 March 2020) accredited 364 universities and 8159 colleges for Cycle I, 166 universities and 3532 colleges for Cycle II, 76 Universities and 1055 Colleges for Cycle III, 03 Universities and 044 Colleges for Cycle IV. Thus, the total Number of Accreditations done by NAAC is 609 Universities and 12790 Colleges.

Table 4.4 (a) Total Number of Accreditations (Status as on 11/03/2020)

	First Cycle	Second Cycle	Third Cycle	Fourth Cycle	Number of Accreditations
Universities	364	166	76	3	**609**
Colleges	8159	3532	1055	44	**12790**
Total	**8523**	**3698**	**1131**	**47**	**13399**

Table 4.4 (b) Grade Break Up of Institutions Accredited (As on 11/03/2020)

	A	B	C	Total
Universities	208	143	13	**364**
Colleges	1697	5478	984	**8159**
Total	**1905**	**5621**	**997**	**8523**



Grade Break up of Institutions Accredited (As on 11/03/2020)

In order to put the performance of accredited institutions in perspective, NAAC decided to analyze (quantitatively and qualitatively) the peer team reports state-wise. So far state-wise analysis of 12 states-Tamil Nadu, Kerala, Karnataka, Haryana, North Eastern region (includes all seven states); Maharashtra, West Bengal, Andhra Pradesh, Madhya Pradesh, Punjab, Rajasthan, and Gujarat - have been carried out and published.

As per AISHE data, there are 1976 Colleges in Telangana. NAAC has accredited 222 Colleges, out of which 141 are having valid accreditation. As per UGC data, there are 24 Universities in Telangana. NAAC has accredited 13 Universities, out of which all the thirteen are having valid accreditation.

Chapter – 5

Statistical Analysis of Accredited Higher Education Institutions in Telangana

Chapter – 5

Statistical Analysis of Accredited Higher Education Institutions in Telangana

Introduction

This chapter deals with the Statistical analysis of accredited Universities and Affiliated colleges in Telangana State. As on date the Number of Universities accredited are 13 out of 24 and the Colleges accredited are 222 out of 1976 and only 141 of them are having valid accreditation at present. The data extracted from the NAAC portal and from the SSRs submitted by the respective colleges is primarily used in this analysis. The analysis is based on the Criterion-wise scores and overall CGPA obtained by the institutions. The diversity of the institutions is also taken into consideration by considering their location, gender specific operation, and the nature of programs offered. The analysis is done separately for the 13 Accredited Universities and for the141 affiliated colleges and presented in different sections.

Objectives

- To provide inputs to the policymakers to evolve appropriate policies for the quality enhancement and quality sustenance of the higher education system
- To provide inputs to statutory regulating authorities to take appropriate steps in increasing the enrolment ratio in Higher education system
- To provide inputs to the funding and regulatory councils, to arrive at more informed planning and policy decisions
- To provide inputs to the NAAC for further improvement of the accreditation process and for developing benchmarks
- To help management and staff to evolve practices for improving their institutional performance
- To create awareness among all the stakeholders on the Higher education system

Procedure

In this report, both quantitative and qualitative techniques (based on the recommendation, commendation etc. As mentioned in each peer team report) have been applied for analysis. The criterion-wise scores and overall weighted scores are taken as comparable data for quantitative analysis. For the convenience of analysis and to get a comparable picture, the accredited institutions are grouped into (i) Universities and (ii) Colleges. Colleges are further grouped into clusters based on the following criteria:

- Grades (based on Grades scored by the colleges)
- Type of program (Medical, Engineering, General and Education)
- Program level (UG & PG)
- Gender (Co-educational Colleges and Women's Colleges)
- Location (Rural Colleges, Semi-urban Colleges and Urban Colleges)
- Source of funding (Government, Grant-in- aid, Private)

Comparison of the accredited institutions as per the profiles was also attempted. The databoth quantitative and qualitative - has been collected from Peer Team Reports (PTRs) and the missing links have been obtained from the institutional websites, SSRs, Annual Quality Assurance Reports and other materials available from NAAC and Telangana State Council of Higher Education. While carrying out the qualitative analysis, under each criterion, key/core indicators identified while assessing the institutions by NAAC will be the focus of study/analysis.

It is presumed that the inter-peer team variation in the scores and the PTRs is minimal and that the commendations, recommendations and concerns mentioned in the PTRs truly reflect the overall institutional situations and of the duly validated Self-study Reports (SSR).

Research Methodology

The following is the methodology adopted in this study.

Research Design

In the study, a cross-sectional data is collected as a part of descriptive research to analyze the performance of institutions rated by NAAC.

Sampling Design

Data relating to a population of 13 Universities and 141 colleges is collected to analyze the effect of location, source of funding, Program category, Gender and Program level on the performance of the institutions correlating with their criteria-wise grade point average scores and overall CGPA obtained in their assessment process.

Data Collection:

Among the two approaches of survey, census method is adopted. The data values are obtained from different sources of NAAC.

Data Analysis

Initially the collected data is examined using Exploratory Data Analysis. As a part of this, two

measures of descriptive statistics are included in the analysis, namely, Measures of Location and Measures of Spread. Under Measures of Location, mean is used and the absolute measures like standard deviation, variance along with a relative measure named Co-efficient of variance are used for relevant analysis.

Even, tools like Bar chart and Pie-chart of Diagrammatic presentation of data are used to understand the behavior of categorical variables.

Further, the Independent sample t-test and Analysis of Variance (ANOVA) are used to understand the significant effect of Gender and location, source of funding, program category respectively. Whenever the significant effect is observed, the post-hoc tests namely Scheffe and Tukey HSD are used to explore that significant difference.

Most of the cases in homogeneity tests where LEVENE's is used are proved to exist in grouped variances of location, source of funding and Program category. So, the post-hoc analysis is restricted to the above-mentioned tests only even by considering the ease of understanding.

In the case of Program level, the Independent sample t-test is used to understand the effect of program levels, namely UG and PG, and on Gender categories namely Co-education and Women on the NAAC ratings. Under this, LEVENE's test is used test the variances equality too.

In the rest of the cases including, location, source of funding and program category, One-way ANOVA is used to understand their effect on the NAAC ratings. In addition to this, the combined effect of location and source of funding, program category and source of funding on the NAAC ratings are also analyzed using Two-way ANOVA.

5.1 Analysis of the Universities

The Telangana state is having a total of 25 Universities approved by UGC in the category of Central, State, Deemed, Open and Autonomous. Out of these 25 universities, only 13 Universities have gone in for NAAC accreditation as in December 2019. The details of the Accredited Universities are presented in the following sections.

5.1.1 Analysis of the Accredited Universities

Among the 25 Universities of Telangana state, only 13 Universities are accredited and all of them are having valid accreditation except one i.e ICFAI Foundation for Higher education, a Deemed-to-be University, the accreditation of which got lapsed in June 2020. Table 5.1 below gives the details of the Universities accredited.

Table 5.1 Number and Percentage of Universities Accredited

Sl. No.	Type of University	Total Number	Accredited Number	Percentage Accredited
1	Central University	03	03	100%
2	State Open University	01	00	0
3	Deemed-to-be University	02	02	100%
4	State Public University	15	08	53.3%
5	State Legislative Act University	01	0	0
6	Institute of National Importance	02	0	0
Total		**24**	**13**	**54%**

Among the 24 Universities across the State, 54% of the Universities are accredited. This is against a national average of 39% Accredited Universities. Highest among the accredited Universities in Telangana are the Central Universities and Deemed-to-be Universities, i.e., 100% of them are accredited. Only 53.3% of the State Public Universities are accredited and the other type of Universities have not at gone for NAAC accreditation.

It can also be inferred from the data that the Universities are accredited under different cycles. Four Universities were accredited under Cycle 1 between March 2016 and Octber 2018 and they

still have the accreditation validity. In cycle 2 Seven Universities were accredited between February 2009 and March 2019. In the Cycle 3 two universities were accredited between January 14 and August 2017 and in that the University of Hyderabad has been accorded a 7-year validity due to its consistent top grade in all the 3 cycles.

The accredited Universities are further analyzed based on their type and Location. The details are presented in a Tabular form. Table 5.2. shows the breakup of these Universities on this basis. There is a total of 12 Universities in Urban location and only one in the Rural location. There are no Universities established in Semi-urban areas. Further all Central Universities and Deemed Universities are located only in the Urban area and among the State Universities only one University is in the Rural area is accredited. Almost 93% of Universities located in the Urban area, 7% located in the Rural area are accredited. The semi-Urban Universities have not gone in for accreditation.

Table 5.2 Locations and Types of Universities

University Location	Type of University			Total
	Central University	State University	Deemed University	
Urban	3	7	2	12
Semi-urban	0	0	0	0
Rural	0	1	0	1
Total	**3**	**8**	**2**	**13**

All the 13 Universities are accredited under CGPA system. The grade points obtained criterion-wise and overall CGPA are presented in Table 5.3. The 13 Universities have obtained CGPA from 2.25 to 3.72. (Grades from B to A+). Majority of the Universities. i.e., 8 out of 13 have got above 3 CGPA. The University of Hyderabad has got the highest CGPA and got the highest grade under 5-grade system along with NALSAR University of Law before the commencement of RAF with seven grades. However, there is no University with lower CGPA, i.e., less than 2.25.

Table 5.3 Distributions of Universities as per the CGPA System

Sl. No.	Name of the Institution	C1	C2	C3	C4	C5	C6	C7	Total (CGPA)
1	Maulana Azad National Urdu University	3.73	3.15	2.92	3.30	3.00	2.40	3.00	3.09
2	NALSAR University of Law	3.87	3.8	3.12	3.80	3.60	3.40	4.00	3.60
3	Telangana University	2.67	2.95	2.52	2.80	2.80	2.00	2.30	2.61
4	The English and Foreign Languages University	3.53	3.25	3.48	3.00	2.80	3.30	3.00	3.26
5	The ICFAI Foundation for Higher Education	3.13	3.75	3.00	4.00	3.60	3.70	3.30	3.43
6	University of Hyderabad	3.53	3.8	3.92	3.80	3.40	3.30	4.00	3.72
7	International Institute of Information Technology	2.53	3.05	3.24	3.30	3.80	2.40	3.00	3.05
8	Mahatma Gandhi University	2.87	2.45	1.88	2.70	2.20	2.10	2.30	2.32
9	Jawaharlal Nehru Technological University, Hyderabad	3.00	3.20	2.92	3.20	2.60	2.80	3.30	3.01
10	Kakatiya University	3.47	3.40	3.24	3.20	3.60	3.7	3.00	3.36
11	Osmania University	3.666	3.60	3.68	3.50	3.6	3.2	3.00	3.52
12	Palamuru University	3.40	2.78	1.50	2.41	1.94	1.42	2.78	2.31
13	Potti Sreeramulu Telugu University	2.6	2.61	0.94	2.83	2.28	2.15	3.5	2.25

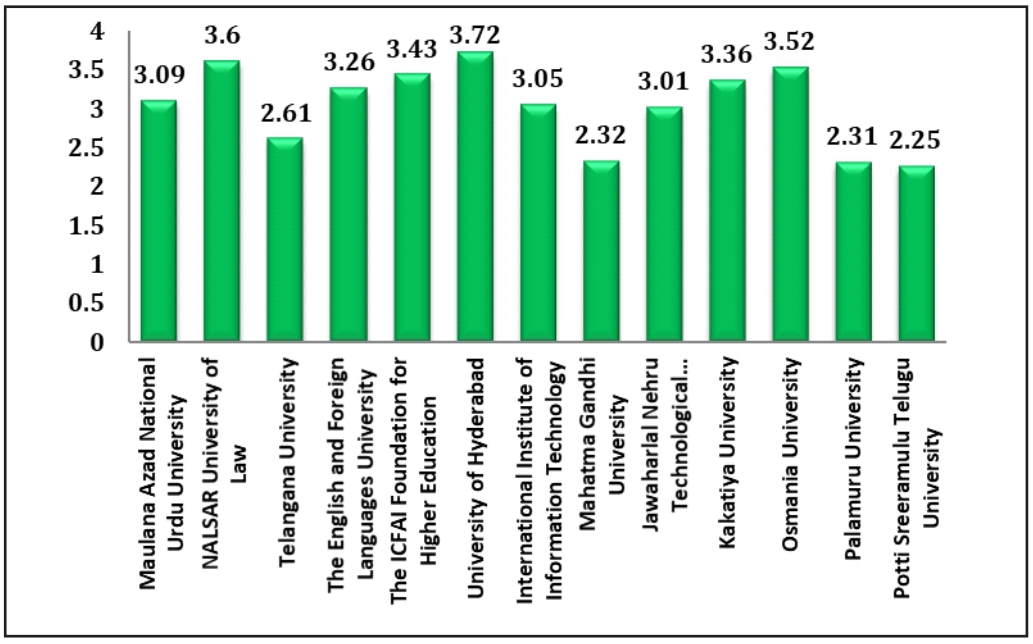


Fig. 5.1: Cumulative Grade Point Average of Accredited Universities

The above listed fourteen Universities in Table 5.3 are assessed under seven different criterion and have secured various grade point averages (GPA). Further the CGPA of these Universities varies from 2.25 to 3.72. The CGPA of Universities is individually shown in Fig 5.1. Hence a detailed analysis of the data is carried out for deeper insight into their performance. Various descriptive statistics of the seven criterions grade points like range, Minimum value, Maximum value, mean value, standard deviation and skewness of all seven criteria are evaluated and presented in the Table 5.4.

It is observed from the data that there is a wide range in the values of Garde points. The lowest among them is 0.94 for Research, Consultancy and Extension. The maximum value of GPA for all the Universities has been obtained in Infrastructure and Learning Resources and Innovation and Best Practices. The Research, Consultancy and Extension score among the Universities has a varied GPA with a maximum range of 2.98 with minimum value of 0.94 and maximum value of 3.92. Further the next maximum of 3.87 CGPA is observed in Curricular Aspects, 3.80 in Teaching Learning and Evaluation and in Student Support and Progression and 3.7 the lowest maximum in Governance, Leadership and Management. It is also worth noting that the mean value is less than 3.0 only in two criteria Research, Consultancy and Extension and in Governance, Leadership and Management.

The skewness observed in Research, Consultancy and Extension is highest and is -ve and is also having highest range when compared to other parameters. It reflects that very few Universities are above average and their high GPA has contributed to an average GPA of 2.79,

which is even the immediate next to the lowest value. Hence the negative skewness shows most of the Universities' performance is well below the average in this parameter and is not up to the mark. Similarly the lowest skewness of the data is found in Infrastructure and Learning Resources which has a maximum GPA value of 4.0. It shows that the performance of the institutions is fairly distributed around the average. The highest mean GPA 3.23 of all the Universities is obtained in Curricular Aspects followed by 3.21 in Teaching-learning and Evaluation and in Infrastructure and Learning Resources. From the range and standard Deviation given in the Table 5.4 it is found that there is a large variation in Research, Consultancy and Extension and Governance, Leadership and Management.

Table 5.4 Descriptive Statistics of Accredited Universities

Criterion	Range	Min.	Max.	Mean	Std. Dev.	Skewness
Curricular Aspects	1.34	2.53	3.87	3.23	0.43	-0.29
Teaching-Learning and Evaluation	1.35	2.45	3.80	3.21	0.42	-0.17
Research, Consultancy and Extension	2.98	0.94	3.92	2.79	0.83	-1.00
Infrastructure and Learning Resources	1.59	2.41	4.00	3.21	0.45	0.07
Student Support and Progression	1.86	1.94	3.80	3.01	0.60	-0.37
Governance, Leadership and Management	2.28	1.42	3.70	2.75	0.70	-0.28
Innovations and Best Practices	1.70	2.30	4.00	3.11	0.50	0.23

Further from the Table 5.4 it is observed that in the Innovations and Best Practices and in Infrastructure and Learning Resources, the variation is comparatively less. The least variation is observed in Curricular Aspects and in Teaching-learning and Evaluation. Further overall GPA in the above two aspects is the highest at 3.21 and 3.23 respectively, when compared to other criteria. Thus, it can be inferred that all universities are almost following same level of standards in Curricular Aspects and Teaching -Learning Evaluation.

Table 5.5 presents the criterion-wise and University-wise analysis. As the sample size of Universities category-wise being small the inferences going to be drawn may not be accurate.

However certainly it will throw some light for a comparison of these Universities. It can be seen from the Table that the Central Universities have scored the highest points in all the criteria compared to State and Deemed to be Universities. State Universities have scored highest in Curricular Aspects and only in this criterion they are better than Deemed Universities. In all other criteria the performance is least compared to central and deemed to be of Universities. The deemed Universities have scored highest in Infrastructure and Learning Resources and Student Support and Progression among the three types of Universities.

Table 5.5 Criterion–wise and University–wise Means

Criterion	Type of University			Overall GPA
	Central	State	Deemed	
Curricular Aspects	3.67	3.09	2.8 3	3.23
Teaching-Learning and Evaluation	3.50	2.99	3.40	3.21
Research, Consultancy and Extension	3.36	2.38	3.1 2	2.79
Infrastructure and Learning Resources	3.47	2.94	3.6 5	3.21
Student Support and Progression	3.20	2.71	3.70	3.01
Governance, Leadership and Management	3.10	2.48	3.05	2.75
Innovations and Best Practices	3.50	2.88	3.15	3.11
Overall CGPA	**3.42**	**2.77**	**3.24**	**3.04**

Table 5.6 Non-Re-Accredited University

Sl. No.	Name of the University	Expiry Date of Cer tificate
1	The ICFAI Foundation for Higher Education	24-0 6-2020

Out of 25 universities in the Telangana State, 13 Universities have gone in for accreditation byNAAC. Out of the 13 Universities the ICFAI Foundation for Higher Education University accreditation validity expired on 24th June 2020. Hence this is the only University that has not been accredited as on date. In fact, the University has prepared for reaccreditation, but did not file the IIQA and SSR on the account of the Covid-19 Pandemic. Hence, it can be concluded that almost 100% of the accredited institutions are committed to retaining the status of accreditation.

5.2 Analysis of the Colleges

In the State of Telangana there are 1976 higher educational Institutes. Out of them, only 222 have gone in for accreditation, i.e., 11% of the total institutions against an Indian average of 21%. More than 81 colleges have not gone for reaccreditation and hence there are only 141 colleges in the State which have valid accreditation in different cycles. Analysis of these 141 colleges is presented in the following section.

Analysis of these colleges has been carried out based on their location, source of funding, type of the institution, level of programs and type of programs offered. An attempt is also made to analyze these colleges based on the limited data that could be extracted from the SSRs of 64 colleges w.r.t student faculty ratio and per capita expenditure excluding faculty salary.

Table 5.7 Locations of Colleges

Location	Number of Colleges	Percent
Urban	72	51.1
Semi-urban	06	4.3
Rural	63	44.6
Total	**141**	**100.00**

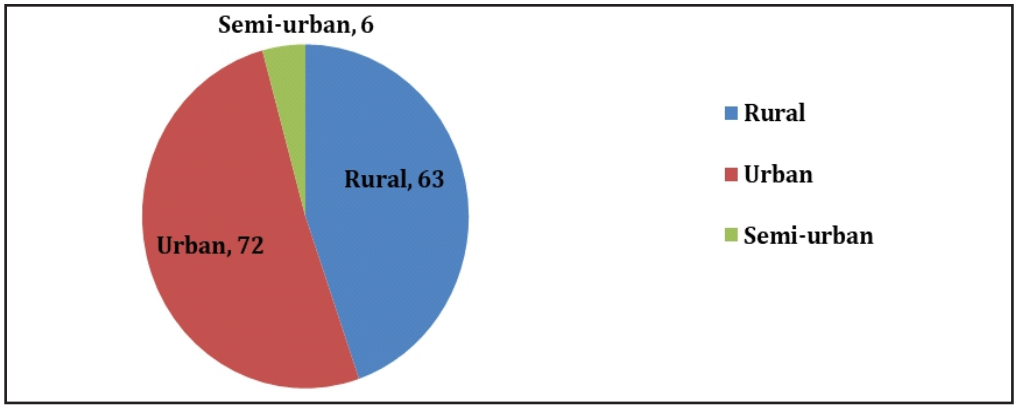


Fig 5.2: Locations of Colleges

5.2.1 Location-wise Analysis

The accredited 141 colleges of Telangana State are in Urban, Semi-urban and Rural areas. The details of these colleges are presented in Table 5.7 and Fig. 5.2. It is observed that around 51% of the colleges located in Urban area are accredited. Around 45% of rural and 4 % of semi-urban are accredited.

Table 5.8 Source of Funding for Colleges

Source of Funding	Number of Colleges	Percent
Government	35	24.8 2
Grant-in-aid	19	13.4 8
Private	87	61.70
Total	**141**	**100.0 0**

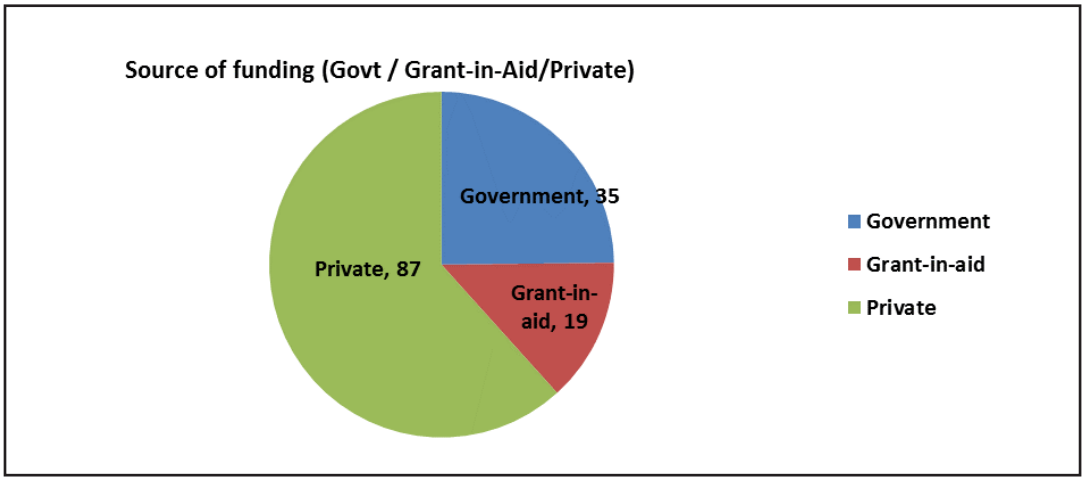


Fig. 5.3: Source of Funding of Colleges

5.2.2 Analysis Based on Source of Funding

Based on source of funding the colleges are classified into three types, viz., Government, Grant-in-aid and private. These Private Colleges are under self-financed category. The details of these colleges are presented in Table 5.8 and Fig. 5.3. It is inferred from the above data that most of the Private Colleges, i.e., 61.7% have gone in for accreditation. The percentage of Government Colleges which have gone in for accreditation is around 24.8% and that of Grant-in-aid is least, i.e., only 13.4%.

Table 5.9 Types of Colleges

Source of Funding	Frequency	Percent
Co-education	120	85.10
Women	021	14.90
Total	**141**	**100.0 0**

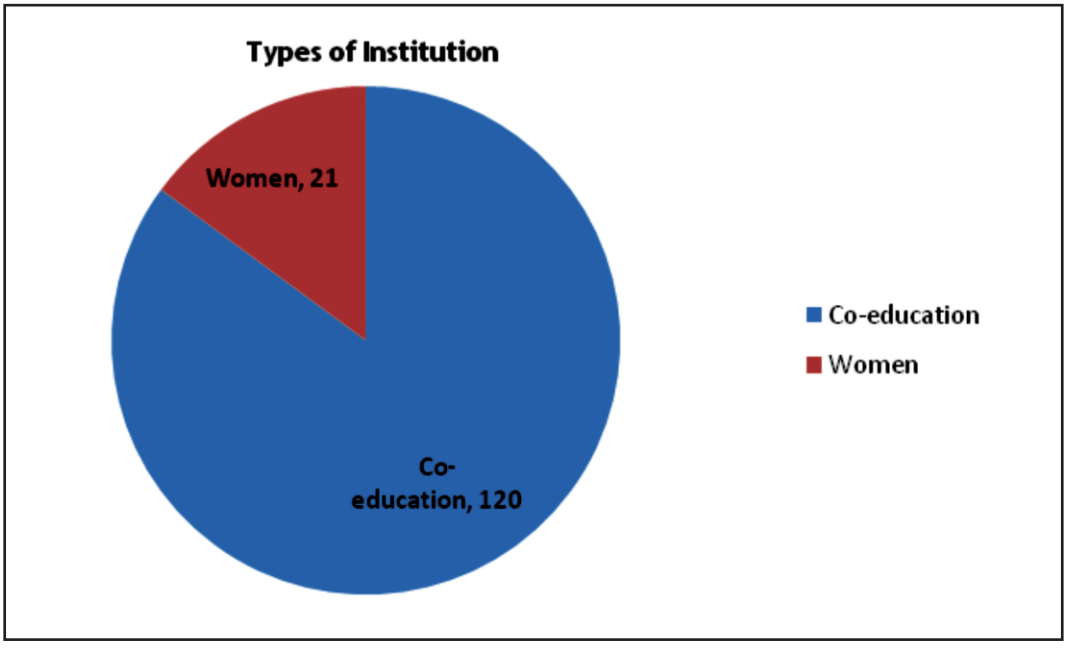


Fig. 5.4: Types of Colleges

5.2.3 Analysis based on type of the Colleges

Most of the colleges in the list of accredited institutions are co-education colleges. Around 85% of the colleges that have gone in for accreditation are under the co-education category and only 15% of the institutions exclusively meant for women are accredited. Table 5.9 and Fig. 5.4 presents the breakup of accredited colleges based on gender, i.e., co-education colleges and women's colleges.

Table 5.10 Programs offered by Colleges

Source of Funding	Frequency	Percent
UG Level	021	14.90
UG & PG Level	120	85.10
Total	**141**	**100.0 0**

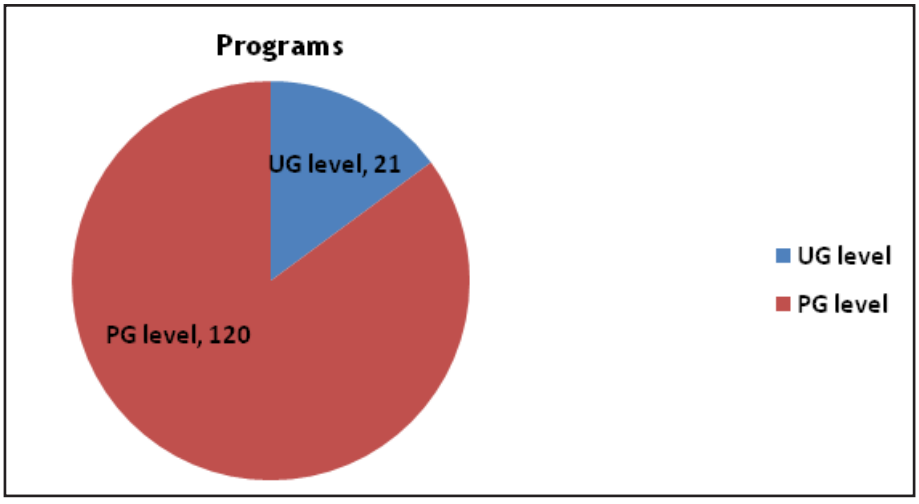


Fig. 5.5: Programs offered by Colleges

5.2.4 Analysis based on levels of programs offered by Colleges

Under this category there are 21 UG colleges and 120 PG level colleges, i.e., offering both UG and PG programs. There are no colleges only offering PG programs. Table 5.10 and Fig 5.5 give the details of the accredited colleges in the Telangana state. It can be seen that 85% of the colleges are offering both UG and PG programs and only 15% of the total accredited colleges are offering only UG programs. In general, affiliated colleges that have sufficient faculty and infrastructure have been permitted to offer PG programs.

Table 5.11 Type of Programs of Colleges

Type	Number of Colleges	Percent
General	61	43.26
Education	02	01.43
Engineering/Management related	67	47.51
Medical/Dental/Nursing/Pharmacy	11	07.80
Total	**141**	**100.00**

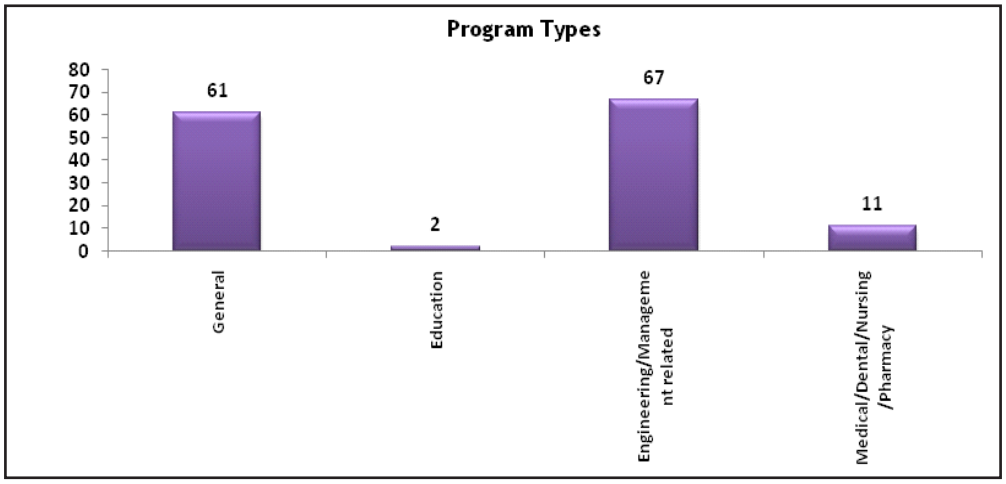


Fig. 5.6: Programs of Colleges

5.2.5 Analysis based on type of programs offered by the colleges

The accredited colleges of the State are classified based on the programs they are offering. The colleges offering programs like arts, commerce and science are categorized as general. Colleges offering programs in Medical, dental, Nursing and pharmacy are placed in one category. Engineering and Management programs offering colleges are considered in another category. Colleges offering programs in Education are put in one category. Table 5.11 and Fig. 5.6 give details of the number of accredited colleges offering such varied programs.

From the Table 5.11 it is observed that colleges offering Engineering and Management programs have preferred to go in for accreditation. Colleges offering general programs like arts, commerce and science are in the next place. These two types of colleges account for 90% of the total accredited colleges in Telangana. Colleges offering other professional programs and education are less than 10% as far as accreditation is concerned. Out of these 141 colleges, there are a few Autonomous colleges also.

Table 5.12 Details of Colleges under Affiliating Universities

Sl. No.	Name of the AffiliatingUniversity	No. of Colleges Accredited	Total no. of Affiliated Colleges
1	Dr. NTR University of Health Sciences	03	184
2	Jawaharlal Nehru Technological University	63	423
3	Kakatiya University	18	293
4	Kaloji Narayana Rao University of Health Sciences	03	160

5	Mahatma Gandhi University	05	100
6	Osmania University	34	407
7	Palamuru University	04	82
8	Satavahana University	04	107
9	Telangana University	07	69
Total		**141**	**1825**

5.3 Affiliating Universities of the Accredited Colleges

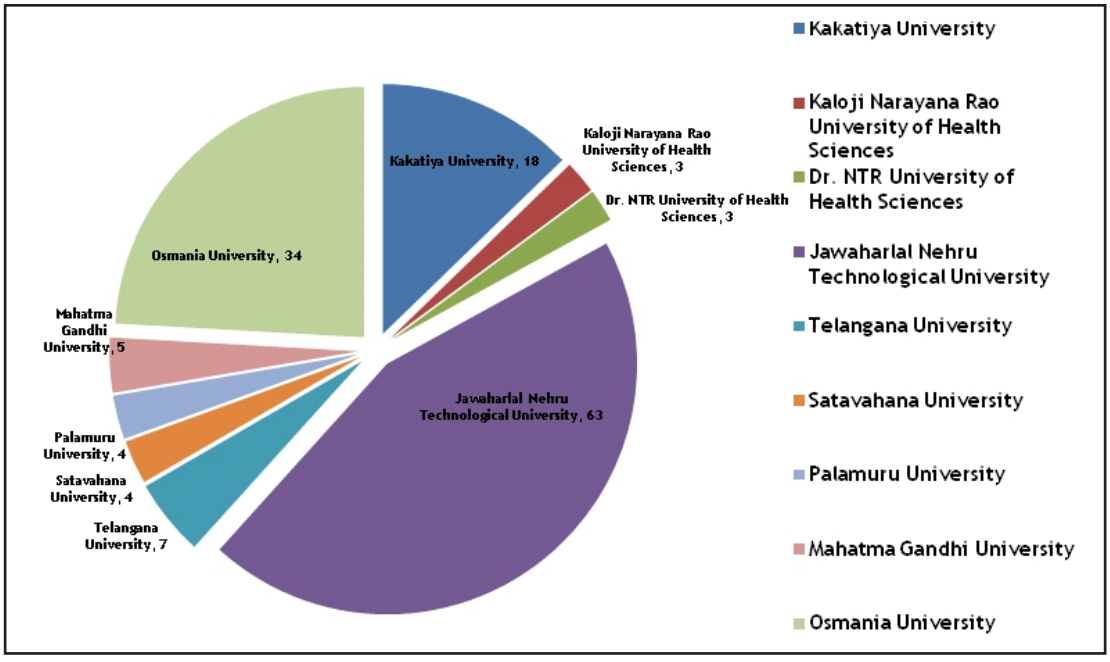


Fig. 5.7: Affiliating Universities of the Colleges

There are 141 accredited colleges affiliated to various Universities across the State of Telangana. Table 5.12 and Fig. 5.7 give the number of affiliated colleges accredited under each University. Jawaharlal Nehru Technology University stood top among the list with 63 colleges accredited under its affiliation. The number of colleges accredited by NAAC under Health Science Universities is found least. However, it is worth noting that not a single college affiliated to the remaining universities of the State has gone in for accreditation as on date.

5.3.1 Accreditation Cycles of the Colleges

The cycle number of the accredited 141 affiliating colleges is provided in Table no 5.13. It reflects that 82 colleges are accredited under the first cycle that amounts to 58%. Less than half, i.e., only 42% of the colleges have gone in for re-accreditation. There is only one college that has gone in for the fourth cycle too.

Table 5.13 Accreditation Cycle of the Colleges

Cycle Number	Number of Colleges	Percent
1	82	58.16
2	33	23.40
3	25	17.73
4	1	00.71
Total	**141**	**100.00**

5.4 Overall Analysis of the Accredited Colleges

In the following section the performance analysis of all the 141 accredited colleges is presented. The entire analysis is based on the Grade point average obtained in each of the seven defined criteria of the NAAC and on the Cumulative Grade Point Average.

Table 5.14 Grades of the Colleges

CGPA range	Number of Colleges	Percent
1.51 to 2.00	6	4.3
2.01 to 2.50	26	18.4
2.51 to 2.75	25	17.7
2.76 to 3.00	32	22.7
3.01 to 3.25	40	28.4
3.26 to 3.50	9	6.4
3.51 to 4.00	3	2.1
Total	**141**	**100.0**

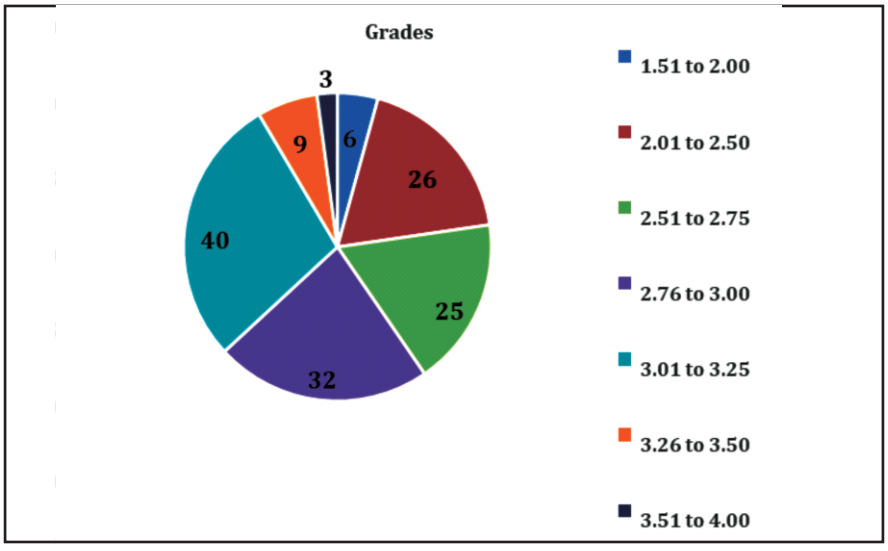


Fig. 5.8: Grades of the Colleges

5.4.1 Grades obtained by the Colleges

The Table 5.14 presents the overall performance of the colleges in terms of their Cumulative Grade Point Average (CGPA). The total number of colleges accredited are divided in seven CGPA ranges. Majority of the colleges, i.e., 28.4% are in the CGPA range of 3.01 to 3.25. Similarly, there are only 2.1% colleges in the highest CGPA range. Further 4.3% of colleges are under the lowest CGPA range. However, 61% of the total accredited colleges have got CGPA above 2.75, which reflects good performance by them.

Table 5.15 Descriptive Statistics of Accredited Colleges

Criterion	Min.	Max.	Mean	Std. Dev.	Co-efficient of Variation
Curricular Aspects	1.30	4.00	2.97	0.58	19.60
Teaching-Learning and Evaluation	1.23	3.69	2.82	0.37	13.37
Research, Consultancy and Extension	1.05	3.75	2.40	0.60	25.40
Infrastructure and Learning Resources	0.80	4.00	3.06	0.54	17.78
Student Support and Progression	1.25	4.00	2.87	0.49	17.38
Governance, Leadership and Management	1.00	4.00	2.63	0.52	20.18
Innovations and Best Practices	1.00	3.88	2.67	0.58	21.99
Overall CGPA	**1.52**	**3.73**	**2.77**	**0.40**	**14.44**

5.4.2 Criterion-wise Analysis of the Colleges

To further understand the performance of these 141 colleges criterion-wise Mean and standard deviation are evaluated and presented in Table 5.15. The overall CGPA of all these colleges varies from a minimum value of 1.52 to a Maximum value of 3.73, with a mean of 2.772. If we consider the variation of scores criterion-wise they vary from 0.80 to 4.00. Highest mean GPA of all 141 colleges obtained in Infrastructure and Learning Resources is 3.06 followed by Curricular Aspects in which it is 2.97. The second lowest value of mean GPA, i.e., 2.63 is in Governance Leadership and Management. The lowest mean GPA of 2.40 is observed in Research, Consultancy and Extension.

After carrying out the overall analysis of the colleges based on their GPA criterion-wise, to further carry out the comparison of colleges, three different combinations of the colleges are chosen. (i) Urban, Semi-urban and Rural (ii) Government, Grant-in-aid and self-financed (iii) Engineering, Medical and General colleges. Since, the number of colleges under the education category is only 2 out of total 141, for the sake of convenience in analyzing the data they are clubbed with the General category.

5.4.3 Influence of Program Level on the Performance of the Colleges

An attempt is made to compare the performance and to bring out the significant difference between UG and UG & PG colleges in the following section. For this purpose the mean, standard deviations are found and LEVENE's test and t-test for equality of variance are carried out. The mean values in each criterion for UG and UG & PG are presented in Table 5.16. The LEVENE's test is carried out to verify whether there is significant difference in the variance of the two levels. The following observations are drawn from the test results presented in Table 5.16 and 5.17.

It is found from the Table 5.16 that there is not much variation in the performance of UG and UG & PG colleges. However, the higher mean, i.e., better performance is observed in UG & PG level programs in Curricular Aspects, Teaching-Learning and Evaluation, Infrastructure and Learning Resources and Innovations and Best Practices. Whether the difference in their performance is significant or not is proved by the data presented in Table 5.17. Only in the first two criteria the significant difference is less than 0.05 and hence equal variance is not assumed.

This shows that only in Curricular Aspects and Teaching-learning and Evaluation there is significant difference in the performance of the institutions at UG and UG & PG levels. Further it can be concluded that in these two criteria the performance of UG & PG institutions is better than that of UG institutions.

Comparison for different Criteria and Overall Performance

Group Statistics

Table 5.16 Influence of Program Level on the Performance under each Criterion

	Program Level	N	Mean	Std. Deviation	Std. Error Mean
Curricular Aspects	UG	41	2.93	.818	.128
	UG & PG	100	3.01	.643	.064

Teaching-Learning and Evaluation	UG	41	2.73	.501	.078
	UG & PG	100	2.87	.418	.042
Research, Consultancy and Extension	UG	41	2.37	.623	.097
	UG & PG	100	2.35	.687	.069
Infrastructure and Learning Resources	UG	41	2.93	.608	.095
	UG & PG	100	3.12	.686	.069
Student Support and Progression	UG	41	2.85	.573	.089
	UG & PG	100	2.90	.595	.059
Governance, Leadership and Management	UG	41	2.61	.628	.098
	UG & PG	100	2.58	.572	.057
Innovations and Best Practices	UG	41	2.56	.673	.105
	UG & PG	100	2.65	.626	.063

Table 5.17 LEVENE's Test for Program Level Effect on Performance

		LEVENE's Test for Equality of Variances		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Curricular Aspects	Equal variances assumed	6.591	.011	-.642	139	.522	-.083	.129
	Equal variances not assumed			-.581	61.264	.563	-.083	.143
Teaching-Learning and Evaluation	Equal variances assumed	8.508	.004	-1.681	139	.095	-.138	.082
	Equal variances not assumed			-1.558	63.981	.124	-.138	.089
Infrastructure and Learning Resources	Equal variances assumed	.725	.396 .	128	139	.899	.016	.124
	Equal variances not assumed			.133	81.684	.894	.016	.119
Research, Consultancy and Extension	Equal variances assumed	1.519	.220	-1.568	139	.119	-.193	.123
	Equal variances not assumed			-1.649	83.457	.103	-.193	.117
Student Support and Progression	Equal variances assumed	.054	.816	-.425	139	.672	-.046	.109
	Equal variances not assumed	-		.431	77.078	.667	-.046	.107

Governance, Leadership, and Management	Equal variances assumed	.388	.534	.273	139	.785	.030	.109
	Equal variances not assumed			.262	68.638	.794	.030	.113
Innovations and Best Practices	Equal variances assumed	.881	.350	-.751	139	.454	-.089	.119
	Equal variances not assumed			-.728	69.857	.469	-.089	.122

5.4.4 Influence of Gender on the Performance of Colleges

An attempt is made to compare the performance and to bring out the significant difference between women and co-education colleges in the following section. For this purpose, the mean standard deviation is found and LEVENE's test for equality of variance is carried out. The mean performance values in each criterion for women and co-education colleges is presented in Table 5.18. The LEVENE's test is carried out to verify whether there is significant difference in the variance of the two levels. The following observations are drawn from the test results presented in Table 5.18 and 5.19.

It is found from the Table 5.18 that there is not much variation in the performance of women and coeducation colleges. This is proved from the results of LEVENE's test values presented in Table 5.19.The significance value found in all these criteria is greater than 0.05 and hence equal variance is assumed. Hence Null hypothesis is accepted which reflects that there is no difference in the performance of the colleges under these two categories. However, the higher mean, i.e., relatively better performance is observed in women colleges in curricular aspects and in Governance and leadership and management criterions. Though the mean value in other criteria is high for coeducation colleges, as read from the LEVENE's test it is insignificant.

Gender -Co-ed and Women

T-Test

Table 5.18 Influence of Gender on the Performance under each Criterion

Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Curricular Aspects	Co-education	137	2.98	.691	.059
	Women	4	3.25	.957	.479
Teaching - Learning and Evaluation	Co-education	137	2.83	.447	.038
	Women	4	2.75	.500	.250
Research, Consultancy and Extension	Co-education	137	2.36	.661	.056
	Women	4	2.25	.957	.479
Infrastructure and Learning Resources	Co-education	137	3.07	.671	.057
	Women	4	2.75	.500	.250
Student Support and Progression	Co-education	137	2.89	.590	.050
	Women	4	2.75	.500	.250
Governance, Leadership and Management	Co-education	137	2.58	.578	.049
	Women	4	3.00	.816	.408
Innovations and Best Practices	Co-education	137	2.63	.642	.055
	Women	4	2.50	.577	.289

Table 5.19 LEVENE's Test for Gender Effect on Performance

Independent Samples Test										
		LEVENE's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Curricular Aspects	Equal variances assumed	1.257	.264	-.768	139	.444	-.272	.354	-.972	.428
	Equal variances not assumed			-.564	3.092	.611	-.272	.482	-1.781	1.238
Teaching-Learning and Evaluation	Equal variances assumed	.129	.720	.361	139	.718	.082	.227	-.367	.531
	Equal variances not assumed			.325	3.141	.766	.082	.253	-.703	.867
Research, Consultancy, and Extension	Equal variances assumed	1.124	.291	.317	139	.752	.108	.339	-.563	.779
	Equal variances not assumed			.223	3.084	.837	.108	.482	-1.403	1.618
Infrastructure and Learning Resources	Equal variances assumed	.171	.680	.953	139	.342	.323	.339	-.347	.993
	Equal variances not assumed			1.259	3.324	.289	.323	.256	-.450	1.096
Student Support and Progression	Equal variances assumed	.019	.891	.471	139	.638	.141	.298	-.450	.731
	Equal variances not assumed			.551	3.249	.617	.141	.255	-.637	.918
Governance, Leadership and Management	Equal variances assumed	.072	.788	-1.429	139	.155	-.423	.296	-1.009	.163
	Equal variances not assumed			-1.030	3.088	.377	-.423	.411	-1.711	.864
Innovations and Best Practices	Equal variances assumed	.118	.732	.393	139	.695	.128	.325	-.515	.770
	Equal variances not assumed			.435	3.220	.691	.128	.294	-.772	1.028

Table 5.20 Number of Colleges under different types

Type of College	No. of Colleges
Government	35
Grant-in-aid	19
Private	87
Rural	17
Semi-urban	06
Urban	72

Table 5.21 Summary of 2 x 2 Factorial Design ANOVA of Location and Source of Funding of Colleges for Curricular Aspects Performance

Source of Variance	Sum of Squares	Degree of freedom	Mean Square	F	Sig.
Locations	868864.6	3	289621.5	628 .29	3.008 7
Source of Funding	770464.1	3	256821.4	357 .4414	3.008 7

There is a difference between the three Locations and the three Source of Funding

5.5 Overall Performance Analysis of Accredited Colleges using ANOVA through SPSS

Table 5.22 Influence of Locations in their Interaction on the performance under each Criterion

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Curricular Aspects	Between Groups	3.512	2	1.756	3.759	0.026
	Within Groups	64.460	138	.467		
	Total	67.972	140			
Teaching-Learning and Evaluation	Between Groups	1.696	2	.848	4.463	0.013
	Within Groups	26.219	13	8 .190		
	Total	27.915	140			

Research, Consultancy and Extension	Between Groups	3.740	2	1.870	4.410	0.014
	Within Groups	58.529	13	8.424		
	Total	62.270	140			
Infrastructure and Learning Resources	Between Groups	2.366	2	1.183	2.718	0.070
	Within Groups	60.060	138	.435		
	Total	62.426	140			
Student Support and Progression	Between Groups	1.009	2 .504	1.475	0.232	
	Within Groups	47.176	138 .	342		
	Total	48.184	140			
Governance, Leadership and Management	Between Groups	3.810 2	1.905	5.931	0.003	
	Within Groups	44.331	138	.321		
	Total	48.142	140			
Innovations and Best Practices	Between Groups	2.969	2	1.484	3.786	0.025
	Within Groups	54.109	138	.392		
	Total	57.078	140			

Homogeneous Subsets

Table 5.22.1 Tukey HSD Test for Criteria I

Criteria I			
	Location	**N**	**Subset for alpha = 0.005**
Tukey HSD[a,b]			1
	Semi-urban	6	2.50
	Rural	35	2.80
	Urban	100	3.08
	Sig.	.060	
Scheffe[a,b]	Semi-urban	6	2.50
	Rural	35	2.80
	Urban	100	3.08
	Sig.		.076

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.22.2 Tukey HSD Test for Criteria II

Criteria II			
	Location	**N**	**Subset for alpha = 0.005**
Tukey HSD[a,b]			1
	Semi-urban	35	2.66
	Rural	6	2.67
	Urban	100	2.90
	Sig.		.291
Scheffe[a,b]	Semi-urban	35	2.66
	Rural	6	2.67
	Urban	100	2.90
	Sig.		.325

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.22.3 Tukey HSD Test for Criteria III

Criteria III				
	Location	**N**	**Subset for alpha = 0.005**	
Tukey HSD[a,b]			1	2
	Semi-urban	6	1.67	
	Rural	35		2.26
	Urban	100		2.43
	Sig.		1.000	.754
Scheffe[a,b]	Semi-urban	6	1.67	
	Rural	35	2.26	2.26
	Urban	100	2.43	
	Sig.		.053	.773

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.22.4 Tukey HSD Test for Criteria IV

Criteria IV				
	Location	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	Semi-urban	6	2.50	
	Rural	35	3.00	3.00
	Urban	100		3.12
	Sig.		.105	.875
Scheffe[a,b]	Semi-urban	6	2.50	
	Rural	35	3.00	3.00
	Urban	100		3.12
	Sig.		.126	.886

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.22.5 Turkey HSD Test for Criteria V

CriteriaV			
	Location	**N**	**Subset for alpha = 0.005**
			1
Tukey HSD[a,b]	Semi-urban	6	2.50
	Rural	100	2.89
	Urban	35	2.94
	Sig.		.105
Scheffe[a,b]	Semi-urban	6	2.50
	Rural	100	2.89
	Urban	35	2.94
	Sig.		.127

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.22.6 Tukey HSD Test for Criteria VI

CriteriaVI				
	Location	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	Semi-urban	6	2.00	
	Rural	35	2.43	2.43
	Urban	100		2.68
	Sig.	.106		.456
Scheffe[a,b]	Semi-urban	6	2.00	
	Rural	35	2.43	2.43
	Urban	100		2.68
	Sig.		.128	.489

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.22.7 Tukey HSD Test for Criteria VII

CriteriaVII			
	Location	**N**	**Subset for alpha = 0.005**
			1
Tukey HSD[a,b]	Semi-urban	6	2.17
	Rural	35	2.46
	Urban	100	2.71
	Sig.		.053
Scheffe[a,b]	Semi-urban	6	2.17
	Rural	35	2.46
	Urban	100	2.71
	Sig.		.067

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.617.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots

Estimated Marginal Means of Criteria I

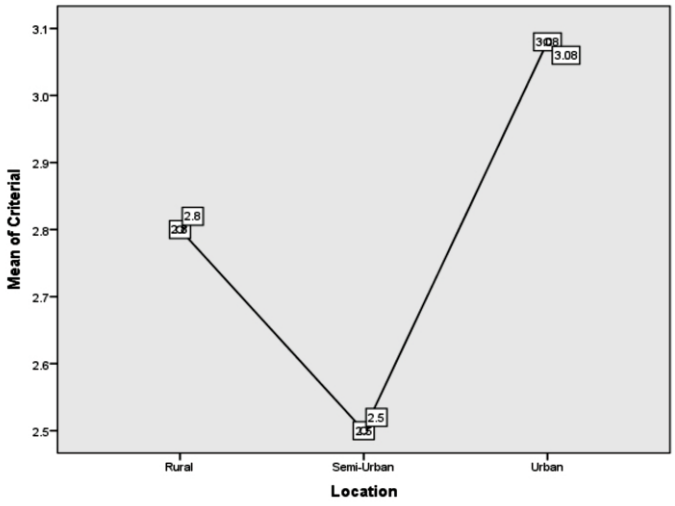


Fig. 5.9: Effect of Location on Curricular Aspects

Estimated Marginal Means of Criteria II

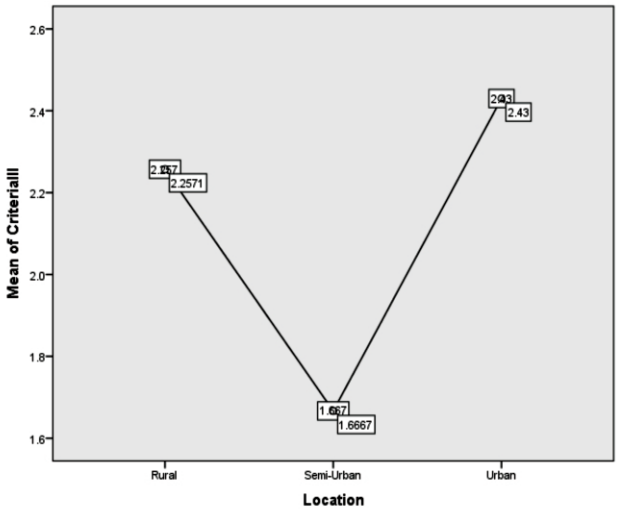


Fig. 5.10: Effect of Location on Teaching-Learning and Evaluation

Estimated Marginal Means of Criteria III

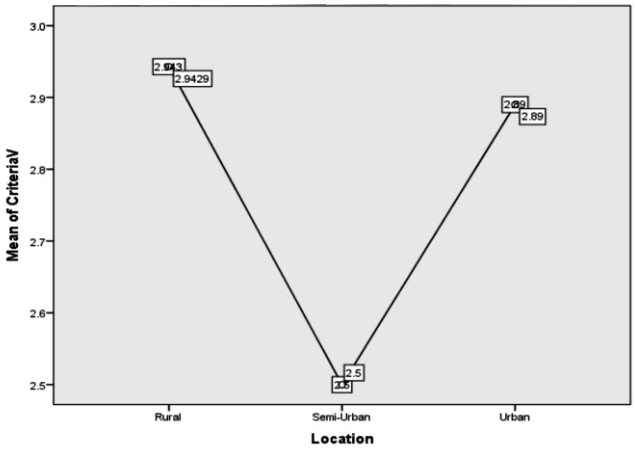


Fig. 5.11: Effect of Location on Research, Consultancy and Extension

Estimated Marginal Means of Criteria IV

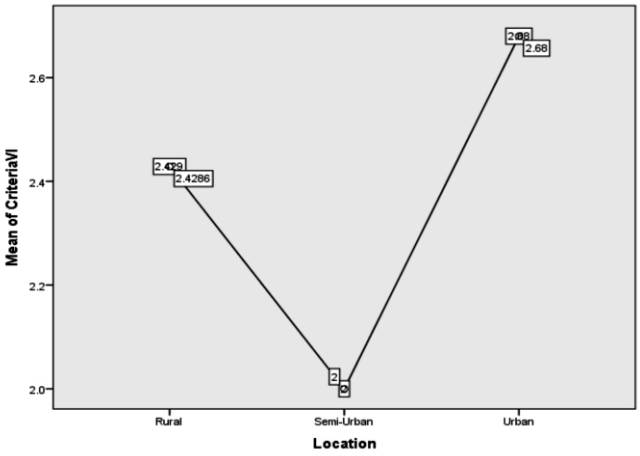


Fig. 5.12: Effect of Location on Infrastructure and Learning Resources

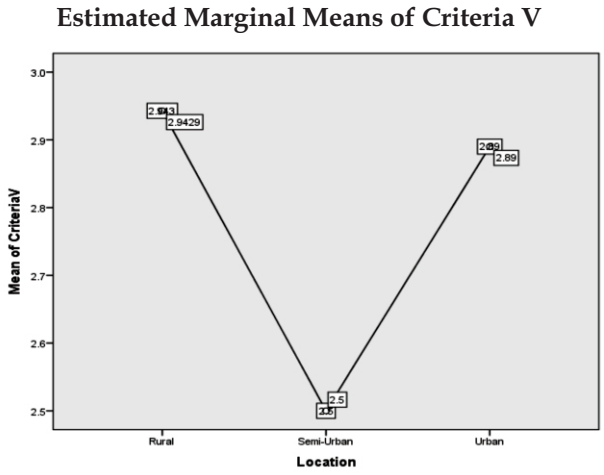


Fig. 5.13: Effect of Location on Student Support and Progression

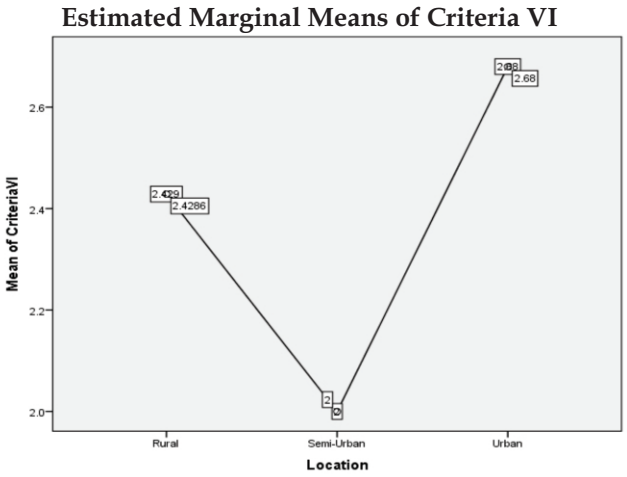


Fig. 5.14: Effect of Location on Governance, Leadership and Management

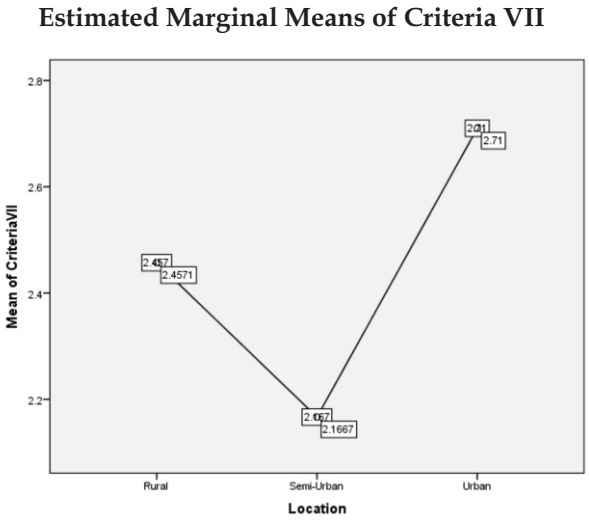


Fig. 5.15: Effect of Location on Innovation and Best Practices

5.5.1 Significance of Location on the Performance of Institutions Criterion-wise

Table 5.22 depicts the influence of location on each criterion. The significance value for the Curricular Aspects, Teaching-learning Evaluation, Research, Consultancy and Extension Governance, Leadership and Management and Innovations and Best Practices is found to be less than 0.05. Thus, the Null hypothesis is rejected in these cases. Hence, performance in these criteria is affected by the locations significantly. In Infrastructure and Learning Resources, Student Support and Progression the sig value is found to be more than 0.05. Hence the performance in these two criterions is not affected by the locations and is non-significant. Particularly the Student Support and progression have high sig value of 0.232 reflecting that there is absolutely no effect of location on the Student Support and Progression.

In addition to the above information to identify which location has got more significant effect on the criterion the data is again subjected to Tukey HSD test and Scheffe Test. Table 5.22.1

shows the effect of location on Curricular Aspects. It reveals that all the three locations Urban, Semi-urban and Rural are having no significance difference with respect to curricular aspects. However, the effect of urban location is more than rural location and is least in case of Semi-urban. Table 5.22.2 shows the effect of location on Teaching-learning evaluation. It reveals that all the three locations, Urban, Semi-urban and Rural, are having no significance difference with respect to Teaching-learning Evaluation. However, the effect of Urban location is more than Semi-urban location and is the least in case of rural.

Table 5.22.3 shows the effect of location on Research, consultancy and extension. It reveals that Rural and Urban locations are more significant than semi-urban. Table 5.22.4 shows the effect of location on Infrastructure and Learning Resources. The Urban location is having significant effect compared to semi-urban location. However, it is evident from the Table that there is not much significance difference between rural and semi-urban and between rural and urban.

Table 5.22.5 shows the effect of location on Student Support and Progression. It reveals that all the three locations urban, semi-urban and Rural are having no significant difference with respect to Student Support and Progression. However, the effect of Rural location is more than urban location and is least in case of Semi-urban.

Table 5.22.6 shows the effect of location on Governance, Leadership and Management. Urban location is having significant effect compared to semi-urban location. However, it is evident from the Table that there is not much significance difference between rural and Semi-urban and also between rural and urban. Table 5.22.7 Shows the effect of location on Innovations and best practices. It reveals that all the three locations Urban, Semi-urban and Rural are having no significant difference with respect to Innovations and best practices. However, the effect of urban location is more than rural location and is least in case of Semi-urban.

Fig. 5.09 to Fig. 5.15 shows the estimated marginal Means of Criteria I to Criteria VII respectively. They represent the performance of the institutions with respect to the location's criterion-wise. In Curricular Aspects the institutions located in urban are performing much better than rural and semi-urban. Under Teaching-Learning and Evaluation also the institutions located in urban area are performing better than semi-urban and rural areas. In this criterion semi-urban institutions' performance is better than rural performance. In Research, Consultancy and Extension criteria again urban institutions are performing better than rural and semi-urban institutions. Further the rural institutions' performance is closer to the urban performance. In criteria on Infrastructure and Learning Recourses also urban institutions are seen performing better than rural and semi-urban institutions and the rural institutions' performance is closer to urban performance. In the Student Support and

Progression criteria rural institutions are seen performing better than urban and semi-urban located institutions. However, the urban institutions are very closure to rural. Under Governance, Leadership and Management the performance of urban institutions is more dominant than rural and semi-urban institutions. In the last criterion on Innovation and Best Practices again urban institutions are seen performing much better than rural and semi-urban institutions.

Table 5.23 Influence of Source of Funding on each Criterion Source of Funding

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Curricular Aspects	Between Groups	11.789	2	5.895	14.479	.000
	Within Groups	56.182	138	.407		
	Total	67.972	140			
Teaching-Learning and Evaluation	Between Groups	1.423	2	.711	3.706	.027
	Within Groups	26.492	138	.192		
	Total	27.915	140			
Research, Consultancy and Extension	Between Groups	8.119	2	4.059	10.345	.000
	Within Groups	54.151	138	.392		
	Total	62.270	140			
Infrastructure and Learning Resources	Between Groups	18.321	2	9.160	28.662	.000
	Within Groups	44.105	138	.320		
	Total	62.426	140			
Student Support and Progression	Between Groups	1.085	2	.543	1.590	.208
	Within Groups	47.099	138	.341		
	Total	48.184	140			
Governance, Leadership and Management	Between Groups	2.754	2	1.377	4.187	.017
	Within Groups	45.388	138	.329		
	Total	48.142	140			
Innovations and Best Practices	Between Groups	6.315	2	3.158	8.584	.000
	Within Groups	50.763	138	.368		
	Total	57.078	140			

Homogeneous Subsets

Table 5.23.1 Tukey HSD Test for Criteria I

Criteria I				
	Source of Funding	N	Subset for alpha = 0.005	
			1	2
Tukey HSD[a,b]	Government	31	2.58	
	Grant-in-aid	17	2.59	
	Private	93		3.19
	Sig.		.999	1.000
Scheffe[a,b]	Government	31	2.58	
	Grant-in-aid	17	2.59	
	Private	93		3.19
	Sig.		.999	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.23.2 Tukey HSD Test for Criteria II

Criteria II			
	Source of Funding	N	Subset for alpha = 0.005
			1
Tukey HSD[a,b]	Government	31	2.65
	Grant-in-aid	17	2.82
	Private	93	2.89
	Sig.		.081
Scheffe[a,b]	Government	31	2.65
	Grant-in-aid	17	2.82
	Private	93	2.89
	Sig.		.100

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.23.3 Tukey HSD Test for Criteria III

Criteria III				
	Source of Funding	**N**	**Subset for alpha = 0.005**	
Tukey HSD[a,b]			1	2
	Grant-in-aid	17	2.00	
	Government	31	2.03	
	Private	93		2.53
	Sig.		.979	1.000
Scheffe[a,b]	Grant-in-aid	17	2.00	
	Government	31	2.03	
	Private	93		2.53
	Sig.		.981	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.23.4 Tukey HSD Test for Criteria IV

Criteria IV					
	Source of Funding	**N**	**Subset for alpha = 0.005**		
Tukey HSD[a,b]			1	2	3
	Government	31	2.45		
	Grant-in-aid	17		2.82	
	Private	93			3.31
	Sig.		1.000	1.000	1.000
Scheffe[a,b]	Government	31	2.45		
	Grant-in-aid	17		2.82	
	Private	93			3.31
	Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.23.5 Tukey HSD Test for Criteria V

CriteriaVI			
	Source of Funding	**N**	**Subset for alpha = 0.005**
Tukey HSD[a,b]			1
	Grant-in-aid	17	2.71
	Government	31	2.81
	Private	93	2.95
	Sig.		.258
Scheffe[a,b]	Grant-in-aid	17	2.71
	Government	31	2.81
	Private	93	2.95
	Sig.		.291

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.23.6 Tukey HSD Test for Criteria VI

CriteriaVII			
	Location	**N**	**Subset for alpha = 0.005**
Tukey HSD[a,b]			1
	Grant-in-aid	17	2.35
	Government	31	2.42
	Private	93	2.69
	Sig.		.068
Scheffe[a,b]	Grant-in-aid	17	2.35
	Government	31	2.42
	Private	93	2.69
	Sig.		.084

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.23.5 Tukey HSD Test for Criteria VII

Criteria VII				
	Source of Funding	N	Subset for alpha = 0.005	
			1	2
Tukey HSD[a,b]	Government	31	2.29	
	Grant-in-aid	17	2.41	2.41
	Private	93		2.77
	Sig.		.723	.060
Scheffe[a,b]	Government	31	2.29	
	Grant-in-aid	17	2.41	2.41
	Private	93		2.77
	Sig.		.745	.076

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots

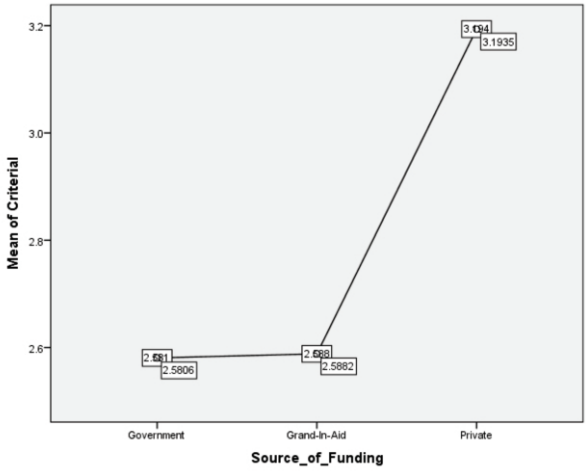


Fig. 5.16: Effect of source of funding on Curricular Aspects

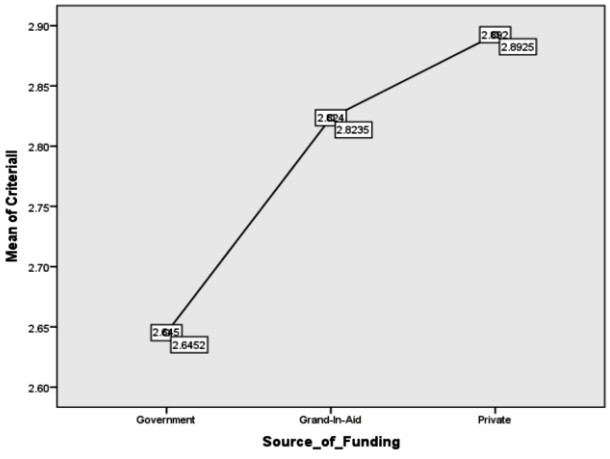


Fig. 5.17: Effect of source of funding on Teaching-Learning and Evaluation

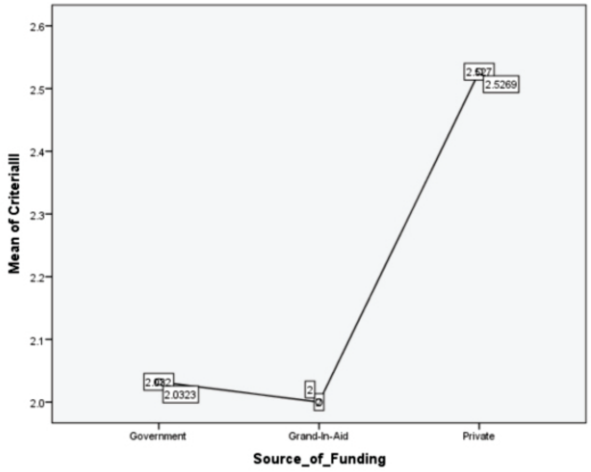


Fig. 5.18: Effect of source of funding on Research, Consultancy and Extension

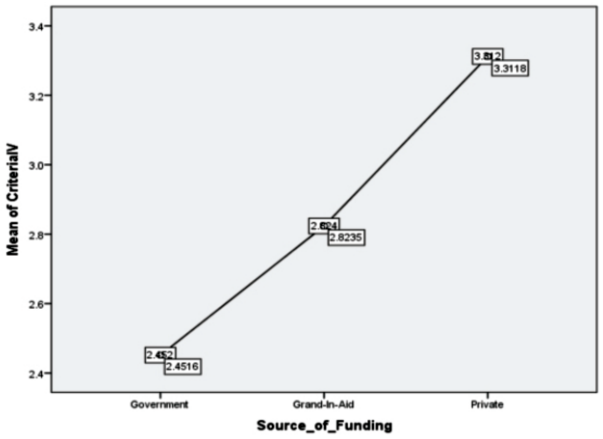


Fig. 5.19: Effect of source of funding on Infrastructure and Learning Resources

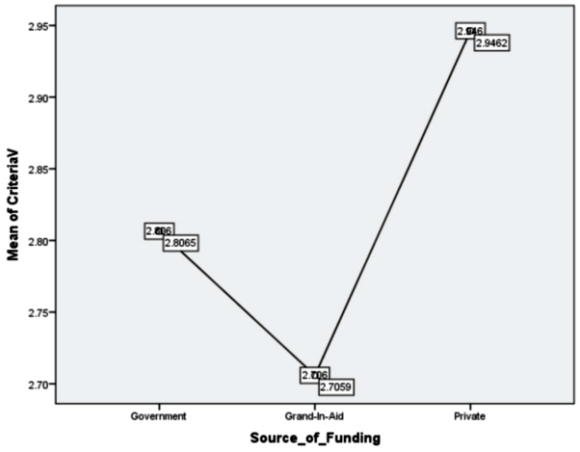


Fig. 5.20: Effect of source of funding on Student Support and Progression

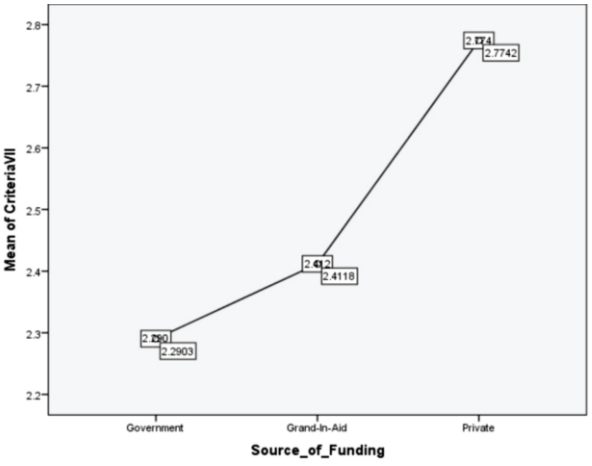


Fig. 5.21: Effect of source of funding on Governance, Leadership and Management

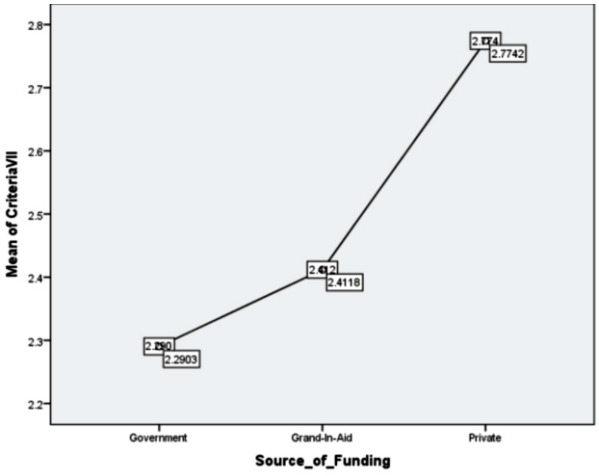


Fig. 5.22: Effect of Source of Funding on Innovations and Best Practices

5.5.2 Significance of Source of Funding on the Performance of Institutions Criterion-wise

Table 5.23 depicts the influence of source of funding on each criterion. The significance value for the curricular aspects, Teaching-learning and Evaluation, Research, Consultancy and Extension, Infrastructure and Leaning Resources, Governance Leadership and Management, Innovations and Best Practices is found to be less than 0.05. Thus, the Null hypothesis is rejected in these cases. Hence, the performance in these criteria is affected by the source of funding significantly. In case of Student Support and Progression the sig value is found to be more than 0.05. Hence, the performance in this Criterion is not affected by the source of funding and is non-significant. Particularly student support and progression has high sig value of 0.208 reflecting that there is absolutely no effect of source of funding on Student Support and Progression.

In addition to the above information to identify which source of funding has got more significant effect on the criterion, the data is further subjected to Tukey HSD test and Scheffe Test. Table 5.23.1 shows the effect of source of funding on Curricular Aspects. It reveals that private institutions have more significance effect than grant-in-aid and government. However, the effect of Private source of funding is more than grant-in-aid and is least in case of government funded institutions. Table 5.23.2 shows the effect of source of funding on Teaching-learning and Evaluation. It reveals that all the three sources of funding have same effect.

Table 5.23.3 shows the effect of source of funding on Research, Consultancy and Extension. It reveals that Private has more effect than grant-in-aid and government. Table 5.23.4 shows the effect of source of funding on Infrastructure and Learning Resources. The effect of all the three source of funding varies significantly in this case. Private institutions have high significance on source of funding followed by grant-in-aid and government institutions. Table 5.23.5 shows the effect of source of funding on Student Support and Progression. It reveals that all the three sources of funding have no significance difference with respect Student Support and Progression. However, the effect of Private source of funding is more than government and grant-in-aid.

Table 5.23.6 shows the effect of source of funding on Governance, Leadership and Management. It reveals that all the three sources of funding, viz., Government, Grant-in-aid and Private are having no significance difference with respect to Governance, Leadership and Management. However, the effect of Private source of funding is more than government and grant-in-aid institutions. Table 5.23.7 shows the effect of location on Innovations and Best Practices. It reveals that the private source of funding has more significance than government.

Grant-in-aid institutions are closer to government and also to private source of funding, revealing similar significance for both.

Fig. 5.16 to Fig. 5.22 show the estimated marginal Means of Criteria I to Criteria VII, respectively. They represent the performance of the institutions with respect to the source of funding criterion-wise. In Curricular Aspects the institutions with private source of funding are performing much better than grant-in-aid and government. Grant-in-aid and government source of funding institutions are having almost the same performance. Under Teaching-Learning and Evaluation, institutions with private source of funding are performing better than grant-in-aid and government. In this criterion, grant-in-aid performance is better than government funded institutions. In Research Consultancy and Extension criteria again, private funded institutions are performing better than grant-in-aid and government institutions. Further the performance of government funded institutions is closer to grant-in-aided institutions' performance.

In criterion on Infrastructure and Learning Resources private funded institutions are performing better than grant-in-aid and government funded institutions. In the Student Support and Progression criterion private funded institutions are performing better than government and grant-in-aid funded institutions. Under Governance, Leadership and Management, the performance of private funded institutions is more dominant than government and grant-in-aid funded institutions. In the last criteria on Innovation and Best Practices again private funded institutions are seen performing better than grant-in-aid and government funded institutions.

Table 5.24 Influence of Program Category on the Performance of Institutions in each Criterion

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Curricular Aspects	Between Groups	112.651	2	6.326	15.780	.000
	Within Groups	55.320	138	.401		
	Total	67.972	140			
Teaching-Learning and Evaluation	Between Groups	1.666	2	.833	4.380	.014
	Within Groups	26.249	138	.190		
	Total	27.915	140			

Research, Consultancy and Extension	Between Groups	8.444	2	4.222	10.824	.000
	Within Groups	53.826	138	.390		
	Total	62.270	140			
Infrastructure and Learning Resources	Between Groups	15.425	2	7.713	22.646	.000
	Within Groups	47.000	138	.341		
	Total	62.426	140			
Student Support and Progression	Between Groups	2.722	2	1.361	4.132	.018
	Within Groups	45.462	138	.329		
	Total	48.184	140			
Governance, Leadership and Management	Between Groups	2.942	2	1.471	4.490	.013
	Within Groups	45.200	138	.328		
	Total	48.142	140			
Innovations and Best Practices	Between Groups	5.141	2	2.570	6.830	.001
	Within Groups	51.937	138	.376		
	Total	57.078	140			

Homogeneous Subsets

Table 5.24.1 Tukey HSD Test for Criteria I

Criteria I				
	Programme Category	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	General	56	2.66	
	Medical	10	2.70	
	Engineering	75		3.27
	Sig.		.976	1.000
Scheffe[a,b]	General	56	2.66	
	Medical	10	2.70	
	Engineering	75		3.27
	Sig.		.978	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.24.2 Tukey HSD Test for Criteria II

Criteria II				
	Programme Category	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	General	56	2.71	
	Engineering	75	2.88	2.88
	Medical	10		3.10
	Sig.		.406	.207
Scheffe[a,b]	General	56	2.71	
	Engineering	75	2.88	2.88
	Medical	10		3.10
	Sig.		.440	.237

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.24.3 Tukey HSD Test for Criteria III

Criteria III				
	Programme Category	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	General	56	2.05	
	Engineering	75		2.55
	Medical	10		2.60
	Sig.		1.000	.955
Scheffe[a,b]	General	56	2.05	
	Engineering	75		2.55
	Medical	10		2.60
	Sig.		1.000	.959

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.24.4 Tukey HSD Test for Criteria IV

Criteria IV				
	Programme Category	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	General	56	2.66	
	Engineering	75		3.31
	Medical	10		3.50
	Sig.		1.000	.503
Scheffe[a,b]	General	56	2.66	
	Engineering	75		3.31
	Medical	10		3.50
	Sig.		1.000	.535

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.24.5 Tukey HSD Test for Criteria V

Criteria V				
	Programme Category	**N**	**Subset for alpha = 0.005**	
			1	2
Tukey HSD[a,b]	General	56	2.73	
	Engineering	75	2.96	2.96
	Medical	10		3.20
	Sig.		.374	.337
Scheffe[a,b]	General	56	2.73	
	Engineering	75	2.96	2.96
	Medical	10		3.20
	Sig.		.409	.371

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.24.6 Tukey HSD Test for Criteria VI

Criteria VI			
	Programme Category	**N**	**Subset for alpha = 0.005**
Tukey HSD[a,b]			1
	General	56	2.41
	Engineering	10	2.70
	Medical	75	2.71
	Sig.		.191
Scheffe[a,b]	General	56	2.41
	Engineering	10	2.70
	Medical	75	2.71
	Sig.		.220

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 5.24.7 Tukey HSD Test for Criteria VII

Criteria VII				
	Programme Category	**N**	**Subset for alpha = 0.005**	
Tukey HSD[a,b]			1	2
	General	56	2.39	
	Engineering	75	2.76	2.76
	Medical	10	2.90	
	Sig.		.110	.721
Scheffe[a,b]	General	56	2.39	
	Engineering	75	2.76	2.76
	Medical	10		2.90
	Sig.		.133	.743

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 22.868.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots

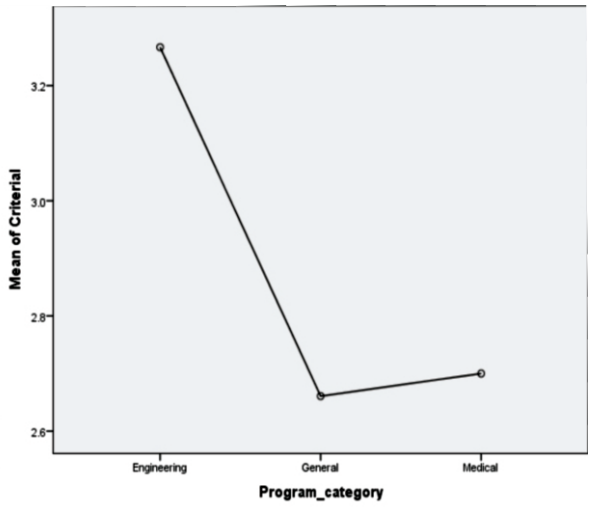


Fig. 5. 23: Effect of Program category on Curricular Aspects

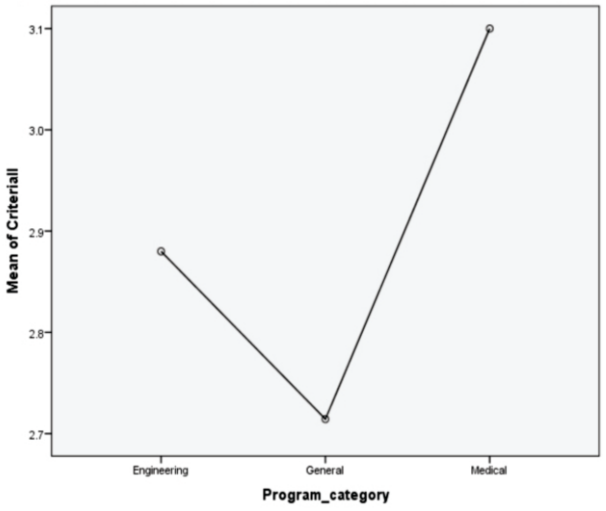


Fig. 5.24: Effect of Program category on Teaching-Learning and Evaluation

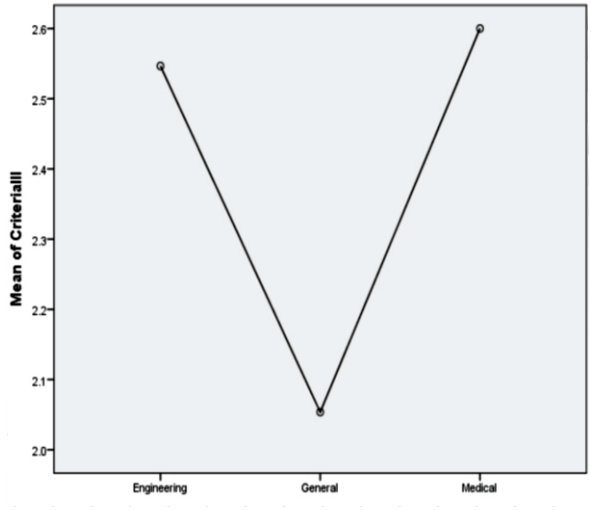


Fig. 5.26: Effect of Program category on Infrastructure and Learning Resources

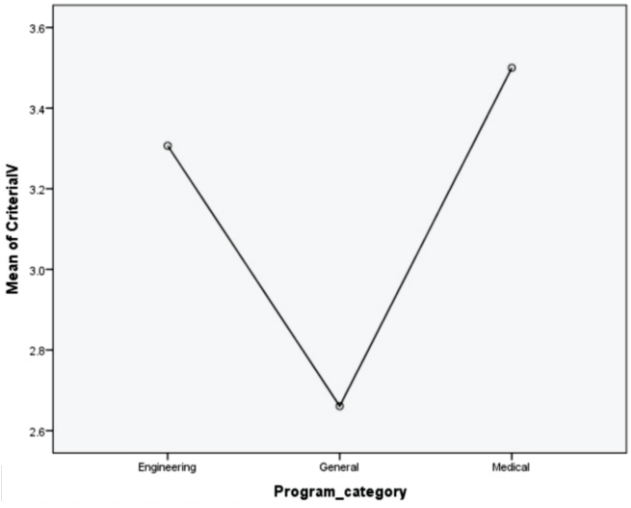


Fig. 5.25: Effect of Program category on Research, Consultancy and Extension

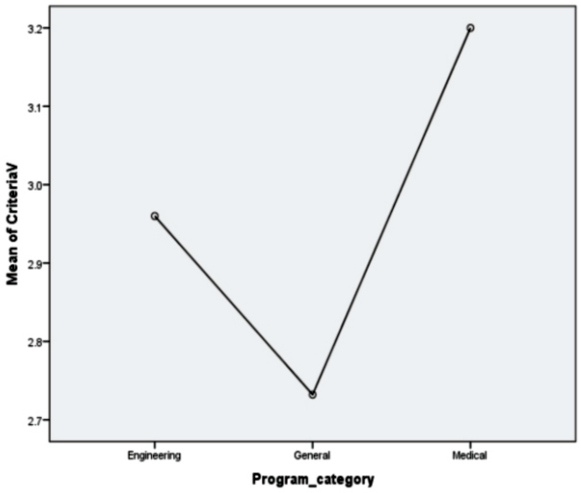


Fig. 5.27: Effect of Program category on Student Support and Progression

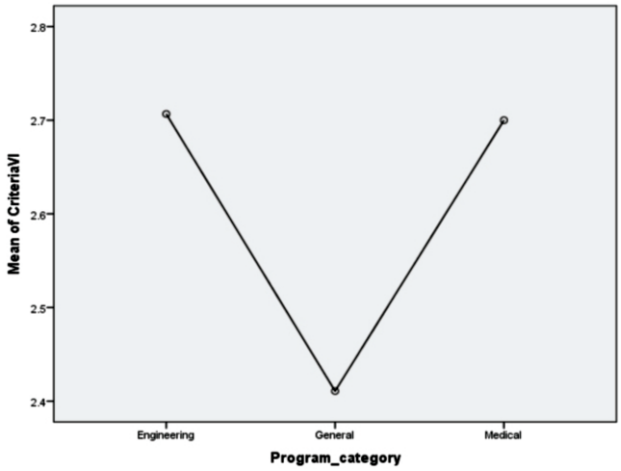


Fig. 5.28: Effect of Program category on Governance, Leadership and Management

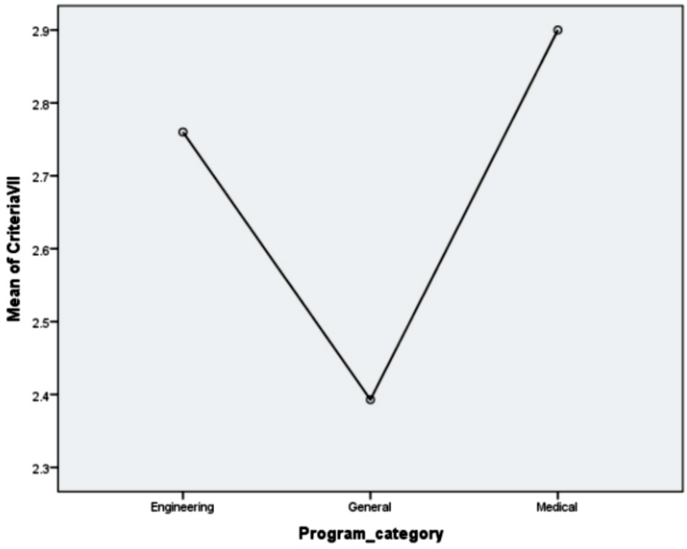


Fig. 5 .29: Effect of Program category on Innovations and Best Practices

5.6 Influence of Program Type on The Performance of Institutions Criterion-wise

While analyzing the influence of programs the Education category institutes number being low, i.e., only 2, they are also clubbed under General category, to limit the number of variables to three. Table 5.24 presents the influence of the program type on each criterion. The significance value for all the seven criteria is found to be less than 0.05. Thus the Null hypothesis is rejected in these cases. Hence, the performance in all these criteria are

significantly affected by the program type. Particularly in the curricular aspects the sig value is 0.00 which indicates that there is a lot of variance in the Curriculum dealt under Medical, Engineering and general.

In addition to the above information to identify which type of program has got more significant effect on the criterion, the data is further subjected to Tukey HSD test and Scheffe Test. Table 5.24.1 shows the effect of type of program on curricular aspects. It reveals that Engineering program offering institutions have more significance effect than Medical and General education. Table 5.24.2 shows the effect of type of program on Teaching-learning and Evaluation. It reveals that Medical has great significance and least significant is General. However, Engineering is in between having similarity with both Medical and General.

Table 5.24.3 shows the effect of Type of programs on offer on Research, Consultancy, and Extension. It reveals that Medical and Engineering have same significance and highest compared to General. Table 5.24.4 shows the effect of type of program on Infrastructure and Learning Resources. The effect of the Medical and Engineering is same and varies significantly in this case. The general program offering institutions have less significance. Table 5.24.5 shows the effect of program types on Student Support and Progression. It reveals that Medical program has high significance compared to General, and Engineering stands between these two.

Table 5.24.6 shows the effect of type of program on governance, leadership, and management. It reveals that all the three programs offering institutions viz., Medical, Engineering and General are having no significance difference with respect to governance, leadership, and management. Table 5.24.7 shows the effect of type of program on offer on Innovations and Best Practices. It reveals that the Medical program has more significance than general program offering institutions. Engineering institutions are closer to the Medical ones and also to General revealing similar significance to both.

Fig 5.23 to Fig 5.29 show the estimated marginal Means of criteria I to criteria VII, respectively. They represent the performance of the institutions with respect to the type of programs on offer criterion-wise. In curricular aspects the institutions offering engineering program perform much better than Medical and general. Under teaching-learning and evaluation the institutions offering Medical programs are performing better than Engineering and general. In this criteria performance of Engineering institutions is better than general. In Research consultancy and extension criterion again, Medical institutions are performing better than Engineering and general institutions. In criterion on Infrastructure and Learning Resources

also Medical institutions are performing better than Engineering and general institutions. In the Student Support and Progression criteria also, the same trend as is noticed. Under Governance, Leadership and Management, the performance of Medical institutions is at the same level of Engineering program offering institutions. In the last criteria on Innovation and Best Practices again Medical institution are performing better than general and Engineering. The general program offering institutions are better than Engineering ones in this criterion.

ANOVA Two Way Analysis

Univariate Analysis of Variance – C1

Between-Subjects Factors			
		Value Label	N
Source of Funding	1	Government	31
	2	Grant-in-aid	17
	3	Private	93
Location	1	Rural	35
	2	Semi-urban	6
	3	Urban	100

Table 5.25 Influence of Source of Funding and Location Interaction on each Criterion Tests of Between-Subjects Effects

General Linear Model

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Criteria I	14.216[a]	8	1.777	4.363	.000
	Criteria II	4.236[a]	8	.530	2.952	.005
	Criteria III	11.562[b]	8	1.445	3.762	.001
	Criteria IV	21.692[d]	8	2.712	8.787	.000
	Criteria V	3.051[d]	8	.381	1.115	.357
	Criteria V	I6.881[e]	8	.860	2.752	.008
	Criteria VII	8.202 [f]	8	1.025	2.769	.007

Intercept	Criteria I	198.581	1	198.581	487.626	.000
	Criteria II	219.766	1	219.766	1225.106	.000
	Criteria III	121.595	1	121.595	316.529	.000
	Criteria IV	232.728	1	232.728	754.178	.000
	Criteria V	209.664	1	209.664	613.193	.000
	Criteria VI	159.564	1	159.564	510.476	.000
	Criteria VII	165.477	1	165.477	446.905	.000
Source of Funding	Criteria I	2.716	2	1.358	3.335	.039
	Criteria II	1.085	2	.543	3.025	.052
	Criteria III	4.666	2	2.333	6.074	.003
	Criteria IV	9.534	2	4.767	15.448	.000
	Criteria V	1.012	2	.506	1.480	.231
	Criteria VI	1.960	2	.980	3.135	.047
	Criteria VII	2.285	2	1.143	3.086	.049
Location	Criteria I	1.856	2	.928	2.279	.106
	Criteria II	.410	2	.205	1.143	.322
	Criteria III	1.044	2	.522	1.359	.260
	Criteria IV	1.067	2	.534	1.72 9	.181
	Criteria V	.525	2	.262	.768	.466
	Criteria VI	1.870	2	.935	2.991	.054
	Criteria VII	.665	2	333	.898	.410
Source of Funding* Location	Criteria I	.705	4	.176	.433	.785
	Criteria II	1.545	4	.386	2.154	.078
	Criteria III	1.589	4	.397	1.034	.392
	Criteria IV	3.157	4	.789	2.557	.042
	Criteria V	1.236	4	.309	.904	.464
	Criteria VI	1.232	4	.308	.985	.418
	Criteria VII	.324	4	.081	.219	.928
Error	Criteria I	53.756	132	.407		
	Criteria II	23.679	132	.179		
	Criteria III	50.708	132	.384		
	Criteria IV	40.733	132	.309		
	Criteria V	45.134	32	.342		

	Criteria VI	41.261	132	.313		
	Criteria VII	48.876	132	.370		
Total	Criteria I	1325.000	141			
	Criteria II	1157.000	141			
	Criteria III	844.000	141			
	Criteria IV	1386.000	141			
	Criteria V	1223.000	141			
	Criteria VI	993.000	141			
	Criteria VII	1028.000	141			
Corrected Total	Criteria I	67.972	140			
	Criteria II	27.915	140			
	Criteria III	62.270	140			
	Criteria IV	62.426	140			
	Criteria V	48.184	140			
	Criteria VI	48.142	140			
	Criteria VII	57.078	140			

a. R Squared = .209 (Adjusted R Squared = .161)
b. R Squared = .152 (Adjusted R Squared = .100)
c. R Squared = .186 (Adjusted R Squared = .136)
d. R Squared = .347 (Adjusted R Squared = .308)
e. R Squared = .063 (Adjusted R Squared = .007)
f. R Squared = .143 (Adjusted R Squared = .091)
g. R Squared = .144 (Adjusted R Squared = .092)

Post Hoc Tests

Table 5.25.1 Source of Funding Multiple Comparisons for Criteria I

Dependent Variable: Criteria I

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	-.01	.189	.999	-.46	.44
		Private	-.61*	.130	.000	-.92	-.31
	Grant-in-aid	Government	.01	.189	.999	-.44	.46
		Private	-.61*	.165	.001	-1.00	-.21
	Private	Government	.61*	.130	.000	.31	.92
		Grant-in-aid	.61*	.165	.001	.21	1.00
Scheffe	Government	Grant	-.01	.189	.999	-.48	.46
		Private	-.61*	.130	.000	-.93	-.29
	Grant-in-aid	Government	.01	.189	.999	-.46	.48
		Private	-.61*	.165	.002	-1.01	-.20
	Private	Government	.61*	.130	.000	.29	.93
		Grant-in-aid	.61*	.165	.002	.20	1.01

B ased on observed means.

The error term is Mean Square (Error) = .391.

*. The mean difference is significant at the 0.05 level.

Table 5.25.2 Source of Funding Multiple Comparisons for Criteria II

Dependent Variable: Criteria II

	(I) Source of Funding	(J) Source of Funding	Mean Difference-nce (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	-.18	.129	.351	-.48	.13
		Private	-.25*	.088	.016	-.46	-.04
	Grant-in-aid	Government	.18	.129	.351	-.13	.48
		Private	-.07	.112	.813	-.34	.20
	Private	Government	.25*	.088	.016	.04	.46
		Grant-in-aid	.07	.112	.813	-.20	.34
Scheffe	Government	Grant-in-aid	-.18	.129	.385	-.50	.14
		Private	-.25*	.088	.022	-.47	-.03
	Grant-in-aid	Government	.18	.129	.385	-.14	.50
		Private	-.07	.112	.829	-.35	.21
	Private	Government	.25*	.088	.022	.03	.47
		Grant-in-aid	.07	.112	.829	-.21	.35

Based on observed means.
The error term is Mean Square (Error) = .182
*. The mean difference is significant at the 0.05 level.

Table 5.25.3 Source of Funding Multiple Comparisons for Criteria III

Dependent Variable: Criteria III

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	.03	.188	.984	-.41	.48
		Private	-.49*	.129	.001	-.80	-.19
	Grant-in-aid	Government	-.03	.188	.984	-.48	.41
		Private	-.53*	.164	.005	-.92	-.14
	Private	Government	.49*	.129	.001	.19	.80
		Grant-in-aid	.53*	.164	.005	.14	.92
Scheffe	Government	Grant-in-aid	.03	.188	.985	-.43	.50
		Private	-.49*	.129	.001	-.81	-.18
	Grant-in-aid	Government	-.03	.188	.985	-.50	.43
		Private	-.53*	.164	.007	-.93	-.12
	Private	Government	.49*	.129	.001	.18	.81
		Grant-in-aid	.53*	.164	.007	.12	.93

Based on observed means.
The error term is Mean Square (Error) = .387
*. The mean difference is significant at the 0.05 level.

Table 5.25.4 Source of Funding Multiple Comparisons for Criteria IV

Dependent Variable: Criteria IV

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	-.37	.167	.070	-.77	.02
		Private	-.86*	.115	.000	-1.13	-.59
	Grant-in-aid	Government	.37	.167	.070	-.02	.77
		Private	-.49*	.146	.003	-.83	-.14
	Private	Government	.86*	.115	.000	.59	1.13
		Grant-in-aid	.49*	.146	.003	.14	.83
Scheffe	Government	Grant-in-aid	-.37	.167	.087	-.78	.04
		Private	-.86*	.115	.000	-1.14	-.58
	Grant-in-aid	Government	.37	.167	.087	-.04	.78
		Private	-.49*	.146	.005	-.85	-.13
	Private	Government	.86*	.115	.000	.58	1.14
		Grant-in-aid	.49*	.146	.005	.13	.85

Based on observed means.

The error term is Mean Square (Error) = .306

*. The mean difference is significant at the 0.05 level.

Table 5.25.5 Source of Funding Multiple Comparisons for Criteria V

Dependent Variable: Criteria V

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	.10	.172	.829	-.31	.51
		Private	-.14	.118	.467	-.42	.14
	Grant-in-aid	Government	-.10	.172	.829	-.51	.31
		Private	-.24	.151	.251	-.60	.12
	Private	Government	.14	.118	.467	-.14	.42
		Grant-in-aid	.24	.151	.251	-.12	.60
Scheffe	Government	Grant-in-aid	.10	.172	.844	-.33	.53
		Private	-.14	.118	.500	-.43	.15
	Grant-in-aid	Government	-.10	.172	.844	-.53	.33
		Private	-.24	.151	.283	-.61	.13
	Private	Government	.14	.118	.500	-.15	.43
		Grant-in-aid	.24	.151	.283	-.13	.61

Based on observed means.
The error term is Mean Square (Error) = .326

Table 5.25.6 Source of Funding Multiple Comparisons for Criteria VI

Dependent Variable: Criteria VI

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	.07	.170	.919	-.34	.47
		Private	-.27	.117	.059	-.55	.01
	Grant-in-aid	Government	-.07	.170	.919	-.47	.34
		Private	-.34	.148	.065	-.69	.02
	Private	Government	.27	.117	.059	-.01	.55
		Grant-in-aid	.34	.148	.065	-.02	.69
Scheffe	Government	Grant-in-aid	.07	.170	.926	-.35	.49
		Private	-.27	.117	.074	-.56	.02
	Grant-in-aid	Government	-.07	.170	.926	-.49	.35
		Private	-.34	.148	.082	-.70	.03
	Private	Government	.27	.117	.074	-.02	.56
		Grant-in-aid	.34	.148	.082	-.03	.70

Based on observed means.
The error term is Mean Square (Error) = .317

Table 5.25.7 Source of Funding Multiple Comparisons for Criteria VII
Dependent Variable: Criteria VII

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Government	Grant-in-aid	-.12	.179	.777	-.55	.30
		Private	-.48*	.123	.000	-.78	-.19
	Grant-in-aid	Government	.12	.179	.777	-.30	.55
		Private	-.36	.156	.057	-.73	.01
	Private	Government	.48*	.123	.000	.19	.78
		Grant-in-aid	.36	.156	.057	-.01	.73
Scheffe	Government	Grant-in-aid	-.12	.179	.795	-.56	.32
		Private	-.48*	.123	.001	-.79	-.18
	Grant-in-aid	Government	.12	.179	.795	-.32	.56
		Private	-.36	.156	.072	-.75	.02
	Private	Government	.48*	.123	.001	.18	.79
		Grant-in-aid	.36	.156	.072	-.02	.75

Based on observed means.

The error term is Mean Square (Error) = .352

*. The mean difference is significant at the 0.05 level.

Profile Plots

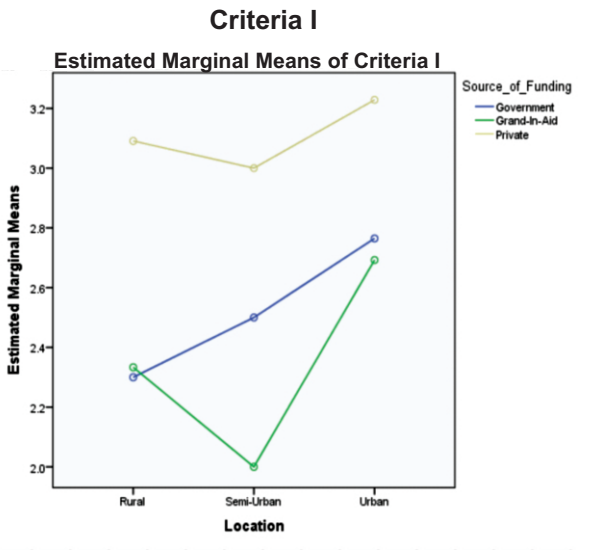


Fig. 5.30: Effect of interaction between location and source of funding on Curricular Aspects

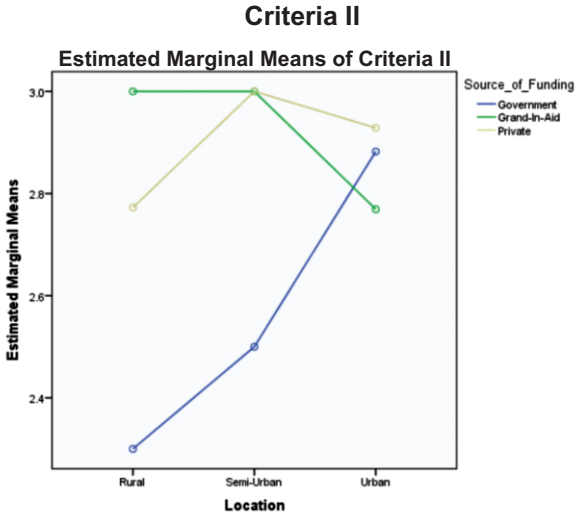


Fig. 5.31: Effect of interaction between location and source of funding on Teaching Learning and Evaluation

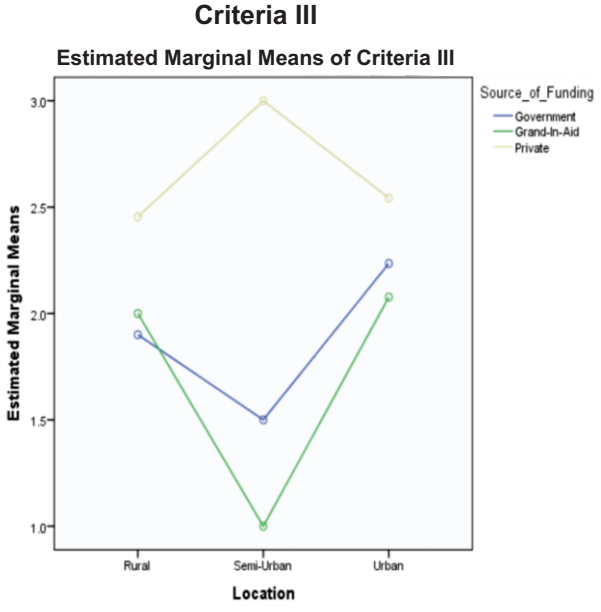


Fig. 5.32: Effect of interaction between location and source offunding on Research, Consultancy and Extension

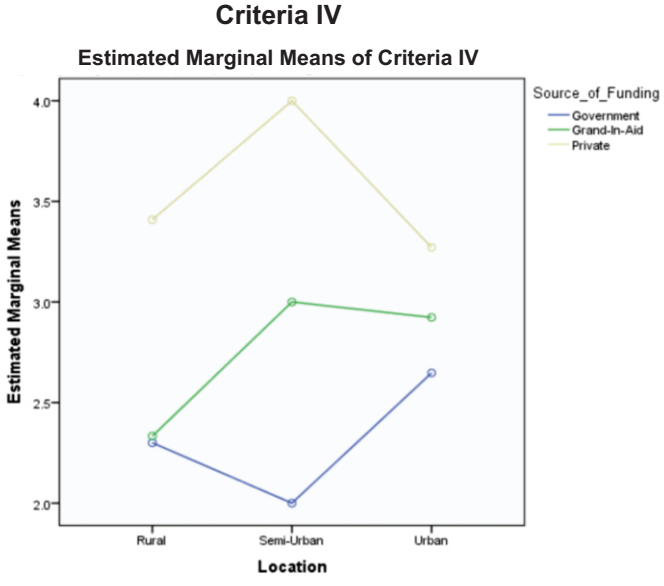


Fig. 5.33: Effect of interaction between location and source offunding on Infrastructure and Learning Resources

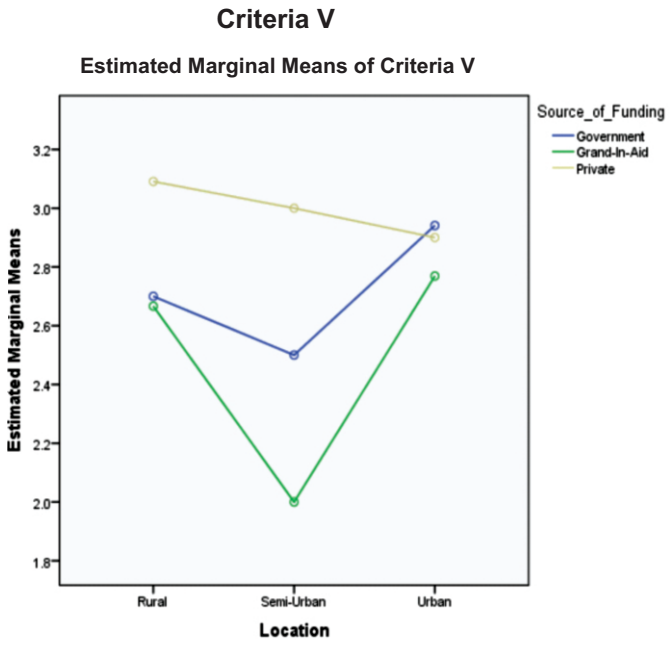


Fig. 5.34: Effect of interaction between location and source of funding on Student Support and Progression

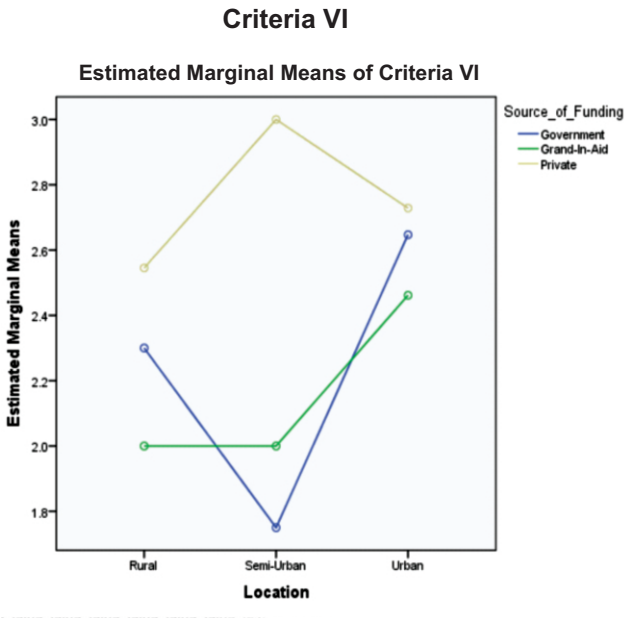


Fig. 5.35: Effect of interaction between location and source of funding on Governance, Leadership and Management

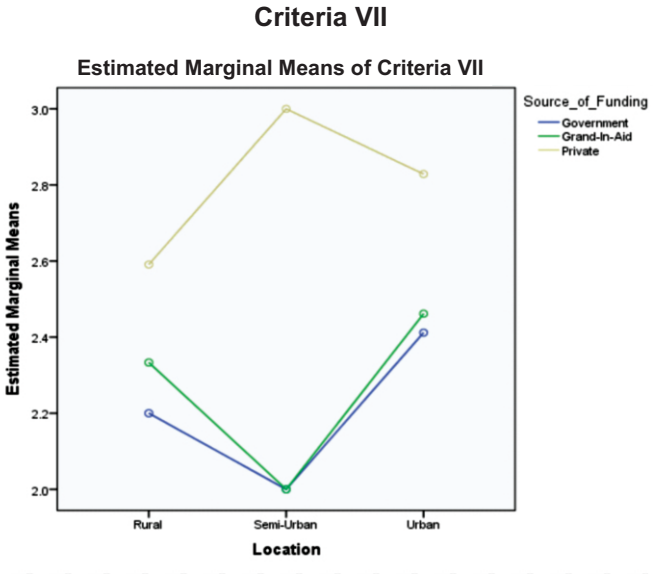


Fig. 5.36: Effect of interaction between location and source of funding on Innovation and Best Practices

5.6.1 Influence of Source of Funding, Location and their Interaction on the Performance of Institutions Criterion-wise

Table 5.25 gives the significance effect of source of funding, location, and interaction between location and source of funding criterion-wise. In Curricular aspects the effect of source offunding is found significant whereas location or interaction between location and source of funding is found insignificant. In Teaching-learning and Evaluation none of the three variables has significance effect. in Research, Consultancy and Extension, Source of funding has significance effect on the performance of the institutions, whereas the location or interaction between location and source of funding has no significant effect. In Infrastructure and Learning Resources source of funding is found very much significant and location has no significance effect. Similarly, interaction between location and source of funding is also found to be significant. In the criterion on student support and progression none of the three variables have shown significant effect on the performance of the institution. Under Governance, Leadership and Management only source of funding has significant effect. In the last criterion on Innovations and Best Practices also only the source of funding is having significance effect and Location or interaction between location and source of funding has no significance on the institution performance.

Fig. 5.33 to Fig. 5.39 are drawn with one of the factors Location of the institutions on X axis and the estimated marginal means for the interaction between location and source of funding on Y axis, criterion-wise respectively. It is understood from Fig. 5.33 that urban colleges with Private funding are performing better in Curricular aspects than any other combination. In rural areas the performance of Grant-in-aid and Government is almost the same. In semi-urban area private funded colleges are better, followed by Government and Grant-in-aid.

Fig 5.34 shows the influence on Teaching-learning and Evaluation. In rural areas Grant-in-aid colleges are performing better than Private and Government. In semi-urban areas Grant-in -aid and Private are performing equally and government is the lowest. In Urban area private funded institutions are better followed by Government and Grant-in-aid. The performance of private funded institutions is the higher in semi-urban area than in urban areas. Grant-in-aid colleges are performing poor in Urban area and are doing good in rural area.

Fig 5.35 shows the significance of location and source of funding on research, consultancy, and extension. It is found that in rural area Private funded are performing better and the remaining two which are at the same level. In semi-urban private funded institutions are at the highest and Grant-in-aid are at the lowest. In Urban area grant-in-aid funded are least and private are at their highest. The performance of private institutions is highest in semi-urban

area, whereas government performance is highest in Urban areas. Grant-in-aid funded institutions are least performing in semi urban area and almost at the same level in rural and urban areas.

Fig 5.36 shows the significance of location and source of funding on Infrastructure and Learning Resources. In rural area government funded and grant-in-aid performance is at same level and private has the highest performance. In semi-urban and Urban areas also private is the highest and the lowest one is the performance of government funded institutions. The performance of private institutions is highest in semi-urban area and lowest in Urban area. The performance of Grant-in-aid institutions is highest in semi-urban area and lowest in rural. However, Government has highest performance in urban and lowest in semi-urban.

Fig 5.37 shows the significance of location and source of funding on Student Support and Progression. In the rural area private funded has highest and Government and Grant-in-aid performance is at an equal level. In semi-urban area also the private funded has the highest and Government and Grant-in-aid performance is at an equal level. However, in Urban area Private funded and Government funded are at equal level whereas grant in aid is at lower level. Further private colleges' performance is noticed highest in rural area and lowest in Urban area. Grant-in-aid colleges and Government colleges' performance is highest in Urban and is the same in rural area.

Fig 5.38 shows the significance of location and source of funding on Governance, Leadership and Management. In the rural area Private funded institutions are performing better than government and grant-in-aid. In semi-urban area private funded institutions are at the highest and government funded are at the lowest level. In Urban area also private funded institutions are at the highest level, followed by government and Grant-in-aid. Government institutions are performing better in Urban than in rural and semi-urban. Private funded are highest performers in semi-urban area and at the lowest in rural area. Grant-in-aid institutions are performing at same level in rural and semi-urban areas and exhibiting highest performance in urban area.

Fig 5.39 shows the significance of location and source of funding on Innovations and Best Practices. In rural area private funded institutions are at the highest level and Government institutions are the lowest performers. In Semi-Urban and Urban areas private funded institutions are performing better than Government and Grant-in-aid and both are performing at the same level. Private funded institutions are showcasing highest performance in semi urban area and they are the least performers in rural area. Government and Grant-in-aid Institutions' performance is highest in Urban area and the lowest in semi-urban area.

Univariate Analysis of Variance

Between-subjects Factors

		Value Label	N
Source of Funding	1	Government	31
	2	Grant -in-aid	17
	3	Private	93
Program category	1	Engineering	75
	2	General	56
	3	Medical	10

Table 5.26 Influence of Source of Funding and Program type Interaction on each Criterion
Tests of Between-subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Criteria I	15.915[a]	7	2.274	5.809	.000
	Criteria II	3.741[b]	7	.534	2.940	.007
	Criteria III	10.848[c]	7	1.550	4.008	.001
	Criteria IV	21.777[d]	7	3.111	10.179	.000
	Criteria V	4.798[e]	7	.685	2.101	.048
	Criteria VI	6.044[f]	7	.863	2.728	.011
	Criteria VII	10.261[g]	7	1.466	4.164	.000
Intercept	Criteria I	175.367	1	175.367	448.050	.000
	Criteria II	205.895	1	205.895	1132.794	.000
	Criteria III	128.783	1	128.783	333.091	.000
	Criteria IV	221.559	1	221.559	724.931	.000
	Criteria V	214.445	1	214.445	657.371	.000
	Criteria VI	167.292	1	167.292	528.523	.000
	Criteria VII	179.260	1	179.260	509.252	.000

Source of Funding	Criteria I	1.092	2	.546	1.395	.251
	Criteria II	.395	2	.198	1.087	.340
	Criteria III	1.233	2	.617	1.595	.207
	Criteria IV	.245	2	.122	.400	.671
	Criteria V1	.931	2	.965	2.959	.055
	Criteria VI	1.146	2	.573	1.811	.168
	Criteria VII	.377	2	.189	.536	.586
Program category	Criteria I	.460	2	.230	.588	.557
	Criteria II	1.956	2	.978	5.381	.006
	Criteria III	1.910	2	.955	2.470	.088
	Criteria IV	3.268	2	1.634	5.347	.006
	Criteria V	2.661	2	1.330	4.078	.019
	Criteria VI	1.983	2.	991	3.132	.047
	Criteria VII	2.893	2	1.446	4.109	.019
Source of Funding * Program category	Criteria I	.641	3	.214	.546	.652
	Criteria II	1.616	3	.539	2.963	.035
	Criteria III	1.220	3	.407	1.051	.372
	Criteria IV	1.553	3	.518	1.694	.171
	Criteria V	1.897	3	.632	1.939	.126
	Criteria VI	2.691	3	.897	2.834	.041
	Criteria VII	3.389	3	1.130	3.209	.025
Error	Criteria I	52.056	133	.391		
	Criteria II	24.174	133	.182		
	Criteria III	51.422	133	.387		
	Criteria IV	40.649	133	.306		
	Criteria V	43.387	133	.326		
	Criteria VI	42.098	133	.317		
	Criteria VII	46.817	133	.352		

Total	Criteria I	1325.000	141			
	Criteria II	1157.000	141			
	Criteria III	844.000	141			
	Criteria IV	1386.000	141			
	Criteria V	1223.000	141			
	Criteria VI	993.000	141			
	Criteria VII	1028.000	141			
Corrected Total	Criteria I	67.972	140			
	Criteria II	27.915	140			
	Criteria III	62.270	140			
	Criteria IV	62.426	140			
	Criteria V	48.184	140			
	Criteria VI	48.142	140			
	Criteria VII	57.078	140			

a. R Squared = .234 (Adjusted R Squared = .194)
b. R Squared = .134 (Adjusted R Squared = .088)
c. R Squared = .174 (Adjusted R Squared = .131)
d. R Squared = .349 (Adjusted R Squared = .315)
e. R Squared = .100 (Adjusted R Squared = .052)
f. R Squared = .126 (Adjusted R Squared = .080)
g. R Squared = .180 (Adjusted R Squared = .137)

Homogeneous Subsets
Program category

Table 5.26.1 Program Category Multiple Comparisons for Criteria I
Dependent Variable: Criteria I

	(I) Source of Funding	(J) Source of Funding	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.61*	.110	.000	.34	.87
		Medical	.57*	.211	.022	.07	1.07
	General	Engineering	-.61*	.110	.000	-.87	-.34
		Medical	-.04	.215	.982	-.55	.47
	Medical	Engineering	-.57*	.211	.022	-1.07	-.07
		General	.04	.215	.982	-.47	.55
Scheffe	Engineering	General	.61*	.110	.000	.33	.88
		Medical	.57*	.211	.029	.05	1.09
	General	Engineering	-.61*	.110	.000	-.88	-.33
		Medical	-.04	.215	.983	-.57	.49
	Medical	Engineering	-.57*	.211	.029	-1.09	-.05
		General	.04	.215	.983	-.49	.57

Based on observed means.
The error term is Mean Square(Error) = .391
* The mean difference is significant at the 0.05 level.

Table 5.26.2 Program Category Multiple Comparisons for Criteria II
Dependent Variable: Criteria II

	(I) Program category	(J) Program category	Mean Difference(I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.17	.075	.075	-.01	.34
		Medical	-.22	.144	.279	-.56	.12
	General	Engineering	-.17	.075	.075	-.34	.01
		Medical	-.39*	.146	.025	-.73	-.04
	Medical	Engineering	.22	.144	.279	-.12	.56
		General	.39*	.146	.025	.04	.73
Scheffe	Engineering	General	.17	.075	.093	-.02	.35
		Medical	-.22	.144	.312	-.58	.14
	General	Engineering	-.17	.075	.093	-.35	.02
		Medical	-.39*	.146	.034	-.75	-.02
	Medical	Engineering	.22	.144	.312	-.14	.58
		General	.39*	.146	.034	.02	.75

Based on observed means.

The error term is Mean Square(Error) = .182

* The mean difference is significant at the 0.05 level.

Table 5.26.3 Program Category Multiple Comparisons for Criteria III
Dependent Variable: Criteria III

	(I) Program category	(J) Program category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.49*	.110	.000	.23	.75
		Medical	-.05	.209	.965	-.55	.44
	General	Engineering	-.49*	.110	.000	-.75	-.23
		Medical	-.55*	.213	.031	-1.05	-.04
	Medical	Engine ering	.05	.209	.965	-.44	.55
		General	.55*	.213	.031	.04	1.05
Scheffe	Engineering	General	.49*	.110	.000	.22	.76
		Medical	-.05	.209	.968	-.57	.46
	General	Engineering	-.49*	.110	.000	-.76	-.22
		Medical	-.55*	.213	.041	-1.07	-.02
	Medical	Engineeri ng	.05	.209	.968	-.46	.57
		General	.55*	.213	.041	.02	1.07

Based on observed means.

The error term is Mean Square(Error) = .387

* The mean difference is significant at the 0.05 level.

Table 5.26.4 Program Category Multiple Comparisons for Criteria IV
Dependent Variable: Criteria IV

	(I) Program category	(J) Program category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.65*	.098	.000	.41	.88
		Medical	-.19	.186	.554	-.63	.25
	General	Engineering	-.65*	.098	.000	-.88	-.41
		Medical	-.84*	.190	.000	-1.29	-.39
	Medical	Engineering	.19	.186	.554	-.25	.63
		General	.84*	.190	.000	.39	1.29
Scheffe	Engineering	General	.65*	.098	.000	.40	.89
		Medical	-.19	.186	.584	-.65	.27
	General	Engineering	-.65*	.098	.000	-.89	-.40
		Medical	-.84*	.190	.000	-1.31	-.37
	Medical	Engineering	.19	.186	.584	-.27	.65
		General	.84*	.190	.000	.37	1.31

Based on observed means.
The error term is Mean Square(Error) = .306
*. The mean difference is significant at the 0.05 level.

Table 5.26.5 Program Category Multiple Comparisons for Criteria V
Dependent Variable: Criteria V

	(I) Program category	(J) Program category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.23	.101	.065	-.01	.47
		Medical	-.24	.192	.427	-.70	.22
	General	Engineering	-.23	.101	.065	-.47	.01
		Medical	-.47*	.196	.048	-.93	.00
	Medical	Engineering	.24	.192	.427	-.22	.70
		General	.47*	.196	.048	.00	.93
Scheffe	Engineering	General	.23	.101	.082	-.02	.48
		Medical	-.24	.192	.461	-.72	.24
	General	Engineering	-.23	.101	.082	-.48	.02
		Medical	-.47	.196	.062	-.95	.02
	Medical	Engineering	.24	.192	.461	-.24	.72
		General	.47	.196	.062	-.02	.95

Based on observed means.
The error term is Mean Square (Error) = .326
*. The mean difference is significant at the 0.05 level.

Table 5.26.6 Program Category Multiple Comparisons for Criteria VI
Dependent Variable: Criteria VI

	(I) Program category	(J) Program category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.30*	.099	.010	.06	.53
		Medical	.01	.189	.999	-.44	.46
	General	Engineering	-.30*	.099	.010	-.53	-.06
		Medical	-.29	.193	.295	-.75	.17
	Medical	Engineering	-.01	.189	.999	-.46	.44
		General	.29	.193	.295	-.17	.75
Scheffe	Engineering	General	.30*	.099	.014	.05	.54
		Medical	.01	.189	.999	-.46	.48
	General	Engineering	-.30*	.099	.014	-.54	-.05
		Medical	-.29	.193	.329	-.77	.19
	Medical	Engineering	-.01	.189	.999	-.48	.46
		General	.29	.193	.329	-.19	.77

Based on observed means.
The error term is Mean Square (Error) = .317
* The mean difference is significant at the 0.05 level.

Table 5.26.7 Program Category Multiple Comparisons for Criteria VII
Dependent Variable: Criteria VII

	(I) Program category	(J) Program category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Engineering	General	.37*	.105	.002	.12	.62
		Medical	-.14	.200	.763	-.61	.33
	General	Engineering	-.37*	.105	.002	-.62	-.12
		Medical	-.51*	.204	.037	-.99	-.02
	Medical	Engineering	.14	.200	.763	-.33	.61
		General	.51*	.204	.037	.02	.99
Scheffe	Engineering	General	.37*	.105	.003	.11	.63
		Medical	-.14	.200	.783	-.63	.35
	General	Engineering	-.37*	.105	.003	-.63	-.11
		Medical	-.51*	.204	.048	-1.01	.00
	Medical	Engineering	.14	.200	.783	-.35	.63
		General	.51*	.204	.048	.00	1.01

Based on observed means.
The error term is Mean Square (Error) = .352
*. The mean difference is significant at the 0.05 level.

Profile Plots

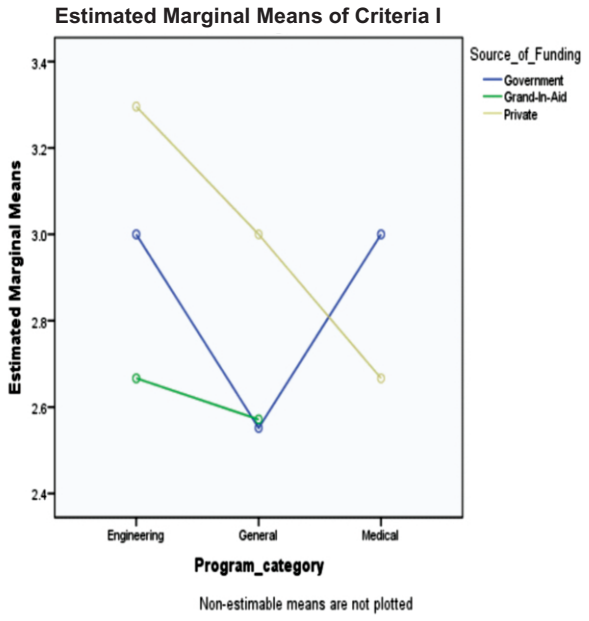


Fig. 5.37: Effect of interaction between program type and source of funding on Curricular aspects

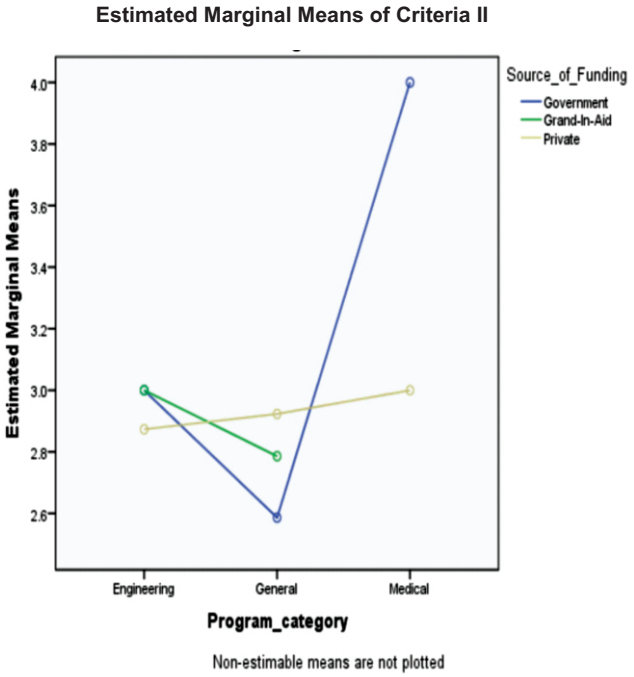


Fig. 5.38: Effect of interaction between program type and source of funding on Teaching Learning and Evaluation

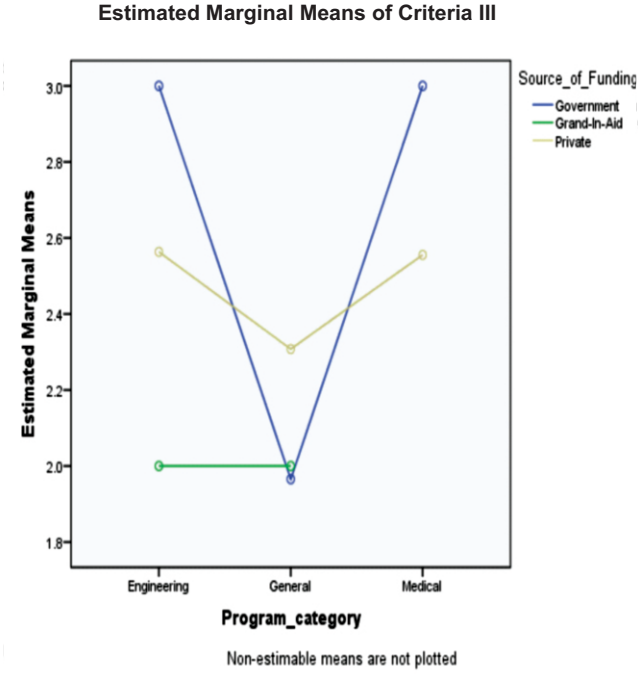


Fig. 5.39: Effect of interaction between program type and source of funding on Research, Consultancy and Extension

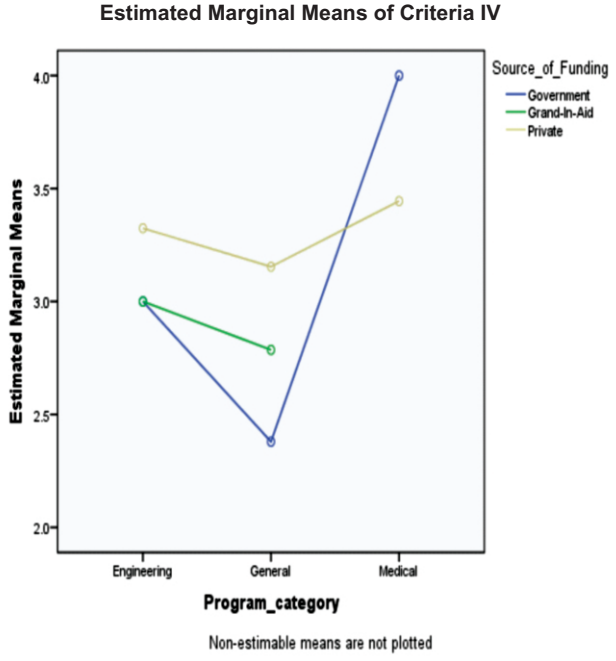


Fig. 5.40: Effect of interaction between program type and source of funding on Infrastructure and Learning Resources

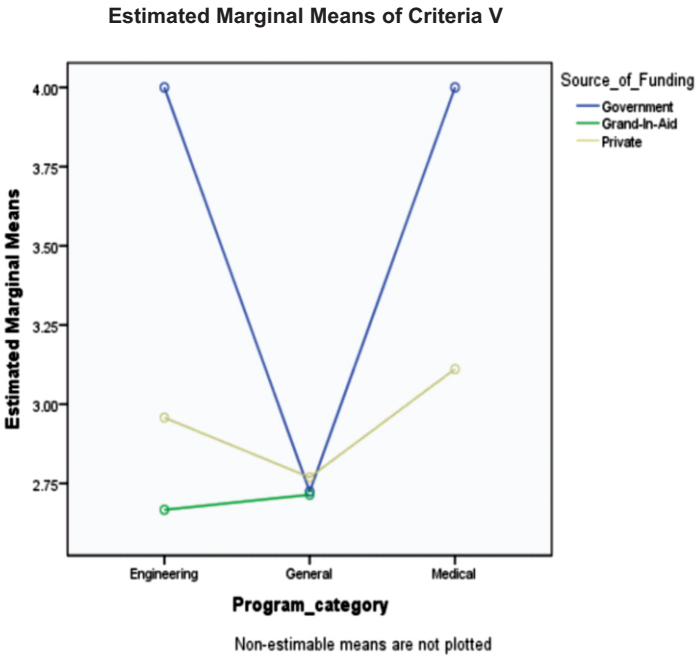


Fig. 5.41: Effect of interaction between program type and source of funding on Student Support and Progression

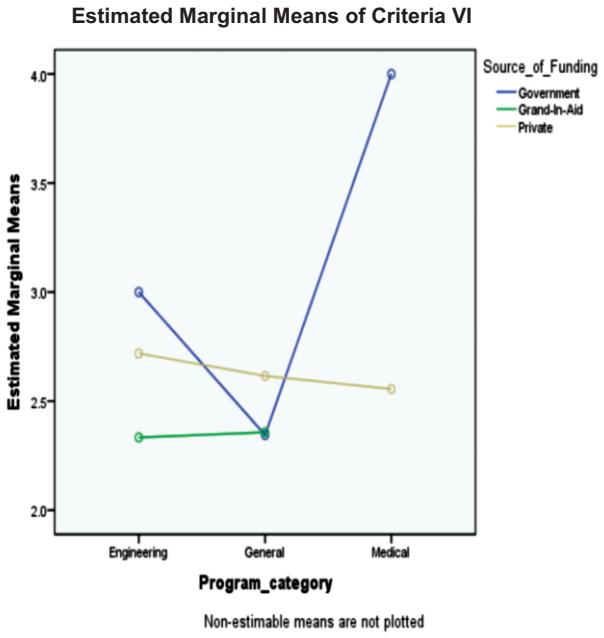


Fig. 5.42: Effect of interaction between program type and source of funding on Governance, Leadership and Management

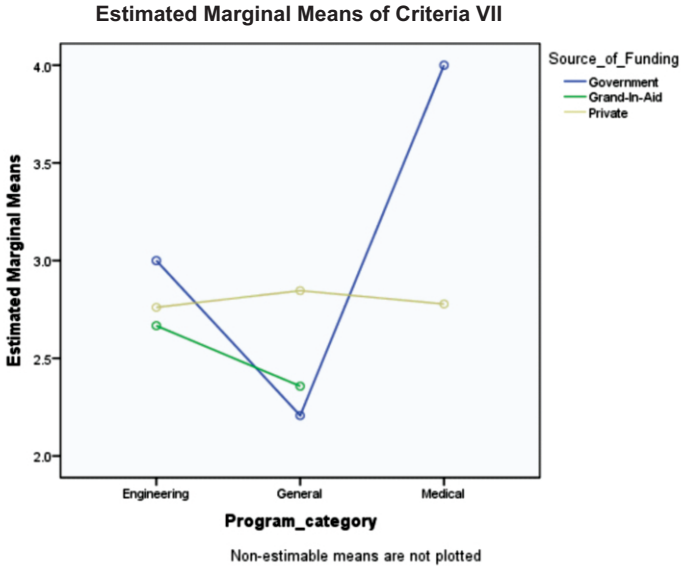


Fig. 5.43: Effect of interaction between program type and source of funding on Innovations and Best Practices

5.6.2 Influence of Source of Funding, Location and their Interaction on the Performance of Institutions Criterion-wise

Table 5.26 gives the significance effect of Source of funding, program type, and interaction between program type and source of funding criterion wise. In Curricular Aspects neither the effect of source of funding nor program category is found significant. In Teaching-learning and Evaluation there seems a considerable effect of program category on the source of funding. In Research, Consultancy and Extension also source of funding and program category have no significance effect on the performance of the institutions. In Infrastructure and Learning Resources, and in Student Support and Progression program category has significant effect but the interaction between source of funding and program category has no significance effect. Under Governance, Leadership and Management and in Innovations and best practices only Program Category has significance effect. The interaction between the Program category and source of funding is found to have significant effect in these two criteria.

Fig 5.37 to Fig 5.43 are drawn with one of the factor program categories of the institutions on X axis and the estimated marginal means for the interaction between program category and source of funding on Y axis, criterion-wise, respectively. It is understood from Fig 5.37 that Engineering colleges with Private funding are performing better in Curricular Aspects than in any other combination. Under general category the performance of Grant-in-aid and Government is almost same. In Medical category government funded colleges are performing better than Private colleges.

Fig 5.38 shows the influence on Teaching-learning and Evaluation. In Engineering Category performance of Government, Grant-in-aid and Private funded colleges are all at same level. In Medical Category Government-aided colleges are performing better than Grant-in-aid and Private. In General Category the performance of all colleges under Government, Grant-in-aid and private funded is almost same. Among the private funded institutions, the performance of Medical colleges is again the highest. Government-aided colleges are performing poor in general program category.

Fig 5.39 shows the significance of program category and source of funding on research, consultancy, and extension. It is found that in Engineering and Medicine Category institutions are performing better under Government funded ones. In the Engineering Category, grant-in-aid institutions are at the lowest. In private funded institutions Engineering Category institutes are performing better and Medical colleges are also almost at the same level.

Fig 5.40 shows the significance of program category and source of funding on Infrastructure and Learning Resources. In the Engineering category government funded and Grant-in-aid performance are at the same level and private has the highest performance. In Medical category Government institutions are at the peak. The performance of private funded institutions is the same In Engineering and Medical category. General category colleges' performance is the lowest in Government funded institutions.

Fig 5.41 shows the significance of program category and source of funding on student support and progression. The performance of Engineering and Medical categories is the same in Government-aided colleges and is the highest. Private funded institutions' performance in this criterion is lower than Government and better than Grant-in-aid institutions. The performance of all the three program type institutes is the same w.r.t source of funding. Under engineering category, Grant-in-aid institutions' performance is at lowest in student support and progression.

Fig 5.42 shows the significance of program category and source of funding on Governance, leadership and Management. In the Engineering Category Private funded institutions are performing better than grant in aid, but the Government funded institutions are performing better than these two. Under General Category, Government and Grant-in-aid performance is at the same level and private institutions are at the highest. In Medical category as usual Government funded institutions are performing much better than private and grant-in-aid funded ones.

Fig 5.43 shows the significance of program category and source of funding on the Innovations and Best Practices. In the Engineering category all the three sources of funded institutions are performing at the same level. Private funded institutions are at the highest level under General Education Category. Medical category institutions are highest performing ones under government category.

5.7 Grade-wise Distribution of Colleges

In the following sections, analysis of colleges is taken on the basis of funding, location and type of college.

5.7.1 Grade-wise distribution of Government, Grant-in-aid and Private Colleges

Details of Grade-wise distribution of government, grant-in-aid and private colleges is presented in Table 5.27. It is observed from the Table that in the CGPA range of 3.5 to 4.00, percentage of Government colleges are highest followed by Private. There are no Grant-in-

aid colleges in the highest CGPA Range. However, in the range of 2.6 to 3.5 CGPA largest percentage of colleges are Private Colleges followed by Grant-in-aid. Government Colleges occupy the least percentage in this CGPA range. Further it is to be noted that the percentage of Government Colleges is also the highest in the least CGPA Range. i.e., from 1.51 to 2.00.

Table 5.27 Grade-wise Distribution of Government and Grant-in-aid Colleges and Self-financed Colleges of Telangana

Source of funding (Govt / Grant-in-aid/Private)					
CGPA Range		Government	Grant-in -aid	Private	Total
1.51 to 2.00	Number of Colleges	3	1	2	6
	Percent	8.6%	5.3%	2.3%	4.3%
2.01 to 2.50	Number of Colleges	14	6	6	26
	Percent	40.0%	31.6%	6.9%	18.4%
2.51 to 2.75	Number of Colleges	6	4	15	25
	Percent	17.1%	21.1%	17.2%	17.7%
2.76 to 3.00	Number of Colleges	7	3	22	32
	Percent	20.0%	15.8%	25.3%	22.7%
3.01 to 3.25	Number of Colleges	4	3	33	40
	Percent	11.4%	15.8%	37.9%	28.4%
3.26 to 3.50	Number of Colleges	0	2	7	9
	Percent	0.0%	10.5%	8.0%	6.4%
3.51 to 4.00	Number of Colleges	1	0	2	3
	Percent	2.9%	0.0%	2.3%	2.1%
Total	Number of Colleges	35	19	87	141
	Percent	100.0%	100.0%	100.0%	100.0%

5.7.2 Grade-wise Distribution of Urban, Semi-urban and Rural colleges

The Table 5.28 gives the grade- wise distribution of Urban, Semi-urban and Rural Colleges. It can be inferred from the Table that the percentage of Urban Colleges is the highest in the CGPA Range of 3.01 to 4.00, followed by rural colleges percentage. However, In the CGPA Range of 2.51 to 3.00, rural colleges are in the highest percentage, followed by Urban colleges. In the low CGPA range of 1.51 to 2.5, the semi-urban college percentage is the highest. It can be concluded that Urban colleges fared well when compared to rural and semi-urban.

Table 5.28 Grade-wise Distribution of Rural Colleges Urban Colleges and Semi-urban Colleges of Telangana

Location (Urban/Semi-Urban/Rural)					
CGPA Range		Urban	Rural	Semi-urban	**Total**
1.51 to 2.00	Number of Colleges	3	2	1	6
	Percent	4.2%	3.2%	16.7%	4.3%
2.01 to 2.50	Number of Colleges	12	10	4	26
	Percent	16.7%	15.9%	66.7%	18.4%
2.51 to 2.75	Number of colleges	9	16	0	25
	Percent	12.5%	25.4%	0.0%	17.7%
2.76 to 3.00	Number of Colleges	17	15	0	32
	Percent	23.6%	23.8%	0.0%	22.7%
3.01 to 3.25	Number of Colleges	23	16	1	40
	Percent	31.9%	25.4%	16.7%	28.4%
3.26 to 3.50	Number of Colleges	6	3	0	9
	Percent	8.3%	4.8%	0.0%	6.4%
3.51 to 4.00	Number of Colleges	2	1	0	3
	Percent	2.8%	1.6%	0.0%	2.1%
Total	Number of Colleges	72	63	6	141
	Percent	100.0%	100.0%	100.0%	100.0%

5.7.3 Grade-wise Distribution of Co-education and Women's Colleges of Telangana

Table 5.29 presents the details of grade-wise distribution of Co-education and women's colleges of Telangana. It is observed from the Table that in the highest CGPA range, i.e., 3.51 to 4.00 there are no women's colleges. However, in the CGPA range of 3.26 to 3.50 Women's colleges' percentage is much higher compared to co-education colleges. In the middle order, i.e., in the range of 2.51 to 3.25 the percentage of co-education colleges is high. Further in the lowest range also, i.e., from CGPA 2.01 to 2.05 also the women's colleges' percentage is high. Hence, it can be concluded that co-education colleges are performing in a better way.

Table 5.29 Grade-wise Distribution of Co-education and Women Colleges of Telangana

Gender (Co-ed/Women)		Co-education	Women	Total
CGPA Range				
1.51 to 2.00	Number of Colleges	4	2	6
	Percent	3.3%	9.5%	4.3%
2.01 to 2.50	Number of Colleges	20	6	26
	Percent	16.7%	28.6%	18.4%
2.51 to 2.75	Number of Colleges	22	3	25
	Percent	18.3%	14.3%	17.7%
2.76 to 3.00	Number of Colleges	30	2	32
	Percent	25.0%	9.5%	22.7%
3.01 to 3.25	Number of Colleges	35	5	40
	Percent	29.2%	23.8%	28.4%
3.26 to 3.50	Number of Colleges	6 3 9		
	Percent	5.0%	14.3%	6.4%
3.51 to 4.00	Number of Colleges	3 0 3		
	Percent	2.5%	.0%	2.1%
Total	Number of Colleges	120	21	141
	Percent	100.0%	100.0%	100.0%

5.7.4 C omparison of Per Capita Expenditure Category-wise

The Table 5.30 given below provide the details of per capita expenditure and the faculty student ratio category-wise. The information is gathered from the NAAC site and is limited to only 61 colleges, and most of them are accredited under Revised Accreditation Framework (RAF). It is observed from the Table that Rural colleges are spending more than Urban colleges. And similarly, in the private aided colleges the per capita expenditure on the student is higher than in government or grant-in-aid institutions. Co-ed colleges are spending more money compared to women's colleges. And as expected the expenditure of Medical colleges is the highest among Medical, General and Engineering.

To assess the student faculty ratio the data available in the NAAC portal is used. However, the Data in the site is limited to only 66 colleges i.e. those are accredited under revised accreditation framework. It is inferred from this limited data that the student faculty ratio is best in Engineering category colleges. In rural colleges it is better than urban colleges. Among Private, grant-in-aid and Government colleges the ratio is the best in private colleges. In the Women's and Co-education categories, Co-education colleges are having better ratio. However, the peer team report analysis of all 141 colleges reveals that the student faculty ratio in many colleges is not up to the mark.

Table 5.30 Per Capita Expenditure and Faculty Student Ratio Details Category-wise

	Per Capita Expenditure (Rs)	Student Faculty Ratio
Urban	37285.03	16.758
Rural	44164.54	15.98911
Semi-urban	NIL	NIL
Private	42792.50	15.48119
Grant-in-aid	35525.96	16.28524
Government	36652.76	16.26077
Women	36117.97	16.37943
Co-education	43310.33	15.55617
Engineering	43992.70	15.47119
General	35525.96	16.80185
Medical	40487.04	16.09955

Table 5.31 Category-wise Performance in Different Accreditation Cycles

Mean CGPA				
	Cycle 1	Cycle 2	Cycle 3	Cycle 4
Women	2.761682	2.478	2.867	2.91
Co-education	2.782734	2.786538	2.822	NIL
Rural	2.781679	2.754667	NIL	NIL
Semi-urban	2.508571	2.4475	NIL	NIL
Urban	2.851293	2.844286	2.84	2.91
Government	2.733729	2.493333	2.841636	NIL
Grant-in-aid	2.448	2.493333	2.847912	2.91
Private	2.782143	3.196364	3.34	NIL
UG	2.813465	2.345556	2.723	NIL
UG & PG	2.782446	2.883043	2.835789	2.91

General	2.774262	2.529091	2.841636	2.91
Education	1.52	2.86	NIL	NIL
Medical	2.781387	3.19	NIL	NIL
Engineering	2.784485	3.22	NIL	NIL

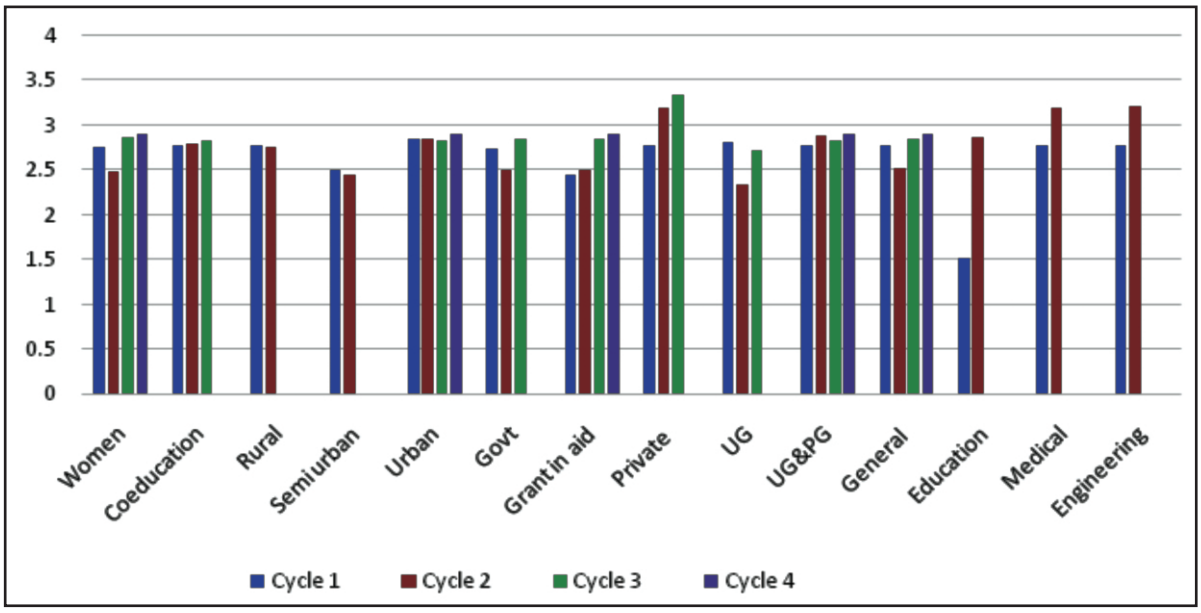


Fig. 5.44: Cycle-wise performance Comparison of Different Categories

5.7.5 Cycle-wise Performance Comparison of Colleges

The Table 5.31 provides the average CGPA obtained by colleges under different categories cycle-wise. The data is limited in few categories as colleges have not undergone more than 2 or 3 cycles. In Medical and Engineering categories there is an improvement from the first cycle to the second cycle. In co-education and women's categories also, there is an improvement from the first cycle to the final cycle. Fig. 5.44 shows the performance of colleges under different categories in different cycles.

5.8 Summary

This section presents the consolidated information drawn from the above statistical analysis for accredited Universities and accredited Colleges of Telangana state separately. The analysis is based on the criterion wise scores and overall CGPA obtained by the institutions. The summary is presented separately for the 13 accredited Universities and 141 accredited affiliated colleges and presented in different sections.

5.8.1 Summary of the Analysis of the Accredited Universities

- 93% of the Universities located in Urban area are Accredited and only 7% of those in rural areas are accredited.

- All Universities have secured more than 2.25 CGPA.
- In research and consultancy the lowest GPA is recorded. i.e., 0.94 and the highest performance is observed, i.e., 4 GPA in Infrastructure and Learning Resources and Innovation and Best practices.
- The Mean GPA is found less than 3 in only two criteria: Research, Consultancy and Extension and Governance, Leadership and Management.
- Highest standard deviation and -ve skewness is observed in Research, Consultancy and Extension. It means that a large no of Universities (9/13) are above average of 2.79 GPA and are performing well.
- Lowest skewness and standard deviation are found in Infrastructure and Learning Resources.
- In curricular aspects and Teaching-learning and Evaluation, the performance of all Universities is almost same.
- Average performance of Central Universities is better than that of Deemed-to-be Universities and State Universities in all criteria.
- State Universities are performing better than Deemed-to-be Universities only in Curricular Aspects.
- Deemed Universities are performing better in Infrastructure and Learning Resources and in Student Support and Progression among all types of Universities.
- All accredited Universities are committed to sustain their status of accreditation.

5.8.2 Summary of the Analysis of Accredited Affiliated Colleges

In the present study 141 number of accredited colleges affiliated to different universities in Telangana state are considered. The data obtained from the NAAC portal and the data drawn from different SSRs is tabulated and is subjected to statistical Analysis as explained in the earlier sections. The inference drawn from the analysis is presented for convenience separately criterion wise. Inference drawn for each criterion in terms of level of programs, Gender variation, source of funding, Type of programs and area of location are presented in Tabular form as given below in the Table 5.32. Further the salient information related to general observation regarding the status of Higher Education in Telangana State is also presented below the Table.

Table 5.32 Criterion-wise Comparison

Criteria – I

Curricular Aspects	UG	UG & PG institutions' performance is better than that of UG Institutions.
	U G & PG	
	Co-education	The performance of Women's Colleges is better than that of Co-ed colleges.
	Women	
	Government	Private institutions have performed much better than Government and Grant-in-aid institutions. The performance of Grant-in-aid and Government funded colleges' is at the same level.
	Grant-in-aid	
	Private	
	Urban	Urban colleges have performed better than rural and semi-urban colleges. Semi-urban colleges' performance is noted at the lowest level. The performance of Private funded colleges is the highest in Urban areas and lowest in Semi-urban areas. The performance of Government and Grant- in-aid colleges is the same level in Urban and Rural locations. Grant-in-aid colleges' performance is at the lowest level in Semi-urban areas.
	Semi-urban	
	Rural	
	General	Engineering institutions have performed much better than Medical and General Category Institutions. General Category Institutions have performed at the lowest level and Medical Colleges are slightly better than General Category Institutions. Medical Category Institutions under Government Funded Category have performed better than private funded Institutions. Under the General Category the performance of Government and Grant-in -aid Institutions is the same. Under Engineering Category Private Funded Institutions have performed at the highest level followed by Government and Grant -in-aid institutions.
	Medical	
	Engineering	

Criteria – II

Teaching - Learning and Evaluation	UG	The performance of UG & PG institutions is better than that of UG Institutions.
	U G & PG	
	Co-education	The performance of Women and co-education institutions is almost at the same level.
	Women	
	Government	The performance of Private funded colleges is better than that of the other two. Government funded colleges' performance is at the lowest level.
	Grant-in-aid	
	Private	
	Urban	The performance of Urban colleges is better than that of Institutions in Semi-urban and Rural areas. Rural colleges' performance is at the lowest level and Semi-urban colleges are slightly better than Rural colleges. The performance of Grant-in-aid colleges is in between that ofprivate funded and Government Institutions. The performance of Government, Grant-in-aid and Private Institutions is almost the same in the Urban locations. The performance of Government Institutions is the least in Rural areas and the highest in Urban areas. Grant-in-aid colleges have performed at the highest level in the Rural areas.
	Semi-urban	
	Rural	
	General	Medical Category institutions have performed much better than Engineering and General Category Institutions. General Category Institutions' performance is at the lowest level. Under Government Funded Institutions, Medical Category Institutions have performed much better than Private Institutions. The performance of Government Funded, Grant-in-aid and Private Institutions is almost the same under the Engineering Category. Under General Category the performance of Government Funded Institutions is at the lowest level.
	Medical	
	Engineering	

Criteria – III

Research, Consultancy and Extension	UG	The performance of UG & PG institutions is almost the same.
	U G & PG	
	Co-education	The performance of Women and co-education institutions is almost the same.
	Women	
	Government	The performance of Private funded colleges is much better than that of Government and Grant-in-aid funded colleges. Government funded colleges have performed better than Grant-in -aid colleges. Grant-in-aid colleges' performance is at the lowest level.
	Grant-in-aid	
	Private	
	Urban	Urban colleges have performed better than semi-urban and Rural Colleges. Semi-Urban colleges' performance is at lowest level. The performance of Private funded colleges is the highest in Semi -urban location. Grant-in-aid colleges' performance is the lowest in Semi-urban areas. Government and Grant-in-aid college's performance is almost the same in Rural and Urban areas. In all the locations the performance of Private Aided colleges is better than that of the other two.
	Semi-urban	
	Rural	
	General	Medical Category Institutions have performed better than Engineering and General Category. The performance of Engineering Category Institutions is slightly at a lower level than that of Medical Category Institutions. The performance of General Category Institutions is at the lowest level. Government Funded Institutions under Engineering and Medical Category are at the highest performance level and are equal in their performance. Government and Grant-in-aid Institutions under the General Category have performed at the lowest level.
	Medical	
	Engineering	

Criteria – IV

Infrastructure and Learning Resources	UG	The performance of UG & PG institutions is almost the same.
	U G & PG	
	Co-education	The performance of Women and co-education institutions is almost same.
	Women	
	Government	Private funded colleges have performed much better than Grant-in-aid and Government funded colleges. Grant-in-aid funded colleges have performed better than Government colleges but at lower level than Private funded colleges.
	Grant-in-aid	
	Private	
	Urban	Urban colleges have performed better than Semi-urban and Rural Colleges. Semi-urban colleges' performance is lowest level. Performance of Government funded colleges is at the lowest level. Private colleges' performance is highest in Semi-urban location. Performance of Government and Grant-in-aid colleges is the same at Rural Location. Government colleges' performance is lowest level in Semi-urban area. Private funded colleges have performed at the peak in all the three locations.
	Semi-urban	
	Rural	
	General	Medical Category Institutions have performed better than Engineering and General Category. And Engineering Category Institutions are slightly lower level than Medical Category Institutions. General Category Institutions' performance is at the lowest level. Government Funded Institutions under the Medical Category have performed better than those under the General and Engineering Category. Under the General Category Private Funded Institutions are better than Government and Grant-in-aid colleges. Under Engineering Category Government and Grant-in-aid Institutions' performance is the same.
	Medical	
	Engineering	

Criteria – V

Student Support and Progression	UG	The performance of UG & PG institutions is almost the same.
	U G & PG	
	Co-education	The performance of Women and co-education institutions is almost the same.
	Women	
	Government	Private funded colleges have performed better than Government and Grant-in-aid colleges. Grant-in-aid colleges' performance is at the lowest level.
	Grant-in-aid	
	Private	
	Urban	The performance of Rural Colleges is better than that of Urban and Semi-urban colleges. Semi-urban colleges are at the lowest level. The performance of Government, Grant-in-aid and Private institutions is almost the same in Urban areas. The performance of Grant-in-aid institutions is lowest in Semi-urban location. The performance of Private funded institutions is at their best in Rural area.
	Semi-urban	
	Rural	
	General	Medical category institutions have performed better than Engineering and General Category Institutions. The performance of Engineering Category Institutions is at a lower level than Medical Category institutions. General category institutions' performance is at the lowest level. Government funded institutions under Medical and Engineering Category are at the highest level and are equal in their performance. Under General category the performance of Government Funded, Grant-in-aid and Private Funded Institutions is the same. Grant-in-aid colleges' performance under the Engineering Category is at the lowest level.
	Medical	
	Engineering	

Criteria – VI

Governance, Leadership and Management	UG U G & PG	The performance of UG & PG institutions is almost the same.
	Co-education Women	The performance of Women colleges is better than that of Co-education institutions.
	Government Grant-in-aid Private	Private funded colleges have performed better than Grant-in-aid and Government funded colleges. Government funded colleges' performance at the lowest level.
	Urban Semi-urban Rural	Urban colleges performed better than Semi-urban and Rural Colleges. Semi-urban colleges' performance is at the lowest level. The performance of Government, Grant-in-aid and Private institutions is almost at the same level in Urban areas. The performance of Private Funded Institutions is at the highest level in Semi-urban areas. The performance of Government Funded Institutions is the lowest level in Semi-urban areas. The performance of Grant-in-aid institutions is the same in Rural and Semi-urban areas.
	General Medical Engineering	The performance of Medical and Engineering Category Institutions is at the same level. The performance of General Category Institutions is at the lowest level. Under Government funded institutions Medical Category Institutions have performed much better than the other two. Under the Engineering Category the performance of Government Funded Institutions is at the highest level.

Criteria – VII

Innovations and Best Practices	UG U G & PG	The performance of UG & PG institutions is almost the same.
	Co-education Women	The performance of Women and co-education institutions is almost the same.
	Government Grant-in-aid Private	Private funded colleges have performed better than Grant-in-aid and Government colleges. The performance of Government colleges is at the lowest level.
	Urban Semi-urban Rural	Urban colleges have performed better than Semi-urban and Rural Colleges. Semi-urban colleges' performance is at the lowest level. The performance of Government and Grant-in-aid institutions is almost the same in all the three locations. The performance of Government, Grant-in-aid and Private Institutions is almost at same level in Urban areas. The performance of Private Funded Institutions is at the highest level in Semi-urban area.
	General Medical Engineering	Medical Category Institutions have performed better than Engineering and General Category Institutions. The performance of Engineering Category Institutions is at a lower level than that of Medical Category Institutions. The performance of General Category Institutions is at the lowest level. Under Medical Category the performance of Government Funded Institutions is at the highest level. Under Engineering Category also Government Funded Institutions are at the highest level. The performance Government and Grant-in-aid Institutions is almost the same under General Category and is at the lowest level.

In the State of Telangana

- Total number of HEIs gone in for accreditation are only 11% against the Indian average of 21%.
- 37% of accredited colleges have not gone for re-accreditation.
- Highest percentage of urban located colleges have been accredited.
- Under the private category, the highest percentage of colleges have gone for accreditation.
- Co-education colleges are the highest accredited among Co-education and Women categories.
- UG & PG level colleges are the highest accredited among UG and PG level colleges.
- Engineering and Management related colleges are the highest accredited among General, Medicine and Engineering programs.
- Under JNTUH, maximum percentage of colleges have gone for accreditation compared to colleges under all other Universities in Telangana.
- The highest percentage of colleges obtained the CGPA in the Range of 3.01 - 3.25.
- Performance of many colleges is below average in Research, Consultancy and Extension.
- The lowest CGPA is recorded in Infrastructure and Learning Resources.
- The highest CGPA is recorded in 3 criteria, namely, curricular aspects, student support and progression and Governance, Leadership and Management.
- Government funded colleges are the highest in number in the CGPA Range of 3.51 to 4.00.
- Urban located colleges are the highest in number in the CGPA band of 3.00 to 4.00.
- Student faculty ratio is better in Private-aided Engineering Colleges, compared to others.
- Medical and Engineering Colleges have shown considerable improvement in ranking from one cycle to another.
- Per capita expenditure excluding salary is more in Private Colleges than in Government and Grant-in-aid Colleges.

Chapter – 6

SWOC Analysis in Peer Team Reports on Accredited Higher Education Institutions in Telangana State

Chapter – 6

SWOC Analysis in Peer Team Reports on Accredited Higher Education Institutions in Telangana State

PART -1

6.1 Introduction

The descriptive analysis in the following chapter is based on the available details of NAAC peer team visits to various Universities and Higher Education institutions in Telangana. The observations, conclusions and suggestions are based on the reports of various cycles of assessment and accreditation. The peer team reports consist of important details regarding major features, strengths, weaknesses, opportunities and challenges faced by every institution. The reports also furnish ten recommendations for quality sustenance and enhancement to every institution. These reports can help to determine the overall scenario of higher education in the State of Telangana.

6.2 Universities

According to the statistical data received, there are twenty-four universities in the state of Telangana. Out of the twenty-four universities, there are (3) three Central Universities, (17) seventeen State Universities, (2) two Deemed-to-be Universities and (2) National level institutions Out of the seventeen State Universities, six are conventional universities, ten are national level specialized Universities and one is a specialized State level University. Thirteen Universities have undergone the NAAC accreditation process and twelve of them possess a valid quality status certificate at present. Two successive reports of one University were available while all other reports are for either the first or the second or third cycle.

6.2.1 Major Features

1) One University is dedicated to English and Foreign Languages. It is the only one of its kind in South Asia. It is a multi-campus university. One major feature of this university is its technology-embedded language teaching. This University offers a well-designed course in the teaching of English that has contributed to improved pedagogy in English Language Teaching.

2) One University has a well-defined mission for preservation, propagation, promotion and advancement of Telugu language, literature and arts. It encourages promotion of traditional performing arts through academic and research programs. This is discernible in its release of audio-visual classics in Telugu literature and documentaries of renowned Telugu personalities.

3) One Central University is committed to the multifarious promotion, application and development of Urdu language. It imparts education in science, vocational, technical subjects through Urdu language and reaches out through distance education.

4) One University is a dedicated Law University. It is located in the rural area and is equipped with good infrastructural facilities. Admissions to this University are based on the All India Test [CLAT] for UG and PG.

5) The Universities are generally situated in large campuses with scope for infrastructure development. Some are located in rural areas and have excellent infrastructure as well as IT set up.

6) Some universities offer easy access to remote and unapproachable backward areas. This gives students from tribal and remote areas opportunities of pursuing higher education.

7) Admissions to central universities are based on all India entrance tests and to State Universities they are based on tests of state-wide jurisdiction and are governed by the Educational Institutions (Regulation of Admissions Order, 1974). Some Universities attract students from other States as well as from foreign countries.

8) Some technical universities have attained national and international recognition. They offer trans-disciplinary programs with special emphasis on entrepreneurship and research. Some have established incubation centers.

9) Two Universities have been selected for the status of a University of Excellence. They have constituted centres for excellence with 'Material Research-Social Relevance' and 'Bio-Prospecting of Certain Medicinal Plants for Healthcare' as thrust areas.

10) Affiliating Universities have to cater to the academic needs of a large number of affiliated Colleges. They have to monitor the overall working of the institutions and provide guidance in matters related to academics-teaching, learning, evaluation and administration.

11) Semester system, continuous assessment, CBCS are implemented in most of the universities. Nevertheless, the CBCS system is partially implemented and it requires to be strengthened.

6.2.2 Strengths, Weaknesses, Opportunities and Challenges (SWOC)

The following are some general prominent characteristics of the Accredited Universities:

6.2.2.1 Strengths

1) Specialized Central Universities and one State University for development of languages and literatures have a unique language-focus. They offer socially relevant integral education with discipline, epitomising an encouraging ambience for promoting language education. These Universities enjoy global reputation.

2) Most Universities have well - organized and developed campus structures. A neat, clean, well-maintained, eco-friendly campus is necessary for creating the essential academic ambience.

3) Admission process is transparent and based on an All India test, pan India studentship or a statewide test. Universities implement statutory reservation policies effectively during admissions.

4) Remedial Coaching Centres for Minorities run by many Universities are advantageous for improving the performance of minorities and rural and socio-economically marginalized students.

5) There is evidence of committed leadership and dedicated staff members reflected in the development and progress of the Universities. Decentralized administration through carefully constituted committees ensures a robust work culture.

6) Along with committed, visionary and proactive management, Universities also benefit from the dynamic leadership of reputed academicians. Universities may tie up with other Universities and institutions and share their expertise.

7) Some Universities have MoUs and collaborations with foreign universities and governments for faculty and student exchange programs to enhance their competencies.

8) Universities have created considerable goodwill and they enjoy the patronage of the public. They have established good relationship with stakeholders. Universities impart education to the underprivileged sections and contribute to the national cause of developing trained human resources and able global citizens.

9) Good discipline is maintained on the campuses. Measures to ensure safety and security of the staff and students are in place.

10) Affiliating universities decide the curricular, teaching-learning and evaluation procedures of the affiliated colleges. They monitor and guide the colleges.

6.2.2.2 Weaknesses

1) In almost all universities, a large number of faculty positions are lying vacant. The process of filling of vacancies for teaching and non-teaching staff has not been taken up. Consequently, the faculty student ratio as well as cadre ratio is low and there is dearth of permanent faculty.

2) In some cases there appears to be the lack of a perspective vision percolating to all sections of the University community. Some stakeholders do not know the Vision, Mission, Goals and Objectives of the University.

3) There are very few major public or private funding sources available for the development of infrastructure and new innovative academic programs to be launched by the Universities.

4) In some Universities, the demand ratio for all the courses is quite low owing to non-up gradation of those courses. Academic and research objectives in keeping with emerging global challenges are not considered carefully by the affiliating universities while framing curricula.

5) Some Universities are found deficient in research, development, and consultancy activities. Linkages with National and International Bodies are few. The research output does not meet global standards.

6) The university-industry interface is inadequate. In order that the University syllabuses are updated to fulfill the requirements of the industry, it is necessary to establish a dialogue with the industry.

7) Qualified Physical Education Director and Gym Instructors are not recruited. The existing sports facilities are inadequate.

8) In some Universities, the NSS /NCC / Youth Red Cross units have either not been instituted or are not contributing adequately. In some universities, the Students' Council is either not constituted or is not functional.

9) The mechanism for feedback collection from various stakeholders is not systematically adopted and analyzed. Post-feedback initiatives are not introduced subsequently. In some cases, there is a lack of effective grievance redress mechanism for staff and students.

10) The internal quality monitoring mechanism is not strong. The IQACs of the Universities are not as proactive and strong as desired.

6.2.2.3 Opportunities

1) Universities have a large scope for designing and implementing need based courses of social relevance. They have the opportunity of developing advanced research in the different emerging areas in keeping with global expectations, standards and challenges. They can make efforts to seek financial assistance for research and development from state and central government funding agencies. The Ministry of Culture and Tribal affairs, GOI, Indira Gandhi National Centre for Arts (IGNCA), National Manuscripts Mission can be approached for developing museums and archives. There is scope for establishing linkages with industry for conducting collaborative research.

2) There is a large scope for improving research, IPR and patenting. There is an opportunity for establishing international tie-ups to attract post doc research fellows from developing and developed countries.

3) As a number of posts are lying vacant, there is scope for recruiting eminent, nationally and internationally known faculty and well-qualified non-teaching staff.

4) The Universities have the opportunity to cater to the development needs of students of the SC/ST/BC/minority communities and bring them into the socio-economic mainstream. They can play a crucial role in furthering the cause of women empowerment and rural development by spreading adult literacy and promoting employability and entrepreneurial skills. There is scope for starting diploma/ certificate/add on courses in collaboration with industries.

5) Some Language Universities have the opportunity of developing an international centre for preservation and growth of Oriental languages and culture.

6) Strengthening of community-based activities under public private partnership and developing stronger linkages with the NGOs are other areas in which the universities can work.

7) Universities should make efforts to improve student enrollment. They can attract students from different parts of the State, country, and even foreign countries. This will give them an opportunity to widen their scope nationally and globally.

8) In order to develop relevant and updated curricula the Universities must consider involving industries to a greater degree in curriculum planning and delivery.

9) By strengthening the IQAC and quality related activities, Universities will be able to ensure quality awareness, enhancement and sustenance.

10) Alumni Association, Students' Council, NCC and NSS activities can be given a boost in order to enhance students' participation in the activities of the Universities.

6.2.2.4 Challenges

1) Managing a large number of affiliated colleges is a big challenge for the Universities because of inadequate human resources and the distance between the university headquarters and the college.

2) Universities have to act as academic leaders in developing innovative action plans in terms of policy and national level development initiatives.

3) Implementation of CBCS in all the programs as mandated by the UGC is necessary.

4) Creating working relationship with Government agencies and regulatory bodies is another challenge that the universities have to face.

5) It is necessary to attract more foreign students for the UG and PG Courses. It is important to train rural based students to meet national challenges. Another related challenge is the need to increase student enrolment in the context of low access, low income and large rural / tribal population.

6) The student-teacher ratio needs to be improved. Recruitment to all vacant teaching and non-teaching positions and creation of more technical positions are required. It is necessary to attract and utilize the expertise of senior and specialized faculty.

7) Universities have to generate resources for research and motivate researchers to have higher impact factor for their publications. Research papers should be published in renowned journals approved in UGC CARE List, Scopus etc. Research measuring up to international standards is the need of the day but it cannot be achieved without adequate resources.

8) Creation of entrepreneurship cells and incubation centres for transfer of knowledge to trade and commerce is necessary. Universities ought to enhance student enrolment by attracting the best talents at the national and international levels.

9) Developing excellent instrumentation facility with required maintenance services will boost the quality of research and help in achieving global recognition.

10) Soft Skills development and employability promotion programs need to be devised. Attracting industries by developing effective interface is a matter of concern. Tapping placement opportunities in reputed industries and other organizations through systematic effort and training to the students is important.

11) Universities should maintain museums and protect cultural artifacts. Museums are the living monuments of our achievements and should be preserved for posterity.

6.2.3 Conclusion

The SWOC analysis draws attention to some of the important aspects of the Universities. It highlights their potential to bring about a silent social transformation through education. Universities influence generations of young minds impart knowledge and train them in various skills. They are the seedbeds of the future of the nation and are the architects of the lives of the youth. They must be places of light, liberty, and learning; otherwise, they would be reduced to a mere cluster of buildings. In order that universities offer the academic leadership, expected of them, their strengths should be identified and reinforced while transforming weaknesses and challenges into opportunities.

If we consider the findings of the SWOC analysis in the light of the seven criteria determined by NAAC, some of the major observations are as follows:

1. Curricular Aspects

Most of the Universities follow the semester pattern and Choice Based Credit System. Some language universities offer interdisciplinary courses and provide options to accommodate diverse needs and future prospects of students interested in language teaching, which are relevant to socio-economic needs. However, the interdisciplinary approach adopted is somewhat limited and less extensive. Curricula are updated periodically by the Boards of Studies and some value added in the process, and in addition, skill based courses are developed too. There is scope however for introducing more courses relevant to the region and for updating curricula by involving experts from the industry. In almost all universities, the feedback mechanism is not systematically implemented. A formal analysis of the feedback and action taken report is essential. Academic audits are not conducted frequently.

2. Teaching – Learning and Evaluation

Information regarding courses offered, admission criteria and rules, etc., is circulated through media and other sources. Admissions are given based on the entrance examination results. Reservation policy of the state and central government is adhered to and students from

various States are admitted in Central Universities. An academic calendar is followed for conducting academic, co-curricular and extracurricular activities. Student-centric methods of teaching-learning are encouraged. Experiential learning and project work are offered in many courses. However, there is a lot of scope for improving research output to match international standards. Research funding needs to be augmented and newer avenues of funding should be explored. There is a need to improve the teacher-taught ratio by filling up all the vacant positions of teaching and non-teaching staff while ensuring cadre ratio. In some Universities, Students' Council is either not constituted or is not active. Lack of representation of students in academic and administrative bodies is observed. The evaluation process is conducted in a timely and transparent manner. Grievance redress mechanism exists but needs to be strengthened in some Universities.

3. Research, Consultancy and Extension

In some universities, progress in research is visible at the national and international levels and has increased during the post-accreditation period. However, allocation of resources for research appears to be limited. Some Universities have national and international collaborations and consultancy activities but the process needs to be strengthened and made more extensive. Inter-departmental collaboration exists in some University departments but it also needs to be reinforced. In most cases, collaborations and linkages with national and international level institutions are yet to be rigorously developed. Some universities have created an eco-system for innovations including the starting of an Incubation Centre and other initiatives for creation and transfer of applicable knowledge. The faculty needs to be familiarized with intellectual property rights. An Industry-Academia Innovation Cell and a Centre for Entrepreneurship Development need to be established. In some Universities, staff and students carry out the extension activities through NCC and NSS. These activities need to be extended to all Universities.

4. Infrastructure and Learning Resources

Most of the Universities possess well–organized, eco–friendly and well-developed main campuses with scope for expansion. The facilities and maintenance of infrastructure on the satellite campuses need to be improved. Universities make optimum use of the existing infrastructure. Hostels, canteens and other facilities exist but are inadequate. Some libraries are partially automated and software installed. Reference journals, e journals, electronic search facility, INFLIBNET/INFONET, and other academic resources are available but are insufficient. Adequate e–enabled classrooms, administrative area, health centre, counseling

centre and other facilities are available in some Universities. Some facilities are available for differently able individuals.

5. Student Support and Progression

Universities aim at the all round development of the students. Some Universities have performed well and their students have excelled in academics, sports, extracurricular and cultural activities. Good sports facilities are available but appointment of Sports Director is not made in many instances. Students have excelled and availed themselves of Scholarships, fee waivers and non–NET fellowships, Earn While You Learn schemes, etc. Some universities have admitted international students, and the International Students' Cell caters to the needs of overseas students. However, more universities need to enroll foreign students in the relevant programs and make a global presence.

Only one University publishes the annual magazine. There is no mention of the publication of annual magazines in other reports. A magazine is an important document that reflects the curricular, co-curricular and extracurricular talents of its students, the achievements and progress of the university and the students. An active Students' Council needs to be established in many Universities to ensure the representation of students on academic and administrative bodies/committees of the institution. Many renowned personalities are past students of these Universities. Reconnecting with them will prove beneficial to the Universities. Registered alumni associations of the universities need to be made functional. In most of the universities, progression to higher studies and research is satisfactory but the dropout rate in some courses is a matter of concern.

6. Governance and Leadership

Vision, Mission, Objectives and Goals of the Universities are reflected through their admission policies. A long–term plan of the University for consolidating its achievements and meeting the global challenges needs to be formulated. Universities have constituted various committees for effective implementation of the policies of the Management. This helps in participatory management and decentralized decision–making. Performance appraisal reports are obtained but a review needs to be made. Accounts are well maintained and external and internal audits conducted. However, academic audits need to be conducted. Funding from research agencies is initiated but is inadequate.

7. Innovation and Best Practices

Every University strives to introduce and sustain innovative and healthy practices to ensure the satisfaction and wellbeing of its stakeholders. Safety and security measures are

ascertained through CCTV surveillance, introduction of biometric attendance for the staff and students and deployment of security personnel. Some Universities have instituted Women's Grievance Cell, Grievance Redress Cell, and Counseling Cell to assist students. These cells must be further strengthened. Solid, liquid and chemical waste disposal mechanism is suitably implemented and some attempts to create Best out of Waste are evident. Initiatives for Swatch Bharat, plastic free campus, tree plantation drive and disposal of litter have been taken up. Use of renewable energy resources, solar energy are encouraged to create eco–friendly campuses. Most of the Universities have a properly designed drainage system. Rain Water Harvesting mechanism is in place. A certain University has planted one–lakh plants on its campus, while another University has instituted a museum with a rich collection of traditional arts, accessories, paintings, sculptures and other rare artifacts.

These are a few examples of Innovations and Best Practices evident on University campuses.

Chapter 7 will deal with the details of this aspect of Quality Assessment and Evaluation.

PART - 2

6.3 Colleges

Out of 1976 Colleges in Telangana, only (141) one hundred and forty-one Colleges have a valid accreditation by NAAC. Out of these, there are (35) thirty-five Government colleges, (19) nineteen are grant-in-aid colleges and (87) eighty-seven are private or self-financed colleges.

(61) Sixty-one colleges impart general education; (2) two colleges are education colleges, (67) sixty-seven colleges are engineering and management related colleges while (11) eleven colleges teach medical, dental, nursing and pharmacy courses.

Forty-seven colleges are located in the urban area, six colleges are in the semi–urban locality and sixty-four colleges are situated in the rural area.

6.3.1 Major Features

1) There are a few high achieving colleges, which have received Star College Department Status, College with Potential for Excellence, Remote Center status recognized by IIT–BOMBAY (under NMEICT–MHRD). One college has completed three phases as College with Potential for Excellence.

2) One College is established specially for the wards of Army personnel. It is situated in a semi-urban location. Army Welfare Education Society (AWES) manages the college.

3) There are twenty–one Government Colleges for Women, spread across the state. This is a very remarkable feature and is evidence of the keen interest take by the Government in women uplift and empowerment.

4) A rural based Medical College has a large green campus, good physical facilities and teaching-learning resources for undergraduate and postgraduate courses.

5) One autonomous college has established an institution–based IT park (DECODE) on the Campus, an Innovation Centre and 11 Centres of Excellence. The college has signed MoUs with seven Foreign Universities.

It is sensitive to the current needs of the country and it has introduced newer courses in line with the UGC mandate.

6) A multi–faculty Government institution, which caters to the diverse socio–economic needs of the society, helps in promoting Urdu and Telugu language.

7) The colleges situated in the rural areas cater to the academic requirements of economically and socially challenged students many of whom are first generation learners.

8) One of the Colleges offers a unique blend of subjects. Their restructured UG Courses with combinations like Forestry, Fisheries, Rural Industrialization and Electronics attract many students.

9) The alumni of some colleges comprise illustrious personalities of international fame. Some colleges have Registered Alumni Associations, which are supportive. The alumni contribute as guest lecturers, sponsors and donors.

10) Some colleges have strong NCC and NSS units. Students are encouraged to participate in various sports activities; one of the students has been selected for participation in Asian Olympics Games.

11) Some colleges effectively implement the Mentor - Mentee system. Consequently, there is a low dropout rate of students though many of them are first generation learners and come from a rural background.

6.3.2 Strengths, Weaknesses, Opportunities and Challenges (SWOC)

The following are some general prominent characteristics of the Accreditated Colleges:

6.3.2.1 Strengths

1) Many of the colleges are situated on clean and green campuses. Some are well maintained and have environment friendly campuses. Some are located in heritage structures.

2) Institutions empower the students from the marginalized and underprivileged section of the society. Government women's colleges have played an important role in empowering women through education.

3) Excellent student supports services with an established public image helps in attracting students from within the state and the country. Satisfactory infrastructure and student facilities, committed faculty and staff, ensure student retention.

4) Where there is a healthy relationship between Management, Staff and Students, there is evidence of better community and extension services rendered by the institution.

5) Dental colleges situated in rural areas cater to the oral health care that would otherwise have been inaccessible. Well-trained and experienced faculty is available to run implant courses.

6) Green initiatives like plastic free campus, tree plantation, Green Audit, Academic Audits are conducted in some colleges. Financial audits are carried out regularly.

7) A proactive Alumni Association, Supportive College Planning and Development Council, and participatory governance are some of the strong points, which lead to student satisfaction and positive feedback from all stakeholders – parents, students and staff.

8) Add on, Value added courses, career and guidance counseling, linkages with MSME, Government of India, and coaching centre for training for competitive examinations offered by some colleges, are relevant and useful in transforming students from weaker sections into successful, employable graduates.

9) The students get an opportunity to render good extension activity and community service and develop good leadership qualities when they participate in NSS and NCC activities.

10) Autonomous Colleges offer diverse programs and continuous evaluation with effective automation in the examination section leading to streamlining of all procedures. The autonomy is used to upgrade and introduce courses relevant to women; self–financed programs offer a wider choice of electives. This leads to good academic performance of the students.

6.3.2.2 Weaknesses

1) Many teaching and non-teaching posts are vacant. There are very few permanent staff members in various institutions. Faculty cadre ratio needs improvement.

2) Funds for maintenance are inadequate which hampers the upkeep, cleanliness and hygiene of the campuses. Funds for research are very limited and this adversely affects the research output of the colleges.

3) Linkages with industries are established but are limited. There is a lack of consultancy expertise. Consultancy services and campus placements are inadequate. The faculty is deficient in research aptitude and their published work does not meet the requisite quality standards. Quality publications with good impact factor need to be increased.

4) Since the University determines fee structures, designing of syllabuses and setting evaluation patterns, the colleges have no scope to revise or reformulate them to suit their requirements. Only few teachers are members of various University committees with limited delegation of responsibilities.

5) Many colleges lack the infrastructure and the expertise to include ICT in their teaching-learning processes. Limited integration of ICT in Evaluation and Curriculum Development is seen.

6) Communicative English proficiency of staff and students needs to be enhanced for better communication and job opportunities. Skill based programs are not offered.

7) An effective system for analyzing feedback from stakeholders is required. Some colleges have not properly collected and processed the feedback received from stakeholders. The action–taken reports necessary for completing the whole process of taking feedback are not documented in some cases.

8) Due to the absence of registered Alumni Association, sustained alumni support is not forthcoming. Many eminent personalities have studied in Telangana institutions. Support from such renowned persons is not sought.

9) The IQACs of colleges need to be strengthened. They must be proactive and participate in all the policy and implementation related decisions and their execution.

6.3.2.3 Opportunities

1) As some of the departments of technical institutions have NBA accreditation, there are many opportunities to get grants from various funding agencies.

2) There is enough potential among faculty members to pursue Doctoral and Post Doctoral research. Initiatives for Government funded projects and projects from non-government agencies can be taken up. Efforts for obtaining grants need to be made. Availability of access to e–Journals, video courses and project Laboratories will enhance these possibilities.

3) National and International conferences in the thrust areas of Engineering can be conducted to achieve a better rapport with the industry.

4) Some technical colleges have an active tie–up and collaborations with many industries for training and research, and for the setting up of collaborative centers of excellence and student internships, which may enable faculty members and students to acquire the opportunity of doing active research.

5) MOOCs and ICT resources for effective teaching-learning can be utilized in order to improve the teaching–learning process.

6) Since colleges are located in urban and rural areas in close proximity to the industrial belt, there are many opportunities for designing and implementing industry oriented technical courses, add on courses and skill based courses. Alumni resources can be utilized for undertaking industry relevant projects and improving the employability of students.

7) Young faculty members can be motivated to be committed to promoting organizational goals. They should be encouraged to help students develop skills to meet the local needs and acquire global competencies and achieve national development through inclusive education

6.3.2.4 Challenges

1) Institutions face tough competition due to the growth of numerous engineering colleges/institutes in surrounding areas. This makes it difficult to attract and retain good students, students from out of the State and country, as well as retain proficient faculty members.

2) Reducing dropout rate among students is the next big challenge. Owing to their weak economic condition, students are finding it difficult to continue with their education. The major challenge is to provide high quality education at low cost.

3) Limitations of resources have to be overcome in order to carry forward women empowerment programs and orient the rural girl students towards the challenges for women in the 21st century knowledge society.

4) There is need to convince the Government to provide more teachers and funds for infrastructure. There are many posts lying vacant that need to be filled immediately with competent faculty and non–teaching staff.

5) There is an urgent need to improve the communication skills and soft skills of faculty and students. Courses related to developing communication skills in the English language and soft skills can be launched as compulsory courses. Interdisciplinary courses aiming at creativity and innovation need to be introduced. Such courses of skill up gradation will help improve students' employability prospects.

6) Modernization of library facilities and laboratories needs mobilization of funds. Efforts have to be made for getting grants from various agencies for upgrading these learning resources.

7) IQAC in almost all colleges needs to be strengthened. The IQAC should be enabled to take decisions to augment the qualitative and quantitative performance of the institutions. A well performing IQAC along with autonomy to the institution has proved to be effective in improving the all round quality of the institutions.

6.3.3 Conclusion

The findings of the SWOC analysis for institutions can be considered in the light of the seven criteria determined by NAAC. Some of the major observations based on the analysis are as follows:

1. Curricular Aspects:

As most of the institutions are affiliated to Universities, they have to follow the courses and syllabuses decided by the Board of Studies and hence there is limited scope for curriculum planning and development. Faculty members of some colleges are members of Board of Studies of the affiliating University. Industrial visits and projects are part of the curriculum. The colleges prepare and implement the Academic Calendar in accordance with the directions given by the university. Feedback is received from students and other stakeholders in some institutions. There is a need for developing an exhaustive mechanism for collecting, analyzing and implementing feedback from various stakeholders. Some colleges conduct enrichment programs and employability skills courses for the benefit of students. Curriculum enrichment is achieved through co-curricular activities such as add-on courses, guest lectures, industry visits, etc. However, in order to make teaching–learning more effective, the industry–institute interaction cell in colleges needs further strengthening. Industry specific and tailor–made courses should be introduced even in non–professional

colleges. Environmental Studies, Gender Sensitization, Human Values and Professional Ethics and other crosscutting issues are addressed through university designed course curriculum and by arranging awareness programs and guest lecturers etc.

2. Teaching –Learning and Evaluation:

Colleges implement transparent admission policies besides maintaining gender ratio and reservation policies as prescribed by the Government. Some professional institutions and conventional colleges adopt independent learning mechanisms for continuous monitoring and evaluation of students based on their grasping/analytical ability. Initiatives are taken for assisting the slow learners and for motivating advanced learners as well. Induction programs are conducted every year for newly admitted students. Conventional method of teaching–learning, chalk and talk method is primarily used. ICT is used in only some colleges. However, ICT based teaching learning needs to be encouraged. Student centric methods are adopted in many institutions. The POs, PSOs and COs are communicated to all the stakeholders by displaying them on college notice boards, websites and printed in the college prospectus. The institutes adhere to the evaluation process decided by the affiliating university and follow the changes in regulations specified by the university from time to time. Colleges practice evaluation of the attainment of program outcomes, program specific outcomes and course outcomes. However, there is need to devise a system of informing the students about their attainment levels so that they realize their weaknesses and take necessary corrective measures to improve their performance. The mapping of COs-POs needs to be re–considered in certain courses. Development of software–based tools for evaluating the attainment levels will bring greater objectivity and efficiency in the process of OBE implementation.

3. Research, Consultancy and Extension:

Some autonomous colleges have established incubation centres approved by MSME that help the students to nurture their innovative ideas and take up some developmental activities. Colleges encourage the faculty members to pursue their academic research. However, budgetary provisions should be made for conducting research. Lectures are arranged for developing awareness regarding IPR. However, faculty should be encouraged to take up research activities/projects using these facilities in a much–focused manner. Some faculty members have publications to their credit. Faculty members need motivation through incentives or seed money for research. The quality of research also needs to be improved to match international standards. One institution received three star rating from MHRD for Institution's Innovation Council activities during 2018-19 and scored 24.99/25 points from

IIC–MHRD during 2019–2020. Colleges conduct Clean and Green program, National Swacha Bharat Abhiyan, women empowerment programs, blood donation camps, health check–up camps, awareness about road safety, provide information about farm technology and awareness about air pollution and such programs with the help of their NSS units. Students and staff take part in tree plantation drives in the neighbourhood community. The IQAC and the Departments, through their staff and students, participate in community work. The Centers for Digital Literacy, Financial Literacy and Health and Nutrition extend their services to the neighborhood community.

4. Infrastructure and Learning Resources

Most institutions have adequate infrastructure such as buildings, classrooms, laboratories, seminar halls, conference halls, library with reading room facilities, etc. and it is optimally utilized. In some colleges, the library and office are completely or partially automated. Software are installed, OPAC facility and reprographic facilities are available in many institutions. Some institutions provide Book bank facility for socially disadvantaged students. Maintaining the available infrastructure and augmenting it is an important concern. There are limited facilities for indoor games. Facilities for outdoor sports and games, gymnasia should be improved. Adequate number of clean toilets and drinking water facilities for students and staff need to be provided. IT infrastructure is available in most of the institutions but is not satisfactory. Internet connectivity is not available in rural and tribal areas. The number of computers is not adequate in some colleges. Institution websites are functional but need to be paid more attention. Safety and security measures on the campus are well taken care of, differently able–friendly campuses are made available but measures and facilities need to be strengthened in case of some institutions. Hostel facilities are available in some colleges but they are insufficient. Especially, hostel facilities for girl students need to be increased

5. Student Support and Progression

In most of the colleges, the students avail of different types of government scholarships. Some institutions make provisions for paying scholarships, free ships, concessions or installments to the needy poor students selected based on merit. Earn and Learn scheme is implemented in some institutions. The Students' Council is the representative student body. In some colleges, the elected members of the Student Council are active and support the college administration. In consultation with the Principal, the Council members chalk out plans and programs for various student related activities in the college. However, in some colleges the Students' Council is not instituted. Various committees like Grievance Redress, Women's Development

Cell and Prevention of Sexual Harassment, Anti-Ragging, Discipline Committee, NSS, Sports, Cultural, Library and SC/ST committees are active and vigilant and exhibit a concern for student welfare. Alumni Association is established in some colleges, which helps by arranging internships and placement of the students. Coaching for GATE, GRE and administrative services needs to be initiated. Training and Placement Cell is active in some colleges.

6. Governance and Leadership

In most of the institutions, the management takes efforts for promoting participatory managerial practices in planning and execution of academic activities through different committees. Colleges follow the service and leave rules framed by the Government and University. The Principal is the executive head of the institution and is vigilant about the smooth conduct and development of the college. The IQAC, the Heads of various departments and conveners of committees and committee members are entrusted with the work of conducting various activities to realize the vision and mission of the Institution. Colleges follow the directives given by the University for electing or nominating the students to act as the members of the Student Council. Participatory management is evident in many institutions. Welfare measures such as group insurance, medical insurance, EPF etc. are provided to staff members. Academic audits are conducted in some institutions and all the institutions conduct financial audits. IQACs are instituted in all the colleges but in some colleges, they have yet to start functioning to make a visible impact. Faculty Development Programs and Faculty Improvement Programs are run in order to give sufficient scope and opportunity to the faculty to develop. Existing vacancies are filled by temporarily appointing faculty members on fixed salary or clock hour basis. This is very detrimental to the quality of higher education. Measures need to be taken to resolve this problem.

7. Innovation and Best Practices

Every institution tries to develop its own innovative and best practices, which later become the distinctive features by which the institution is recognized. Maintaining green campuses and installing renewable power resources such as solar panels are some of the best practices preferred by many institutions. Reduction in power consumption by installing CFL and LED bulbs, architecture and utilization of the building for maximum use of natural light are measures undertaken in the direction of a commitment to a cleaner and greener environment. Another institution claims its distinctness by exposing the students to higher degree of learning through an approach of beyond the textbook. Various facilities like "ramp" for the differently able persons are available in some institutions. Certain Green Practices such as

Plastic–free campuses, Use of Bicycles on the campus, Use of Public Transport, Paperless Office, etc., need to be initiated or should be made more visible. Some institutions have successfully installed rainwater harvesting systems. Fire Safety measures are in place in some institutions.

These are a few instances of innovations and best practices evident on College campuses.

Chapter Seven will discuss in detail the innovative and best practices with special reference to the seven criteria determined by NAAC for quality assessment.

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Chapter – 7

Innovation and Best Practices

Chapter – 7

Innovation and Best Practices

7.1 Introduction

Reviewing Innovation and Best Practices: Relevance

The UGC has identified five key areas to be addressed by the higher educational system in the country, given its demographic profile of multiple and graded inequalities. They are equality, access, relevance, quality, and excellence. The National Knowledge Commission of 2009 added some key areas namely, concepts creation, application, innovation, and experimentation in order that we as a nation may reap the demographic dividend. Globalization has accentuated the search in the field of higher education for greater competition among educational institutions. In addition, it has emphasized the development of models of collaboration, innovation, and convergence facilitating knowledge–flows and creation of a wide range of opportunities for graduates. This leads to a spirit of competitiveness among educational institutions that outlines the need for quality in every aspect of their functioning and in the delivery of services. In the process, every institution strives for value addition, for creating a distinct model that is unique to its institutional genius. This enhances an institution's quest for competency-promotion oriented education. Globalization further in its expansiveness and spirit of flexibility enables higher educational institutions to search for flexibility in the choice of their courses, for the adoption of the cafeteria approach. This helps the youth widen their knowledge base with a focus on outcome–based education and development of employability skills, which the teaching learning process is becoming aware of increasingly. These developments aligned with the quest for quality are expected to bring about rapid transformation in higher education making it more attuned to the goals of the pursuit of productivity for the youth and excellence in higher education leading to internationalization.

Services offered by the higher educational institutions such as admissions, collection of fees, attendance, teaching, monitoring and evaluation of student performance, skill building, employability promotion, participatory management in which students play a creative role, collaborative learning, value addition, transparency promotion, information dissemination, etc., are improved through developing best practices. The ecosystem for innovations as defined in the NAAC manual "comprises material resources (funds, equipment, facilities

etc.), and human resources (students, faculty, staff, industry representatives etc.) – linkages among them that make up the institutional entities to promote the development of products and systems that are likely to have significant economic value."

It is evident that best practices and innovation ecosystem developed by it directly influence the quality of the institution. The base of an innovation ecosystem is a network of relationships and ideas, which stimulate the generation of processes that strengthen the national economy. A review of the best practices and innovation ecosystem developed in the various NAAC accredited institutions will guide other institutions to design useful models for improving the quality of their functioning and delivery of services. These practices serve as models to stimulate thought and initiate experimentation. Innovations and Best Practices followed by the accredited institutions in the seven criteria determined by NAAC are enlisted below.

7.2 Universities

General observations regarding Innovation and Best Practices in the following criteria are

1. Curricular Aspects

1) In all the Universities, the Board of Studies is responsible for developing the courses and building innovations into them. In some universities, primary stakeholders are involved in curriculum design; inputs from the affiliated colleges are also incorporated exhibiting participatory management. Because of stakeholder involvement, the curriculum developed addresses the needs of the region, which makes it relevant and useful especially to the local community.

2) One Language University offers a wide choice of interdisciplinary courses to accommodate diverse needs of the students and the future prospects of the students interested in pursuing language teaching. By adopting the *à la carte* menu type, it contributes to flexibility with regard to choice. Language and literature related priorities are addressed to enhance course relevance and its professional relevance.

3) One Law Institution has introduced new and innovative courses, which attract students from across the country. It has included a summer internship programme in its curriculum to make study more related to the practice of the profession.

4) Self-financed private universities redesign curriculum at the beginning of the academic calendar. They update their syllabi frequently and make them more relevant. Teaching plan for all courses is also made available on the internet. Dual degree programme and

integrated programmes are offered for the benefit of the students and for giving their courses greater skill orientation.

5) A 103–year–old University has established a council for affiliated colleges to offer them a platform to share their problems and provide their feedback. The courses in the Departments of Communication and Journalism and Theatre Arts aim at promoting social awareness, sensitivity to gender related issues, professional ethics and other relevant cross cutting issues. The University adopts villages and contributes to the revival of traditional folk performances by encouraging folk artists and providing them a platform for their wider creative expression.

2. Teaching–Learning and Evaluation

1) Universities prepare the academic calendar to guide affiliated colleges and faculty to plan learning, co–curricular and extracurricular and evaluation schedules from the beginning of the academic term.

2) In order to complement the teaching process, eminent persons in the subject areas are frequently invited to deliver guest lectures.

3) In order to ensure inclusivity some Universities have instituted a Standing Committee on Diversity. Literary festivals, film festivals, quiz competitions, international parliamentary debates and moot courts are organised to expand the horizons of the students. The Cell for the Disabled is formed to address the needs of the differently able students. One University offers a course on ethical and cultural values to all UG students.

4) Some private Universities declare results within fifteen days of the conduct of the examinations. They share and discuss evaluated answer books with the students. This helps increase the credibility and transparency of the institutional processes.

3. Research, Consultancy and Extension

1) One Central University mainly focuses on advanced research in the area of Science. It is internationally recognized. It has ranked in the top 200 Asian Universities in a survey conducted by Quacquarelli Symonds (QNS) in 2010. Research in emerging areas is pursued and advanced high end computational facilities are offered for promoting research competence.

2) Disbursement and accounting of research funds is streamlined through appropriate software development and use. Universities grant some financial support to research and postdoctoral fellows. It is important to note that one University took up these initiatives after the NAAC assessment and accreditation process.

3) One University offers consultancy to the Central Government on diverse areas. State Government seeks consultancy on the draft bills, training and consultancy requirements.

4) Most of the teachers have research publications and books to their credit. Some of the Social Sciences and Commerce departments publish their own journals.

5) In one Language University, impressive reading material for the teaching of English and foreign languages has been produced.

6) Budgetary provision is available to promote the extension activities.

7) Universities undertake socially relevant research projects, which enable policy decisions, evaluation of government schemes, and the promotion of beneficiary access.

8) One University observes a special day for research – a weekly Research Day– to promote research culture among faculty and students.

4. Infrastructural and Learning Resources

1) Adequate budget allocation for maintenance of infrastructure is provided in a few Universities. Satisfactory maintenance of infrastructure is visible.

2) Budgetary allocation is made available for periodic up gradation of IT facilities.

3) One university has a state–of–the–art printing press and a publication unit, which takes care of the university publications.

5. Student Support and Progression

1) A well–formulated student mentoring system exists in some Universities.

2) In some universities, students regularly publish Wall Magazines. Students also publish journals and Newsletters.

3) In some Universities, more than 90% of placements are obtained through the Placement Cell.

4) In one University, the students have set up and they manage the campus radio station.

5) Some Universities have an active alumni association. It helps economically weaker students by offering them financial aid. The alumni support sponsorships, provide job opportunities and guide the students through guest lectures on avenues of employment and the skill sets required for the purpose.

6. Governance, Leadership and Management

1) One University offers medical insurance policy to the faculty and the non-teaching staff to the tune of Rs.15,000 per annum.

2) Some Universities undertake benchmarking of their curriculum with reference to international and national standards and practices.

3) In some Universities there are eminent academicians appointed on Governing Board and Academic Council. Their guidance proves helpful in developing the quality profile of the institution. An active IQAC and knowledge management practices are in vogue. The University practices curriculum benchmarking with international and national practices.

7. Innovation and Best Practices

1) One Language University has a translation studies department, focusing exclusive attention on theory and praxis in the discipline.

2) As women empowerment initiative and for offering special facilities to women faculty, a Day Childcare Centre is available on the campus of a University.

3) An International Scholar-in-Residence programme has been in vogue in some Universities.

4) Mentor-Mentee programme is functional in many Universities.

5) Talent search examination for all UG and PG final year students is introduced in some Universities.

6) Courses in new areas such as computational linguistics, critical humanities and material production etc. relevant to contemporary requirements are offered by one Language University.

7) Carbon and pollution monitoring is conducted on some campuses.Use of bicycles within the campus area is promoted.

8) Five Chancellor's Awards for faculty are introduced to encourage young teachers. Awards are given annually to educational institutions for their overall excellence.

9) Lectures by the university faculty to the UG and PG courses in affiliated colleges are arranged through the video-conferencing mode. This gives students from remote areas exposure to lectures by experts in the relevant fields.

10) 'Community Engagement through Microbial Research and Student Internship Interventions' is a practice adopted by one University to promote university–community partnership for improving the lives of the people by sensitizing them about health hazards.

The findings of this study resulted in timely and appropriate intervention from the Government and the adoption of suitable precautionary measures by the people. One University conducted a Health and Hygiene survey during the holiday season and promoted awareness about safe drinking water among students at various remotely located schools in the surrounding/home villages of the students, as a part of community internship programme.

11) Another good practice is 'Sustaining Green Campus through Scientific and Eco–friendly Interventions' which aims at ensuring the protection of bio–diversity and safeguarding the flora and fauna.

7.3 Colleges

General observations regarding Innovations and Best Practices in the Colleges in the seven criteria are as follows:

1. Curricular Aspects

1) One college after receiving autonomy has shown exemplary progress in revising its curricula and designing relevant courses. Post-autonomy, this College received the Potential for Excellence status from the UGC. It also bagged TEQIP–II Grant from the World Bank and FIST from the DST. It possesses NBA and NIRF accreditation and the ranking is in the band of 101-150.

2) Colleges affiliated to Universities have limited freedom to deviate from syllabuses decided by the Universities. Colleges can participate in the curriculum design if their faculty members are members of Board of Studies of the affiliating University. However, this number is very small. So University curriculum is supplemented by special, value added, add on courses including Communication Skills Courses / Skill Development Courses/Project Work/Internship/Industrial Visits/Seminars/Workshops/ Symposia /Guest Lectures by experts, etc.

3) Interactions with Commercial and Industrial Organizations are arranged for practical knowledge enrichment. Classroom interactions, group discussions, seminars, field visits etc. are a few methods used by institutions to supplement the curriculum. A

college focusing on learning beyond classroom has tried to enrich the syllabus through practical inputs.

4) Some institutions focus on a meticulously planned teaching learning schedule by preparing annual curricular plans and day-wise teaching schedules, Teachers' Diary, Teaching Plan, etc., at the beginning of the year. This systematized approach gains in transparency.

5) One of the oldest institutions providing higher education through the Hindi medium at the intermediate, Degree and PG levels has the objective of catering to the needs of the students with Hindi background. This institution has started vocational programmes for promoting the employability of the students. Entrepreneur Club, Consumer Club etc have been set up to encourage the students' interaction with outside community to develop their business and communication skills.

6) The idea of initiating a film club to sensitise students to issues like gender equality, environment consciousness is an innovative attempt. Film is used as a channel of communication of social values, gender issues, human values, professional ethics in addition to the knowledge of the environment and sustainable development.

7) Besides implementing the regular syllabuses, special training is provided in technical courses like JAVA, C Programming, Testing, AUTOCAD and language skills in order to improve the employability of the graduates.

2. Teaching–Learning and Evaluation

1) One institution follows a comprehensive teaching-learning process (TLP) consisting of Conventional Teaching, Interactive Teaching Learning, Experiential Learning and the use of Supplementary Teaching methods. Conventional Teaching Methods include lectures, tutorials and remedial classes. Interactive Teaching Learning methods include Case Studies, Student Seminars, Debates, Quizzes, Group Discussions and Role Plays. Experiential Learning includes internships, minor projects, major projects, business surveys, industrial visits, etc. Supplementary teaching methods include interaction with industry experts, guest lectures, mentoring and counseling. The College has a unique practice of compiling a comprehensive academic manual in the form of Students' Handbook that serves as an academic guide to the students with detailed session plans, activity schedules and calendars.

Some institutes make use of innovative methods for enriching the learning experience. The methods include special lectures, field study, case studies, project–based–methods,

experimental methods and group learning methods. Along with the conventional lecture method, the institution encourages the interactive method, which includes group discussion, role-play, subject quiz, news analysis, educational games and discussion. In all the courses, tutorial classes are conducted where problem-solving skills are imparted.

2) Security measures such as CCTV surveillance and deployment of security personnel ensure safety and security, especially of girl students. Disciplinary regulations are widely published and enforced following norms of transparency. As a result, students, especially girls, feel safe and are encouraged to seek admissions in large numbers leading to improved enrolment and widened student diversity. Such measures support the cause of women empowerment.

3) In some institutions, slow learners are identified and remedial measures undertaken. Colleges conduct remedial and bridge programs to reduce the knowledge gap of slow learners.

4) Efficient Mentor–Mentee system is in place in some institutions. The institution communicates learning outcomes to the students and parents. The College makes use of student performance in the continuous evaluation process to frame remedial courses for slow learners. Where tutor–ward/mentor–mentee system is not adopted, a class counselor system for rendering advice to the students is in place.

5) Some institutions encourage students to become members of professional bodies such as IEEE, ISBTEP, and TASK etc. This helps students participate in entrepreneurship awareness / promotion programmes.

6) One institution has compiled an Examination Manual containing details of all procedures, rules and regulations for pre and post Examination processes. This information is helpful to the students, as they become aware of all the examination related procedures. This is a transparency promotion measure.

3. Research, Consultancy and Extension

1) The Incubation Centre at one institution is instrumental in nurturing and overseeing innovation and entrepreneurship. The Incubation Centre was started with the objective of fostering startups with the provision of essential training, mentorship, business space, etc. and transforming them into self-sufficient enterprises. The centre encourages its students to come up with startup ideas and provides necessary support enabling them to become successful entrepreneurs. It coordinates and leverages the synergies in

various strands of excellence leading to innovation and entrepreneurship at the institution, consisting of innovative research, industrial interactions, establishment of India's first university–driven Research Park and a stellar record of incubation in rural, social and industrial technologies.

2) One institute has a research and development cell to monitor and address the issues of research. Students are also engaged in surveys appropriate for professional students for Government and Non–Government organizations. Students are also encouraged to participate in certain surveys such as survey of Indian Marketing Research Bureau, Household Survey of the Government of Telangana, and survey on Slums around Hyderabad. The college has adopted two nearby villages, two schools and three orphanages as part of its social responsibility.

   Volunteers of another college have carried out several surveys such as Integrated Household Survey, Survey on old age and widow pensioners, socio–economic conditions of labourers and Beedi workers etc., and contributed towards Institutional Social Responsibility.

3) One Women's College has established an Entrepreneurship Development Cell (EDC) in collaboration with the FICCI, Ladies Organization (FLO) and Association of Lady Entrepreneurs of India (ALEAP). It promotes awareness of entrepreneurial opportunities for women and stimulates innovative ideas for establishing small enterprises

4) In one dental college, expensive dental procedures are offered free of cost to BPL patients. Mobile dental vans are used for offering treatment in villages. The College arranges anti–tobacco campaigns and other awareness programs and conducts exhibitions and camps.

5) One institution distributes study materials in the form of books to the poor students. The Book Bank scheme is followed in some institutions.

6) Some colleges have departments recognized by nationally important institutions such as ISRO.

4. Infrastructural and Learning Resources

1) In most of the institutions the campus is well maintained, the ambience supports the academic cause, gardens; playgrounds are available for outdoor and indoor games. Green campus initiatives are followed. There are adequate buildings, classrooms, conference and seminar halls, sports facilities, Health Centre, Cafeteria and restrooms

for girls and boys, hostels and other facilities. Many of the campuses follow the plastic free policy and encourage use of bicycles. Maintenance of available ICT facilities is taken up either by in-house personnel or by means of AMCs.

2) The building of one institution complies with the ratings of Leeds-certified Silver-rated Green Building. The institute is designated as a green building in the country and has numerous species of plants, including herbs, shrubs and big shady trees. The institute has a distinctive vision for green buildings, green landscaping, energy savings and future use of non-conventional energy sources.

3) One college has a rare collection of old and rare Hindi literary books that is carefully maintained.

4) Libraries of some colleges are equipped with Textbooks, Reference Books National Journals, Online Journals, and Specialized Journals, etc. These Colleges use the OPAC System for digital library. Libraries have Reading halls / Reference Sections/ Stock Areas / Wi –fi / Computer facilities for students, etc.

5) Most of the colleges publish annual magazines with the active participation of their students. The annual magazine records all the major activities and achievements of the academic year in which it is published.

5. Student Support and Progression

1) Every institution organises an induction or orientation programme for the first year students to acquaint them with the culture, history, aims and objectives of the institution, the rules and regulations, the academic calendar and standard operating procedures and practices on the campus.

2) Some institutions have developed a comprehensive Care System, designed to provide an environment conducive to the holistic development of the students. Multi-pronged Capability Enhancement and Development Schemes include

Individual Mentoring, Student development programmes, and programmes designed to learn to live and work together and achieving excellence in personal and academic areas.

3) In some Colleges, committees and clubs are constituted to help the personality development of the student. Student Clubs create interest in both technical and non-technical activities and talent promotion. Career Guidance Cell creates awareness on career opportunities in emerging fields. It motivates students to take part in coaching

classes for competitive examinations such as GATE, CAT, GRE, and UPSC, etc. The Training and Placement Cell provides training in aptitude, promotion of technical and personal competencies and facilitates job placements.

4) In some colleges that follow the Mentor–Mentee system, academic and personal counseling is offered to students. Mentors meet their allotted mentees to identify their strengths and weakness and oversee their personality development and holistic growth.

5) Some colleges offer remedial coaching for slow learners. This has helped in curbing the dropout rate significantly. However, remedial coaching must be pursued based on a more scientifically designed curriculum and the adoption of suitable implementation modalities. The faculty prepares question banks for the students to help them get ready for the examinations.

6) In a few Colleges NCC cadets have won accolades by participating in the Republic Day parade at New Delhi. Many have received the C–certificate.

7) One institution has been listed in the first list of empanelled institutes of National Entrepreneurship Resource and Co-ordination Hub (National E–Hub) Pradhan Mantri YUVA Yojana for 2016-2017. It received a grant of Rs. 9 lakhs from MHRD– NIESBUD for a duration of 5 years from 2016–17 to 2020–21.

8) Some institutions encourage research activities by instituting Rolling Cup trophies and Cash prizes for academic achievements.

6. Governance, Leadership and Management

1) The vision and mission statements of the institutions are in tune with the objectives of higher education. The programmes taken up by the institutions largely follow these statements carefully. These statements are the watchwords and guiding lights of any institution.

2) Most of the institutions follow decentralization and participative administration. Various committees, the principal and the management formulate the policies and plans collaboratively. This ensures effective implementation of the same. The members of the management are usually accessible to the faculty to present their views and ideas.

3) Auditing of the financial processes is carried out on a regular basis. Internal and external audits are conducted regularly.

4) Participation of faculty in various research programmes and FDP programs is encouraged. Programs like computer training, training in work ethics and Stress

management, workshop on Telangana Service rules, and many others are arranged for the benefit of the faculty.

7. Innovation and Best Practices

1) One Dental College follows an integrated teaching module. "Teach–the–Teacher" is a novel idea for educating the child population about oral and dental health care through their teachers. The same institution has developed an innovative robotic arm for dental implant.

2) In one institution, the alumni, staff members and donors, arrange mid-day meals for the students. This has helped those needy students who come from remote places to utilise their time in the institution more usefully. In some colleges, staff members donate midday meals to needy students during preparation time before examinations.

3) Most institutions have programmes for developing environment related awareness among students. They take up activities such as ECO Club, rainwater harvesting, tree plantation drives, developing pollution free and eco–friendly campus, solid and e–waste management, vermi–composting etc. Energy audit system is in place in some colleges to reduce the consumption of conventional energy. Use of solar power has also been initiated. In addition, some energy saving efforts with CFL bulbs and replacement of old air conditioners in computer laboratories, use of biogas in laboratories and such have been launched.

   Another institution has signed an MOU with a firm for the collection of plastic bottles, covers, sheets, boxes, etc., for recycling. Students are educated about the harmful effects of plastic. Some institutions have taken the lead in creating paperless office by reducing the use of paper, increasing use of automation, taking up digital storage of documents and making correspondence through e-mails, messaging and other means.

4) Some institutes and departments have designed various need-based programs to develop the communication and technical skills of the students. The institutional distinctness lies in its exposing the students to a higher degree of learning by taking them beyond the bounds of the prescribed textbooks. Institutions provide full freedom to the students to tackle challenging issues so that they develop the capabilities for handling complex tasks.

5) One college has developed innovative restructured courses. It has a collection of Spoken English material for students seeking to improve their English language skills. Several Colleges have English Language Labs meant for honing the communication skills of the students.

6) Alumni have instituted medals for academic excellence. They also extend financial support to a number of students to meet the cost of transport provided to them.

7) Some institutions make provision for books, free hostel facilities and financial aid to the economically challenged students.

8) Students from some institutions have undertaken many innovative projects like use of pesticides in agricultural operations, IoT related projects, etc. They have won numerous prizes in exhibitions for their exhibits such as Solar based Mobile Chair, Android age Solar LED lighting System, E–cart and E–rickshaw – a green solution for transportation.

9) In one institution, daily news is broadcast through the public address system. This helps to keep students updated on current events.

7.4 Conclusion

A review of the innovations and best practices of Universities and Colleges brings to the fore the following observations

1) Institutions of Higher Education are active in spreading environment related awareness and implementing green practices.

2) Most of the institutions follow a decentralized, participatory management approach, which supports the cultivation and propagation of the democratic ethos.

3) Colleges working at the grassroots level, in remote, rural places, face challenges different from those of their counterparts in the urban areas. They have to deal with first generation learners, challenges due to economic constraints and socio-cultural restraints. Retention of these students in colleges requires imaginative planning, building up of trust, and inculcating in the community a sense of belief in the empowering, transforming potential of higher education. Affiliating Universities play a minimal role in addressing these problems of the affiliated colleges. The Universities can play a more significant role in assisting such institutions by maintaining a dialogue with the affiliated colleges and developing appropriate institutional mechanisms.

4) University syllabuses in some cases are not updated in a timely manner. Affiliated institutes have to try different methods to bridge the gaps, since they do not have the freedom to make innovatory additions to the syllabus. Further, the syllabuses as they are implemented do not have much potential for developing the institution–industry interface.

5) Opportunities and funds for developing research of international standards are few in Universities and fewer still in Colleges.

6) One institution has shown exemplary progress and development after receiving autonomous status. This example can be used as a case study for identifying the advantages of autonomy in higher education.

7) Most of the institutions follow conventional methods of teaching learning with some use of ICT. In many institutions office services, library services, and examinations are partially automated.

8) Schemes implemented in educational institutions such as the NCC, NSS, Red Ribbon Club, YRC, etc., contribute immensely to the national objective of character building, value generation and personality development of the students. Their role in nation building must be appreciated.

These are some observations regarding the role played by innovations and best practices in the development of institutions. Though much has been achieved in the field of higher education, much more remains to be done.

Chapter Eight will focus on the suggestions and recommendations for improving the quality of the institutions of higher education.

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Chapter – 8

Recommendations and the Way Forward for Universities and Affiliated Colleges in the State of Telangana

Chapter – 8

Recommendations and the Way Forward for Universities and Affiliated Colleges in the State of Telangana

8.1 Introduction

The Higher Education Scenario Today

Telangana, as a geographical and political entity was born on June 2, 2014 as the 29th and the youngest state in the Union of India. It has a glorious history of at least two thousand and five hundred years. The Government of Telangana is making great efforts to conserve and promote the illustrious culture of Telangana and the richness of its Telugu and Urdu languages. Telangana is a symbol of multi–religious, multi–ethnic, multi–cultural and multi–linguistic society. It is gradually emerging as the business hub of the nation. The Government has offered attractive incentives and created an environment for developing industry and business, which has enabled it to attract new investments from reputed companies like Apple, Amazon, Face book, Uber, Google, Microsoft, etc. The Government has ensured that Telangana leads the country in promoting entrepreneurship through T–Hub and We–Hub, a dedicated platform for Women Entrepreneurship. In the recent ranking by NITI Aayog based on progress made towards meeting the Sustainable Development Goals, Telangana has ranked 3rd in the country.

One important aspect responsible for the progress and development of any society and its sustenance is the education imparted to its people. At the time of its emergence as the 29th State of India, the State of Telangana, inherited a conceptualized system of education and an administrative set up from the united Andhra Pradesh. Chapters Four and Five of the present report have offered a descriptive and graphic profile of the higher education scenario in Telangana State after the bifurcation. At present, the State of Telangana has six (6) Conventional Universities, ten (10) Specialized Universities and one (1) State Level Specialized institute. The State has three (3) Central Universities, two (2) Deemed to be Universities, and two (2) National Level Institutes. Only thirteen (13) Universities have been accredited by NAAC out of the twenty–four (24).

Out of 1976 Colleges in Telangana, only two hundred and twenty–two (222) colleges are accredited by NAAC and of these one hundred and forty–one (141) Colleges have valid

certification at present. Out of these, there are thirty–five (35) Government Colleges, nineteen (19) grant–in–aid colleges and eighty–seven (87) are private or self–financed colleges. Sixty–one (61) colleges impart general education; two (2) colleges are education colleges, sixty–seven (67) colleges are engineering and management related colleges while eleven (11) colleges teach medical, dental, nursing and pharmacy courses. Forty–seven (47) colleges are located in the urban area, six (6) colleges are in the semi-urban locality, and sixty–four (64) colleges are situated in the rural area.

The Government of Telangana has instituted the Telangana State Council for Higher Education (TSCHE). The Council is striving to improve and expand higher education in all areas equitably, recognize and eliminate areas of disparities in access, and emphasize the relevance of higher education for national development. It aspires to improve the quality of higher education. Access, equity and excellence are the three pillars on which the quality of higher education rests. According to the TSCHE Report of 2018.

TSCHE focuses on

- Industry- academia collaboration
- Improved funding to the Universities (2018-19)
- Filling up of Teaching vacancies
- Conduct of Accreditation and Sensitization through NAAC workshops for improving quality in Higher Education
- Introduction of student centric academic processes including Mentoring and guidance
- Conduct of Common Entrance Tests (CETs)
- Preparation of Perspective Plans and Strategic Plans
- Institution of State level awards to encourage meritorious teachers in Higher Education
- Conduct of Refresher Courses for the up gradation of knowledge of teachers
- One of the important concerns of higher education today is access and Gross Enrolment Ratio (GER). In GER, the State of Telangana stands at the 6th place in SC/ ST Categories and at the ninth position in all categories in the country. The total GER of the State is relatively higher than the All India GER, which is 25.8. The Government has instituted over 30 Women's Degree Colleges in the last four years to benefit young

girls from Scheduled Caste community considering that the Gross Enrolment Ratio (GER) of backward sections in Higher Education is one of the highest in the country, according to the All India Survey on Higher Education 2015–16.

- An important initiative is Telangana Academy of Skill and Knowledge (TASK),whichis a not–for–profit organization created by the Government of Telangana for bringing synergy among institutions of Government, Industry and Academia with an objective of offering quality human resources and services to the industry. TASK has been collaborating with various corporate and multi–national companies that work towards setting up a 'train–and–hire' model for students of mechanical, electrical, electronics and aeronautical domains in TASK–registered engineering colleges. This is an important step in developing a symbiotic relation between the institutions and industry.
- However, according to NASSCOM–McKinsey Report, ASER report, not more than 15 percent of graduates of general education and 25–30 percent of Technical Education are fit for employment. The low performance by the institutions of higher education in this regard can be associated with deficiencies in infrastructure, training, curricular structures, funding, faculty and some other factors. Serious concerns are raised over middling or poor quality of colleges and faculty in higher education in India. It follows that the quality of higher education has a strong inter–relationship with physical and academic infrastructure. Thus, there is a need for major qualitative reforms in the Indian higher education system in order to ensure high quality colleges as well as faculty.
- According to the gist of findings of the Analysis of the Universities referred to in 5.8.1 in the present report on the State of Telangana
- 93% of the Universities located in urban area are accredited, while only 7% of those in rural areas are accredited
- All Universities have secured more than 2.25 CGPA.
- The lowest GPA is recorded i.e. 0.94 in Research and Consultancy and the highest performance is observed in Infrastructure and Learning Resources and Innovation and Best Practices with 4 GPA.
- The Mean GPA is found less than 3 in only two criteria: Research, Consultancy and Extension and Governance, Leadership and Management.

- Highest standard deviation and –ve skewness is observed in Research, Consultancy and Extension; which means that a large number of Universities (9/13) are above the average of 2.79 GPA and are performing quite well.
- Lowest skewness and standard deviation is found in Infrastructure and Learning Resources.
- In Curricular Aspects and Teaching-Learning and Evaluation the performance of all Universities is almost the same.
- Average performance of Central Universities is better than that of Deemed-to-be Universities and State Universities in all criteria.
- State Universities have performed better than Deemed-to-be Universities only in Curricular Aspects.
- Deemed Universities are performing better in Infrastructure and Learning Resources and in Student Support and Progression among all types of Universities.
- All Accredited Universities are committed to retaining their status of accreditation or going beyond.

According to the essence of the findings of the Analysis of the Colleges referred to in 5.8.2 in the State of Telangana

- 11% of total HEI have gone in for accreditation against the Indian average of 21%.
- 37% of accredited colleges have not gone for reaccreditation.
- Highest percentages of urban located colleges have been accredited.
- Under private category, highest percentage of colleges has gone in for accreditation.
- Co-education colleges are accredited higher among co–education and women categories.
- Engineering and Management related colleges have received the highest accreditation among General, Medicine and Engineering programs.
- Under JNTUH, the maximum percentage of colleges has gone in for accreditation among all the Universities in Telangana.
- Highest percentage of colleges is in the CGPA Range of 3.01–3.25.
- Performance of many colleges is below average in Research, Consultancy and Extension.

- Lowest CGPA is recorded in Infrastructure and Learning Resources.
- Highest CGPA is recorded in four criteria namely Curricular Aspects, Infrastructure and Learning Resources, Student Support and Progression and Governance, Leadership and Management.
- Government funded colleges are the highest in number in the CGPA range of 3.51 to 4.00.
- Urban located colleges are the highest is number in the CGPA band 3.00 to 4.00.
- As compared to others, the student faculty ratio is better in Private aided Engineering colleges.
- Medical and Engineering colleges have shown considerable improvement in ranking from one cycle to another.
- Per capita expenditure excluding salary is more in Private colleges than in Government and Grant–in–aid colleges.

The State of Telangana can make efforts towards improving the quality of higher education in the State after considering all these factors. A study of the NAAC peer team visit reports on 13 Universities and 141 Colleges which have pointed out the shortcomings of the accredited institutions, have suggested certain measures to improve their quality.

The following are some suggestions and recommendations to various stakeholders, which, if implemented, will certainly pave the way for a more successful, quality–oriented higher education system in the State of Telangana.

8.2 Recommendations

8.2.1 Government

1) All the departments involved in the process of higher education such as Finance/ Administration/Medical/Technical/Law/Agriculture etc. should work in coordination and with the unanimously shared objective of improving higher education in the State.

2) Financial assistance should be given to universities and institutions that are involved in the noble cause of preserving the history and culture of the State through the development of arts, literatures, languages, maintenance of museums, relics, etc.

3) Special grants for the maintenance of heritage buildings should be provided.

4) Government should release scholarships to students of various categories of reserved castes, tribes and economically backward communities in a timely manner.

5) The Government must take serious note of the fact that very few institutions have undergone NAAC assessment and accreditation, in spite of the fact that NAAC assessment and accreditation is mandatory. The Government should immediately attend to this issue and in coordination with the Universities concerned accelerate the process of accreditation. Further steps in this direction are:

   I) An awareness drive may be taken up to explain the need and significance of accreditation. Assistance for interpreting the manuals and writing the self–study report can be given by involving experts and by identifying lead colleges to assist the weaker ones.

   ii) An in-depth study of the peer team reports must be conducted to find out the strong and weak points of institutions. Usually, those colleges, which secure higher grades are rewarded with some schemes and receive financial support. It must be noted that low achievers also need support to improve their grades. If they are neglected, they would slip lower on the quality ladder. Hence, schemes to assist low achievers to boost their future performance should be implemented.

   iii) In order to take care of these matters, a State Level IQAC could be constituted according to the UGC and NAAC guidelines.

   iv) TSCHE may take up the task of upgrading the syllabuses of various institutions so that universities and affiliated colleges will be able to impart the latest knowledge and skills helpful in improving the employability of the students. A separate cell could be formed for coordinating the development of various curricula in consultation with the needs of the industry. Grants could be made available to institutions for developing Incubation Centres and Employment Cells.

6) In all the institutions, there are a large number of posts lying vacant for long. These teaching and non–teaching posts must be filled immediately. The cadre ratio should be maintained in each institution.

7) Research and consultancy conducted by universities and institutions must be guided by a policy made by the government to ensure the quality of research and corresponding funding for the same. Unless a budgetary allocation is made for research, it will not thrive in the portals of the higher education institutions.

8) In order to promote interdisciplinary, collaborative research and related consultancy, it may be necessary for a State Research Board to be constituted by the TSCHE for the purpose of designing appropriate models and overseeing implementation.

9) The Telangana Government could encourage high achieving institutions to opt for autonomy and seek potential for excellence status to ensure academic freedom.

10) The Government must prepare a well-charted vision document specifying its objectives and goals in the area of higher education for the next decade. This will clarify its perspective and prepare the educational institutions for developing the outlook and action plan.

11) There is no Women's University in the State. There are a number of women's colleges and one technical education college exclusively for women. Many of them are government colleges. In the criterion–wise comparison the performance of Women's Colleges is better than that of Co–education institutions in Criterion 1: Curricular Aspects and Criterion 6: Governance, Leadership and Management while in all other criteria it is at par. It is recommended that a Women's University should be founded to further the cause of women empowerment through education.

8.2.2 National Assessment and Accreditation Council (NAAC)

1) A large number of unassessed and non–accreditated universities and institutions are a matter of major concern, which adversely affects the quality mandate for higher education. A survey of the actual reasons for higher education institutions not initiating the assessment process must be undertaken. This will help reduce the barriers and accelerate the accreditation processes. All stakeholders must be apprised of the benefits of quality assessment. NAAC should arrange awareness promotion workshops and seminars. It should encourage and assist institutions to initiate such seminars in remote rural, tribal areas. At the college level, it may be appropriate if online tutorials/ preparation classes are held for the preparation of the Self–study Report provided the institution submits basic data about itself to NAAC in a prescribed format.

2) The present report has captured most of its data from the peer team visit reports. The reports reflect some important aspects of the institutions, which the team visited. However since the teams had to use telegraphic language peer team reports are necessarily brief. A detailed picture could be found only in the self–study reports. However, the self–study reports may not be promptly available.

Some suggestions for the preparation of peer team reports are made here:

i) The peer team visit report of the previous cycle should be the take off point for the next one. Therefore, the recommendations of the previous peer team report and the institution's compliance with the report should form the nucleus of the subsequent peer team report so that a clear representation of the progress of the institution visited will be discernible. A detailed charting of compliance features may be helpful for the subsequent assessment and for the stakeholders to assess the progress made by the institution.

ii) While assessing Universities, some points should be marked for the University's role in launching an accreditation drive among its affiliated colleges and the result thereof and for the performance of accredited colleges. Criteria for these may be developed so that through this a University's coordination process with the affiliated colleges will be strengthened. The University could be credited with some points for the grades achieved by the affiliated colleges. This will make Universities more vigilant in the matter of the performance of affiliated colleges.

iii) Low grades are often obtained because of lack of infrastructure, absence of approved staff, or some problems like weak internet connectivity, which are beyond the means of the institution. The UGC reserves grants for top grade colleges and high achievers. It should also consider for grants the low achieving colleges if they are working satisfactorily in all other criteria despite their challenges.

3) Almost all peer team reports point to the fact that the IQAC of the institutions needs to be strengthened further. The NAAC should analyze the reasons for the weak performance of the IQACs and guide the institutions accordingly. Institutions should be convinced of the need for a vibrant IQAC.

4) Another important aspect usually mentioned in the reports is the absence of a strong feedback mechanism. The institutions should be trained to collect feedback from various stakeholders, assess the responses through a scientifically designed process, and take appropriate, timely action. If a model procedure is designed or a methodology suggested by NAAC, it will be helpful to conduct a systematic feedback.

5) NAAC should mention the cycle of accreditation for which the certificate is issued on the certificate itself. That will help as a ready reference.

6) Toning up of peer team reports in matters of precision, assessment of strengths and weaknesses according to the seven criteria, and in evaluating strengths comparatively between one assessment and another may be considered.

7) NAAC manuals for different educational institutions are available in English and Hindi. NAAC should consider translating the manuals in the regional languages also, for the benefit of those institutions, which are likely to find it difficult to comprehend the NAAC manuals in the English language. The manuals could be in the regional languages. However, the responses should be recorded in English for the convenience of the peer team and NAAC office.

8.2.3 Universities

It is observed from the data regarding University assessment with reference to the seven criteria decided by NAAC, that there is a wide difference in the values of Grade points.

The lowest among them is 0.94 for Criterion 3: Research, Consultancy, and Extension. The maximum value of GPA for all the Universities has been obtained in Criterion 4: Infrastructure and Learning Resources and Criterion 7: Innovation and Best Practices

The Criterion 3: Research, Consultancy and Extension score among the Universities has a varied GPA with a maximum range of 2.98 with minimum value of 0.94 and a maximum value of 3.92.

Further, the next maximum of 3.87 CGPA is observed in Criterion 1: Curricular Aspects, 3.80, in Criterion 2: Teaching-Learning and Evaluation and in Criterion 5: Student Support, Progression, and 3.7 is the lowest maximum in Criterion 6: Governance, Leadership and Management.

It is also worthwhile to note that the mean value is less than 3.0 only in two criteria Criterion 3: Research, Consultancy Extension and in Governance, Leadership, and Management.

With reference to this scenario, the following are a few suggestions for improvement.

1) All the institutions follow Government norms and rules for admissions and recruitment. However a large number of faculty positions are lying vacant and there is an urgent need to appoint suitable staff. University authorities must pursue the matter with the Government and get the issue resolved.

2) As a major policy requirement, universities must implement the choice based credit system in its true sense. The problems that would arise out of this change such as availability of faculty, funding. etc., could be resolved with the support and guidance of the government and with the institution of online methodologies. The recently adopted National Education Policy –2020 has stressed the importance of this transformation in the choice of courses.

3) In almost all institutions the role and contribution of the IQAC needs to be strengthened–rejuvenated, with redefined functions of quality mapping of the universities. The peer teams noticed that in Universities where the IQAC was influential and had contributed well, the performance of the University had excelled. Hence, there is an urgent need to endorse a vibrant IQAC.

4) Universities must promptly complete the reaccreditation process within the validity period of the previous certification. A large number of affiliated colleges have not completed the NAAC assessment process. The Universities must encourage these institutions to undertake the process of assessment and accreditation. They should be given a deadline by which they should complete the process of accreditation. The University should assist the affiliated colleges by holding workshops on SSR writing, maintaining records, and documents, and the determining factors in the seven criteria marked by NAAC etc. Universities must constitute special cells under their IQAC to establish this dialogue with the affiliated colleges. They must ensure that institutions submit their AQARs on time.

5) Feedback from stakeholders is not taken properly. Action taken reports are not available. A systematic feedback mechanism needs be implemented, as feedback is an essential tool of quality assessment and maintenance.

6) A comprehensive research policy should be developed for the benefit of the faculty members. Funding is a major issue especially in the matter of research activities. Consultancy needs to be formalized by establishing University–Industry collaboration and linkages, incubation centres and research societies. The number of patents and IPR related activities need to be improved. Universities must explore possibilities of receiving financial support for research from different institutions and industries. Conducting research of an international standard is the need of the day. The Universities are expected to play the lead role while the other institutions follow their example.

7) For encouraging research in colleges, Universities must insist on the Management providing a research budget. A Research Cell should be created in the Universities to advise colleges on research, on making proposals to the UGC/DST/ other agencies and on overseeing the progress of research undertaken.

8) The Universities should increase the content of their academic interaction and engagement with the colleges and advise them on skill improvement, add on, and online courses, stimulate their research endeavors, and encourage their placement and entrepreneurship activities. If necessary clustering of colleges in a local area for enhanced quality of teaching and curricular offerings should be considered.

9) Sports and extension activities need to be enhanced. Telangana can boast of giving to the nation some of the best sportspersons who have received international acclaim. They are alumni of the State universities. However much needs to be done in the field of sports if this tradition has to continue. Unless there are good sporting facilities available to students and opportunities to participate in various games we cannot expect to produce future athletes and players. In many Universities the posts of Sports Director, Physical Directors are either vacant or do not exist. The Universities must take up this issue with the Government for an immediate resolution.

10 Except in the report of one University, the publication of an annual magazine is not mentioned elsewhere. There are references to in-house journals by students, or wall magazines and papers but it seems that annual magazines are not published. Magazines are a long–lasting record of all the activities conducted in the institution during a particular academic year. It is an important document, which with time accumulates archival value.

11) All Universities arrange orientation programmes, induction programmes and faculty development programmes. In these programmes, it is necessary to guide the teachers in the use of ICT in teaching-learning. ICT based teaching-learning has to be enhanced for which the faculty has to be sufficiently trained. This is especially essential in the current COVID–19 scenario where education has gone online and would remain so for some time at least. Capacity building of teachers needs to be promoted.

12) Universities should prepare a Perspective Plan, a vision document with a road map for further development. The Planning and Monitoring Boards of Universities must be entrusted with this task. Developmental strategies and action plans for a stipulated period need to be created and shared with the affiliated institutions for guiding their path of academic progress.

13) Outcome Based Education OBE–which bases each part of the educational system around achievable goals needs to be implemented in the true spirit. The Programme Outcomes, Programme Specific Outcomes and Course Outcomes need to be specified and the teaching-learning and evaluation process should be designed to achieve these outcomes. All academic, co–curricular and extracurricular activities should complement each other to help the students achieve the particular outcomes.

14) Universities must initiate skill development courses, need based courses, multi-disciplinary courses, and placement and internship initiatives. Since curricula of the affiliated colleges are decided by the universities, the responsibility of updating their syllabuses from time to time rests with them.

15) Universities should carry out annual academic audit, green audit, power audit, gender audit, carbon mapping and encourage affiliated colleges to do the same. They should share their expertise and knowledge of renewable power resources such as solar energy with the affiliated institutions.

16) Only one University report has a reference to the Students' Council activities. Universities must encourage the formation of the representative students' body through either elections or selection. This Council can be a healthy link between the administration and the students. Activities conducted by the NCC and NSS should be encouraged because they help in character building and personality development of the youth of our nation.

17) Universities may be encouraged to introduce flexible learning initiatives by drawing upon the NPTEL, MOOCs, and other relevant platforms. The faculty may access the ICT initiatives of the MHRD, the UGC, the IUCs in the form of digital platforms for the broadening of the horizon of their learning and that of their students. Extra credits may be given to the students for obtaining proficiency certification in identified areas of skills relevant to their fields and provision may be made to show these as Add–ons in the Degree certificates. Creation of online learning environments is to be encouraged to pave the way for improved learning, communication, and collaboration. The younger faculty must be trained in online content development, online teaching, online testing and evaluation, and in obtaining feedback on all these components for creating a continuous, uninterrupted teaching–learning environment. Development of some learning by doing initiatives will strengthen student autonomy as a learner.

18) There is lack of inter–institutional and intra-institutional common academic management norms and records of periodic performance of every unit of the University / College functioning. This needs to be initiated under the IQAC.

19) The Central Placement Cell and Portal at each University working in unison with the Departments of study may be started or strengthened to assess and meet the demand generated by the industry and other sectors of employment. This can be done by organizing short-term training in demand–driven areas of skills, providing training programmes for the students on interview, communication, and life skills, and developing a database on employers / industries / organizations and their timelines relevant to the Institute's placements programme. Entrepreneurship Centres and Innovation Centres should be established to help improve students' employability skills.

20) Universities in consultation with the Government may create appropriate software through technology consultation to identify an integrated easy–to–customize applications' platform to automate wide–ranging functions including Accounting and Finance and Purchase and Procurement and related back office functions. The most up–to–date software needs to be acquired.

8.2.4 Colleges

Very few colleges have undergone the NAAC assessment and accreditation process. For those 141 colleges who have, the highest mean GPA 3.06 is obtained in Criterion IV: Infrastructure and Learning Resources, followed by Criterion I: Curricular Aspects in which it is 2.97.

The second lowest value of mean GPA i.e. 2.63 is in Criterion VI: Governance, Leadership and Management.

The lowest mean GPA of 2.40 is observed in Criterion III: Research, Consultancy and Extension.

In the light of these observations, here are a few suggestions to improve the quality of educational institutions in the State of Telangana.

1) Continuous assessment is necessary in order to upgrade the institution and successfully face the competition created by numerous colleges in the vicinity. Clusters of colleges led by a high achieving institution could be formed to carry out the activities required for assessment.

2) The IQAC plays a pivotal role in the quality building measures of the institution. Hence, the IQAC should be strengthened. It must draw up well–defined action plans, procedures and quality assurance strategies for the institution. It must assist the management in taking up decisions that will help improve the quality of the institution.

It must

i. Develop a system of quality assessment, monitoring, and enhancement of the academic and administrative performance of the University,

ii. Internalize quality culture at all levels in the Institutes, and

iii. Institutionalize best practices. The IQAC must also build an organized methodology of documentation.

3) Institutions must pay attention to proper recording and preservation of documentary evidences for the projects and activities they undertake. A well–defined process for

proper documentation must be prepared and shared with all the faculty members and staff. The colleges may have web-based archives where all the important documents are duly preserved.

4) Implementing OBE: Outcome Based Education OBE in its true meaning is necessary for the overall development of the students. The faculty must make them aware of the goals that they have to achieve at the end of the learning process. The teachers role in the OBE is multifarious–instructor, trainer, facilitator mentor all at the same time. Faculty must properly be oriented to practice the OBE system.

5) Though the major concern of institutions is the delivery of the prescribed curricula, yet research remains an important aspect of academic development. The research output by institutions is quite low in terms of both quality and quantity. One major reason for this unsatisfactory performance is the paucity of funds and financial support. Budgetary provision for research, seed money, funds for arranging and attending conferences, papers ,publications of books ,filing patents all this needs to be taken care of if the research graph has to improve.

6) Research is coupled with consultancy. If institutions carry out extensive quality research, they can develop consultancies, which can help them become self-supporting. Institution–industry tie up is necessary for facilitating consultancies and improving the relevance of the curricula by making the required additions. Colleges should set up Entrepreneurship Centre and Innovation Centre or should connect with the affiliated University where these centres are set up. This will help in making students employable.

7) The number of patents is quite low. Colleges should conduct IPR awareness and plagiarism awareness activities. An anti–plagiarism policy needs to be framed and made known to all. Anti–plagiarism software should be installed.

8) Many teaching and non–teaching positions are vacant in all the institutions. The posts of Librarian and Physical Director are to be filled. Temporary, ad hoc appointments of staff, poorly affects the quality of any institution. Efforts must be made for appointing qualified faculty, non–teaching staff and retain senior faculty. Institutions must insist upon the Government taking up an employment drive to fill up the vacant posts at the earliest.

9) The dropout rate of students in rural areas is a matter of great concern. Prompt measures have to be taken to ensure that the students complete their education. Students can be retained only when they are sure that the graduation or post graduation would help them earn their means of living. The education imparted to them must be able to make them employable. Outcome Based Education has yielded good results. It should be encouraged and some amount of academic flexibility must be granted so that the teaching learning process is updated.

10) In some institutions, the infrastructure is inadequate. Libraries, laboratories, rest rooms, IT related facilities, internet connection, availability of computers, are not sufficient. In order to make higher education accessible to the differently able students their needs such as ramps, lifts, washrooms etc., need to be taken care of. Students' use of library facilities needs to be reviewed. Some of the reports have recorded a low footfall and underused library facilities.

Some institutions are located in remote areas and face problems such as frequent electricity outages, poor internet connectivity, lack of means of transport, inadequate staff, etc. Special attention should be paid to such institutions because they are in charge of spreading education at the grass roots level of the society. They are the ones who will be responsible for transforming the tribal, rural, socio–economically marginalized youth, especially girls who usually are first generation learners, into educated, self–aware, responsible and independent citizens. Such institutions must receive special attention and support.

11) Competition from other institutions is a constant threat. This threat should be converted into an opportunity for the improvement of quality and institution–specific, locale-specific advantages.

12) A policy for solid and liquid waste management, biodegradable, non–biodegradable and e–waste management should be prepared and followed carefully.

13) Stakeholders, especially students, can be involved in the preparation of the Annual Activities Calendar of the institution. This will help to make them participate actively and voluntarily in the planning of the annual activities and ensure their support.

14) The role of the alumni is also very important in creating a favourable image of the institution. An institution's alumni are the reflection of its past, representation of its present and a link with its future. The role of the alumni is not restricted to donations alone. They can help the institution by inspiring by example, mentor the present

students, and arrange on–campus placement drives. Students' Placement Cell needs to be strengthened. Alumni help the institution to build a positive image and earn social acceptance. An online Alumni portal should also be attempted.

15) Some institutions are required to update their websites. Especially, in the post–COVID–19 situation, the website is the most easily accessible source of communication between the institution and its stakeholders.

16) A sharp decline is seen in instituting Arts, Commerce and Science Colleges after 2000. Most of the new institutions, which have come up, are Engineering, Medical, Pharmacy, Technical and Management institutions. Only older Universities and colleges established in the 20th century retain Humanities, Basic Sciences and Commerce education. All new institutions offer applied science courses or professional courses. There appears to be an imbalance in the statewide distribution of courses. The implied 'less importance' given to humanities, literatures and basic sciences might prove detrimental to the society in the future. Creating a society of responsible youth, who have inculcated basic human values, and are trained in humanitarian values as against the utilitarian perspective is necessary for an ethical and stable society.

17) A common system for remedial coaching was found wanting. At present slow learners are identified on the basis of their performance in the internal assessment or mid-term tests, by which time, part of the academic year would have progressed with a section of the students remaining passive and not participating in the classroom. Instead, the model of designing a comprehensive test at the commencement of the academic year for the identification of slow learners may be considered. Tutorials followed by frequent online tests and online evaluations may help the students achieve expected competencies in core skills.

8.2.5 Other Stakeholders

Teachers, Non-teaching, Students and Parents

The process of education and assessment will be incomplete without teachers, non-teaching staff, students, and parents.

1) Teachers have an important role to play in the accreditation process. They have to be convinced about the significance and advantages of improving quality and assessment scores of the institution.

2) A higher grade achieved by the institution will certainly invite better opportunities for attracting grants for research and appointments to positions of academic importance.

Details about the institute such as quality of education, research output, teaching learning, infrastructure etc. are reflected in the NAAC grade. It helps students to choose the best institute based on its NAAC grade. The NAAC grade also determines the value of the degree offered by the higher learning institutes.

3) Teachers and students are the real participants in the quest for excellence. It is their efforts, which are greatly important to achieve the goal of quality in higher education.

4) The Student Satisfaction Survey introduced in the new NAAC assessment methodology is enough to spell out the importance of students' satisfaction as stakeholders. The parents are indirectly related to the process and play an important role during the peer team visit meet.

5) Some of the services, which directly correspond to the satisfaction quotient of the students and their parents, are:

A transparent admission procedure followed by the institution, the ease of business while dealing with the laboratory, office and library staff, satisfactory learning experience, evaluation procedures, infrastructure and other facilities, grievance redressal committee, safety and security measures on the campus, effective career guidance and placement cell in the institution. Students must make the optimum use of all the facilities provided by the institutions.

6) In the current pandemic situation most of the teaching learning process has become virtual. Students attend online classes. On–campus learning is different from learning in the virtual space. It has transitioned from bricks to clicks. In the new normal situation, the responsibility of the students has increased manifold. They will have to change their study habits. They will have to be self-motivated and require two important tools of learning, viz. metacognition and retrieval. They have to give up the traditional methods of rote learning and develop critical thinking and adaptability skills. They will have to practice a mix of the three methods viz.

(i) Self–Learning, (ii) Peer–Learning and iii) Group–Learning

NAAC has been proposing the use of ICT in the teaching-learning process for quite some time. The present situation has compelled all the institutions to work online and include ICT as a major methodology.

8.3 Conclusion: The Road Ahead

This chapter has listed the suggestions and recommendations given by the peer teams after having closely studied the institutions they visited. There were many common observations regarding the functioning of the assessed institutions such as a large number of vacant posts, ineffective IQACs, outdated syllabi and the inability of affiliated institutions to update them, insufficient funds for research and need to bolster research activity and inadequate infrastructure and absence of maintenance. Many institutions have yet not undergone the NAAC process for several reasons. Unless they are convinced of the advantages of assessment and accreditation, the institutions will not take up the quality initiative. Assessment and accreditation in higher education is an effective means of quality assurance. It provides credible information on academic quality of the institution.

NAAC accreditation is mandatory for all the higher learning institutes. Without NAAC accreditation, universities are not eligible for UGC grants, RUSA grants, financial aid, etc. Further, NAAC accreditation determines the quality of the institute in terms of education, infrastructure, research, teaching-learning, etc.

Institutions must realize that some of the major benefits of NAAC accreditation are:

- NAAC accreditation helps the institutes to perform their own SWOT analysis through a well–designed process.
- It helps them conduct a performance audit and plan their future activities in a better and more co-ordinated manner.
- Better resource planning will also be possible. It helps funding agencies to have before them objective criteria for providing adequate funding to the higher education institutes.
- NAAC grade/assessment will help educational institutes to initiate modern or innovative methods of pedagogy and cultivate a futuristic perspective.

If the higher education institutions and other stakeholders follow the recommendations listed above, it will help in improving the quality quotient of Higher Education in the State of Telangana.

Finally, only when each stakeholder contributes her or his bit to the cause of improving quality, the dream of excellence will be achieved.

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ABBRREVIATIONS

NAAC	-	National Assessment and Accreditation
NITI Aayog	-	National Institution for Transforming India Aayog
PCI	-	Per Capita Income
LRUP	-	Land Records Updation Programme
IMR	-	Infant mortality Rate
NIN	-	National Institution of Nutrition
ODF	-	Open defecation free
UGC	-	University Grants Commission
ISO	-	International Organization for Standardization
HEI	-	Higher Educational Institutions.
INQAAHE	-	International Network for Quality Assurance Agencies in Higher Education
GGP	-	Guidelines for Good Practices
APQN	-	Asia Pacific Quality Network
USA	-	United States of America
CHEA	-	Council for Higher Education Accreditation
HRK	-	Hochschulrektorenkonferenz
UK	-	United Kingdom
HE	-	Higher education
FE	-	Further education
PACUCOA	-	Philippines Accrediting Association of Schools, Colleges and Universities' Commission of Accreditation
FAAP	-	Federation of Accrediting Agencies of the Philippines
ALCUCOA	-	Accrediting Association of Charted College and Universities Commission on Accreditation
NNQAA	-	National Network of Quality Assurance Agencies
TVEAAP	-	Technical Vocational Education Accrediting Agency of the Philippines
UNESCO	-	The United Nations Educational, Scientific and Cultural Organization

NAA	-	National Accreditation Agency
AICTE	-	All India Council for Technical Education
AB	-	Accreditation Board
NARAHE	-	National Accreditation Regulatory for Higher Educational institutions
A&A	-	Assessment and Accreditation Process
PTR	-	Peer Team Reports
RAF	-	Revised Accreditation Format
GPA	-	Grade Point Average
IQAC	-	Institutional Quality Assurance Cell
AQAR	-	Annual Quality Assurance Report
ICT	-	Information communications technology
QnM	-	Quantitative Metrics
QIF	-	Quality indicator framework
APSCHE	-	Andhra Pradesh State Council of Higher Education
TSCHE	-	Telangana State Council for Higher Education
NIRF	-	National Institutional Ranking Framework
GER	-	Gross Enrolment Ratio
KG	-	Kinder Garden
PG	-	Post Graduate
MHRD	-	Ministry of Human Resource Development
RUSA	-	Rashtriya Uchchatar Shiksha Abhiyan
AP	-	Andhra Pradesh
CETs	-	Common Entrance Tests
UG	-	Under Graduate
B.Ed	-	Bachelor of Education
EFLU	-	English and Foreign Language University
M.B.A	-	Master of Business Administration
M.C.A	-	Master of Computer Applications.
JNTUH	-	Jawaharlal Nehru Technological University Hyderabad
IICT	-	Institute of Chemical Technology
CCMB	-	Centre for Cellular Microbiology
NRSA	-	National Remote Sensing Agency

ISB	-	Indian School of Business
IITH	-	Indian Institute of Technology, Hyderabad
TIFR	-	Tata Institute of Fundamental Research
SC/ST	-	Scheduled Caste/ Scheduled Tribe
CPI	-	College Population Index
GPI	-	Gender Parity Index
NQRI	-	National Quality Renaissance Initiative
TAFRC	-	Telangana Admissions Fee Regulation Committee
AOVN	-	Ambedkar Overseas Vidhya Nidhi
BC	-	Backward Class
TASK	-	Telangana Academy of Skill & Knowledge
SSR	-	Self-study Reports
GPA	-	Grade point averages
CGPA	-	Cumulative grade point average
ANOVA	-	Analysis of Variance
OU	-	Osmania University
KU	-	Kakatiya University
TU	-	Telangana University
MGU	-	Mahatma Gandhi University
PU	-	Palamuru University
SU	-	Satavahana University
BA	-	Bachelor of Arts
B.Sc	-	Bachelor of Science
B.Com	-	Bachelor of Commerce
B.E	-	Bachelor of Engineering
B.Tech	-	Bachelor of Technology
B.Pharm	-	Bachelor of Pharmacy
LLB	-	Bachelor of Law
B.V.Sc	-	Bachelor of Veterinary Science
MBBS	-	Bachelor of Medicine
Pharma-D	-	Doctor of Pharmacy
MA	-	Master of Arts
M.Sc.	-	Master of Science

M.Com	-	Master of Commerce
M.E	-	Master of Engineering
M.Tech	-	Master of Technology
LLM	-	Master of Law
MS	-	Master of Science
MD	-	Medicine Doctor
BDS	-	Bachelor of Dental Surgery
SLQACC	-	State Level Quality Assurance Coordination Committee
SLQAC	-	The State Level Quality Assurance Cell
JNTU	-	Jawaharlal Nehru Technological University
SWOC	-	Strengths, Weaknesses, Opportunities and Challenges
IGNCA	-	Indira Gandhi National Centre for Arts
AWES	-	Army Welfare Education Society
TLP	-	Teaching-learning process
EDC	-	Entrepreneurship Development Cell
FCI	-	FICCI, Ladies Organization
QNS	-	Quacquarelli Symonds
ALEAP	-	Association of Lady Entrepreneurs of India
ICAR	-	Indian Council of Agricultural Research
ICFAI	-	Institute of Chartered Financial Analysts of India

Appendices

3 (b) Colleges and Seats available at different interval from 2014–15 to 2018–19							
Year and Category		Engineering	MCA	MBA	B.Ed.	Law	Degree Colleges
2014–15	Govt./Univ.	14	15	21	4	3 (3ydc]	124
	Aided	0	0	0	2	0	54
	Un–aided	330	73	410	268	14	1097
	Total Colleges	344	88	431	274	17	1275
	Total seats	184419	5846	55034	29044	2670	246176
2015–16	Govt./Univ.	14	15	21	6	4(3ydc]	126
	Aided	0	0	0	0	0	54
	Un-aided	249	33	322	219	13	1098
	Total Colleges	263	48	343	225	17	1278
	Total seats	126468	2966	41796	22670	2850	283823
2016–17	Govt./Univ.	14	13	21	07	3 (3ydc]	130
	Aided	0	0	0	0	0	54
	Un–aided	210	24	284	210	18	941
	Total Colleges	224	37	305	217	21	1125
	Total seats	105132	2436	32934	19200	3190	378654
2017–18	Govt./Univ.	14	13	21	07	03	136
	Aided	0	0	0	0	0	50
	Un–aided	198	29	283	209	18	886@
	Total Colleges	212	42	304	216	21	10720
	Total seats	97961	2736	32710	18350	4610	421947
2018–19	Govt./Univ.	14	13	18	7	3	138*
	Aided	0	0	0	3	0	50
	Un-aided	188	29	293	208	18	861
	Total Colleges	202#	42	311	218	21	1049••
	Total seats	97134	2786	34562	19050	3610	403002

Source: TSCHE Statistical Booklet –2018 (11–03–2019)

3(c) Growth of Professional Colleges from 2014 to 2018 in Telangana State

Sl. No.	Year	Engineeering		B–Pharmacy		MBA		MCA		ME/M.Tech		M.Pharm.		L.L.B		B.PEd.	
		No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake	No.	Intake
1.	2014-15	344	184419	171	16320	431	55034	88	5846	272	31250	155	12568	17	2670	13	1260
2.	2015-16	263	126468	145	11438	343	41796	48	2966	171	15152	130	7820	17	2850	17	1760
3.	2016-17	224	105132	123	9476	305	32934	37	2436	143	10998	107	4694	21	3190	17	1760
4.	2017-18	212	97961	131	10283	304	32710	42	2736	82	5996	95	2790	21	4610	17	1760
5.	2018-19	202	97134	127	9792	311	34562	42	2786	94	7743	112	3929	21*	3610	17	1760

3 (d) Number of students appeared and qualified in various CETs from 2015–16 to 2018–19 in Telangana State						
Sl. No.	CET	Details	Years			
			2015–16	2016–17	2017–18	2018–19
1	EAMCE (Engg.+Med)	Appeared	212821	223542	205395	203163
		Qualified	163350	200861	181813	159820
2	EDCET	Appeared	57775	41485	58738	32330
		Qualified	57220	40826	57413	30606
3	ECET	Appeared	19748	26410	24458	26883
		Qualified	18143	24742	22702	24746
4	ICET	Appeared	63488	66510	71097	55191
		Qualified	58037	63549	69091	49812
5	LAWCET (3yr+Syr)	Appeared	17546	11630+ 3561	15408+ 4031	18547*
		Qualified	12870	9897+ 2811	13955+ 2893	15793*
6	PECET (UGDP. Ed + B.PEd)	Appeared	6327	5823	5653	3835
		Qualified	6216	5672	2388	3707
7	PGECET M.Tech +Pharm)	Appeared	43776	41281	33246	22461
		Qualified	38882	35093	29742	20131

4 (c) Abstract Showing Professional Colleges Distribution in Telangana State for the Year 2018–19								
Sl. No.	Type of Colleges	Affiliating University	No.of Colleges		Total Colleges	Intake		Total Intake
			Univ/ Govt.	Pvt.		Univ/ Govt.	Pvt.	
1	Engineering	JNTUH	3	173	176	1380	86046	87426
		OU	2	11	13	420	6230	6650
		KU	3	4	7	825	1800	2625
		MGU	1	0	1	180	0	180
		JNAFAU	1	0	1	160	0	160
		PJSTAU	2	0	2	51	0	51
		Veterina	2	0	2	42	0	42
	Total		**14**	**188**	**202**	**3058**	**94076**	**97134**
2	MBA	JNTUH	1	137	138	60	12587	12647
		OU	6	119	128	420	16965	17385
		KU	5	19	24	420	1500	1920
		MGU	1	5	3	60	480	540
		PU	2	3	5	120	240	360
		SU	2	7	9	120	1260	1380
		TU	1	3	4	30	300	330
	Total		**18**	**293**	**311**	**1230**	**33332**	**34562**
3	MCA	JNTUH	2	3	5	60	180	240
		OU	6	22	28	360	1540	1900
		KU	3	3	6	160	336	496
		MGU	1	0	1	60	0	60
		TU	1	1	2	30	60	90
	Total		**13**	**2.9**	**42**	**670**	**2116**	**2.786**
4	B.Pharmacy	JNTUH	0	82	82	0	6530	6530
		OU	0	14	14	0	1240	1240
		KU	1	24	25	60	1582	1642
		PU	1	3	4	60	180	240
		SU	1	1	2	40	100	140
	Total		**3**	**118**	**127**	**160**	**9632**	**9792**
5	Pharma-D	JNTUH	0	32	32	0	945	945
		KU	0	11	11	0	295	295
		OU	0	11	11	0	330	330
		PU	0	1	1	0	30	30
	Total		**0**	**55**	**55**	**0**	**1600**	**1600**

Sl. No.	Type of Colleges	Affiliating University	No.of Colleges		Total Colleges	Intake		Total Intake
			Univ/ Govt.	Pvt.		Univ/ Govt.	Pvt.	
6	LLB-3 Years	KU	1	2	3	80	480	560
		OU	1	14	15	60	2700	2760
		MGU	0	1	1	0	60	60
		SU	1	0	1	180	0	180
		TU	1	0	1	50	0	50
	TOTAL		**4**	**17**	**21**	**370**	**3240**	**3610**
7	LLB-5 Years	KU	1	1	2	80	120	200
		MGU	0	1	1	0	60	60
		OU	2	9	11	120	840	960
	TOTAL		**3**	**11**	**14**	**200**	**1020**	**1220**
8	LLM-2 Years	KU	1	2	3	60	60	120
		OU	2	8	10	245	256	501
		TU	1	0	1	15	0	15
	TOTAL		**4**	**10**	**14**	**320**	**316**	**636**
9	B.Ed.	KU	2	44	46	200	2700	2900
		MGU	1	32	33	100	2850	2950
		OU	2	73	75	200	7150	7350
		PU	1	25	26	100	2150	2250
		SU	0	23	23	0	2250	2250
		TU	1	14	15	100	1250	1350
	TOTAL		**7**	**211**	**218**	**700**	**18350**	**19050**
10	B.P.Ed.	KU	2	1	3	200	100	300
		MGU	0	3	3	0	400	400
		OU	1	6	7	60	600	660
		PU	0	3	3	0	300	300
		SU	0	1	1	0	100	100
	TOTAL		**3**	**14**	**17**	**260**	**1500**	**1760**
11	UGDPED	OU	1	1	2	200	50	250
		MGU	0	2	2	0	100	100
	TOTAL		**1**	**3**	**4**	**200**	**150**	**350**

Sl. No.	Type of Colleges	Affiliating University	No.of Colleges		Total Colleges	Intake		Total Intake
			Univ/ Govt.	Pvt.		Univ/ Govt.	Pvt.	
12	M.TECH	JNA&FAU	1	0	1	20	0	20
		JNTUH	4	74	78	540	5655	6195
		KU	1	4	5	36	373	409
		OU	2	8	10	457	662	1119
	TOTAL		**8**	**86**	**94**	**1053**	**6690**	**7743**
13	M.PHARMACY	JNTUH	1	68	69	54	2478	2532
		KU	1	23	24	54	734	788
		OU	0	14	14	0	480	480
		PU	1	3	4	18	51	69
		SU	0	1	1	0	60	60
	TOTAL		**3**	**109**	**112**	**126**	**3803**	**3929**
14	PHARM-D (PB)	JNTUH	0	14	14	0	140	140
		KU	0	3	3	0	30	30
		OU	0	6	6	0	60	60
		PU	0	1	1	0	10	10
	TOTAL		**0**	**24**	**24**	**0**	**240**	**240**

4 (d) No. of Colleges with Intake and Enrollment for the Academic Years from 2015-16 to 2018-19 in Telangana State																				
Program	**No. of Colleges 2015-16**					**No. of Colleges 2016-17**					**No. of Colleges 2017-18**					**No. of Colleges 2018-19**				
	Govt.	**Pvt.**	**Total**	**Total Intake**	**Enrol ment**	**Govt.**	**Pvt.**	**Total**	**Total Intake**	**Enrol ment**	**Govt.**	**Pvt.**	**Total**	**Total Intake**	**Enrol ment**	**Govt.**	**Pvt.**	**Total**	**Total Intake**	**Enrol ment**
Degree	180	1098	1278	283223	231257	184	941	1125	408266	213321	136	936	1072	421947	202232	138*	911	1049	403002	202394
Engineering	19	249	268	115912	70792	14	206	220	104758	73686	14	198	212	97961	68594	14	188	202	97134	68138
B-Pharmacy	4	141	145	11438	9265	4	119	123	9226	7994	3	128	131	10283	8158	3	124	127	9792	8542
B.Ed.	6	219	225	22670	16095	7	210	217	19200	13824	7	209	216	19350	1383	47	211	218	19050	17743
B.P.Ed.	3	15	18	1760	1707	3	15	18	1760	1725	3	14	17	1760	1352	3	14	17	1760	1239
Law (3&5yrs)	3	14	17	2850	2622	3	18	21	3190	2934	3	18	21	4710	4474	4	18	22	4830	4509
MCA	15	34	49	2966	632	13	24	37	2436	2211	13	29	42	2736	1814	13	29	42	2786	1879
MBA	21	326	347	41796	31975	21	284	305	32934	28047	21	283	304	32710	28068	18	293	311	34562	27507
Total	**251**	**2096**	**2347**	**483215**	**364345**	**249**	**1817**	**2066**	**581770**	**343742**	**200**	**1815**	**2015**	**590457**	**328526**	**200**	**1788**	**1988**	**572916**	**331951**
Courses offered in the UG Colleges																				
PG	76	444	520	25285	21745	76	444	520	25285	22251	76	444	520	25285	21492	76	446	522	25415	23134
M.Tech	8	163	171	15152	7795	8	135	143	10998	6001	8	74	82	5996	4799	8	86	94	7743	5185
M.Pharmacy	4	126	130	7820	4072	4	103	107	4694	3396	4	91	95	2790	1352	3	109	112	3929	2763
Pharm-D	0	48	48	1440	1310	0	54	54	1620	1276	0	56	56	1645	1398	0	55	55	1600	1479
Pharma -D(PB)	0	20	20	200	120	0	26	26	260	197	0	24	24	240	186	0	24	24	240	127
Total	**88**	**801**	**889**	**49897**	**35042**	**88**	**762**	**850**	**42857**	**33121**	**88**	**689**	**777**	**35956**	**29227**	**88**	**719**	**807**	**38927**	**32688**

5 (a) Courses and Duration (years)						
UG Programmes				**PG Programmes (Entry after completing UG)**		
General	BA, B.Sc, B.Com	3 yr		General	MA, M.Sc M.Com	2 yr
Engineering	BE, B.Tech	4 yr		Engineering	ME, M.Tech	2 yr
Medical	MBBS	5 ½ yr		Medical	M.S, M.D	3 ½ yr
Pharmacy	B.Pharma	4 yr		Pharmacy	M.Pharma	2 yr
	Pharma .D	6 yr			Pharma .D (PB)	3 yr
Veterinary	B.V.Sc.,	4 yr		Management	MBA	2 yr
Agriculture	B.Sc.,	4 yr		Law	LLM	2 yr
Law	LL.B	5 yr		Computers	MCA	3 yr
UG Programmes (Entry after Completing UG)						
Education	B.Ed.,	2 yr		Law	LL.B	3 yr

5 (b) Number of Mandals Identified to provide access to Higher Education and Colleges Sanctioned (2006 to 2018)					
Year	**No. of Mandals**	**No. of Applications Received**	**No. of Colleges Sanctioned**	**No. of MandaIs Covered**	**Percentage of MandaIs Covered**
2006-07	78	93	63	35	44.8
2007-08	123	97	61	43	34.9
2008-09	159	94	81	39	24.5
2009-10	197	115	44	33	16.7
2010-11	236	102	68	47	19.9
2011-12	167	160	98	69	41.3
2012-13	117	128	66	44	37.6
2013-14	181	294	202	114	77.9
2014-15 -AP	73	209	73	54	73.9
2014-15-TS	66	125	150	68	54.4
2015-16 to 2018-19	No notification issued for sanction of new Private Colleges from 2015-16 to 2018-19				

5 (c) Number of Private Un-aided Degree Colleges permitted under each University from the year 2006-2018

Sl. No.	University	No. of Colleges permitted by State Council of Higher Education											
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015-16 & 2016-17	2017-18	2018-19
1.	OU	12	12	14	6	15	28	24	53	48	No new Pvivate Degree colleges sanctioned from 2015-16 to 2018-19	-	-
2.	KU	11	14	14	6	3	18	16	39	45		1	-
3.	TU	-	-	-	-	-	1	1	11	11		1	-
4.	MGU	-	-	-	-	-	4	1	19	14		1	-
5.	PU	-	-	-	-	3	4	1	4	12		-	-
6.	SU	-	-	-	-	6	4	0	20	20		-	-
Total		**23**	**26**	**28**	**12**	**27**	**59**	**43**	**146**	**150**		**3**	**-**

** in 2017-18 4 Hotel Management Colleges and 5 Law Colleges Sanctioned

5 (d) PG Courses Sanctioned (2016-2018) in Private Colleges – University-wise Data

Sl. No.	University	No. of Colleges permitted by State Council of Higher Education											
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015-16 & 2016-17	2017-18	2018-19
1.	OU	50	31	28	24	43	10	12	4	48	No new Private Degree colleges sanctioned from 2015-16 to 2018-19	2	-
2.	KU	27	18	26	6	18	6	8	16	45		9	-
3.	TU	-	-	-	-	0	4	3	1	11		-	-
4.	MGU	-	-	-	-	12	2	6	7	14		2	-
5.	PU	-	-	-	-	3	0	0	1	12		2	-
6.	SU	-	-	-	-	10	1	2	4	20		4	-
Total		**77**	**49**	**54**	**30**	**86**	**23**	**31**	**33**	**150**		**19**	**-**

5 (e) PrivateDegree Colleges Sanctioned by the State Council of Higher Education – Urban, Rural & Tribal-wise from 2006-07 to 2018-19				
Year	**Urban**	**Rural**	**Tribal**	**Total**
2006-07	13	45	5	63
2007-08	4	53	4	61
2008-09	12	66	3	81
2009-10	5	37	2	44
2010-11	9	58	1	68
2011-12	29	61	8	98
2012-13	25	35	6	66
2013-14	63	131	8	202
2014-15	47	154	22	223
2015-16 to 2018-19	**No new notification issued for sanction of new Private Colleges from 2015-16 to 2018-19**			

9 (a) TAFRC- Fee Structure for Admission into various Professional Courses for 2015-16 to 2017-18 (valid for 3 years)				
Sl. No.	Course	Tuition Fee Per Annum for the Students of Private Un-aided Colleges		Special Fee Per Annum
		Category 'A'	Category 'B'	
1	Engineering	Varies from College to College (Rs. 35,000/- to Rs.1,13,500/-)		Rs. 5,500/-
2	MBA/MCA	Varies from College to College (Rs. 23,000/- to Rs. 90,000/-)		Rs. 5,500/-
3	Pharmacy	Varies from Colleg e to College (Rs. 35,000/- to Rs. 90,000/-)		Rs. 5,500/-
4	B.Ed.	Rs. 13,500/-	Rs. 13,500/- special fees	Rs. 3,000/-
5	L.LB./B.L.	Rs. 9,600/-	Rs. 32,000/-	Rs. 2,500/-
6	M.E/ M.Tech./ M.Arch./ M. Pig.	Rs. 57,000/-	Rs. 1,25,000/- Up to 6000 US Dollars for each NRI Student	Rs.7,500/- Special fee at the time of admission and Rs. 6,500/- from and year onwards
7	M.Pharmacy	Rs. 1,10,000/-	Rs. 2,25,000/- Upto 7000 US Dollars for each NRI Student	
8	Pharm.D.(PB)	Rs. 68,000/-	Rs. 1,55,000/- Upto 6000 US Dollars for each NRI Student	Rs. 5,500/- Special fee at the time of admission and Rs. 2,500/-from 2"d Year onwards
9	L.L.M	Rs. 21,600/-	Rs. 33,800/-	Rs. 2,500/
10	M.Sc.Nursing	Rs. 75,000/- PA (Free Seats) 50%	Rs. 1,48,500/- 50% seats	-----
11	B.P.Ed	Rs. 13,500/-	Rs. 13,500/-	Rs. 3,500/-
12	U.GD.P.Ed	Rs. 12,000/-	Rs. 12,000/-	Rs. 3,500/-

13	MBBS	Rs. 60,000/- (50% cat. A seats Non-Minority) Rs. 60,000/- (60% cat. A seats Minority)	Rs. 11,00,000/- (10% cat. B seats Non-Minority) Rs. 11,00,000/- (40% cat.B seats Minority)	Cat.-C maximum up to 2 times of Cat 'B' (40%Cat.C seats Non-Minority) Rs. 13,25,000/-
14	BDS	Rs. 45,000/- (50% cat. Aseats Non-Minority) Rs. 45,000/- (60% cat. A seats Minority)	Rs. 4,00,000/- (10% cat. B seats Non-Minority) Rs. 2,70,000/- (40% Cat. B seats Minority)	Cat-C Rs. 4,00,000/- (40% Cat. C seats Non-Minority) Rs. 2,70,000/-
15	Language Pandit (Hindi, Telugu & Urdu)	Rs. 13,000/-	Rs. 13,000/-	Rs. 3,000/- Special fees

9 (b) Under Graduate & Post Graduate Courses Fee Structure							
Sl. No.	University Colleges	Fee Range (Rs. Per Annum)					
		UG Level (Government)			UG Level (Un-aided)		
		B.A	B.Com	B.Sc	B.A	B.Com	B.Sc
1	OU	3550	3850-6850	3950-6950	7870	10535-22535	12535-14535
2	KU	2750-5750	2850-6050	3150-6150	12510	17010-21560	19910-22560
3	TU	3050-6050	3350-6350	3650-6650	1690-20400	18100-20600	19100-21600
4	MGU	3550-6550	3650-6850	3950-6950	11450-13950	16015-18515	16015-20515
5	PU	3050-6550	3550-6850	3950-6950	6900-14600	14600-19100	16600-19100
6	SU	2750-6050	2850-6350	3150-6450	12100	15100-19800	17300-19800

Source:11: DOST-2018

9 (c) University-wise Block Grants from 2006-07 to 2018-19 in Telangana State													
(Rupees in Crores)													
Univ.	**2006 -07**	**2007 -08**	**2008 -09**	**2009 -10**	**2010 -11**	**2011 -12**	**2012 -13**	**2013 -14**	**2014 -15**	**2015 -16**	**2016 -17**	**2017 -18**	**2018 -19**
OU	93.00	93.00	49.22	75.00	135.53	113.30	216.40	170.14	170.14	266.24	238.19	496.16	369.54
KU	23.72	23.72	24.87	18.75	34.68	25.80	65.58	47.88	47.88	41.11	67.03	125.75	112.41
BRAOU	6.74	6.74	5.31	6.00	15.72	8.25	14.36	14.36	57.4	40.19	8.03	29.08	30.45
PSTU	11.69	13.19	13.19	9.90	13.13	10.50	15.51	17.10	6.75	17.07	15.38	36.95	39.42
JNTUH	35.65	36.64	33.75	8.50	16.00	16.00	36.00	166.85	396.00	282.35	55.44	62.65	72.04
TU	3.00	12.00	12.00	6.00	17.99	10.50	10.54	20.00	24.16	11.67	28.29	50.95	43.77
MGU	0	10.00	10.00	5.00	17.49	10.50	8.15	15.00	15.16	15.00	15.00	56.95	44.49
SU	0	0	2.50	1.63	14.88	7.75	6.30	4.79	12.42	7.30	21.69	28.42	28.71
PU	0	0	2.50	1.63	14.75	7.75	4.93	4.79	8.95	8.10	8.10	45.77	26.63
JNA & FAU	0	0	0.00	0.00	6.00	6.50	8.50	9.35	9.96	5.45	5.45	9.02	10.37
RGUKT	0	0	265.00	275.00	400.00	425.00	560.40	353.50	119.63	93.24	50.00	30.00	34.50
Total	**173.80**	**195.29**	**418.34**	**407.41**	**676.17**	**641.85**	**946.67**	**823.76**	**868.45**	**787.72**	**512.60**	**944.42**	**812.43**

For Communication with NAAC

The Director

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