



Criterion 4. Infrastructure and Learning Resources

Rajmohan Pardeshi & Bharat Kangude
IQAC Cluster India

Outline

- Background and Motivation
- NAAC Guidelines for Infrastructure and Learning Resources
- What is extra for autonomous Colleges?
- Funding Opportunities for Infrastructure.
- QS Ranking focuses on which points of Infrastructure?
- Take Away...
- Question & Answers

Why Infrastructure is important?

- The college campus is center of the lives of thousands of students and in many cases their actual home
- We spent maximum of our time in college campus

Design of Education Infrastructure

- **Affecting interrelated factors came through research are :**
 1. **Naturalness (Light, Air Quality)**
 2. **Stimulation (Color)**
 3. **Individualization (Flexibility of Learning Spaces)**

Infrastructure

- Higher Education Institution should ensure the availability of fit-for-purpose infrastructure.
- Planned by considering present and future needs of the institution.
- Adequate to provide conducive atmosphere to achieve the program outcomes.
- Laboratories must be well equipped, maintained and updated as per the needs of core subjects.
- Security and safety of the learning environment
- 1) Physical Facilities and 2) Support Facilities

Physical Infrastructure for Teaching Learning

- Classrooms
- Learning Support Facilities
- Library and Information Resources
- Computing and IT Facilities
(Reasonably Modern & Scalable)
- Well Equipped Laboratories
- Auditorium
- Seminar Halls
- Highlight if some ultrahigh facilities you have

Support Facilities

- Hostel
- Canteen
- Sports and Recreational Facilities
- Healthcare Center
- Student Centers
- Transportation
- Facilities for cultural activities

General Documentation to be maintained

- Master plan of the Institution
- A Summary of Classrooms in tabulated form
(Room No. /Capacity/ICT Facilities/Area)
- Details of Laboratories with Equipments
- Details of Library
- Summary of Recreational facilities and Sports Facilities
- Summary of Recent Improvement and Planned improvement of these facilities
- Summary of Safety and Security of Measures of all Facilities
- Bills/Orders/Audited Statements of Expenditure
- Geotagged Photographs

While Writing Qualitative Answers

- Use Quantitative Numeric Information
- If Number is small convert it into %
- Show the Adequacy and Relevance
- Focus on Optimal Use
- User Capacity of the Facility
- If government sponsored facility show some Outreach Use.
- Highlight the Achievements if any
- Various Policies/Procedures/SoP's are in place
- Tracking of its usability (to get number of users)

Criterion 4. Infrastructure and Learning Resources

Key Indicator		Q ₁ M	Q _n M	Weightage
4.1	Physical Facilities	2	2	30
4.2	Library as Learning Resource	1	3	20
4.3	IT Infrastructure	1	2	30
4.4	Maintenance of Infrastructure on Campus	1	1	20
Total:	4	5 (29)	8 (71)	100

4.1.1

Q₁M

The Institution has adequate infrastructure and physical facilities for teaching – learning, viz., classrooms, laboratories, computing equipment, etc.

5

- Overall General Description with 500 Words Comprising :
- Claim Infrastructure is as per the regulations of regulating authorities
- Mention Quantitative information such as numbers and ratios
- Try to show it is as per the standards (ISO etc)
- Adequate and Relevant to carryout Teaching Learning Activities to achieve the said outcome
- Policy of Optimal Use / Policy of Augmentation as per the growing needs / Goals of Sustainable Development
- Existence of Well formed procedures for its maintenance

4.1.2

Q₁M

The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.

5

Describe the adequacy of facilities for sports, games and cultural activities which include specification about area/size, year of establishment and user rate within a maximum of 500 words

Include the details about play ground with its standard measurements , mention if having specialized pitches, tracks etc.

Indoor Stadium : Funding/ Establishment Year and Facilities developed for outdoor games

Gymnasium: its technical details with capacity

Yoga Center : if yes, then its ambience and activities

Cultural Activities : Musical Instruments, Video/Photography Facility/ Required Facilities for Dance and Drama etc. (Costumes/Makeup Kits etc)

Notable Achievements in Sports and Cultural Activities

Don't forgot some Special Mentions if you have :

- CCTV Surveillance of full Campus
- Certificate of Building Safety from Disaster Management authorities
- Fire Safety Certificate From Relevant Authorities
- Certification to Laboratories/Workshop Facilities from some standard organizations

4.1.3

Q_nM

Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc.

10

Room number or Name of classrooms/Seminar Hall with LCD / wifi/LAN facilities with room numbers

Type of ICT facility

Link to Geo tagged Photos and Master Timetable

Note: Labs and Workshops with ICT facility not be considered

Smart Classroom

- State of the art hardware and software
- Internet of Teaching
- Natural Language Processing Capabilities
- Animated Modules and Videos
- Remote Access Capabilities (Live Streaming)
- Save Class Option(Lecture Capturing System)
- Artificial Intelligence Enabled

Learning Management System (LMS)

- A Learning Management system is software applications for administration, documentation, Tracking, reporting and delivery of educational courses etc.
- **Open Source Vs. Cloud Based**

Open source examples

- Moodle (Training, Assessment, Certificate)
- OpenEdX (Harward and MIT 2012, Indian Professor, Nimisha Ashtagiri)

4.1.4

Q_nM

Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)

10

1. Consolidated Fund Allocation duly certified by finance officer for Infrastructure Augmentation
2. Highlight the relevant items in Audited Statement of Income and Expenditure
3. In case of Private Institution, document should be certified by Chartered Accountant
4. Total Expenditure Excluding Salary Vs. Expenditure for Infrastructure augmentation
5. Avoid Recurring Expenditure on Laboratory Maintenance in this metric

4.2.1
Q₁M

Library is automated using Integrated
Library Management System (ILMS)

4

Data Requirement for last five years: Upload a description of library with,

- Name of ILMS software
- Nature of automation (fully or partially)
- Version
- Year of Automation

Additional Information :

- Purchase Order
- Screenshots
- Photographs of Daily Operations

(KOHA :: Open source ILMS)

4.2.2

Q_nM

The institution has subscription for the following e-resources

1. e-journals
2. e-ShodhSindhu (Only for 2(f)/12(b) Institutes)
3. Shodhganga Membership (not for colleges)
4. e-books
5. Databases
6. Remote access to e-resources (N-List is for all)

6

- E-Copy of the Letter Subscription/Membership in the name of HEI.
- Expenditure incurred for the subscription/Membership
- Screenshots of Facility Claimed with the Name of HEI
- Softcopies of Printed Books will not be considered as eBook.

Databases :

International:

Jgateplus, Mathscinet, Web of Science,

National: Institute for Studies in Industrial Development

ISID: 252 Indian Social Science Disciplines ,
from the year 2000 News paper clippings

4.2.3	Average annual expenditure for purchase of books/e-books and subscription to journals/e- journals during the last five years (INR in Lakhs)	5
Q_nM		

- Consolidated Extract of Expenditure for Purchase of Books and Journals for last 5 years attested by Head of Institution and CA.
- Audited Income & Expenditure Statement Highlighting the expenditure for purchase of books and journals

4.2.4

Percentage of per day usage of library by teachers and students (foot falls and login data for online access) (Data for the latest completed academic year)

Q_nM

5

- Upload last page of accession register details
- Method of computing per day usage of library
- Number of users using library through e-access
- Number of physical users accessing library
- Certified e-Copy of the Ledger for foot falls for 5 days
- Certified Screenshot of the data for the same 5 days for online access
- During DVV any random 5 days data will be asked

4.3.1
Q₁M

Institution frequently updates its IT facilities including Wi-Fi

5

Describe IT facilities including Wi-Fi with date and nature of updation within a maximum of 500 words File Description

Update(Addition or Deletion/ Replacement):

- Wi-Fi Bandwidth**
- Hardware Configuration**
- Software : Windows/MS Office/Tally/Institutional ERP/**
- Networking Facilities**
- CCTV Surveillance Facilities**
- UPS Facility**
- Cyber-security: anti-virus/ Internet access management software (blocking of specific websites)**
- LMS/ Institutional Repositories : Dspace/ ILMS**
- College Website/ College App**

Upload any additional information : Purchase orders, Account Details etc.

4.3.2

Student – Computer ratio (Data for the latest completed academic year)

10

Q_nM

Number of Computers: Number of Students

- **Number of computers available for Student use only**
- **Bills for the Purchase of Computers**
- **Stock Register**

Note:

- **Data to be given only pertaining to latest completed academic year**
- **Computer for Office and Faculty use will not be considered**

4.3.3

Bandwidth of internet connection in the Institution Options:

15

Q_nM

A. ≥50 MBPS

B. **30 MBPS – 50 MBPS**

C. 10 MBPS – 30 MBPS

D. 10 MBPS – 05 MBPS

E. < 05 MBPS

- **Bill indicating connection plan, speed and bandwidth and the HEI's name for one month/quarter/latest academic year**
- **Only leased line connectivity will be considered**
- **E-copy of the agreement with service provider**
- **Audited Accounts Statement**

4.4.1

Q_nM

Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)

10

Building renovation (Coloring/POP/Partitions) , Repairing of equipments, furniture, plumbing work, Hardware Repair / Electricity Bills/ Property taxes, Maintenance charges for UPS etc.

Human Resources Appointed/Outsourced for Maintenance work

Geotagged Photographs of Maintenance work

Assigned Budget for Maintenance and actual expenditure occurred with Audited Statement of Accounts

4.4.2 Q ₁ M	There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (1000 Words)	10
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- A policy detail and Procedure (Open Tendering Etc) outsourcing agencies, methods of reimbursement which is followed by the institution should be described here.
- Upload Policy documents, work order letters, agreements, Bill Pay receipts, LMC/CDC Reports etc.

What is extra for Autonomous Colleges

QIM

4.3.1 Institution has an IT policy covering wi-fi, cyber security, etc., and allocated budget for updating its IT facilities

QnM

**4.3.4 Institution has Facilities for e-content development
Facilities available for e-content development :**

- 1. Media centre**
- 2. Audio visual centre,**
- 3. Lecture Capturing System(LCS)**
- 4. Mixing equipments and softwares for editing**

Funding Opportunities for Infrastructure

- DST FIST (PG Colleges)
- DBT Star (UG Colleges)
- R & D Projects Funding from 11 Ministries
- DRDO Center of Excellence Scheme
- Center of Excellence Scheme of Various Industries like IBM, Mahindra etc. under CSR
- UGC Schemes
- Khelo India scheme under Ministry of Youth Affairs and Sports.
- National council for Promotion of Urdu
- MP Lad Fund, MLC/ MLA Funds
- Fundraising from Alumni & Stake Holders from Society

QS Ranking :: Infrastructure

- **Sport Facilities** : Indoor, Outdoor, Pitches ,Athletic Tracks, Gym, Swimming Pool, Fulltime Staff
- **Medical Facilities** : On campus one Doctor per 3000 fulltime students
- **Student Society's**: 20 or more administered by students
- **Hostel Accommodation**: Minimum total number of full time students
- **IT Infrastructure**: 1 computer per 5 students and 80% wifi campus.
- **Library**: investment of 100 USD per student

Take Away....

- **Infrastructure Development Vs. Usability**
- **Infrastructure Development Vs. Maintenance**
- **Piecemeal approach Vs. Proper Planning**
- **Funding Vs. Fundraising**
- **3P's of Progress: Projects, Publications, Placements**
- **If you loss your eye sight it can be cured, but if you loss your vision there no cure for it.**

Time for Questions ?

Rajmohan Pardeshi

Asst. Prof in CS, KASCC

Adjct.Prof. in CS,BVBDC

Karnataka, Bidar

rajmohanji@hotmail.com

8050202281

Bharat Kangude

Head & Assoc.Prof in Physics

BGC, Sangvi, Pune-27

Maharashtra

9890106937