CHAPTER II

SPECIFIC AREA COMPLIANCE AUDIT

HIGHER EDUCATION DEPARTMENT

2.1 Specific area Compliance Audit of outcomes in higher education

Executive Summary

This Specific area Compliance Audit was conducted to ascertain the outcomes of higher education in the State in terms of its contribution to employability and research, the level of equitable access to quality higher education, and the adequacy and effectiveness of Governance and Management structures. The State performed well in student enrolment, pass percentage, access and affordability. Audit, however, found issues mainly with student-faculty ratio in colleges, valuation of answer papers, poor research output, regional disparity in access and ineffective functioning of governance structures.

- ***Student-Faculty Ratio was quite healthy in the sampled universities, but the abnormal delays in recruitment of regular teaching staff resulted in engagement of large number of guest faculty for Government colleges.***
- ***Large number of revaluation requests and change of marks after revaluation cast doubt on the efficiency of answer sheet evaluation system. The moderation exercise and award of grace marks lacked transparency.***
- ***Only a handful of university departments were active in research. Majority had poor or nil research output.***
- ***The State has a higher college density than the all India average. However, regional disparity within the State is a matter of concern as 14 districts have lower college density than the all India average of 28 colleges per one lakh of population in the age group of 18 to 23 years.***
- ***The Gross Enrolment Ratio of SC and ST students at 41.6 and 37.8 per cent respectively was much below the state's overall ratio of 49 per cent.***
- ***The State level bodies, established to ensure good governance were not fully functional. The TN State Council for Higher Education did not play its envisaged roles due to non-constitution of its main organ, viz., The Council. The TN State Academic Audit & Accreditation Council has not started functioning since its establishment in 2010.***
- ***While their applications for formal approval were pending with the University, affiliated colleges started new programmes and increased intake capacities. The routine post facto approval for such new programmes by the universities is indicative of slackness in governance.***

- ***While all the State public universities were accredited under the quality framework of NAAC, only 103 out of the 258 eligible Arts and Science colleges (40 per cent) affiliated to the sampled universities were accredited. This showed that 60 per cent of Arts and Science colleges were not meeting the desired quality standards.***
- ***The University of Madras continued to face financial crisis due to mismanagement and inadequate financial support from GoTN. As a result, funds meant for research and development activities were diverted for salaries and regular non-plan expenditure.***

2.1.1 Introduction

2.1.1.1 Higher education indicators

Higher education in India is currently defined as the education which is obtained after completing 12 years of schooling and is of the duration of at least three years. This education may be of the nature of General, Vocational, Professional or Technical education.

Inclusive and quality education for all is a powerful and proven vehicle for sustainable development. Higher education is passing through a phase of unprecedented expansion in terms of number of students and number of higher education institutions (HEI). Government of Tamil Nadu (GoTN) has recognised that Access, Equity, Quality and Governance as target areas. 'Vision 2023' of GoTN envisages progress in Human Development Index by providing inclusive higher education, addressing both access and equity issues.

College density[1] and Gross Enrolment Ratio[2] (GER) are major indicators of performance of higher education sector in the State. A comparison between Tamil Nadu and India in terms of number of HEIs, college density, and GER in the years 2010-11 and 2018-19 is given in **Table 2.1**.

Table 2.1: Number of Higher Education Institutions and Gross Enrolment Ratio

Year	Number of universities*		Number of colleges*		College Density		GER	
	Tamil Nadu	All India	Tamil Nadu	All India	Tamil Nadu	All India	Tamil Nadu	All India
2010-11	59	621	1,985	32,974	27	23	32.9	19.4
2018-19	59	993	2,466	39,931	35	28	49.0	26.3
Change during 2010-19	- (No change)	372 (60 *per cent* increase)	481 (24 *per cent* increase)	6,957 (21 *per cent* increase)	8	5	16.1	6.9

* Includes all types of universities/colleges - Medical, Engineering, Agriculture, Management, Arts, Science, etc.

(Source: All India Survey on Higher Education)

1 Number of colleges per lakh of population in 18 to 23 age group.

2 Number of students as a percentage of population in the age group of 18 to 23 years.

It can be observed from **Table 2.1** that, number and density of colleges and the GER of Tamil Nadu had increased over the years and was above the national average.

2.1.1.2 Funding for State universities and colleges

GoTN provides funds through State budget to universities as grant-in-aid[3], mainly for salary of teaching and non-teaching staff. GoTN also provides funds through budget for running Government colleges and salary grants to Government aided colleges. Apart from State budget, universities and colleges receive assistance from Government of India (GoI), Ministry of Human Resources Development (MHRD) under Rashtriya Uchchatar Shiksha Abhiyan (RUSA) scheme and also from the University Grant Commission (UGC) for infrastructure, research, etc. HEIs also mobilise funds through fee from students, sponsored research and consultancy projects, etc. The funding pattern and related findings are discussed in detail in **Paragraph 2.1.10**.

2.1.2 Organisational set-up

At Government level, Department of Higher Education is headed by the Principal Secretary to deal with the affairs of universities and colleges providing higher education in general stream. The Director of Collegiate Education heads the field formation in charge of colleges.

At the University level, the Vice Chancellor (VC) who is the ex-officio Chairman of Senate, Syndicate and Academic Council, is the principal executive and academic officer of the University. The VC is assisted by Registrar, Controller of Finance and Financial Adviser, Controller of Examination, Heads of departments, etc. The Senate is the highest governing body of the University and is responsible for making statutes and passing resolutions on the annual accounts and the financial estimates. The Syndicate is the Chief Executive body responsible for making, amending and cancelling Ordinances and it appoints teaching as well as non-teaching staff and defines their duties, emoluments and conditions of services. University affiliates Government and private colleges.

2.1.3 Planning and execution of audit

2.1.3.1 Audit Objectives

The objectives of the Specific area Compliance Audit of outcomes in higher education were to assess whether:

- The system of higher education in Tamil Nadu led to betterment of society by ensuring increased employability and research through high quality teaching/learning processes,
- Equitable access to quality higher education was ensured for all, and

[3] In the form of Block Grants and Additionalty grants.

- Governance and management of higher education system was adequate and effective.

2.1.3.2 Audit Criteria

The Specific area Compliance Audit was conducted against the criteria derived from the standards/goals set by Central and State Governments and their agencies, as listed out in **Appendix 2.1**.

2.1.3.3 Scope of Audit and Audit Methodology

(i) Scope of Audit

This Specific area Compliance Audit was conducted during September 2019 to February 2020, covering academic years (AY) 2014-15 to 2018-19 to examine aspects of access, equity, quality and governance of higher education. Four out of the nine (44 *per cent*) State public affiliating universities providing education in general streams (Science/Arts/Commerce), *viz.*, Alagappa University (AU), Karaikudi, Bharathidasan University (BDU), Tiruchirappalli, Mother Teresa Women's University (MTWU), Kodaikanal and University of Madras (UoM), Chennai, and 32 out of the 294 (11 *per cent*)[4] colleges affiliated to the sampled universities were selected through random sampling method (**Appendix 2.2**).

Besides this, records of Higher Education Department, Directorate of Collegiate Education and Tamil Nadu State Council for Higher Education were also scrutinised.

(ii) Audit Methodology

The Audit was conducted between September 2019 and February 2020, by scrutiny of records in the Higher Education Department, Directorate of Collegiate Education and sampled universities and colleges. Audit evidence was collected from relevant records and databases of the entities, joint physical inspections, discussion papers, photographs and feedback through a student's survey conducted by issuing a questionnaire for evaluation of quality of education to 438 students in the sampled universities and 969 students in the sampled colleges.

An Entry Conference was held (September 2019) with the Principal Secretary to Government, Higher Education Department, Government of Tamil Nadu and Vice-Chancellors of all four selected universities, in which audit objectives, scope of audit, audit methodology and criteria were discussed. An Exit Conference was held on 17 November 2020 to discuss the audit findings and recommendations.

2.1.3.4 Acknowledgement

Audit acknowledges the co-operation extended by the Higher Education Department, Directorate of Collegiate Education, Vice-Chancellors and

[4] Seven Government colleges, four university constituent colleges, and 21 private colleges. One of the sampled college was closed down during the period covered by audit.

concerned officers of AU, BDU, MTWU and UoM and Principals of sampled Government colleges, Government Aided colleges and Self-financing colleges in conduct of this Audit.

2.1.4 Assessing quality through student performance

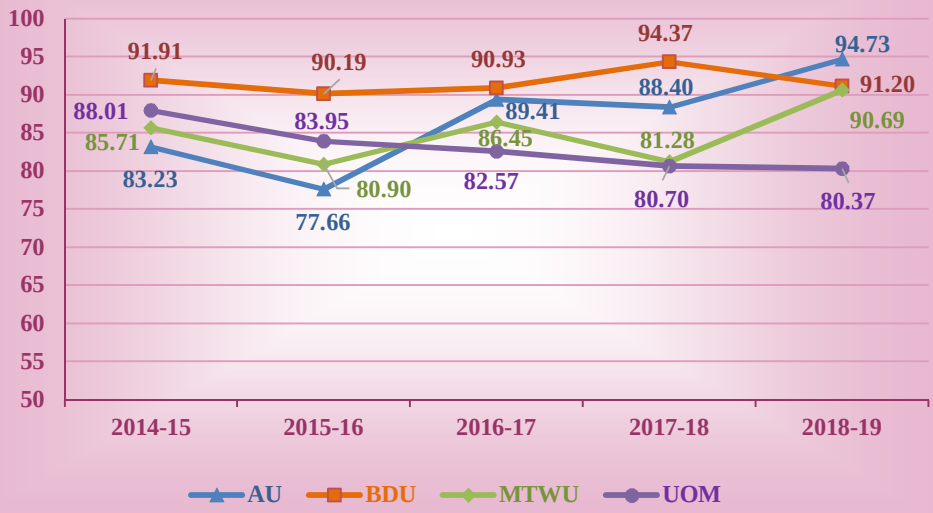
2.1.4.1 Examination results

Performance of students in examinations serves as an indicator of extent of effectiveness of teaching and better outcome in higher education. Performing well in examinations is a pre-requisite for getting employment of choice and for exercising the option of higher studies.

(a) Pass percentage in universities

The average percentage of students passing in examinations during 2014-19 in the sampled universities are given in **Exhibit 2.1**.

Exhibit 2.1: Average pass percentage of students in examinations

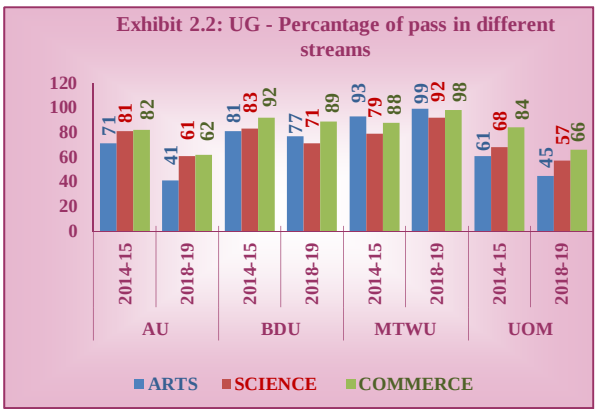


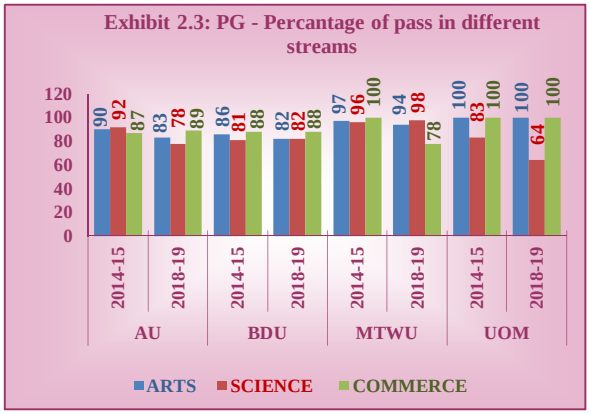
(Source: Information collected from respective university)

The high pass percentage, though an indicator of good performance, should be seen in the backdrop of lack of a defined policy for revaluation of answer scripts, coupled with high percentage of revaluations and liberal award of grace marks in the name of moderation, as commented in **Paragraph 2.1.7**.

(b) Pass percentage in affiliated colleges

The pass percentage of students of Arts, Science and Commerce streams in UG and PG programmes in all colleges affiliated to four sampled universities are shown in **Exhibits 2.2** and **2.3**.



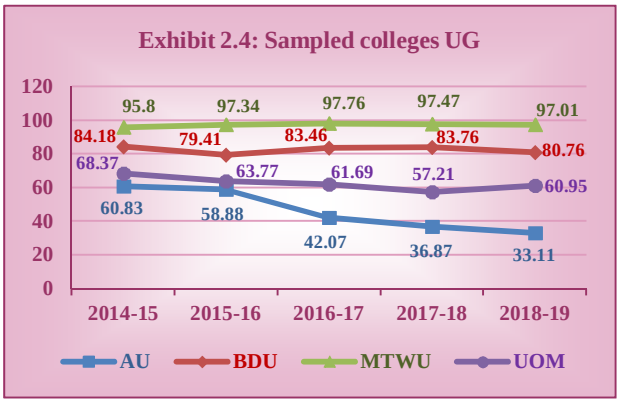


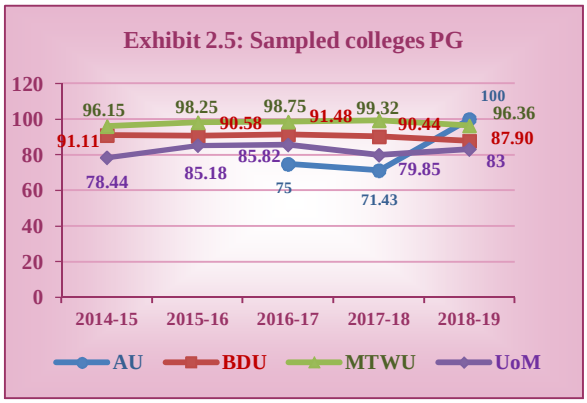
(Source: Data furnished by respective universities)

As seen from the above Exhibits, the average pass percentage of UG students showed a declining trend in the affiliated colleges of AU, BDU and UoM, but improved in MTWU. In AU and UoM, the average pass percentage in all streams of UG programmes was below 80 as of 2018-19, while in the colleges of BDU and MTWU, the average pass percentage in UG programmes exceeded 80. In PG programmes, except in Science streams of colleges in AU and UoM, colleges of all sampled universities showed an average pass percentage of over 80.

(c) Pass percentage in sampled colleges

In respect of 32 sampled colleges affiliated to the four universities, the overall pass percentage in UG and PG programmes for the years 2014-19 is given in **Exhibits 2.4** and **2.5**.

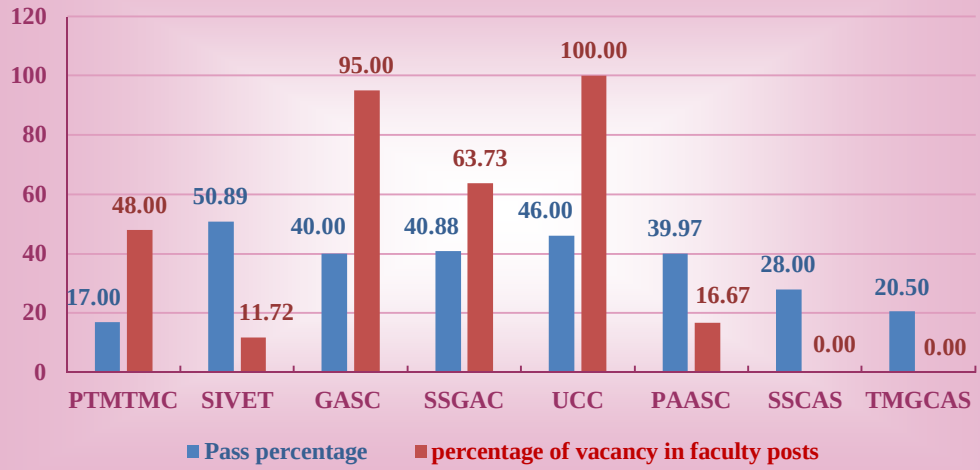




(Source: Data furnished by respective colleges)

Audit analysed the effect of vacancies in faculty position in eight colleges with low pass percentage and found that the lack of regular faculty did impact the pass percentage as given in **Exhibit 2.6**.

Exhibit 2.6: Colleges with low pass percentages



PTMTMC: Pasumpon Thiru Muthuramalinga Thevar Memorial College, Kamuthi; SIVET: SIVET College, Gowrivakkam, Chennai; GASC: Government Arts & Science College, Mudukulathur; SSGAC: Sri Subramaniaswamy Government Arts College, Tiruttani; UCC: University Constituent College, Thiruvottiyur; PAASC: Pattammal Alagesan Arts & Science College, Athur, Chengalpet; SSCAS: Sri Santhoshi College of Arts & Science, Maduranthakam and TMGCAS: TMG College of Arts & Science, Manimangalam, Chennai.

(Source: Data furnished by respective colleges)

- In AU, the results of Government and aided colleges were very low, and could be linked to poor faculty strength. Audit found that in Government-aided PTMTM College, Kamuthi, with 48 *per cent* vacancy in sanctioned posts, the result in UG programmes was only 17 *per cent*. Similarly, the Government Arts College, Mudukulathur had no regular faculty members and the College was run with only Guest lecturers on a consolidated pay of ` 15,000 per month.

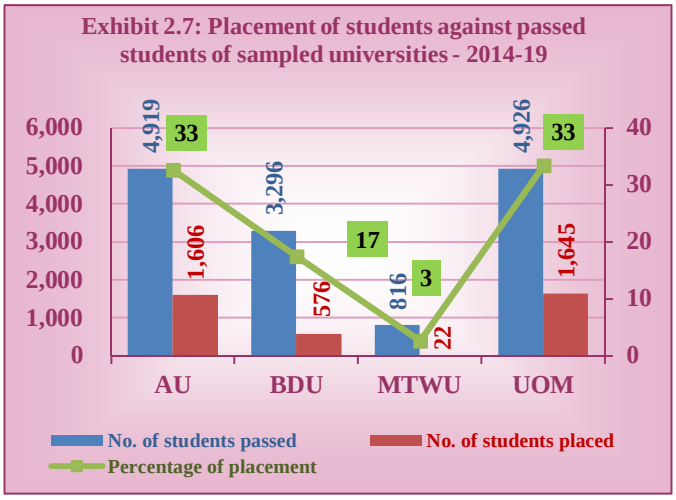
- In UoM, in both UG and PG programmes, Government and Government aided colleges performed better than self-financing colleges. Audit observed that one of the main reasons for low performance in self-financing colleges was posting of temporary/ unqualified teachers and high attrition rate of teachers in self-financing colleges of UoM. In the six sampled self-financing colleges, during 2014-19, 297 faculty members had resigned during the middle of academic year, bringing discontinuity in teaching process.

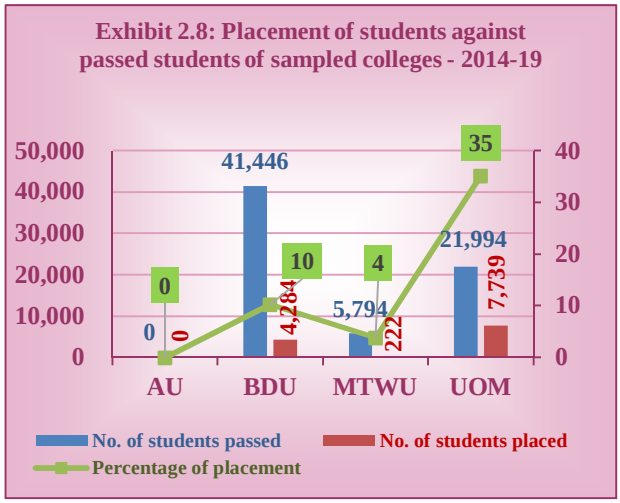
- A survey of 272 students in the eight colleges revealed that on an average, 52 *per cent* of them were not satisfied with the teachers' knowledge, teaching ability, punctuality, guidance, communication skill and evaluation. Further, 47 *per cent* of students were not completely satisfied with the teachers ability to identify strength/ weaknesses in them and inform the outcomes of the programs.

Thus, from the samples studied, Audit observed that the pass percentage was adversely impacted by vacancies of teachers in Government and University Constituent colleges, and in self-financing colleges, appointment of unqualified teachers impacted the pass percentage.

2.1.4.2 Employability

Producing employable graduates forms an integral function of higher education system. Students should be imparted with requisite skills, competencies and knowledge so that they can cope with the rapidly changing job market requirements. The presence of facilitators like career counselling, placement cell and alumni association helps in enhancing the potential of job aspirants in identifying areas of employment, honing skills and increasing acceptability by the recruiters. They also facilitate the availability of this pool of trained human resource to the potential employers.





(Source: Data furnished by respective universities and colleges)

In the sampled universities, approximately 28 *per cent* of the students who passed out during 2014-19 were successful in getting placements in various sectors (**Exhibit 2.7**). In 18 of the 32 affiliated colleges[5] that maintained placement data, the percentage of students getting placed was 18 *per cent* (**Exhibit 2.8**). Among the sampled universities, AU and UoM performed well with 33 *per cent* placement, followed by BDU with 17 *per cent*.

An analysis of placement performance disclosed that:

- Thirty five *per cent* students of colleges affiliated to UoM were placed when compared to only 10 *per cent* and 4 *per cent* in colleges affiliated to BDU and MTWU respectively.
- Students of 14 sampled colleges (AU-4, BDU-7 and UoM-3) were not given the benefit of placements mainly due to non-establishment of a placement cell as discussed in **Paragraph 2.1.4.3 (ii)**.
- In AU, the Management stream, with 473 placements out of the 705 students graduating during 2016-19, accounted for a larger chunk of placements. Audit, however, found that placement of students from other streams was quite low with PG programmes in

[5] 13 colleges did not have placement cell and one college was closed.

Arts having a placement of just 13 *per cent*[6] and PG programmes in Science streams having a placement of just five *per cent*[7].

- BDU also had higher percentage of placement in respect of few programmes, such as, M.Tech in Geological Technology and Geo informatics (58 *per cent*), M.A. in HR Management and M.A. in Sociology (56 *per cent*), M.A. in Development studies (50 *per cent*), M.B.A. (46 *per cent*) and Master in Social Work (40 *per cent*). Whereas, programmes like M.A. in Economics, Tamil, etc., had low placement record of less than 10 *per cent*.
- In MTWU, only 89 out of 816 students of University Departments attended campus placement programme during 2014-19 of which only 22 (25 *per cent*) students got placements. Registrar, MTWU reasoned that Kodaikanal being a tourist place, the students were in a position to earn their livelihood by working in shops and hotels and were hesitant to move away from their native place. Audit opined that it is the responsibility of the University to create avenues for better placement and encourage students to strive for better employment.
- UoM organised job fairs to benefit students from all departments/programmes. Besides this, HoDs of 53 out of 86 PG programmes arranged campus interviews, and the students of the remaining 33 PG programmes did not have this facility. It was found that while the placement of students from the programmes with campus interview facility was 45 *per cent* during 2016-19, the overall placement percentage during the period was only 26 *per cent*.
- The Department of Management Studies in UoM, which had a separate placement cell with a dedicated placement officer, had a higher placement record of 64 *per cent* during 2014-19.

Urban-Rural divide in placement

Twenty three out of thirty two sampled colleges were located in rural areas and nine colleges in urban areas. Placement cells were not available in 57 *per cent* of the colleges located in rural areas.

Placement of students from colleges in urban areas at 18 *per cent* was slightly better compared to students of colleges in rural areas at 16 *per cent*.

The survey conducted by Audit among 757 students of rural colleges found that 18 *per cent* of them were dissatisfied with the facilities available for career guidance and placement cell. Whereas, a survey of 210 students of urban colleges disclosed that the percentage of students dissatisfied with career guidance and placement cell was five *per cent* and four *per cent* respectively. This points to lack of placement facilities in rural colleges when compared with the colleges in urban centres. This is a pointer to the fact that

[6] Only 48 out of 365 students who graduated during 2016-19 were placed.
[7] Only 70 out of 1,288 students who graduated during 2016-19 were placed.

placement cells in those colleges were not responsive to the needs of the students for jobs leading to the students being dissatisfied with the performance of these cells in their colleges.

2.1.4.3 Facilitation for placement

Employability enhancement programmes envisage bridging the gap between skills possessed by the students and the skills that are looked for by the employers.

(i) Soft skills programme

The soft skill courses are intended to improve language and communication skills, personal habits, cognitive or emotional empathy, time management, and teamwork and leadership traits for employability. UGC's quality mandate also envisages training students in essential professional and soft skills.

- Among the sampled universities, AU and MTWU had made soft skill courses mandatory only for UG programmes and PG students were not benefitted. BDU and UoM had made soft skill courses mandatory for UG as well as PG level.
- In all colleges of AU, MTWU and UoM, courses on Communicative English and other employability/soft skills were integrated with the course curricula and was compulsory at UG level.
- In the affiliated colleges of BDU, soft skill courses were offered as one among the non-major Electives at UG level. These courses were not compulsory. Among the four sampled Government colleges, three colleges did not maintain any data on students completing soft skill courses and in one college out of 8,182 students enrolled in soft skill courses, only 1,125 students (14 *per cent*) had completed the courses during 2014-19.

Thus, Audit observed that AU and MTWU had not attached the due importance to soft skill courses at PG level and BDU had made the soft skill programmes optional. This meant that though the job aspirants had the requisite academic skillset, they were not provided the means to hone their practical skills.

(ii) Placement Cell and job fairs

As per UGC guidelines, Career and Counselling Cells (Placement Cell) should be established in all universities and colleges. The Placement Cell should gather information on job avenues and placements and organise seminars and guidance workshops for informing students about the emerging professional trends, market needs and to impart training in soft skills.

- Placement Cells are functioning in AU and MTWU for the students of the university concerned and affiliated colleges.

- The Placement Cell in BDU works only for the students of the affiliated colleges.
- In UoM, Placement Cell is available only for MBA students. For other students, annual job fairs are conducted and campus interviews are arranged by University departments.
- A survey conducted by Audit among 438 students of the sampled universities revealed that 39 *per cent* and 44 *per cent* of the students were either dissatisfied or not fully satisfied with career counselling and Placement Cell respectively. Similarly, 36 *per cent* of them were dissatisfied or not fully satisfied with the training and internship opportunities.
- Fourteen of the thirty two sampled colleges (43 *per cent*) did not have Placement Cells and 15,526 students who graduated from these colleges during 2014-19 were not given the opportunity of getting placements through campus placement programme.
- Job fairs provide prospective employers access to large pools of qualified candidates. All sampled universities were active in organising job fairs. Audit, however, found that none of the sampled colleges organised any job fairs.

Thus, Audit observed that BDU and UoM need to strengthen their Placement Cells. Forty three *per cent* of sampled colleges had not taken any initiatives on Placement Cells and none of them had organised job fairs.

2.1.4.4 Further education

As per para 5.2 of NAAC Manual, HEI's concern for student progression to higher studies is a pertinent issue. Progression is enabled through building systematic approaches to postgraduate and higher progression. Data on student progression to higher education, furnished by the universities disclosed that 32 *per cent* of students of AU progressed to M.Ed., M.Phil, Ph.D., etc., compared to only 12 to 16 *per cent* in the other three universities. A 'School of Education' functioning in AU, offering B.Ed., M.Ed., M.Phil., etc., was one of the reasons for higher progression of students of AU. Other sampled universities did not have such a School.

Audit found that the data on student progression to higher education was not maintained uniformly by all colleges. Eleven colleges did not maintain any data. Audit observed that this data was essential for colleges to enable them in guiding and empowering students to make informed choices.

2.1.5 Assessing quality through effectiveness of learning processes

Audit of the efforts taken by the sampled HEIs in the State in attaining the desired outcome through quality enhancement are discussed hereunder:

2.1.5.1 Course curricula

The UGC mandated that the curricula be revised once in three years and the syllabi be made relevant in tune with job market dynamics as also in tune with advances in research and development. Every department of the universities has a Board of Studies (BoS) with members having academic/industry background. The BoS designs the curricula after studying the new developments in the field of study and the needs of employers. The curricula designed by the BoS is put up to the Standing Committee on Academic Affairs/Academic committee of the University for approval.

- In AU, curricula of 11 PG programmes[8] were not revised for more than three years. Among them, the curriculum of MBA in Bank Management was last revised in 2012 and that of M.Phil in International Business was last revised in 2013.
- BDU and MTWU had updated the curricula of all their programmes.
- In UoM, the curricula of 75 out of the 86 programmes offered (87 *per cent*) were revised during 2014-19. Curricula of five programmes were not revised within the stipulated three years and details of revision were not furnished for six programmes. Further, the University did not revise curricula in respect of 25 out of 70 UG programmes and 48 out of 63 PG programmes offered by affiliated colleges. Specific reasons for non-revision were not available. Audit also found that the sampled departments[9] did not maintain any documentary evidence for the feedback obtained from alumni and employers while revising curriculum.

Audit observed that programmes like Banking, Information Technology, Business Management, etc., have seen large scale changes. Relying on a syllabus last revised in 2012 and 2013 could have a detrimental impact and would leave students completely unequipped to work in these dynamic sectors. Similarly Computer science, Biochemistry, Pharmacology, etc., are fields where research-based changes are happening swiftly. Therefore, not revising the curricula periodically would lead to mismatch between what is taught and the new developments existing in industry which is required by employers.

From the above data, Audit observed that there were significant shortfalls in curricula revision in two of the four sampled universities, which had resulted in failure to update the curricula based on new developments in the field of study.

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8 MBA (Bank Management), MCA (Regular), M.Sc (CS), MCA (WEP), M.Phil (CS), M.Sc (Bioelectronics & Biosensors), MA (English), MBA and M.Phil (International Business), M.Sc and M.Phil (Physics) and MBA (Corporate Secretaryship).

9 Anatomy, Computer science, Endocrinology, Genetics, Mathematics, Medical biochemistry, Microbiology, Pathology, Pharmacology and Environmental Toxicology, Physiology and Statistics.

2.1.5.2 Field projects and internship

Field projects and internships are intended to impart practical knowledge related to the field of study.

(i) Internships/field projects by university students

All the PG students of AU, MTWU and UoM undertook internship/field projects during 2014-19. Audit, however, found that in BDU, only 56 *per cent* of the students enrolled in 29 PG programmes of two/three year duration during 2014-19, undertook internship/field projects. In their reply, the Registrar, BDU, stated that students were allowed to complete their course by doing research projects instead of field projects or internship. The reply attested the Audit observations that in BDU students completed their programmes without having the benefit of internships.

(ii) Internship/field projects by students of sampled colleges

Audit found that the affiliated colleges did not provide adequate avenues for student internship, leading to poor performance as given in **Table 2.2**.

Table 2.2: Internships in sampled constituent/affiliated colleges

Colleges	Percentage of students who underwent internship		
	Government and Constituent	Government Aided	Self -finance
4 colleges in AU	Nil	Nil	100
14 colleges in BDU	3	8	9
2 colleges in MTWU	Not Applicable	100	100
12 colleges in UoM	7	8	17

(Source: Details furnished by respective colleges)

On analysis, Audit found that:

- As per the Choice Based Credit System regulations issued by UGC, internship is an optional part of the curricula. The sampled universities had not made internship a compulsory part of the course curricula for UG programmes, but made it compulsory for PG programmes of affiliated colleges.
- In three sampled colleges (two self-financing and one Government aided) of AU and MTWU, all the students got opportunity to undertake internship/field projects.
- In nine of the sampled colleges, including three colleges with PG programmes, none of the students under took internship/field projects.
- In the remaining 20 sampled colleges, only an average of seven *per cent* of UG students undertook internship.

Audit found that while the Universities had formal linkages with industry through University Industry Community Interface Centres, there was no such mechanism at college level. Despite that, three of the sampled colleges

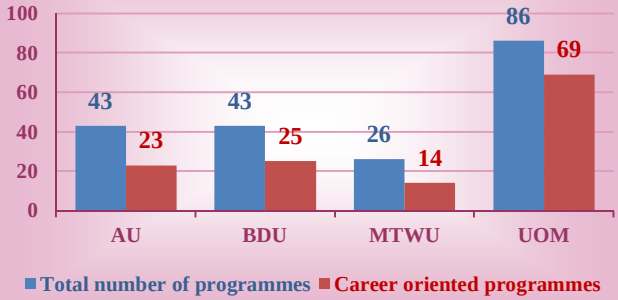
performed well by tying up with local industries/institutions for field projects and internships.

Thus, Audit observed that a significant number of BDU students and a majority of students of 29 out of the 32 sampled colleges did not gain practical knowledge through field projects/internships to make them ready for the job market.

2.1.5.3 Career oriented curricula in universities

The *Quality Mandate* (May 2018) of UGC envisages "learning outcome-based curriculum framework". The programmes offered in universities/colleges should have focus on enhancing the employability. Some of the career oriented UG/PG programmes offered by the sampled HEIs include Business Administration, Biotechnology, Microbiology, Journalism, etc. These programmes enjoyed higher placement. The total number of PG programmes offered in the sampled universities and the number of career oriented programmes among them are given in **Exhibit 2.9**.

Exhibit 2.9: Career oriented programmes



(Source: Respective universities)

2.1.5.4 Career oriented curricula of colleges

Analysis of data on career oriented programmes offered by sampled colleges revealed the following:

- Eight out of the nine sampled colleges in urban areas (89 *per cent*) and 14 out of the 23 colleges in rural areas (61 *per cent*) offered career oriented programmes like Microbiology, Business Administration, Biochemistry, Computer applications, Commerce, Fashion Technology, Textile science, Tourism, Visual Communication, etc.
- Career oriented programmes had a higher placement record of 24 *per cent* and 14 *per cent* in urban areas and rural areas respectively. Whereas, basic programmes such as History, Tamil, English, Mathematics, Physics, Chemistry, etc., had a placement record of 16 *per cent* and 12 *per cent* in urban areas and rural areas respectively.
- Nine sampled colleges in rural areas and one in urban area offered only basic programmes such as History, Tamil, English, Mathematics, Physics, Chemistry, Commerce, etc.

Thus, Audit observed that 10 of the total of sampled 32 colleges (31 *per cent*) affiliated to the sampled universities offered only basic degree programmes on traditional subjects such as History, Tamil, English, Mathematics, Physics and

Chemistry. The colleges needed to introduce career oriented programmes which provide better placement avenues.

2.1.6 Quality through effective teaching processes

2.1.6.1 Student-Faculty Ratio

Student-teacher ratio or student-faculty ratio (SFR) is the ratio between the number of students who attend a college or university and the number of teachers in the institution. Low SFR allows the teachers to better manage the class and devote more time and energy for research and other development works.

The sampled universities had a healthy SFR with reference to the ratio of 20:1 recommended by RUSA. The sampled colleges, however, had a poor SFR, which continued to worsen during the last five years (**Table 2.3**).

Table 2.3: Student-Faculty ratio in sampled institutions

University/ colleges	2014-15			2018-19		
	Number of Students	Number of Teachers	SFR	Number of Students	Number of Teachers	SFR
AU	2,353	157	15	3,752	208	18
BDU	1,994	182	11	2,269	156	15
MTWU	441	49	9	578	54	11
UoM	2,978	261	11	3,317	215	15
Colleges	68,622	2,734	25	79,689	3,039	26

(Source: Data furnished by respective universities/colleges)

SFR in Universities

SFR in the sampled universities are calculated on the basis of student strength and the number of regularly appointed teachers. Universities, being centres of academic research, the teachers' strength cannot be directly linked to student strength.

The issues relating to SFR in universities are discussed below:

- Three departments in UoM[10] and three departments in MTWU[11], which did not carry out any research activity during 2014-19, had an SFR of less than 5:1. Low SFR in departments without any research output indicated significant excess academic staff with reference to the norm of one faculty member per 20 students. The Universities had not reviewed the SFR, especially in departments where no research work was taking place.
- In BDU, the SFR as of 2018-19 was 15:1. Audit, however, found wide variance in availability of faculty in different departments.

[10] Education, Hindi and Kannada Departments.
[11] Library Information Science, Social Work and Women studies departments.

While five departments [12] had a SFR of less than 5:1, in four departments[13] SFR ranged from 30:1 to 93:1.

- In UoM, the SFR as of 2018-19 was 15:1. Audit, however, found that the SFR had gone above the RUSA prescribed minimum of 20:1 in Geology and Computer Science Departments. In the Geology Department, the total student strength had increased from 48 in 2014-15 to 60 in 2018-19, while faculty strength had decreased from 5 to 3 during the same period. In the Computer Science Department, the SFR, which was 29:1 in 2014-15 came down to 21:1 in 2018-19 due to reduction in intake from 144 to 104 during the same period.
- It was further noticed that in addition to the regular academic staff on UGC scale, during 2018-19, UoM appointed a total of 63 full-time guest faculty on consolidated salary of ` 20,000. If the number of full time guest faculty are taken into account, the SFR of UoM as of March 2019 would be 11:1. Though, there is no defined benchmark for maximum number of faculty members in a department, the University had not reviewed the need for available teachers in departments which are not doing any research work. Audit observed that such a review could identify surplus academic staff for possible shifting to constituent colleges of the University.

SFR in sampled colleges

SFR in colleges is calculated by considering the number of regularly appointed teachers and full-time guest faculty. **Table 2.4** shows the SFR in the sampled colleges as of March 2019.

Table 2.4: Student faculty ratio in sampled colleges

Colleges	SFR in all colleges	SFR in Government/ Aided/Constituent colleges	SFR in Self-finance colleges
4 colleges affiliated to AU	31:1	35:1	20:1
13 colleges affiliated to BDU	24:1	25:1	20:1
2 colleges affiliated to MTWU	30:1	41:1	21:1
12 colleges affiliated to UoM	29:1	33:1	24:1

(Source: Data furnished by respective colleges)

Audit noticed that the SFR exceeded double the norm in four sampled colleges:

- In three UoM colleges, *viz.*, Government College, Tiruttani, University Constituent College, Thiruvottiyur and Pachaiyappa's College for Women, Kanchipuram, the SFR was 72:1, 71:1 and 62:1 respectively.
- In Government Arts College for Women, Pudukkottai affiliated to BDU, the SFR was 72:1.

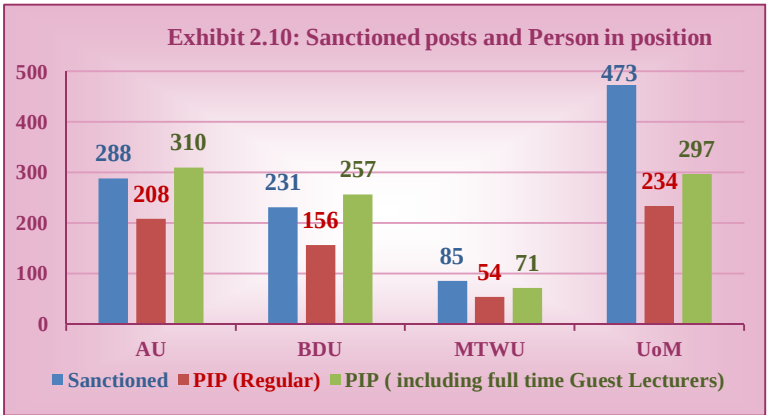
[12] Economics, Environmental Biotechnology, Marine Biotechnology, Marine Science and Social works.

[13] Biotechnology, Bharathidasan School of Management, English and History.

Government Arts College, Mudukulathur, affiliated to AU, offers five programmes, but had only one permanent faculty for a total 460 students enrolled during 2014-19. The vacancies were managed by engaging guest lecturers.

2.1.6.2 Vacancies in faculty positions

Audit found that the unfilled vacancies of sanctioned posts of faculty in the sampled universities and colleges were a cause for the increasing SFR. The person in position (PIP) in the sampled universities, against sanctioned strength as of March 2019, is given in **Exhibit 2.10**. All the universities had engaged full-time guest lecturers in excess of the vacant of regular posts.



(Source: Respective universities)

(i) Vacancies in universities

Analysing the reasons for the increasing SFR in all the sampled universities, Audit observed that a ban on recruitment, in force from April 2017 to June 2018, and the system of freezing of block grants from Government towards salaries, as discussed in **Paragraph 2.1.10.7 (i)**, contributed to the vacancies.

- In AU, 4 out of the 38 departments functioned with an Associate Professor as HoD, which showed that these departments did not have sufficiently senior academicians to head them.
- In BDU, the Department of Statistics and the Department of Sociology were run with only guest lecturers. Further, three[14] out of thirty nine departments functioned only with Assistant Professors. Department of Medical Physics and the Department of Remote Sensing did not have HoDs. Audit also found that there were no admissions in the PG programmes on Medical Physics during 2015-18 and Remote Sensing during 2014-17.
- In MTWU, despite having a healthy SFR of 11:1, five of the seventeen departments were headed by Associate Professors and three by Assistant professors. Thus 8 of the 17 departments were deprived of senior academicians to head them.

[14] Bharathidasan School of Management, Geography and History.

- In UoM, the vacancies against sanctioned posts of Professors, Associate Professors and Assistant Professors as of March 2019 were 37 *per cent*, 75 *per cent* and 51 *per cent* respectively. Despite having a healthy overall SFR of 15:1, the vacancies of Associate Professors and Assistant Professors remained unfilled.

  - *Inter alia* due to shortage of faculty, UoM had revised the sanctioned intake of students from 3,728 in 2016-17 to 1,614 in 94 programmes for 2017-18, despite year-on-year increase in admissions in the University.
  - In the Department of Endocrinology, due to shortage of faculty members, M.Sc course was withdrawn from the academic year 2014-15.
  - Though the student intake in Centre for Cyber Forensic and Information Security was increased from 20 to 25, it is functioning only with one Assistant Professor and by engaging 43 part-time guest lecturers. As the subject is in great demand, the University should have engaged regular faculty rather than depending on guest lecturers.

(ii) Vacancies in sampled colleges

Against the total sanctioned strength of 10,079 teachers in Government colleges in the State, only 4,889 permanent teachers were on roll, leaving 5,190 posts (51 *per cent*) vacant. The vacancy position in aided colleges was 22 *per cent* (2,380 vacancies against a sanctioned strength of 10,610). The large number of vacancies was managed mainly by engaging full-time guest lectures.

In the 32 sampled colleges, vacancies ranged up to 72 *per cent* in Government colleges and up to 48 *per cent* in Government aided colleges. Among the sampled colleges, University Constituent College, Thiruvottiyur and Government College, Muthukulathur had no permanent faculty members and the colleges were run with guest lecturers. Audit found that both these colleges had a poor pass percentage of 46 and 40 *per cent* respectively during 2014-19.

Analysing the issue of unfilled vacancies, Audit found that:

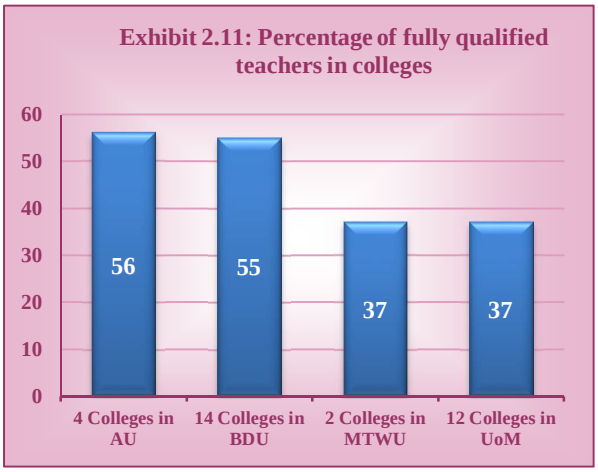
- During 2014-19, 17 programmes were newly started in 10 Government colleges and 1,318 students were admitted, without any teachers for handling these programmes.
- The TN Teachers Recruitment Board (TRB), the agency responsible for recruitment of teachers for Government colleges, planned to recruit 1,883 teachers for different subjects in 2016. Government, however, banned all recruitments between April 2017 and June 2018, leading to non-completion of the recruitment process. In October 2019, TRB notified recruitment of 2,331 posts, but the recruitment process was incomplete as on February 2021.

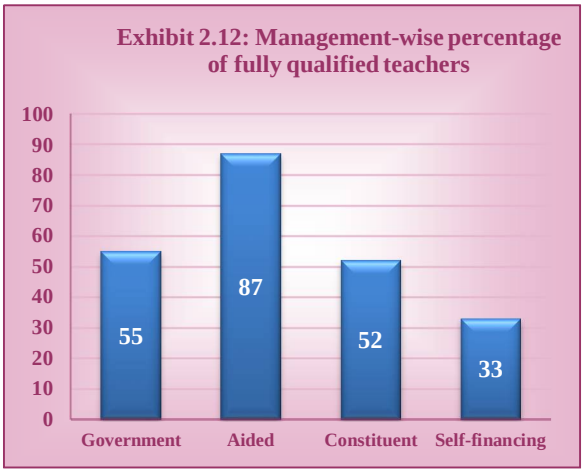
- The unfilled vacancies were filled up by appointment of guest lecturers. As on March 2020, 4,084 guest lecturers were posted in Government colleges with salary of ` 15,000 per month. The salary paid to guest lecturers by GoTN was much below the UGC recommended salary of ` 50,000.

Thus, Audit observed that delays by TRB in recruitment of teachers caused vacancies to increase. Guest lecturers were taken on contract basis to cater to the need, and were not recruited through transparent merit-based recruitment process. Many were not paid adequately and hence would be in the lookout for better paying jobs. As they are not eligible for research grants, they would not contribute to further research, which would have an adverse impact on the institution as a centre of higher learning.

2.1.6.3 Availability of qualified teachers

In the 32 sampled colleges, 1,305 out of 2,495 teachers as of March 2019 did not possess required qualification of Ph.D or NET/SLET. The percentage of fully qualified teachers in the sampled colleges affiliated to the four universities is given in **Exhibit 2.11** and the management-wise percentage of fully qualified teachers is presented in **Exhibit 2.12**.





(Source: Data furnished by respective colleges)

The percentage of fully qualified teachers in self-financing colleges and self-supporting wings of aided colleges was only 33 *per cent*, while in Government/Aided/Constituent colleges 64 *per cent* of total teachers were qualified.

As per the conditions governing affiliation of colleges, all colleges, are expected to pay salary to teachers as per UGC's scale of pay. The starting salary of an Assistant Professor in UGC scale is around ` 70,000 per month[15]. However, Audit noticed that the monthly consolidated salary paid to teachers in the sampled self-financing colleges ranged as low as ` 7,500 to ` 12,000 in colleges affiliated to UoM. In one sampled aided college (self-financing

[15] Basic pay ` 57,700 + Allowances.

stream) affiliated to AU, the salary range was between ` 4,000 and ` 11,500 per month during 2018-19.

Audit also observed that in addition to the inability of self-financing colleges to attract fully qualified teachers, the low salary structure could possibly be the reason for high attrition rate in these colleges. Audit noticed that 297 teaching faculty had resigned during 2014-19 in the self-supporting streams in aided colleges and self-finance colleges affiliated to UoM. Similarly, in one self-financing college of MTWU, during 2014-19, 42 teachers had left the institution and in the one sampled self-financed college of AU (commenced in 2016-17), 18 teachers had left in the first three years of its functioning.

Impact of not having fully qualified teachers

- The absence of fully qualified teachers reflected in the performance of students of self-financing colleges. While the pass percentage of students in the sampled self-financing colleges and self-supporting programmes in aided colleges affiliated to UoM, ranged between 20 *per cent* and 74 *per cent*, the students of the sampled Government/aided colleges performed well with pass percentage between 41 *per cent* and 89 *per cent* during 2014-19.
- The pre-condition for UGC's recognition to colleges under Section 2(f) and 12B of the UGC Act, 1956, includes employment of qualified teachers and payment of UGC scale of pay. Faculty in such colleges alone are eligible for financial assistance from UGC for undertaking research projects. In the 32 sampled colleges, only 16 colleges had 2(f) recognition, wherein, 90 faculty members received research grant totalling ` 5.48 crore from UGC during 2014-19. Faculty in colleges without UGC scale of pay were thus denied opportunity for UGC funded research.
- The universities stipulated payment of UGC scales to teaching staff as one of the conditions for grant/continuation of affiliation. Audit, however, found that the four sampled universities, overlooked the non-fulfilment of this condition by private colleges and thus failed in the role of governance with respect to colleges affliated to them.

2.1.6.4 Coverage of Syllabus

(i) Universities

The class time table for each department in universities is prepared for six hours of teaching for five days in a week. As a part of the internal quality assessment, all universities obtain a student feedback, including on syllabus coverage by teachers. The feedback results were, however, not compiled for a meaningful analysis, after 2014 by the universities.

Audit conducted a survey covering 438 students of the four universities which revealed the following:

- Fifty seven *per cent* of students in UoM, 45 *per cent* of students in AU, 40 *per cent* of students in BDU and 12 *per cent* of students in MTWU had said that faculty had covered less than 85 *per cent* of syllabus.
- In UoM, 28 out of the 240 students (12 *per cent*) who took part in the survey had suggested in their feedback that faculty can be more regular to class and cover syllabus early to avoid rushing up of portions before examinations.

(ii) Sampled colleges

The survey conducted by Audit among 969 students from the sampled colleges revealed that 52, 27, 9 and 32 *per cent* of students in colleges affiliated to AU, BDU, MTWU and UoM respectively had recorded that syllabus covered was less than 85 *per cent*.

Thus, Audit observed that the less than 100 *per cent* coverage of the syllabus by significant number of teachers of universities and colleges reflected poorly on the quality of teaching in HEIs.

2.1.6.5 Professional development training of faculty

Based on National Policy on Education, 1986, UGC envisaged setting up of Academic Staff Colleges (ASC) in each university. ASCs, now renamed as Human Resource Development Centre (HRDC) were to impart orientation training to newly recruited Assistant Professors and refresher training to existing teachers for promotion under career advancement scheme. UGC has prescribed curricula for orientation programme/refresher course. Audit scrutiny of achievements under this activity is discussed below:

- BDU and UoM with HRDC, could impart training to all faculty at least once during 2014-19.
- AU and MTWU did not have a HRDC as mandated by UGC to train academic staff. As a result, only 15 *per cent* and 18 *per cent* of their faculty members had attended refresher training in HRDCs of other universities during the years 2014-19.
- The HRDC of UoM earmarked only 80 slots per year for staff of affiliated colleges which was insufficient to meet the needs of training of all faculty members. Audit found that none of the 318 faculty members employed in five sampled colleges [16] underwent any training course during 2014-19. In the remaining seven sampled colleges[17] two to twenty eight *per cent* of the faculty

[16] Jaya College of Arts & Science, Thiruninravur; Nazerath College of Arts & Science, Avadi; Pachaiyappa's College for Women, Kancheepuram; TMG College of Arts & Science, Manimangalam, Chennai and University Constituent College, Thiruvottiyur.

[17] Annai Veilankanni's College for Women, Chennai; Pattammal Alagesan Arts & Science College, Chengalpet; Chellammal Women's College, Chennai; SIVET college, Chennai; Queen Mary's College, Chennai; Sri Subramaniaswamy Government Arts College, Tiruttani and Sri Santhoshi Arts and Science college, Maduranthakam.

members attended training during this period. Audit found that no steps were taken by UoM to increase the training slots for college teachers.

- Out of four sampled colleges affiliated to AU, none of the faculty of two colleges attended training programmes and 12 and 15 *per cent* of average number of faculty attended training programme in the other two colleges.
- In the two sampled colleges affiliated to MTWU, while all the faculty attended training programme in one test-checked college, only 13 *per cent* of average number of faculty attended training programme in another College.
- Out of 14 sampled colleges affiliated to BDU, average of 51 *per cent* of Regular faculty in eight colleges attended Orientation/Refresher/Short-term and Faculty development programmes during 2014-19.

Thus, lack of HRDC in two universities, insufficient capacity in HRDCs to train teachers of affiliated colleges, and failure to address the need for increased capacity, resulted in the professional development trainings being carried out by HEIs on a limited basis. This could impact the quality of education imparted by HEIs.

2.1.7 Examination and evaluation system

Audit found that all the four sampled universities were prompt in following the stipulated process for setting question papers, conducting examinations, and publishing results.

The system of external evaluation, however, differed among the sampled universities, as per the evaluation policies framed by the Academic Council of the university concerned and approved by the syndicate of the university.

- AU followed double valuation system, wherein the answer scripts are evaluated by two different evaluators, one from the University department and one from outside the University. The average of the two scores is taken.
- UoM and BDU followed a system of internal and single valuation, wherein answer papers are valued only once internally within the department concerned.
- In MTWU, the system followed is single external valuation where answer papers are evaluated by faculty of other universities.
- In February 2016, the Academic Council of UoM, stressing the need for accountability by the examiners, resolved to bring back double valuation system. But UoM had not taken a decision on the issue (March 2020).
- Single external valuation system is followed for affiliated colleges.

Audit observed a need for standardising and strengthening the evaluation process in view of the spate of revaluation requests being received every year as discussed in **Paragraph 2.1.7.2**.

2.1.7.1 Moderation of marks

As per the regulations, a student has to score a minimum of 40 *per cent* in both the internal and external examinations to pass in the examination. In addition to the mark scored by the examinees, the sampled universities awarded moderation or grace marks. During 2014-19, the moderation marks awarded ranged from a minimum 1 to a maximum of 18.

- In UoM, if there were any question from outside the syllabus, full mark for the question is allowed to the examinees who had attempted the question. UoM awarded grace marks to 792 border line students out of the 1.24 lakh UG/PG students of affiliated colleges who appeared in university examinations during 2014-19.
- In BDU, a Passing Board is formed in each of the University departments with all the faculty being the members of the Board. In the meetings held each year, they decide on the need to provide additional marks to students. During 2014-19, additional marks, ranging from 1 to 18, were granted to 844 out of the 10,840 PG students of University departments who appeared in examination during 2014-19.
- In AU, Board of Examiners of each programme meet at the respective valuation centres and recommend grace marks to moderate the percentage of results. The decisions so taken in the valuation centres are approved by the Vice-Chancellor.

An analysis of the moderation marks awarded disclosed that:

- The authority concerned in the sampled universities, while deciding award of moderation marks, did not give any justification therefore.
- The Controller of Examinations of UoM, while approving the grace marks for border line cases in November 2019 examinations, had recorded that the individual minutes were not giving any rationale for the award of grace marks and that the different sets of considerations by Boards need reconciliation. The VC instructed (January 2020) to draw up clear guidelines to decide the award of grace marks, but no action was on record as of December 2020.

Instances of abnormal increase in marks are highlighted below:

- In the April 2016 examinations in BDU, 18 additional marks were awarded to an examinee in an arrear paper in Biomedical Sciences, which made the student pass the paper where he/she had scored only 17 out of 75.
- In the April 2017 examinations, BDU awarded 15 grace marks to each examinee of two subjects relating to Computer Science and Engineering Department.

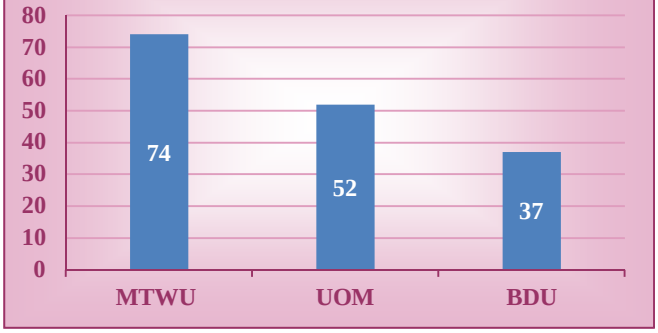
- In the November 2018 examinations of BDU, four marks per subject and a maximum 12 marks per candidate were awarded as grace marks in Mathematics, Microbiology, Biomedical Science, Botany, Bioinformatics, Zoology, Biotechnology and Physics. An additional three *per cent* of students passed the examination after award of moderation marks.
- If the moderation marks were not taken into consideration, the results in BDU would be in the range between 74.26 *per cent* and 82.31 *per cent* against the results published after award of moderation marks which was in the range between 94.30 *per cent* and 99.31 *per cent* during 2014-19.
- In the April 2019 examination for M.Sc/Chemistry, the Board in UoM resolved to add eight marks to all examinees to increase pass percentage.
- In the November 2019 examination for M.Sc/Computer Science and M.Sc/Information Technology, the Board in UoM decided to award three marks for all students to increase pass percentage significantly.

Audit observed that award of moderation marks without any defined yardsticks and seemingly with the only objective of increasing pass percentage would impact the quality of higher education imparted.

2.1.7.2 Revaluation

The sampled universities had not issued any guidelines for revaluation of answer sheets. The failed candidates and the passed candidates who had doubt in marks awarded to them, apply for revaluation without stating any justification for their application. All such applications were taken for revaluation. A scrutiny of the data relating to revaluation of answer sheets of students of 294 affiliated colleges of the four universities disclosed that AU did not maintain data on revaluation. In BDU, MTWU and UOM a total of 1,48,356 students had applied for revaluation during 2014-19, out of them 74,889 students (50 *per cent*) had got their marks changed through revaluation as given in **Exhibit 2.13**.

Exhibit 2.13: Percentage of students whose marks changed on revaluation during 2014-19



(Source: Respective universities)

Audit found that during 2014-19, 58 *per cent* of students of colleges affiliated to UoM applied for revaluation, which was highest among the sampled universities. Further, the percentage of change of marks after revaluation ranged from 37 to 74 *per cent* which indicated that the original valuation was not proper.

MTWU stated that since the first and second valuation were done by different examiners, the valuation differs on their perspectives. Audit however noticed that in respect of 18 to 40 *per cent* of students the change in percentage of marks was above 10, which should not happen even if examiners might have different perspectives. BDU and UoM did not explain the reasons for such wide variations in evaluation. Audit found that the universities did not have any system to analyse the reasons wherever abnormal changes happened on revaluation.

Thus, Audit observed that the efficacy of the evaluation system in the sampled universities was an area of concern in the light of substantial changes in marks received by students on re-evaluation.

2.1.8 Quality through effective research

Higher education's contribution to knowledge base is through effective research. The outcome of research includes patents for new inventions, publications, consultancy services by faculty, etc. The National Institutional Ranking Framework (NIRF) ranks universities on the basis of five parameters including Research and Professional Practices (RP). Three of the four sampled universities, *viz.*, AU, BDU and UoM, were ranked (2020) among the top 100 universities in India, with all India rank of 36, 53 and 22 respectively. It was, however, seen that in terms of RP, all the three universities showed poor performance as shown in **Table 2.5**.

Table 2.5: NIRF scores of universities

University (All India rank in bracket)	Score out of 100				
	Teaching and learning	Research and Professional practices	Graduation outcome	Outreach and inclusivity	Peer perception
AU (36)	63.66	22.69	68.36	51.63	44.76
BDU (53)	63.49	28.38	50.92	46.57	40.09
UoM (22)	65.37	33.16	68.21	55.23	38.30

(Source: NIRF website)

It was further noticed that the scores of the three sampled universities in RP were much lower than the average of score of the top 10 universities which was 50.48 out of 100. The poor scores in RP was one reason that brought down the ranking of these universities.

2.1.8.1 Patents, research projects and consultancies

The details of number of patents awarded, revenue through consultancies by faculty and number of researchers doing research in the sampled universities during 2014-19 are given in **Table 2.6**.

Table 2.6: Patents, research projects and consultancies during 2014-19

Name of University	Number of patents awarded	Research projects		Consultancies	
		Number	Number of JRFs, SRFs and PDFs enrolled	Number	Revenue generated (` in crore)
AU	0	107	226 + 5 + 5 = 236	16	2.53
BDU	0	218	682 + 98 +116 = 896	21	0.23
MTWU	0	28	7 + 0 + 13 = 20	3	0.14
UoM	9	390	52 + 192 + 7 = 251	55	1.02

JRF - Junior Research Fellowship; SRF - Senior Research Fellowship; PDF - Post Doctoral Fellowship

(Source: Data furnished by universities)

Performances in terms of department-wise research projects in the four universities are given in **Appendix 2.3**. Although 838 research/ consultancy projects were taken up by the sampled universities during 2014-19, only nine patents were obtained and the research and consultancies culminated in research papers, publication or consultancy reports. Research projects, consultancies and research guidance also contribute to Academic Performance Indicator for career advancement of academic staff. Audit, however, found that:

- In AU, 11[18] out of the 38 departments, having 28 faculty members did not carry out any research during 2014-19.
- In BDU, 26 faculty members of 11[19] out of 39 departments had not done any research project during 2014-19.
- In MTWU, four[20] out of the 17 departments having 11 faculty members did not undertake any research during 2014-19.
- In UoM, 37[21] out of 74 departments with 96 faculty members, including 24 Professors and 17 Associate Professors had not undertaken any research projects during 2014-19.

18 Alagappa institute of Education sciences, Alagappa institute of Skill development, Botany, Computational logistics, Computer science, Fine arts, Geology, History, Logistics management, Social work and Tourism & hotel management.

19 Computer science, Centre for study of social exclusion and inclusive policy, English, Geology, Industrial biotechnology, Lifelong learning, Performing arts, Sociology, Statistics, Tamil and Women's studies.

20 English, Mathematics, Physical Education and Visual communication.

21 Adult & Continuing Education; Anna Centre for Public Affairs; Anthropology; Arabic, Persian & Urdu; Bioinformatics; Centre For Sangappalagai for Tamil Development; Christian Studies; Computer Science; Counselling Psychology; Cyber Forensic & Information Security; Defence & Strategic Studies; Education; English; French; Hindi; Indian Music; JBAS Centre For Islamic Studies; Jainology; Kannada; Legal Studies; Library & Information Science; Malayalam; Management Studies; Material Science; Network System & Information Technology; Physical Chemistry; Physical Education; Politics & Public Administration; Saiva Siddhanta; Sanskrit; Social Work; Sociology; South East Asian Studies; Tamil Language; Tamil Literature; Telugu and Vaishnavism.

- In 16 out of 32 sampled colleges, which had recognition under Section 2(f) of UGC Act, 90 faculty members conducted 92 research projects during 2014-19 with UGC funds.

Thus, Audit observed that the universities lacked research-orientation due to lack of initiatives by several of their faculty members. Further, the Universities did not monitor the situation of research activity and probe the underlying reasons behind the failure of faculty to undertake research.

2.1.8.2 Other Audit findings on research

(i) Submission of thesis beyond prescribed time

During 2014-19, a total of 3,151 students enrolled for Ph.D in different departments of AU (881), BDU (1,000), MTWU (346) and UoM (924). Audit, however, found instances of non-completion of their research and submission of thesis within the stipulated time.

- In BDU, 437 scholars had not submitted the thesis within the prescribed time limit of three to five years.
- In MTWU, out of 111 students registered for Ph.D between 2010-11 and 2012-13, there was no response from 29 students.
- Details of scholars who did not submit their thesis within the prescribed time limit was not compiled by AU and UoM.

(ii) Ineligible scholars enrolled in Ph.D

In AU, 881 (476 full time and 405 part time) Ph.D scholars were enrolled during 2014-19, and the enrolment was increasing over the years. Research Advisory committee (RAC) had fixed the minimum cut off marks for Ph.D pre-registration as 45 *per cent* in the qualifying entrance examination. It was seen from the minutes of the meeting of RAC held between September 2014 and April 2018 that in order to ensure availability of enough number of candidates for Ph.D in every discipline, the cut off marks were reduced so that at least one third of the candidates who appeared in the entrance examination qualified for registration. Audit observed that pursuing Ph.D requires a good academic background, and selection of unqualified students would have an adverse impact on the quality of research. The University replied (November 2020) that the practice of reducing cut off marks is withdrawn.

(iii) Publication of theses in Shodh Ganga

UGC envisaged (June 2009) uploading of electronic version of theses and dissertations by the researchers in the UGC sponsored online repository called *Shodh Ganga*. The objective of *Shodh Ganga* is to facilitate open access to Indian theses and dissertation to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, will not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would also prevent problems of duplication of research and poor quality resulting from the "poor visibility".

- In AU, theses relating to 1,230 Ph.Ds awarded during the period 1990 to 2018, were uploaded in the *Shodh Ganga* website with

delay ranging from one to nine years. In 878 cases, the delay was more than five years.

- MTWU had uploaded only 51 theses in the *Shodh Ganga* website out of 330 Ph. D's awarded during 2014 -19.
- UoM performed well and had uploaded all theses during 2014-19 in the *Shodh Ganga* project. The University had uploaded 11,685 theses as of September 2020; and obtained second place in uploading highest number of thesis at all India level, after University of Calcutta.
- As of December 2020, BDU had uploaded all the 5,931 theses in *Shodh Ganga* website for Ph.Ds. The University did not maintain year-wise details of theses uploading.

Non-uploading and delayed uploading of theses by AU and MTWU could delay the acrual of benefits to the scientific community through further research in that area.

(iv) Research centres

The goal of a research centre is to enable interaction among faculty, scholars, students and industry to enhance research opportunities, academic excellence, real-world problem solving, knowledge creation and dissemination.

Audit found that in UoM, eight[22] out of fourteen research centres were not functioning as they neither handled any research projects nor trained a Ph.D scholar. Thus, the intended purpose of offering programmes and research activities was not achieved. In two centres[23], sampled by Audit, it was found that there were no physical buildings or separate rooms for the centres and no students were enrolled for any course in the centres. Audit however, observed that during 2016-19, these non-functional centres incurred contingent expenditure of ` 0.34 lakh on electricity, wages, etc.

2.1.8.3 Research papers and publications

According to UGC Regulations, 2016, the Academic Performance Indicators for career advancement *inter alia* stipulates publication of a minimum five research papers for promotion from Assistant Professor to Associate Professor and three more research papers to qualify for promotion to the level of Professor for career advancements.

The number of research papers published in UGC notified Journals and number of books and chapters in edited volumes/books published by teachers of the sampled universities during 2014-19 is given in **Table 2.7**.

22 Centre for Population studies, Centre for Ocean & Coastal studies, Centres for Natural Hazards & Disaster studies, Endangered languages, Water resource management, Neurotoxicity, Stem cell and Infrastructure management studies.

23 Centre for Population studies and Centre for Ocean & Coastal studies.

Table 2.7: No of research papers published during 2014-19

Name of university	Average number of full time teachers during 2014-19	Papers published		Books and chapters in edited volumes/published, and papers in national/international conference proceedings	
		Number	Average per teacher	Number	Average per teacher
(1)	(2)	(3)	(4)	(5)	(6)
AU	201	4,482	22	2,317	12
BDU	156	1,921	12	789	5
MTWU	60	727	12	276	5
UoM	257	899	4	2,460	10

(Source: Data furnished by respective universities)

AU, despite being a small and a relatively new University, performed well in terms of research output through papers and publication. It was also observed that UoM with 50 *per cent* of faculty positions lying vacant, as commented in **Paragraph 2.1.6.2**, performed poorly.

2.1.8.4 Receipt and utilisation of research grants

As per para 3.3 of NAAC Manual, HEIs have to be actively engaged in promotion of research through evolving appropriate policies and practices, making adequate resources available and encouraging active research involvement of teachers and scholars in research. Analysis of grants received for research activities disclosed that all the sampled universities, except BDU, depended largely on Government grants as given in **Table 2.8**.

Table 2.8: Receipt and utilisation of research funds

Name of University	Grants received from (` in crore)			Utilisation of grants received from (in *per cent*)			Number of research projects undertaken during 2014-19	Number of research projects completed within the prescribed time period
	Govern-ment Sources	Non-Govern-ment sources	Total	Govern-ment sources	Non-Govern-ment sources	Total grants		
AU	16.81	1.19	18.00	91	99	91	107	56 (42 in progress)
BDU	70.92	13.65	84.57	100	57	93	218	145 (55 in progress)
MTWU	1.84	0	1.84	66	0	66	28	8 (9 in progress)
UoM	140.34	0.58	140.92	48	67	48	390	Details not maintained

(Source: Records of respective universities)

Audit scrutiny of financial records relating to conduct of research programmes in UoM revealed that for two projects[24] under the Centre for Potential Excellence in Particular Area (CPEPA) project, UGC allocated ` 1.75 crore for creation of capital assets (for purchase of equipment). UoM could spend only ` 70 lakh for the purpose and failed to create the additional assets. As UGC instructed UoM (April 2018) to return the unspent amount along with interest, the work remained incomplete. Thus, UoM failed to utilise the grant as planned in the two projects and lost the grant of ` 1.75 crore.

[24] CPEPA Life Science - Department of drugs from medicinal plants for human welfare and CPEPA Earth Science - Climate change and its impact on mangrove ecosystem.

Thus, Audit observed that the universities are far from becoming self-reliant on research funds through sponsored projects. Except in the case of BDU, the universities received over 90 *per cent* of research funds only from Government sources.

2.1.9 Access and equity in higher education

2.1.9.1 Easy access to higher education

Access to higher education has been defined as availability of sufficient number of institutions across the serviced region to adequately fulfil the demand from that region. Equity means equal opportunity to all sections of the society to participate in higher education.

Ensuring equitable access to quality higher education is one of the major outcomes expected by Government. Every year, MHRD conducts a web-based All India Survey on Higher Education (AISHE). As per AISHE reports, the number of universities, colleges, college density and average enrolment per college in Tamil Nadu during 2014-19 were as shown in **Table 2.9**.

Table 2.9: Number of all types of higher education institutions in Tamil Nadu

Year	Number of all types of universities	Number of all type of colleges	Colleges density	Average enrolment per college
2014-15	58	2,477	33	854
2015-16	58	2,368	32	895
2016-17	58	2,368	33	922
2017-18	58	2,472	35	919
2018-19	59	2,466	35	924

(Source: AISHE Reports)

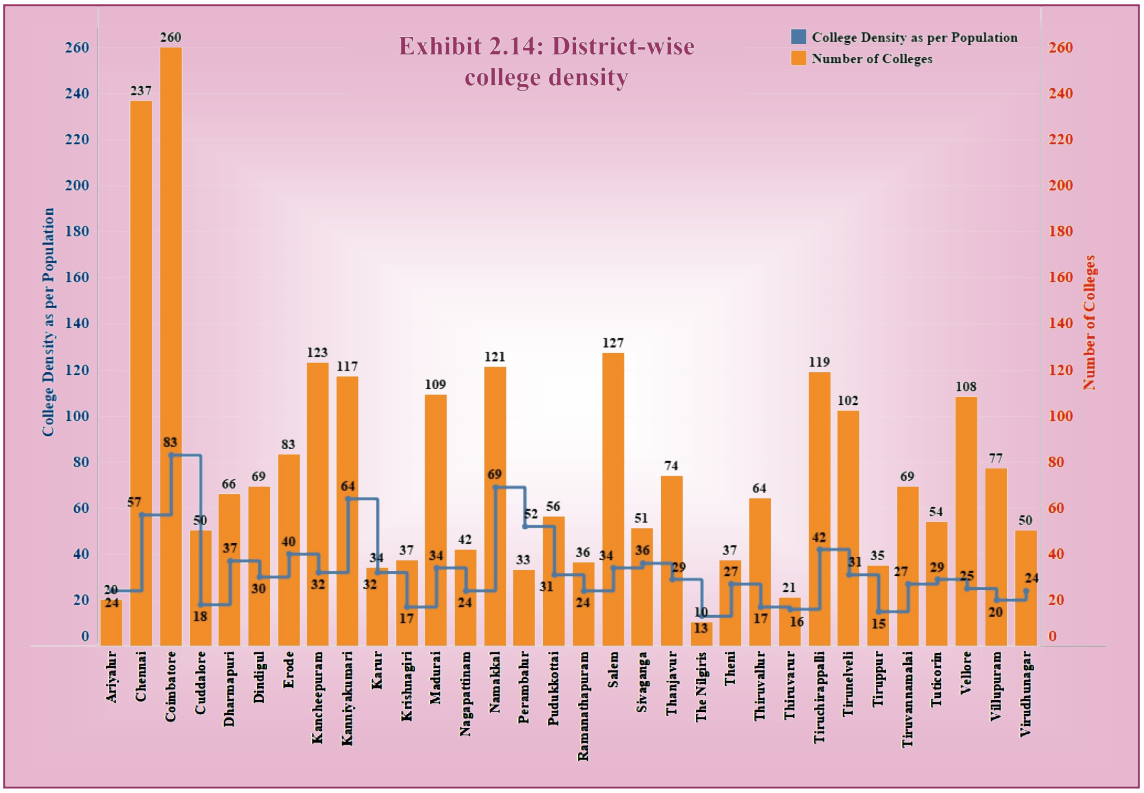
In Tamil Nadu, the number of universities increased from 58 to 59 during 2014-19 and the number of colleges marginally declined from 2,477 in 2014-15 to 2,466 in 2018-19, despite Government starting 31 new Arts and Science colleges during this period. The decline in the number of colleges was due to closure of some self-financing colleges, especially Engineering colleges during this period. The college density in the State at 35 per one lakh of age group population was higher than the national average of 28 colleges per one lakh population.

Despite a reduction in the number of colleges, the college density increased from 33 to 35 per one lakh of age group population due to decrease in age group population over the years.

(i) Disparity in accessibility of higher education

The 'Vision 2023' of GoTN seeks to provide inclusive higher education addressing both access and equity issues. In pursuance of this vision, GoTN established 31 Government Arts and Science Colleges, during the years 2014-19.

Audit, however, found abnormal disparity in college density[25] (all types of colleges) among districts, which varied from just 10 colleges per lakh in the Nilgiris district to 83 colleges per lakh in Coimbatore district as of March 2019, as shown in **Exhibit 2.14**.



(Source: AISHE Report, 2019 and Census 2011)

It was also found that in 14 districts the college density was less than the all India average of 28 colleges per lakh population. Incidentally, it was found that five[26] of the six districts in the State with more than 25 *per cent* SC/ST population as per 2011 Census had lower college density than all India average, which indicated issues in accessible higher education to the disadvantaged segments of the society. Audit found that while the average number of Government funded colleges[27] per district was 9.4 (301 such colleges in the 32 districts of the State), four of these five districts had fewer number of Government funded colleges than the State's average. The Nilgiris district with a poor college density of just ten per one lakh of age group population, had only four Government funded colleges. Thiruvarur district with a college density of 16, had five such colleges. Cuddalore and Villuppuram districts with a college density of 18 and 20 respectively had six such colleges each. While the number of private colleges were greater than Government funded colleges in these districts there was an urgent requirement

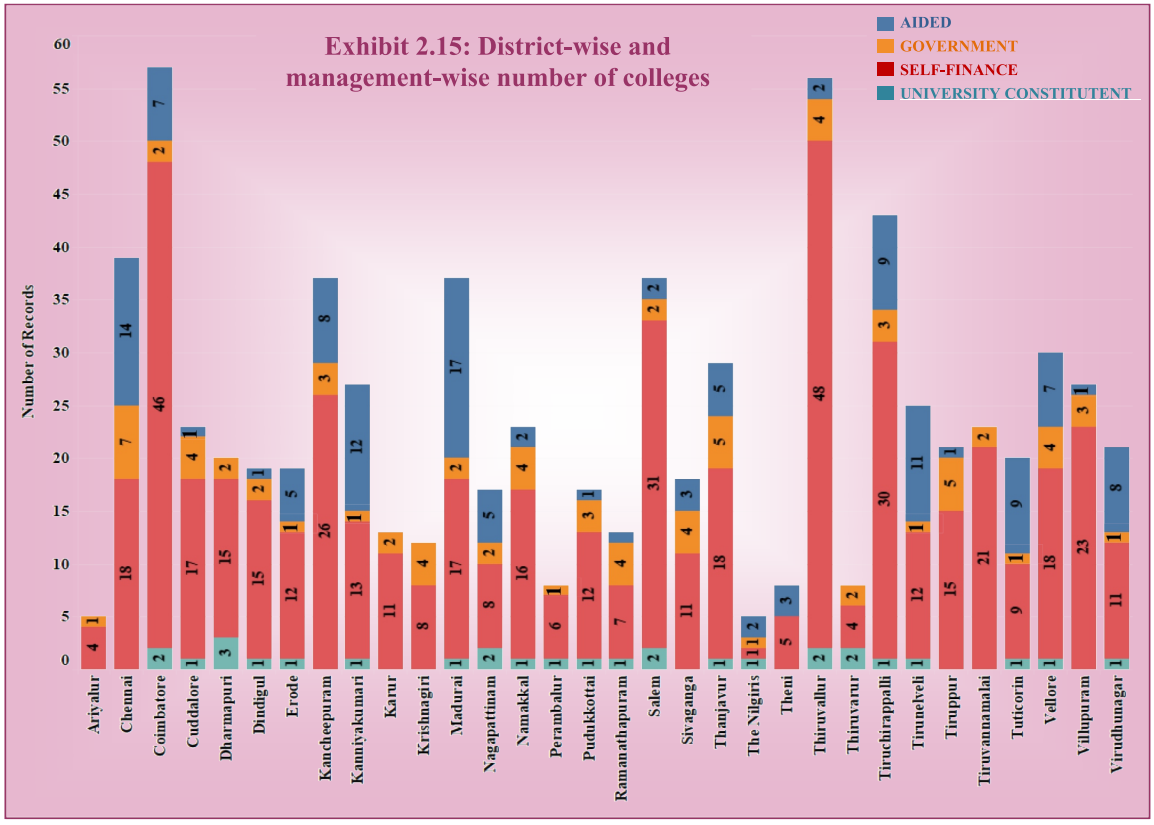
25 To identify the college density, 2011 census population in the age group between 10 and 15 was taken, so that these population will fall in the age group of 18-23 for the year 2019-20. This data was linked with the data set comprising of 2,466 colleges in the State and plotted to arrive at the college density among districts.

26 Cuddalore, Nagapattinam, The Nilgiris, Thiruvarur and Villupuram.

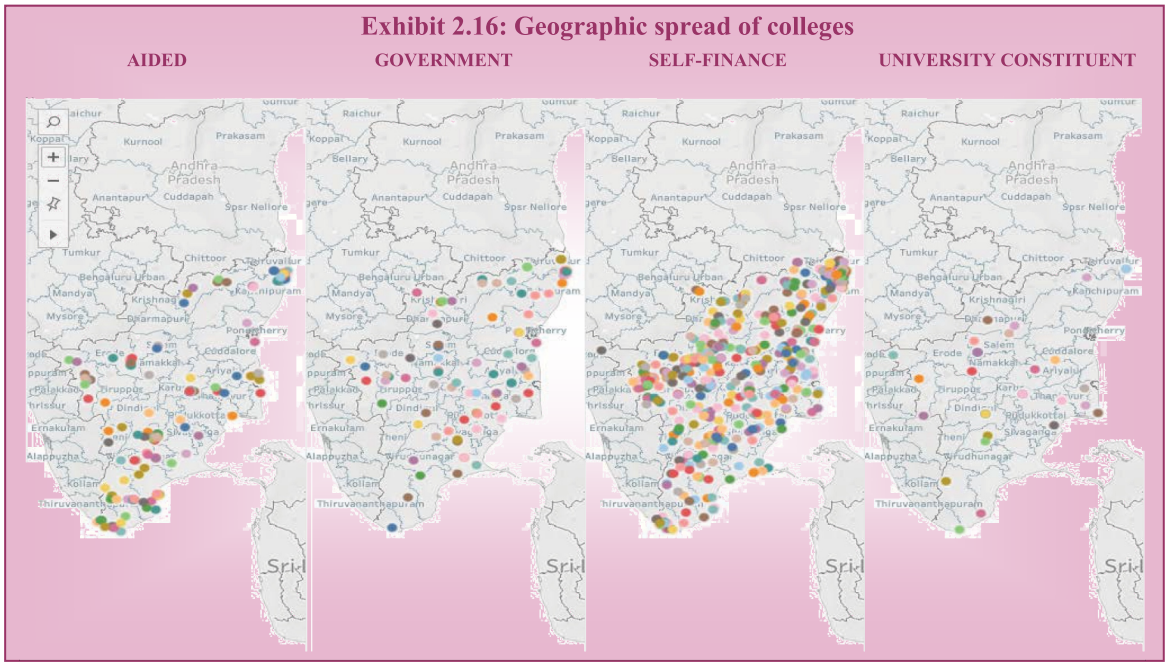
27 Includes Government colleges, Government aided colleges and University constituent colleges.

for GoTN to establish more colleges in these districts in order to provide students grater access to higher education.

Geographic spread of Arts and Science colleges of different management *viz.,* Government, Government aided, University constituent and self-financing colleges are given in **Exhibits 2.15** and **2.16**.



(Source: AISHE Report, 2019 and DCE)



(Source: AISHE Report, 2019 and DCE)

As could be seen from **Exhibits 2.15** and **2.16**, the self-financing colleges contributed greatly to the higher college density of the State.

(ii) Gross Enrolment Ratio

The State and national level data on Gross Enrolment Ratio[28] (GER) in higher education for the period from 2010-11 to 2018-19 as per AISHE reports are given in **Table 2.10**.

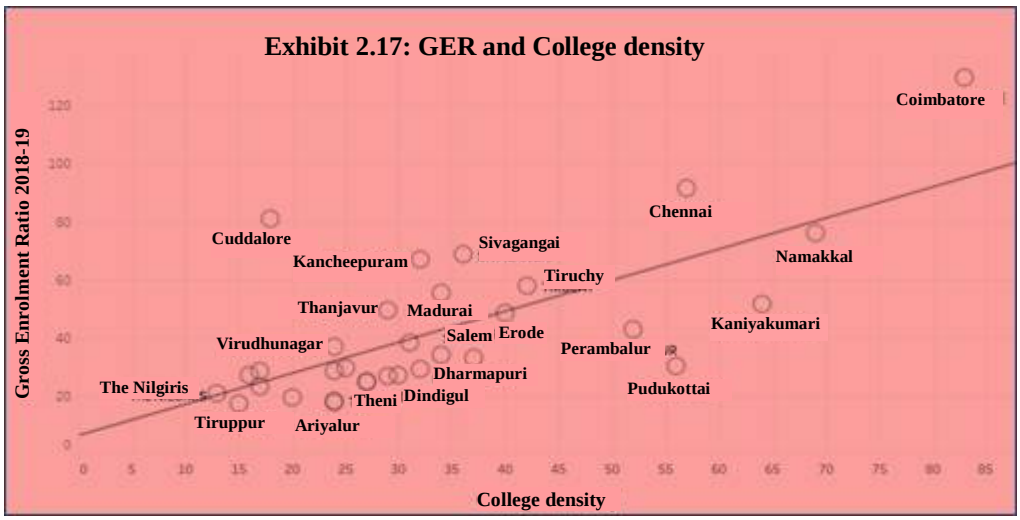
Table 2.10: Data of GER

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
GER of India	19.4	20.8	21.5	23.0	24.3	24.5	25.2	25.8	26.3
GER of Tamil Nadu	32.9	40.0	42.0	43.0	45.2	44.3	46.9	48.6	49.0
Ranking of Tamil Nadu	5	2	3	4	3	3	2	2	3
GER of best ranked State	41.4	42.2	54.6	55.8	56.1	57.6	56.1	56.4	53.9

(Source: AISHE reports)

GER increased from 32.9 in 2010-11 to 49 in 2018-19. At all India level, in GER, the State ranked third in 2018-19. Audit, however, analysed district-wise GER using Census data on age group population and enrolments as per AISHE data and found that as of 2018-19, eight districts of the State had lower GER than the all India average of 26.3 during that period. Though inter district movement of students could impact the district-wise GER, Audit found abnormal variation among districts; While Ariyalur, Ramanathapuram, The Nilgiris, Tiruppur and Villupuram districts had GER below half of the State's average, GER of Coimbatore district was three times that of the State's average. The GER had a close relationship with college density as shown in **Exhibit 2.17** and it was found that under-performing districts had a low college density as discussed in **Paragraph 2.1.9.1 (i)**.

Exhibit 2.17: GER and College density



(Source: AISHE Report, 2019 and DCE)

28 Gross Enrolment Ratio in Higher Education in India is calculated for 18-23 years of age group. Total enrolment in Higher Education, regardless of age, expressed as a percentage to the eligible official population (18-23 years) in a given year.

(iii) Availability of academic choice

(a) Enrolment

Position of degree-wise enrolment for the years 2016-17 to 2018-19 is shown in **Table 2.11**.

Table 2.11: Degree programme-wise enrolment

Year	Type of college	Total no. of colleges	Total enrol-ment	UG		PG		M.Phil		Ph.D	
				Male	Female	Male	Female	Male	Female	Male	Female
2016-17	Govt.	256	5,79,028	2,08,999	2,83,948	31,422	47,001	2,027	3,557	919	1,155
	Private	467	4,06,949	1,67,112	2,03,106	18,486	16,565	601	786	136	157
2017-18	Govt.	259	5,79,088	2,09,117	2,82,941	33,140	48,257	1,210	2,400	858	1,165
	Private	496	3,60,329	1,46,478	1,54,689	18,474	16,895	22,886	590	155	162
2018-19	Govt.	271	5,27,645	1,83,054	2,75,240	16,802	45,585	1,072	2,185	1,592	2,115
	Private	542	3,89,966	1,78,563	1,69,856	19,956	18,956	768	1,532	181	154

(Source: Details furnished by DCE)

Fifty nine *per cent* of total enrolment was in Government and Government aided colleges. Enrolment in both Government and private colleges had decreased by nine and four *per cent* respectively in 2018-19 when compared to that in 2016-17. Enrolment of female students was more than male students in both Government and private Arts and Science colleges, due to higher number of boys opting for career oriented courses such as catering, courses in Industrial Technical Institutes and other professional courses.

Instances of significantly poor admission in few of the programmes offered by the sampled universities are discussed below:

Alagappa University: The average enrolment of students ranged between 25 and 59 *per cent* of the sanctioned strength in respect of six programmes *viz.*, Tamil, Master of Social Work, History, Nanoscience, Oceanography and Bioinformatics.

Bharathidasan University: In five programmes, *viz.*, Economics, Environmental Science & Technology, Human Resource Management, Development Studies and Sociology, the demand and admission were less than 20 *per cent* of the sanctioned intake during 2014-19.

Mother Teresa Women's University: The enrolment during 2014-19 was only 26 to 32 *per cent* of the sanctioned intake.

- PG programmes in Computer Science had no enrolment during 2014-19.
- PG programmes on Counselling, Visual Communication, Economics and Library Information Science did not have any admission for four years during the five year period of 2014-19.
- In seven PG programmes in Biotechnology, Textiles and Clothing, Social Works, Women Studies, Mass communication, Education and History, the average enrolment of students during 2014-19 was 3 to 24 *per cent*.

MTWU reasoned that the location of the University in a hilly terrain with high cost of living and poor socio-economic background of the students was the reason for low enrolment.

Audit, however, observed that the University failing to attract students could be attributed to factors like low placement record, non-introduction of popular career oriented programmes, etc., as commented in **Paragraphs 2.1.4.2 and 2.1.5.3.**

University of Madras: In UoM, the demand was more for PG programmes in the Schools of Mathematics, Physical Science, Life Science and Chemical Science, where only 3 to 19 *per cent* of aspirants secured admission during 2014-19. It was found that the sanctioned intake for these programmes could not be increased for want of faculty and facilities. In the meantime, due to low demand, the intake capacity of 63 programmes were reduced by 68 *per cent* during 2014-19 (**Appendix 2.4**). In the 2014-19 period, no admissions were made during one to five years in 27 approved Masters programmes of the University.

- Despite demand, students are admitted in the Masters programme in Law only on alternative years due to non-availability of adequate faculty members.
- Student admissions was stopped for M.D. (Pathology) and M.Sc. (Biomedical Science) programmes, which had high demand, due to non-availability of faculty members. M.D. (Pathology) and M.Sc. (Biomedical Science) programmes were also discontinued from 2014-15 and 2016-17 respectively, as the retired faculty members were not replaced.
- Due to lack of demand, admissions were not made in M.A. in South and South East Asian Studies, M.A. in Divyaprabandam and M.A.in Folk Music during 2014-19 and no admissions were made during one to three years in M.A. in Christian Studies, M.A. in Financial Economics and M.A. in Saiva Siddhantha.

Audit observed that the universities did not review the reasons for low demand for several of their courses, and non-availabilty of faculty was instrumental in students being unable to pursue higher studies in key areas such as law and pathology. The lack of faculty put potential students at a disadvantage.

(iv) Enrolment in sampled colleges

Government colleges and aided colleges prepared rank list for student admission. The sampled self-financing colleges, however, admitted students by following spot admission procedure for all programmes. Audit observed that the spot admissions for self-supported courses, was essentially on first come first served basis which was contrary to the admission procedure in Government colleges which granted admissions in the order of merit. **Table 2.12** shows the demand, sanctioned intake and admission during 2014-19.

Table 2.12: Sanctioned intake and students admitted in affiliated colleges

Nature of college	Demand	Sanctioned Intake	Admitted
Government	1,75,265	54,818	51,300
Aided	1,25,563	56,832	49,730
Self-finance	31,671	46,603	29,898

(Source: Data furnished by respective colleges)

The above **Table 2.12** shows that demand was about 3.4 times, 2.5 times and 1.5 times of the sanctioned intake in Government, Aided and self-financing colleges respectively. Admission was, however, less than the sanctioned intake and very less in self-financing colleges.

2.1.9.2 Ensuring equity

(i) Gross Enrolment Ratio of disadvantaged groups

Data of GER of SC and ST categories and Gender Parity Index of All India and Tamil Nadu for the period 2014-19 are given in **Table 2.13**.

Table 2.13: GER of SC and ST category and Gender Parity Index

Year	GER of SC		GER of ST		Gender Parity Index	
	India	Tamil Nadu	India	Tamil Nadu	India	Tamil Nadu
2014-15	19.10	33.20	13.70	32.30	0.92	0.92
2015-16	19.90	34.40	14.20	31.80	0.92	0.92
2016-17	21.10	38.30	15.40	36.00	0.94	0.95
2017-18	21.80	42.10	15.90	40.50	0.97	0.98
2018-19	23.00	41.60	17.20	37.80	1.00	0.97

(Source: AISHE Reports)

It was observed that the GER of SC and ST students in the State was much higher than all India GER of SC and ST students. Audit, however, found that the GER of SC students (41.6 *per cent*) and the GER of ST students (37.8 *per cent*) in the State as of 2018-19 was much lower than the overall GER of 49 *per cent*. In this context, it is pertinent to mention that districts with major SC and ST populations had lesser accessibility to higher education as commented in **Paragraph 2.1.9.1 (i)**.

(ii) Gender equity

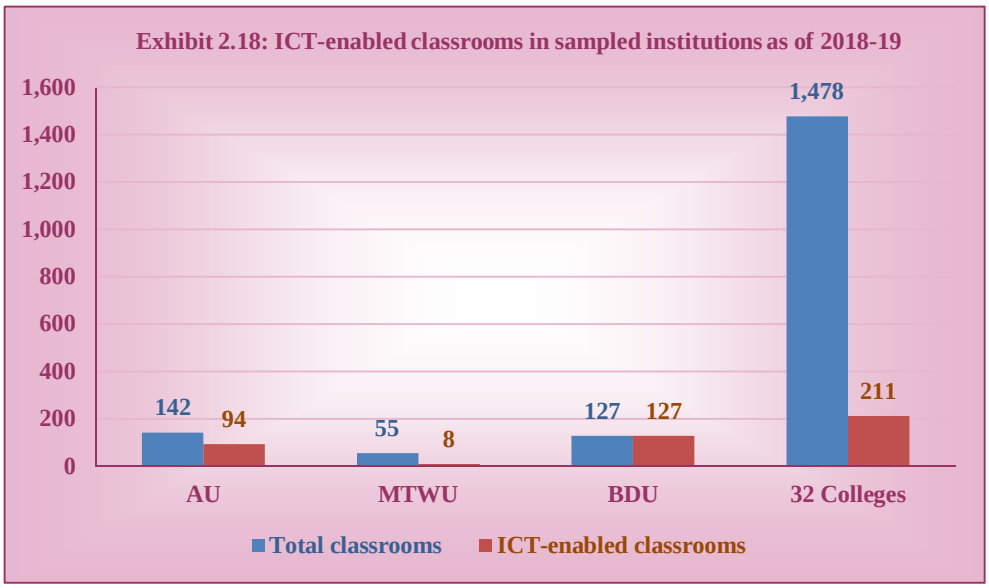
As of 2018-19, the State had a Gender Parity Index of 0.97, which meant that 97 female students were enrolled in higher education for every 100 boys enrolled. The State performed poorer with an index of 0.97 in comparison with all India Gender Parity Index of 1.0. The State had a higher sex ratio of 999 females per 1,000 males, as against 943 females per 1,000 males at national level.

The HEIs of the State fared well with reference to national statistics regarding equitable access to higher education. However, Audit observed that some districts, mostly with significant population of disadvantaged groups, lagged behind the State average in enrolment and college density.

2.1.9.3 Infrastructure

(i) Information and Communication Technology facilities

UGC envisages the use of Information and Communication Technology (ICT) for teaching and learning in HEIs. ICT-enabled facilities include LCD projectors, Wi-Fi/LAN, smart class, Learning Management System, audio video recording facilities etc. NAAC also considers percentage of ICT-enabled classrooms and student-computer ratio while granting accreditation to an institution. The details of ICT-enabled classrooms in the sampled institutions was as given in **Exhibit 2.18**.



(Source: Data collected by Audit from respective universities/colleges)

In UoM, 110 classrooms were ICT-enabled. However, data on the total number of classrooms was not made available.

(a) ICT facilities in universities

AU, BDU and MTWU had upgraded 66 *per cent*, 100 *per cent* and 14 *per cent* of classrooms as ICT-enabled classrooms.

University of Madras: During joint physical verifications of classrooms in 15 sampled departments of the University in January 2020, Audit found that only 35 of the 38 reportedly ICT-enabled classrooms[29] had some form of ICT facilities; of which, 19 classrooms had only a white board and a projector, two classrooms had only projectors, five classrooms had only computers and three classrooms had just air conditioning facility. Three had no ICT facilities and only six were fully equipped.

Audit found that in 2012, UGC approved ` 1.70 crore for creating ICT infrastructure. Out of which, only a sum of ` 1.04 crore was utilised as of March 2020. Due to delay in implementing the project and non-furnishing of utilisation certificate, the University did not receive the entire sanctioned amount from UGC, leading to non-provision of ICT infrastructure in all classrooms.

[29] As reported by UoM to NAAC.

(b) ICT facilities in sampled colleges

Among the 32 sampled colleges, seven[30] colleges did not have any ICT-enabled classrooms. Though 25 colleges claimed that they had 1 to 34 ICT-enabled classrooms, such classrooms had just one projector and a screen. Other gadgets *viz.*, Wi-fi/LAN, smart class, Learning Management System, audio video recording facilities etc., were not available in these classrooms.

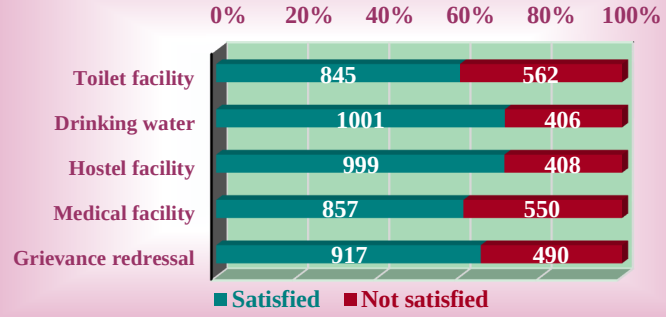
Thus, Audit observed that while the universities except MTWU had fair degree of ICT penetration, the colleges continue to lag behind.

(ii) Built environment

Regulation 3.1 of UGC (Affiliation of Colleges by Universities) Regulations, 2009 prescribed that affiliated colleges should have minimum infrastructure facilities such as a college building, classrooms, laboratory, library, etc., as specified in the Regulations.

The survey conducted by the Audit teams among 1,407 students of the sampled institutions disclosed that about 29 to 40 *per cent* of the respondents were not satisfied with toilet facilities, medical facilities, drinking water facilities, hostel facilities and grievance redressal mechanism **(Exhibit 2.19)**. Audit found that the level of dissatisfaction with toilet facilities, drinking water facilities, hostel facilities, medical facilities and grievance redressal mechanism was the highest with Government colleges wherein 54, 44, 40, 54 and 48 *per cent* respectively of the students expressed dissatisfaction. Whereas, aided colleges presented a better picture with lower dissatisfaction levels at 16 to 31 *per cent* on toilet facilities, drinking water facilities, hostel facilities, medical facilities and grievance redressal mechanism. Self-financing colleges also performed substantially better in terms of student's satisfaction with these facilities.

Exhibit 2.19: Student survey- Percentage satisfaction



(Source: Student survey by Audit)

Thus, Audit observed that while the above discussed facilities do not relate to the classroom, they are essential for a conducive academic environment and the absence of these facilities in Government colleges would make it difficult for students.

[30] Alagappa University Model Constituent College of Arts & Science, Paramakudi; Bharathidasan University Constituent Arts & Science College, Nannilam; Bharathidasan University Model College, Aranthangi; Government Arts College, Tiruttani; Pachaiyappa's College for Women, Kancheepuram; Sri Santhoshi College of Arts & Science, Maduranthakam and University Constituent College, Thiruvottiyur.

(a) Built environment in universities

(i) Incomplete building in UoM

With a view to facilitate research and to overcome the problem of water logging in the existing main building located in a low lying area, UoM commenced (December 2012) the work of constructing a modern multi-storeyed building at its Taramani campus. The contractor stopped (December 2014) the work after completing 68 *per cent* of the work, due to non-payment of outstanding bills to the tune of ` 6.44 crore. Due to paucity of funds, UoM could not pay the bills of the contractor and approached (December 2014) GoTN for funds.

This issue was included in the CAG's Audit Report (G&SSA) for the year ended 31 March 2017. To an Audit enquiry on the present status (**Exhibit 2.20**), UoM replied (February 2020) that GoTN had sanctioned (December 2019) ` 24.15 crore for completing the balance work. The work was entrusted (January 2020) to the Public Works Department. The work was yet to start (December 2020).

Exhibit 2.20: Facade of the incomplete building

(Source:Audit Team)

The abnormal delay had caused the Basic Medical Science Departments to function from an unsafe building. The failure to complete the building, impacted achievement of the objective of furthering and facilitating research in bio-medical sciences with better laboratory infrastructure.

(ii) Cleanliness of buildings in UoM

A joint physical inspection (February 2020) of the campus buildings of UoM revealed poor maintenance of various buildings. In the ground floor of the Centenary building, outside Controller of Examinations' room and Ph.D. Section rooms, lot of old answer paper bundles and old research theses were kept in the open, obstructing the passage. Old unserviceable computers and furniture in large numbers were also kept in the ground floor corridors, thereby affecting the aesthetics of the building (**Exhibits 2.21** and **2.22**).

Exhibit 2.21: Waste records not disposed

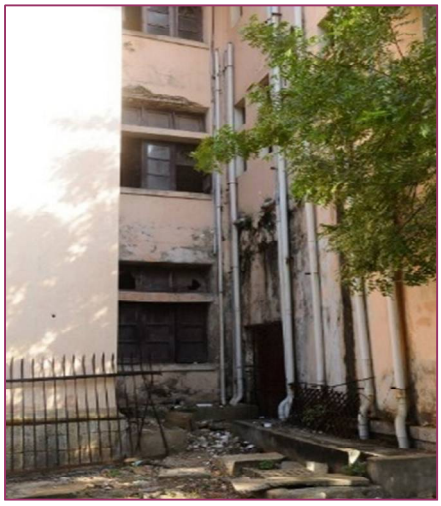
Exhibit 2.22: Stacking of unused material

(Source: Joint physical inspection)

Audit noticed that there was no system for periodical inspection of buildings and to prioritise immediate repair. Wastes were dumped along university corridors and waste dumps on the campus were not cleared. The buildings (**Exhibits 2.23** and **2.24**) had broken ceilings and walls, water leakages, damaged floor, unclean toilets, broken windows and doors and bad odour due to leaky sewer lines. As a result of neglect, the aesthetically designed buildings of this University had lost their visual appeal and concerns of hygiene and sanitation could not be ruled out.

Exhibit 2.23: Damaged roof and time expired fire extinguisher

Exhibit 2.24: Leaky sewer lines in Chepauk campus



(Source: Joint physical verification)

(iii) Laboratories of UoM

There are 16 science departments running PG/M.Phil/Ph.D programmes in UoM. A joint physical verification of the laboratories of nine[31] departments revealed that three laboratories were seen cramped with equipment. Equipment in working condition were kept in corridor due to want of space.

[31] Biochemistry, Biophysics, Biotechnology, Botany, Nanoscience and Nanotechnology, Nuclear physics, Organic chemistry, Theoretical Physics and Zoology.

Equipment purchased using project funds were kept in faculty's small rooms, causing inconvenience to accommodate all the students. It was further noticed that UoM had not established a system for annual physical verification of labarotory equipment and for disposal of unserviceable equipment. Obsolete equipment were strewn along the corridor, obstructing free movement. Details of equipment lying idle for several years are given in **Table 2.14**.

Table 2.14: Equipment kept idle

Department/ Laboratory	Name of equipment	Cost (` in crore)	Status
Nanoscience	Confocal Raman Microscope, X-ray photon spectroscopy, Field emission scanning electron microscope, High Resolution transmission electron microscope	14.89	Purchased in 2010-11. Not working from 2015 due to expiry of AMC. Students go to IIT for experiments.
Nuclear Physics	Positron Angular Correlation	1.00	Source not purchased

(Source: Data collected from respective departments of UoM)

Audit observed that funds in the range of ` 11,000 to ` 4.68 lakh provided to various departments every year, during 2014-15 to 2018-19, was not sufficient for the departments for maintaining the equipment resulting in several equipment not being repaired and hence could not be used by the students. A list of unserviceable equipment in the sampled departments is given in **Appendix 2.5**.

Besides, the 63 Students' labs and 105 Research labs of the University had just two regular Lab Assistants/Lab Attenders and six casual/contract staff. Out of the 30 sanctioned posts of Lab Assistants/Lab Attenders, 28 were vacant. As a result, the research scholars and faculty members handled all lab related maintenance works.

Thus, by not providing adequate funds and manpower to run the laboratories, costly equipment were lying unutilised and this impacted the support required by students in research and practical work.

(iv) Non-establishment of Commonwealth Mother Teresa Women's International Centre

With a view to enrich higher education and to build diverse culture and perspectives in the classrooms, which would prepare students for global work place, GoTN and the Association of Commonwealth Universities had agreed in principle to establish Tamil Nadu Commonwealth Mother Teresa Women's International Centre at MTWU, Kodaikanal with international students and academics.

The plan was to initially offer Certificate and Diploma programme in the areas of Yoga, Ayurvedic science, Music, Dance and Culture studies, etc., which would be open to all women who had completed school education including international students obtaining Commonwealth/other scholarships from universities across the globe.

GoTN sanctioned (October 2013) and released (December 2013 to July 2017) ` 5 crore for construction of building, purchase of books, computers and furniture and for recurring cost for three years. The building for the Centre was completed (August 2016) at a cost of ` 3.85 crore, and the balance grant of ` 1.15 crore was retained by the University. The Centre, however, has not started functioning. In the Exit Conference held on 17 November 2020, the Registrar, MTWU stated that steps were being taken to offer short-term courses by the Centre. In the absence of a tie up with the Association of Commonwealth Universities, the objective of the project was not achieved and the building constructed at a cost of ` 3.85 crore remained largely unutilised (**Exhibits 2.25** and **2.26**).

Exhibits 2.25 and 2.26: Commonwealth Mother Teresa Women's International Centre

(Source: Joint physical verification)

Thus, the project failed to take off due to lack of adequate efforts by the University.

(v) Idle equipment in BDU

School of Physics: Two expensive equipment, *viz.*, Physical Property Measurement System (PPMS) and Vibrating Sample Magnetometer (VSM) with accessories were procured (2009 and 2014 respectively) at a total cost of ` 2.29 crore, using funds provided by Department of Science & Technology, Government of India. The PPMS and VSM required regular refilling of high purity helium gas and liquid helium besides provision of Uninterrupted Power Supply (UPS). These equipment are used for research mainly by Ph.D scholars. During 2009-18, thirteen Ph.D students worked on these equipment and three more Ph.D students enrolled from January 2019 to July 2019. These equipment, however, could not be put to regular use from November 2018, due to non-refilling of helium and non-availability of batteries for the UPS. The Department estimated a requirement of ` 4.50 lakh for purchase of batteries and ` 3 lakh per year for regular maintenance of the equipment. The University did not sanction the required funds for purchase of helium and batteries (March 2020). As a result, these equipment could not be used for research, and 14 Ph.D scholars could not complete their research within the stipulated time.

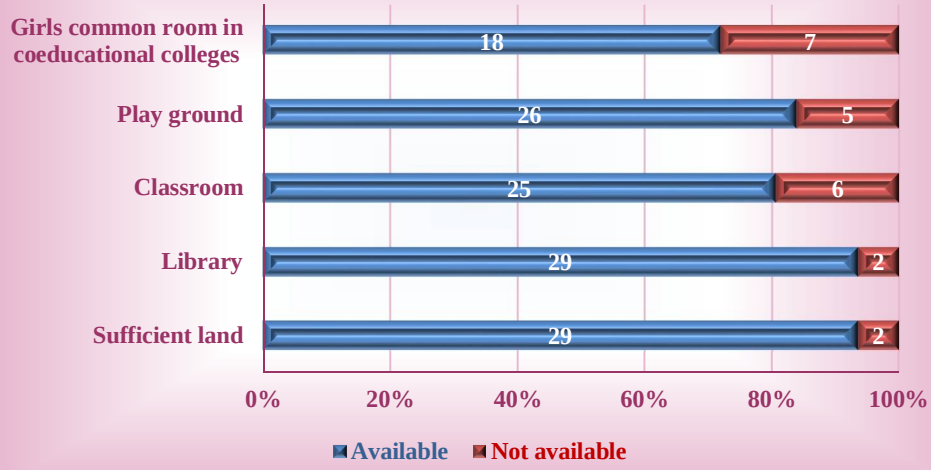
School of Chemistry: The Single-crystal X-ray diffraction equipment, in which X-ray methods are employed to determine arrangement of atoms within a crystalline specimen, and Electron Paramagnetic Resonance (EPR) spectroscope, an equipment for examination of free radicals and the other paramagnetic centres, purchased in January 2008 and June 2009 at a cost of ` 0.68 crore[32] and ` 0.92 crore[33] respectively were under repair from 2011 and 2013. BDU did not provide funds for rectifying the defects in the equipment leaving the scholars and faculty to take samples/experiments/analysis outside BDU on payment.

(b) Built environment in sampled colleges

(i) Inadequate infrastructure

The availability of the prescribed minimum infrastructure in the sampled colleges, with reference to the affiliation norms, disclosed shortage of selected important infrastructure as given in **Exhibit 2.27**.

Exhibit 2.27: Shortage of infrastructure in sampled colleges



(Source: Respective colleges)

Audit observed that shortage of prescribed minimum infrastructure would have an adverse impact on the environment provided to the students in the pursuit of higher education.

Improper upkeep and maintenance of building in the sampled colleges are discussed below:

(ii) Kundavai Naachaiyar Government Arts College for Women

Three helipads were formed in the playground of the college in 1995 in connection with VIP visit to the town. The helipads were still not removed and hence the playground could not be utilised for sports and games. As a result,

[32] As per December 2020 exchange rate.

[33] Purchase process was 1.35 crore in Japanese Yen equivalent to ` 0.92 crore as per December 2020 exchange rate.

55 of the 107 girl students, who had joined on sports quota had to travel two to four kilometres to other stadiums for practicing football, handball, hockey and athletics.

The allotment of ` 15,000 to each department for purchase and another ` 1,500 for maintenance of equipment was inadequate. As a result, 210 out of 255 compound microscopes, 109 out of 155 dissection microscopes and seven other equipment[34] in Botany Department were not in working condition, leaving the students to use the working instruments in batches. Similarly, in Zoology lab, three instruments[35] were unserviceable since 2018, as the funds allocated were not sufficient for purchase of new equipment and maintenance of those under repair.

(iii) Arignar Anna Government College, Musiri

In May 2015, the College purchased Emission spectrometer and IR and UV Spectrometers at a cost of ` 8.64 lakh and ` 11.99 lakh respectively using assistance provided by UGC. Audit scrutinised the log book and observed that the equipment were in a state of disrepair since February 2017 and were not rectified for want of funds. The students, therefore had to approach other colleges for conducting experiments involving these equipment.

2.1.10 Governance and management

2.1.10.1 State level Governance

(i) State Higher Education Council

Tamil Nadu State Council for Higher Education (TANSCHE), established in 1992, through an Act of Legislature is the agency for promotion and coordination of higher education in the State. GoTN constituted the Council of TANSCHE under the chairmanship of the Minister in charge of higher education with members drawn from academics, industry, scientific community and Government officers. In September 2013, GoI directed that State Higher Education Councils should be headed by eminent academicians. GoTN did not take any action to reconstitute the Council on the suggested lines. The Council of TANSCHE has not been reconstituted after 2015, leading to functioning of TANSCHE without the Council, the body envisaged under the Act to deliberate and guide its functioning. As a result:

- TANSCHE has not been functioning as an autonomous statutory body of experts with defined powers and responsibilities.
- Perspective plan for higher education was not placed before the Council for its approval.

[34] PH meter, digital based spectrophotometer, microcontroller based spectrophotometer, rotary shaker, research microscope, electronic top pan balance and refrigerator.

[35] Photo micrographic unit, UV-VIS Spectrophotometer and Cooling Centrifuge.

- TANSCHE did not serve as an interface between HEIs and UGC, All India Council for Technical Education, etc., in matters such as implementation of RUSA, NAAC accreditation, etc., leading to deficiencies in implementing RUSA and shortfalls in obtaining NAAC accreditation as commented in **Paragraphs 2.1.10.8** and **2.1.10.6** respectively.
- Another envisaged function of TANSCHE was to manage research and innovation funds under RUSA. In the absence of the Council to decide on distribution of such funds, TANSCHE was not involved in this activity and hence the envisaged system of administering and routing of GoI/GoTN grants/funds in a transparent manner was not achieved.

(ii) State Level Quality Assurance Cell

NAAC mandates setting up of State Quality Assurance Cell (SQAC) to promote quality in higher education. GoTN has not constituted the SQAC and no reasons were furnished to Audit for non-constitution. It was also found that there was no alternative institutional arrangement for carrying out the functions envisaged for SQAC. As a result, the State lacked an action plan for quality improvement in higher education through NAAC accreditation, leading to large number of colleges, especially Government colleges functioning without NAAC accreditation as commented in **Paragraph 2.1.10.6**.

TN State Academic Audit & Accreditation Council (TNSAAAC): GoTN formed (April 2008) TNSAAAC to carry out accreditation of all Arts and Science colleges once in two years. The State Council met twice in 2010 but is yet to commence its function (May 2019). No reason was furnished to Audit for the TNSAAAC's dormancy. Thus, the colleges are not accredited after academic audit at State Level and TNSAAAC was not facilitating NAAC accreditation as commented in **Paragraph 2.1.10.6**.

2.1.10.2 Institutional level governance

(i) Governing bodies of universities

Senate is the highest body of the sampled universities, except MTWU, which has an Academic Committee at the top. Besides reviewing policies and programmes, these bodies provide academic, administrative and financial oversight. In the sampled universities, except MTWU, the Syndicate is the executive body, which makes statues and exercises those powers that are not delegated to officers of the University[36]. In MTWU, the Executive Council makes statutes and exercises powers not delegated to officers of the University.

Audit scrutiny of the role played by these governing bodies disclosed the following:

[36] Chancellor, Pro-Chancellor, Vice-Chancellor, Registrar, Finance Officer and Controller of Examination.

- According to the respective Acts of the sampled universities, the Senate of the University is a body with broad-based membership representing different groups including (a) ex-officio members from Government and the University, (b) members nominated by the Chancellor and (c) other members elected from different sections, such as, university graduates, Head Masters (HM) of high schools in the jurisdictional area of the University, elected members of Local Bodies, etc. It was noticed that the Senate of the universities had membership only from the ex-officio and nominated category. The Senates did not have elected members. Thus, the envisaged broad-basing, which would help in strengthening the functioning of the Senate was not achieved.

- Audit found that on an average 85 *per cent* of members attended Senate meetings, which is convened twice a year. Government officers from Education, Revenue, Finance, Health & Family Welfare and Social Welfare, who are ex-officio members, did not attend any Senate meetings of AU, BDU and UoM[37] and the Academic Committee meetings of MTWU during the period 2014-19. Thus inter departmental coordination and multi-disciplinary expertise in decision making was not facilitated due to the absences of Government officers in Senate meetings.

(ii) Internal Quality Assurance Cell (IQAC)

The UGC has taken a policy decision to direct all universities to establish IQACs. All sampled universities had established IQACs. Audit, however, found the following deficiencies in the functioning of IQACs:

(a) Feedback from stakeholders: Receiving feedbacks on curriculum, course design, and pedagogy of classroom interaction, extent of learning, etc., from students, parents and other stakeholders on quality related issues is one of the functions of IQACs. Audit found that in UoM the feedback was not consolidated since November 2014. Similarly, in MTWU, the feedback was not consolidated during 2014-18. Audit observed that non-consolidation of feedback by two universities proved that the feedback was not put to use for quality improvement.

(b) Maintenance of database: Development and maintenance of institutional database through Management Information System is also a function of IQACs. In UoM, the IQAC, *inter-alia*, maintains database of enrolment, student placement and students going for higher education. Audit found that the figures furnished to National Institutional Ranking Framework (NIRF) were in variance with the data shown in the Annual Report and Annual Quality Assurance Reports as given in **Table 2.15**. The wide variations in the data made it unreliable.

[37] Except three officers attending Senate meetings of BDU in 2017 and three others attending the Senate meeting of UoM in March 2018.

Table 2.15: Inaccuracies in data

Year	Number of students placed as per			Number of students pursued higher studies as per		Enrolment as per details furnished in/by		
	NIRF	AQAR	AR	NIRF	AR	NIRF	AQAR	AR
2014-15	153	153	604	148	240	1,195	2,371	1,187
2015-16	179	179	364	104	197	1,077	1,174	1,110
2016-17	254	268	337	151	205	1,162	1,309	1,194
2017-18	266	346	0	147	0	1,298	1,488	1,378

AQAR-Annual Quality Assurance Report AR-Annual Report

(Source: Details furnished by University of Madras)

(c) Academic and Administrative Audit by IQAC: As per NAAC guidelines, as a quality assurance mechanism, IQAC should conduct Academic and Administrative Audit (AAA) every year and follow up the recommendations. Audit found that the IQAC in UoM did not conduct AAA since its formation in 2005. In BDU, IQAC conducted AAA once in three years instead of every year.

(d) IQACs in sampled colleges: Out of the 32 sampled colleges, only the 12 accredited colleges had IQAC.

Thus, IQACs, although established did not receive adequate importance thus failing in its achievement of its goal to improve the academic and administrative performance of the universities and colleges.

Audit observed that the lapses in institutional level governance contributed to deficiencies in the college and course affiliations, as discussed in **Paragraph 2.1.10.3**. Further, the deficiencies in SFR **(Paragraph 2.1.6.1)** and the issue of engagement of unqualified teachers **(Paragraph 2.1.6.3)** were issues which could have been monitored and checked by governing bodies and IQACs in universities and colleges.

2.1.10.3 Affiliation to colleges

(i) Non-compliance with affiliation norms

Affiliation norms include existence of a functional management body for the college, availability of prescribed physical infrastructure such as land, buildings, laboratories, library books, playground, constitution of college council etc. Major issues of non-compliance with affiliation norms in respect of the sampled colleges are discussed below. **Appendix 2.6** gives a detailed list of non-compliance with affiliation norm.

- Management body was not constituted in six colleges (AU-3, BDU-2 and UoM-1) and College Council was not constituted in any of the sampled colleges.
- Minimum mandated land requirement of two acres in Chennai and five acres in other places were not met by two colleges of UoM.

- There was no library in two constituent colleges (BDU-1 and UoM-1). In one college[38] under AU, furniture was not provided in the library.
- Toilet facility was not available for boys and girls in two colleges (AU-1 and UoM-1).
- Playgrounds and space for physical exercise were not available in five colleges (AU-2, BDU-2 and UoM-1).

Despite major deficiencies in minimum requirements, these colleges continued functioning with temporary affiliation, since their inceptions. In the Exit Conference (November 2020) the representatives of universities opined that the universities lacked manpower to periodically verify adherence to affiliation norms.

(ii) Programmes started by colleges without affiliation

(a) University of Madras

UoM had granted affiliation to 93 colleges for 451 programmes during the years 2014-19. Test check of records relating to affiliation for 194 programmes in 72 colleges disclosed the following:

- Pending approval of their application for starting new programmes and increasing intake capacities etc., 53 colleges started 123 new programmes and/or increased the intake during 2014-19 (**Appendix 2.7**). UoM accorded *post facto* approval for all these unapproved programmes after a delay of one to eight years, without any penalty.
- Among the 12 sampled colleges affiliated to UoM, 10 colleges had started 40 new programmes or increased intake capacity of programmes without prior permission. In all but one case, UoM had accorded *post facto* approval with specific conditions to be fulfilled. Audit found that nine of the colleges had not fulfilled the conditions even after one to five years of granting course affiliations with conditions.

As of March 2020, one college[39] was running four programmes without the approval. UoM replied to Audit that the college had been repeatedly advised to satisfy affiliation norms. The University, however, did not take any action to publicise the list of colleges running unapproved programmes. Audit observed that routine ratification of violations by colleges would tantamount to lapses in governance and could lead to private colleges running programmes without adequate academic staff and environment.

[38] Government Arts and Science College, Mudukulathur.
[39] Sri Santhoshi College of Arts & Science, Maduranthakam.

(b) Alagappa University

The Standing Committee on Academic Affairs (SCAA) *inter alia* gives approval for starting new programmes and for increasing the sanctioned intake for a programme.

- During 2014-19, 31 colleges started 187 new programmes or increased the intake capacity without waiting for formal approval. SCAA ratified the actions of the colleges and accorded *post facto* approval (**Appendix 2.8**).
- The proposals for ratifying new programmes and increasing intake were taken up by SCAA belatedly. As the colleges had already started these programmes, SCAA, as *fait accompli*, was forced to grant *post facto* approval by ratifying the actions of the colleges in starting the programmes and increasing intake. This situation arose due to failure in conducting SCAA meetings on time.

To an audit enquiry, AU stated that in future, issues would be placed before the SCAA well in advance instead of getting ratification as a matter of routine.

(iii) Permanent affiliation to constituent/affiliated colleges

Colleges can apply for permanent affiliation to the university after five years of continuous operation. As of March 2020, only 23 *per cent* of the total colleges affiliated to the four sampled universities had permanent affiliation.

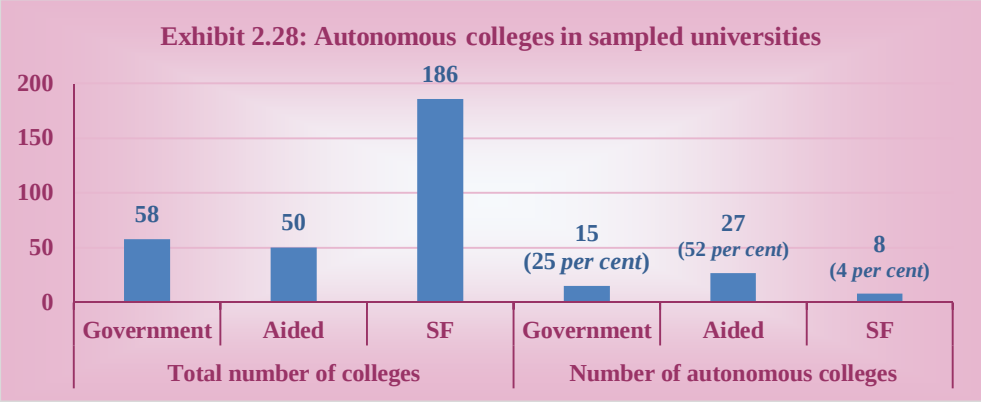
- In UoM, 40 out of 114 colleges had obtained permanent affiliation and applications from six colleges seeking permanent affiliation were pending with the University.
- BDU had not given permanent affiliations to any of the 132 affiliated colleges. Colleges affiliated to BDU had not applied for permanent affiliation and BDU had not taken any action in this regard for reasons not on records.
- MTWU had given permanent affiliation to 10 out of 11 colleges.
- In AU, only 20 out of 43 colleges had permanent affiliation.
- Five out of the seven sampled Government colleges did not have permanent affiliation even though they were functioning for more than five years.

Audit observed that permanent affiliation being an indicator of availability of infrastructure, teaching and non-teaching staff, and other systems as per norms in the colleges, 228 colleges (77 *per cent*) in the sampled universities were functioning with temporary affiliation, even after five years of their commencement.

Audit observed that universities repeatedly ratified violation of affiliation norms by colleges, often without any penalties, and allowed them to function with temporary affiliation. This practice would render affiliation norms weak in the long run.

2.1.10.4 Autonomy of higher education institutions

As of March 2020, at the State level, 130 out of the 795 Arts and Science colleges (16 *per cent*) are autonomous. This is marginally above the target of granting autonomy to 10 *per cent* of the colleges by 2017. In the sampled universities, 17 *per cent* of total 294 colleges had autonomous status. The status of autonomous colleges in the sampled universities is given in **Exhibit 2.28**.



(Source: Sampled universities)

As could be seen from **Exhibit 2.28**, Government aided colleges fared better than Government colleges in obtaining autonomy and only four *per cent* self-financing colleges were autonomous.

Audit noticed that non-accreditation by NAAC and lack of permanent affiliation, which are pre-requisite for applying for autonomy, were the main reasons for not granting autonomy to several colleges.

2.1.10.5 De-burdening of universities

In the State, out of the nine public universities, five universities, *viz.*, Bharathiyar University, Coimbatore, BDU, Tiruchirappalli, Periyar University, Salem, Tiruvalluvar University, Vellore and UoM, Chennai have more than 100 affiliated colleges.

Ideally, as the number of universities in the State should be increasing by keeping pace with the number of colleges. GoTN, however, has not started any new university after 2002. Of the nine public universities in the State, seven were started between 1982 and 2002.

2.1.10.6 Accreditation of higher education institutions

As of March 2020, all the State public universities and 210 out of 784 Arts and Science colleges (27 *per cent*) were accredited by NAAC.

Colleges become eligible for accreditation after the first batch of students graduate. Out of 294 colleges affiliated to the sampled universities, 258 colleges were due for accreditation as of March 2019. Out of which, only 103 colleges (40 *per cent*) had obtained NAAC accreditation.

It was found that out of 11 Government colleges in the sampled universities, only four (36 *per cent*) were accredited by NAAC. Whereas, five out of

the nine aided colleges (56 *per cent*) and 1 out of the 12 self-financing colleges (eight *per cent*) were accredited by NAAC. This indicated poor performance of Government colleges and self-financing colleges in obtaining NAAC accreditation. These colleges would also have obtained accreditation if the SQAC and TNSAAAC functioned effectively and carried out the mandate entrusted to these bodies.

As a result of non-accreditation, 65 *per cent* of the colleges in the sampled universities were ineligible for UGC funding for development activities. Audit observed that non-establishment of State level Quality Assurance Cell and non-functioning of TN State Academic Audit and Accreditation Council, as commented in **Paragraph 2.1.10.1 (ii)** adversely impacted the ability of colleges to obtain accreditation, as these agencies were expected to provide necessary help in obtaining NAAC accreditation. Further, gaps in infrastructure and manpower in the colleges as discussed in **Paragraph 2.1.9.3 (ii) (b)** and **2.1.6.2 (ii)** also contributed to inability to obtain NAAC accreditation.

(i) Colleges with Potential for Excellence (CPE)/Colleges of Excellence (CoE)

As of April 2017, in Tamil Nadu, 20 colleges have been awarded with CPE status and four colleges have been awarded CoE status. Audit found that none of the Government colleges in the State have figured in the list of colleges with CPE/CoE status. Only two[40] (six *per cent*) of the sampled colleges were having CPE status.

- Audit observed that one of the envisaged functions of TANSCHE was to identify and promote 'Institutes of excellence'. However, the Council was defunct since October 2015, as commented in **Paragraph 2.1.10.1 (i)**, leading to lack of a system to encourage colleges to apply for CPE/CoE.
- Non-obtaining of CPE/CoE denied opportunity for upgrading facilities using financial assistance from UGC.

2.1.10.7 Financial Management

Government of Tamil Nadu provides funds from State budget to State public universities as grant-in-aid for salary of teaching and non-teaching staffers. Government and aided colleges also receive funds through State budget. Apart from this, the universities and colleges receive assistance from MHRD and UGC under RUSA and other schemes for infrastructure, research, etc.

(i) Financial position of universities

Financial resources have a direct bearing on the quality of higher education. Non-plan grants from GoTN, fees collected from students and interest

[40] Jamal Mohamed College (Autonomous), Tiruchirappalli and National College (Autonomous), Tiruchirappalli.

received from the corpus funds are the major sources of receipts of universities. Salaries to teaching staff is the major class of expenditure.

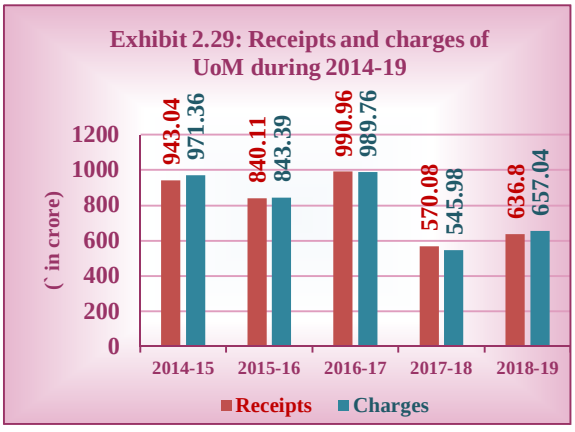
Receipts and expenditure of universities broadly fall under four parts.

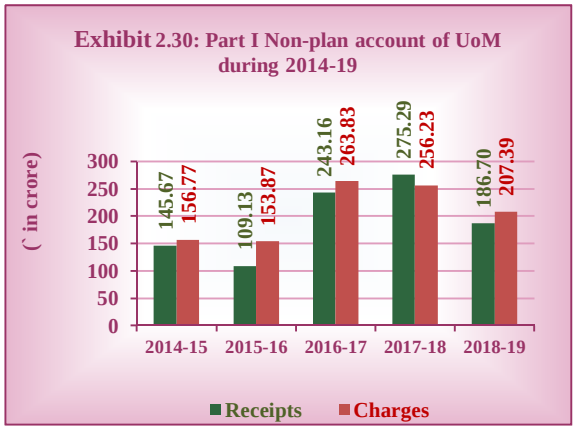
- Part I - Non Plan, includes receipts in the form of grants from GoTN, fees collected, etc., and expenditure on salaries, maintenance, operations, etc. Block grants which are periodically fixed, based on the excess of expenditure over revenue of the universities and additionalty grant to compensate the universities for meeting increase in salary expenditure are the main non-plan grants from GoTN.
- Part II - Plan, includes receipt from GoTN, UGC and other agencies for specific development activities and research activities and expenditure met therefrom.
- Part III - Earmarked fund, mainly includes transactions under endowments created for specific fields of studies.
- Part IV - Other Funds, includes Provident Fund, Pension Fund and Contributory Pension Fund.

The financial position of the sampled universities are given in **Appendix 2.9** and discussed hereunder.

(a) University of Madras

The receipts and charges of UoM during 2014-19 are given in **Exhibit 2.29**. The excess of expenditure over receipts during 2014-15, 2015-16 and 2018-19 was on account of increasing deficit under Part I Non-Plan account as shown in **Exhibit 2.30**.





(Source: Annual Accounts of UoM)

Diversion of funds from Plan account: During 2014-19, the expenditure on salaries and other non-plan expenditure exceeded the receipts by ` 78.14 crore. The accumulated deficit under non-plan account of UoM as on 31 March 2019 was ` 61.03 crore. UoM financed the deficit mainly through temporary diversion of funds from Part II Plan account, which is meant for research and development activities. In their reply (February 2021),

UoM stated that the transfer of funds from Plan to Non-plan account was a temporary measure and would be reversed.

Deficiencies in managing the finances of UoM are discussed below:

- The University did not revise the fee structure for over 15 years despite continuous increase in salary and other expenditure. Thus, while expenditure has increased substantially, revenue has remained stagnant due to non-revision of fees.

- **Issues in block grant fixation**: The block grants are periodically fixed by GoTN by calculating the excess of the expenditure on salaries, building maintenance, stationery and printing, etc., over receipts through fees, income from land and building, etc. After its revision in 1996-97, in August 2017, GoTN constituted a Committee for revision of block grants to the universities under the control of State Higher Education Department. The Committee made its recommendation based on the audited annual accounts for the year 2015-16. Scrutiny of working papers[41] of the Committee for recommendation for revised block grant in respect of UoM disclosed that the Committee fixed the revised block grant as ` 759.68 lakh instead of ` 860.22 lakh by inadvertently taking ` 100.54 lakh received towards fee concession for SC/ST students as income pertaining to the year 2015-16. However, this item of "revenue" was pertaining to the period from 2004-05 to 2013-14 towards reimbursement of tuition fees and was reimbursed by the Government in 2015-16. UoM did not point out this error in calculation of block grants.

The following expenditure, which were treated as ineligible for the purpose of calculation of block grants, caused short receipt of grants by UoM from GoTN:

- Salaries to the tune of ` 1.88 crore paid to staff occupying posts not approved by GoTN were disallowed at the time of fixation of block grant.

- GoTN disallowed excess expenditure of ` 6.43 crore per annum on granting higher benefits, in deviation of Government orders. GoTN had not accepted the independence exercised by the University in deciding higher scales of pay and promotions for its staff.

- Expenditure of ` 71.28 crore incurred by the University in respect of its constituent colleges was not included in the block grant calculation.

- **Idle investment in buildings:** The Chairman of the Senate in its meeting dated 25 March 2017, opined that construction of many buildings during the last ten years, with or without demand, was one of the reasons for the increasing deficit. It is pertinent to mention

[41] In Higher Education Department.

that CAG's Audit Report (G&SSA), 2016-17 and 2017-18 pointed out unfruitful expenditure totalling ` 32.89 crore[42] in respect of two separate buildings. As already pointed out by Audit and opined by the Chairman of the Senate, the University squandered huge sums in construction of buildings without assessing the need therefor.

The above lapses resulted in financial constraints leading to diversion of funds from Plan account to Non-Plan account. Consequently, the University compromised on research and development activities which are to be funded through the Plan account. Audit observed that if left unchecked, the widening gap in Non-plan account would lead to lesser focus on research and development and thereby could seriously impact the functioning of UoM.

(b) Alagappa University

The overall receipts of the University continued to be in excess of the expenditure. Audit, however, found that the accumulated deficit under the General Account of the University increased from ` 62.24 crore in March 2014 to ` 118.35 crore in March 2019. The University was able to manage the deficit by transferring from the Distant Education (DDE) Fund. During 2014-19, ` 83.30 crore was transferred from DDE fund to the General Fund to meet the deficit in General Account. Audit observed that the funds transferred from DDE exceeded the ceiling of 15 *per cent* of receipts stipulated for transfer. Thus, over reliance on DDE would not be a sustainable option for the University.

(c) Mother Theresa Women's University

Total expenditure was in excess of receipts during the years 2016-17 and 2018-19. Audit noticed that the deficit of MTWU was mainly due to non-release of grant to meet salary expenditure in respect of all the 85 teaching and 109 non-teaching staff for MTWU. GoTN considered the salary expenditure of only 33 teaching and 45 non-teaching posts for additionalty grant.

Thus, Audit observed that the sampled universities had to rely mainly on GoTN due to inadequate internal generation of revenue.

2.1.10.8 Funds under RUSA

RUSA funds are sanctioned under 12 components including infrastructure creation, research and innovation etc. Sanction is norm-based and outcome dependent. The funds flow from GoI to State and then to the identified HEIs. The details of RUSA funds received by the four sampled universities and 5 of the 32 sampled colleges during 2015-19 is given in **Table 2.16**.

[42] Audit Report 2016-17 (` 22.79 crore) and Audit Report 2017-18 (` 10.10 crore).

Table 2.16: Funds released under RUSA

(` in crore)

Year	Approved outlay for the state	Funds released			Funds released to state universities	Funds released to Government colleges
		Central share	State share	Total		
2015-16	RUSA I	55.22	34.94	90.15	51.97	33.19
2016-17		53.60	36.55	90.15	47.26	42.87
2017-18	RUSA II	41.23	38.13	79.35	32.72	36.63
2018-19		55.95	73.88	129.83	111.30	13.53
Total		**206.00**	**183.50**	**389.48**	**243.25**	**126.22**

(Source: Information provided by State Government)

(i) University of Madras:

Diversion of grant: UoM received an Infrastructure grant of ` 20 crore during March 2016 to December 2018[43] out of which ` 7 crore was sanctioned for new buildings for the School of Mathematics and Boys Hostel in the Guindy Campus, after demolishing the existing old buildings. After receiving the funds, the University diverted it to fund the ongoing construction of a multi-storey building at Guindy Campus, which was originally proposed to be constructed using University funds.

To an audit enquiry, UoM replied (March 2020) that due to difficulty in finding a place to relocate the existing School of Mathematics and the Boys hostel and issues in getting plan approval on account of the proximity of the site to Cooum river, the sanctioned fund was diverted.

The reply is not acceptable because the issues pointed out in the reply ought to have been considered while the proposal was submitted to avail RUSA grant. A joint physical verification of the two buildings revealed that both the existing buildings were very old and dilapidated.

Audit therefore concluded that the financial position of the sampled universities was not satisfactory. Universities had to divert funds from other heads, including those earmarked for research, to manage administrative expenses.

2.1.11 Recommendations

- GoTN may speed up the recruitment process and consider adhering to UGC guidelines on guest faculty honorarium.
- GoTN may consider the feasibility of shifting surplus teachers in university departments with low SFR to the constituent colleges of the university.

[43] March 2016 (` 10 crore), May 2018 (` 5 crore) and in December 2018 (` 5 crore).

- Government may consider setting up of new Government or constituent colleges in districts with low college density and facilitate more number of private colleges in these districts to synergise the efforts by Government. Special emphasis should be given for starting new colleges in the districts having sizable SC/ST population, so as to address the issue of lower GER among the under previllaged communities.
- In order to narrow down the gap between overall GER and GER of SC/ST students, Government should work on increasing accessibility to higher education in districts with higher population of SC/STs.
- Government should speed up the long pending process of fee fixation for self-financing colleges and self-supporting programmes in aided colleges.
- Government should frame guidelines for HEIs to assess the availability of funds for recurring expenditure on repairs and maintenance of costly equipment and other infrastructure before accepting/utilising GoTN/GoI/UGC funds for capital expenditure.
- Government should prioritise constitution of the Council of TANSCHE as envisaged in the Act with enough independence and defined roles so as to strengthen governance at State level.
- SQAC and TNSAAAC should be reactivated to ensure quality of HEIs and facilitating NAAC accreditation.
- Institution level monitoring should be strengthened and universities should avoid the practice of routine ratifications of programmes started by affiliated colleges without seeking prior approval. Universities should set annual time lines for submitting applications for approval of new programmes and take timely decisions on such applications.
- Universities should concentrate on measures to augment revenue generation. The University of Madras should refrain from diverting funds from Plan Account for Non-Plan expenditure.